

FIFTH GENERATION WARFARE

UNDERSTANDING THE FIFTH GENERATION MISSION SPACE

JOINT INTELLIGENCE,
SURVEILLANCE &
RECONNIASSANCE

War is undertaken to maintain a position of advantage, establish a more advantageous situation, or influence the attitudes or behaviour of another party.

Defence Capstone Doctrine

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“Eight years into the war in Afghanistan, the U.S. intelligence community is only marginally relevant to the overall strategy. Having focused the overwhelming majority of its collection efforts and analytical brainpower on insurgent groups, the vast intelligence apparatus is unable to answer fundamental questions about the environment in which U.S. and allied forces operate and the people they seek to persuade.”

Fixing Intel, A Blueprint for Afghanistan

INTRODUCTION

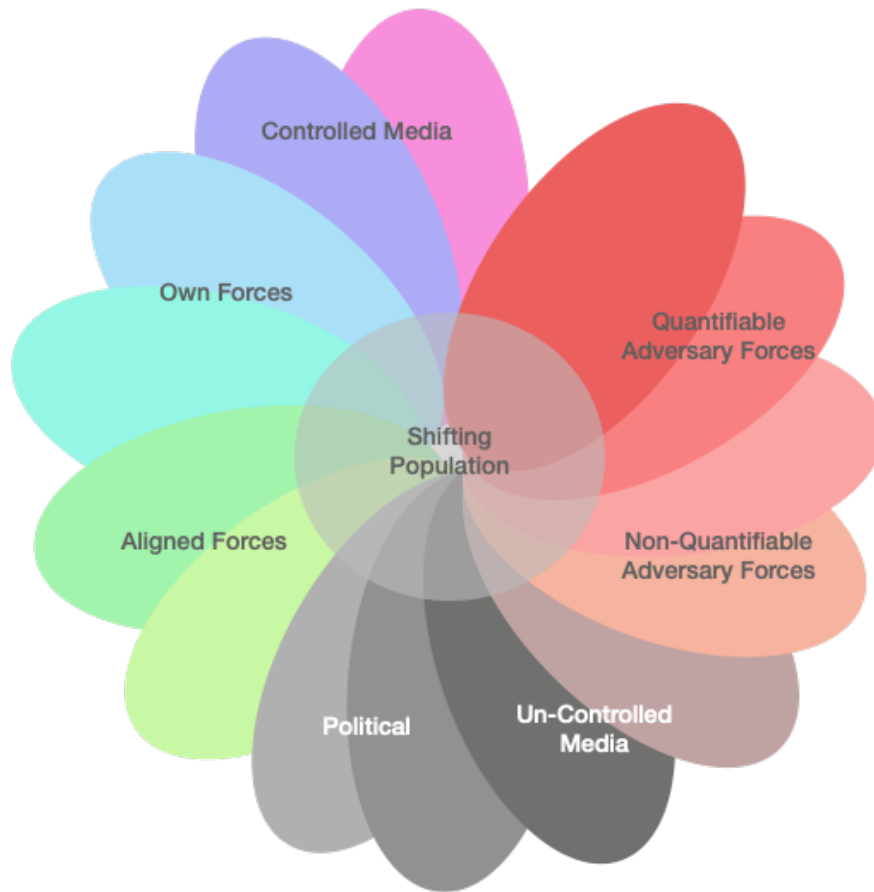
The 5GW mission space is cognitive. By this we mean, actors will seek to exhort their influence through a combination of physical and virtual actions to change the way that target audiences perceive a given situation. The ultimate goal of the actor is to change attitudes, behaviour and ultimately the will of the target audience. We call this cognitive effect. We are already seeing a significant shift away from the use of lethal force as the primary tool to achieve this and towards more sophisticated combinations of physical manoeuvre, electronic and cyber warfare and a manipulation of the narrative. Only where necessary, will the use of lethal force be used.

Measuring the cognitive effect(s) is both complex and ambiguous as cognition has many drivers and influencers.

- Culture
- History
- Social and political organisation
- Economic conditions
- Geography
- Unconscious Biases
- Sensory perception
- Access to information

Compounding the issue is the impact of third party influence. For example, If an actor in a 5GW mission space is disliked by a particular target audience they are trying to support, everything that the actor tries to achieve, even, if it may be intended for the benefit of the environment, will be viewed with suspicion and even hostility. This issue goes further when other actors take into account that negative perception and therefore resist any public association. Hence the reluctance of the charity organisations to be associated, in any way with military force.





WHERE ARE WE?

This is a question often asked by commanders and operators trying to maintain their bearings in the mission space. Understandably, we focus our efforts to maintaining our position in terms of geography: When you ask a soldier to begin to plan the first thing they are likely to do is roll out a map. Temporal awareness is also well practiced: Timekeeping comes naturally to military personnel. However, cognitive awareness, asking how the situation has and is changing, is less well practiced. We are often too focused on the tactical situation, on the delivery of the payload, that we forget the watch for the operational effects. The advent of the video stream live broadcast into the command HQ as compounded the tendency for Commanders to focus onto the 'now', not the 'next'; onto the action, not the effect.

Mapping a plan over time is the 'Operation Art' of campaign planning. This requires understanding the linkages between the desired end state and the effects we wish to have on the actors and audiences within the mission space. In 3GW and 4GW this was often limited only to the effects required on the enemy and in counter Insurgency operation the enemy and the local population. In 5GW however, the mission space is vast, complex and multi domianial. We must consider a wide range of actors, audiences and adversaries (including the enemy). This is likely to required in-depth understanding of not only the enemy, those who are willing to oppose you with lethal force, but all adversaries, criminal groups, all of the different elements of the media, the civilian population, NGOs, host nation forces, allies, neighbouring states, private contractors (from all sides) and so on. Tennant's Threat Model (above) aims to encapsulate this complex melee of differing stakeholders.

THE COGNITIVE ARENA

We need to understand in great detail, what these different actors think, about their desires and drivers and about their perceptions.

This means going beyond watching what is going on geographically, which is simply a means of obtaining situational awareness, and really understanding what is going on.

The shift from situational awareness to situational understanding requires ground truth and the only way of getting this is by engaging with people. This can be done through various Open Source means, traditional HUMINT, and obtaining and monitoring of key statistics, that are not traditionally associated with 'military intelligence' such as crime rates, market viability and economics. Militaries will need to learn from the masters of social understanding; the political lobbyists and from the commercial advertising sector.

The collected data can be fused and analysed by highly skilled operators to produce a heat maps of sentiment for things such as support to local governance, support for the military operation or faith in the news and media. **Over time these statistics will provide indications of cognitive change amongst target audiences.**

In short they provide a position on the operational plan.

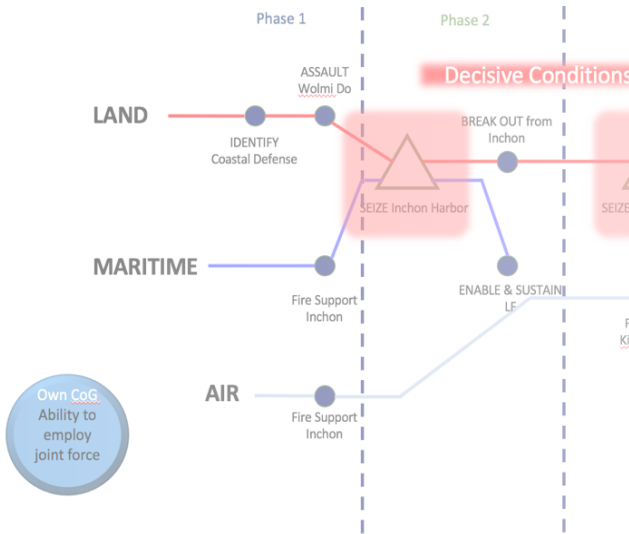
HISTORY WILL TEACH US NOTHING (?)



In 2008, it was decided to try and understand where the coalition forces were in their Afghanistan campaign. The area to be initially mapped was the southern command centred on Kandahar. Specialist operational analysts were employed to devise questions, metric and statistics that could be used to demonstrate the public's perception of the coalition, of the government of Afghanistan and to identify their drivers. Given this start point, the collection plan was created and the data harvested. The analysis proved to be surprising: a strategically important area in the region was displaying signs of strong lawlessness, crime, drugs activity and dwindling support for federal or federally backed governance. Support to the coalition was completely non-existent. The mapping exercise had demonstrated that we had lost ground in our drive towards the operational end state. But why?

Further investigation showed that 3 months earlier a company commander had taken a local decision to reduce the number of patrols in the area. This reduction caused a void that was filled by the subversive elements of the community and it was also used by the adversary to indicate that the coalition forces were too scared to patrol, this manipulated message undermined the credibility of the coalition to bring stability.

THE B OF THE BANG



In the cognitive mission space of 5GW we need to step back from the point of impact and look at the ripples that have been caused and how these ripples effect the operational end state. The wall of truth at the front of the headquarters, so long the backdrop for full motion video streamed from MQ-9s, now needs to display the Joint ISR (JISR) picture: both the common operating picture (situational awareness) and a representation of effects, both that were intentional and those that weren't (situational understanding). This called be regarded as a representation of the cognitive mission space.

But how is this done?

Any campaign, military or commercial, will have an end state: a condition, that once met, the campaign is deemed a success. The operational plan is the map, showing the route that must be travelled to get to the end state and Intelligence is the triangulation of compass back-bearings giving us an approximation of where we are on it.

In the case of the recent Crimea conflict, the Russian end state may have been; "Acquiescence from the international community and submission from Ukraine that the Crimean peninsular is under the political, military and economic control of the Russian Federation without ongoing instability or unrest".

Equally, the end state for the coalition forces in Afghanistan may have been, "The denial of Afghanistan as a safe-haven for Islamic Terrorism and the establishment of a government capable of maintaining the rule of law to its people."

If these are the end states then all activity within a mission space should further the progress toward the end state: every engagement, every tweet, every bomb dropped or patrol conducted. It can clearly be seen that there is a direct link between tactical action and operational end state and if we are to maintain progress on the operational campaign, we need a capability to map tactical action and the resulting effects caused against operational requirements.

JISR AND 5GW

Joint ISR is crucially important to 5GW in three ways: firstly, JISR will set the context of the problem by delivering baseline understanding, secondly it will enable decision makers to identify changes that indicate that conflict has started, finally once an operational campaign is underway, JISR will be used to map success or failure through the Measurement of Effect (MOE) Process.

Setting the context

In section 2 of this series of papers, we introduced the concept that a 5GW may take the form of a slowly manipulated mission space that may not see direct physical action until the battle is lost. This slow insipid creep, driven by inducing cognitive effect through manipulation of the narrative and possibly including subversive 'active measures', needs to be measured in order to identify where its occurring, monitor it and, importantly, to identify and mitigate the key triggers that are being exploited by the adversary.

Intelligence staffs currently conduct preparation of the environment studies during which they attempt to identify centers of gravity and potential key courses of action. Since the inception of 4th generation warfare, these studies have looked to model the human terrain and identify key nodes within the human network through Human Terrain Analysis (HTA) and stakeholder analysis. In 5GW these techniques need to be doubled down on and their results should take center stage in commanders' decision making. Indeed a 5G IPOE could be used to generate time dominate fusion .

TRIGGERING A RESPONSE

By monitoring the manipulation of a potential theatre by a third party collaborative cross government responses can be implemented to mitigate and rebut insidious actors and steer the narrative back towards the freedoms and values that Western Democratic society espouses. If the situation demands it military capability can be brought to bear. Unlike the 4GW all or nothing paradigm, this will be a delicate and incremental transition.

Once a 5G campaign has been identified and the command decision is to counter the threat, the Intelligence staff will undergo a specific exercise to identify the critical intelligence requirements needed by the command staff to plan the campaign. In addition the Intel staff will to identify the desired effects needed to achieve the operational end state.

The intelligence requirements are collated into an Intelligence Collection Plan. This document is effectively a living document tracking the development of intelligence and the understanding of the environment, most notably it is a comprehensive list of the unknowns, the information delta. This enables commanders to understand their intelligence gaps and to get a sense of what they don't know as much as what they do. By building in questions about the baseline start-state of things. It enables a commander to identify how things have changed and to gauge whether the operational plan is working. Not as simple as it seems...

THE OBSERVER EFFECT

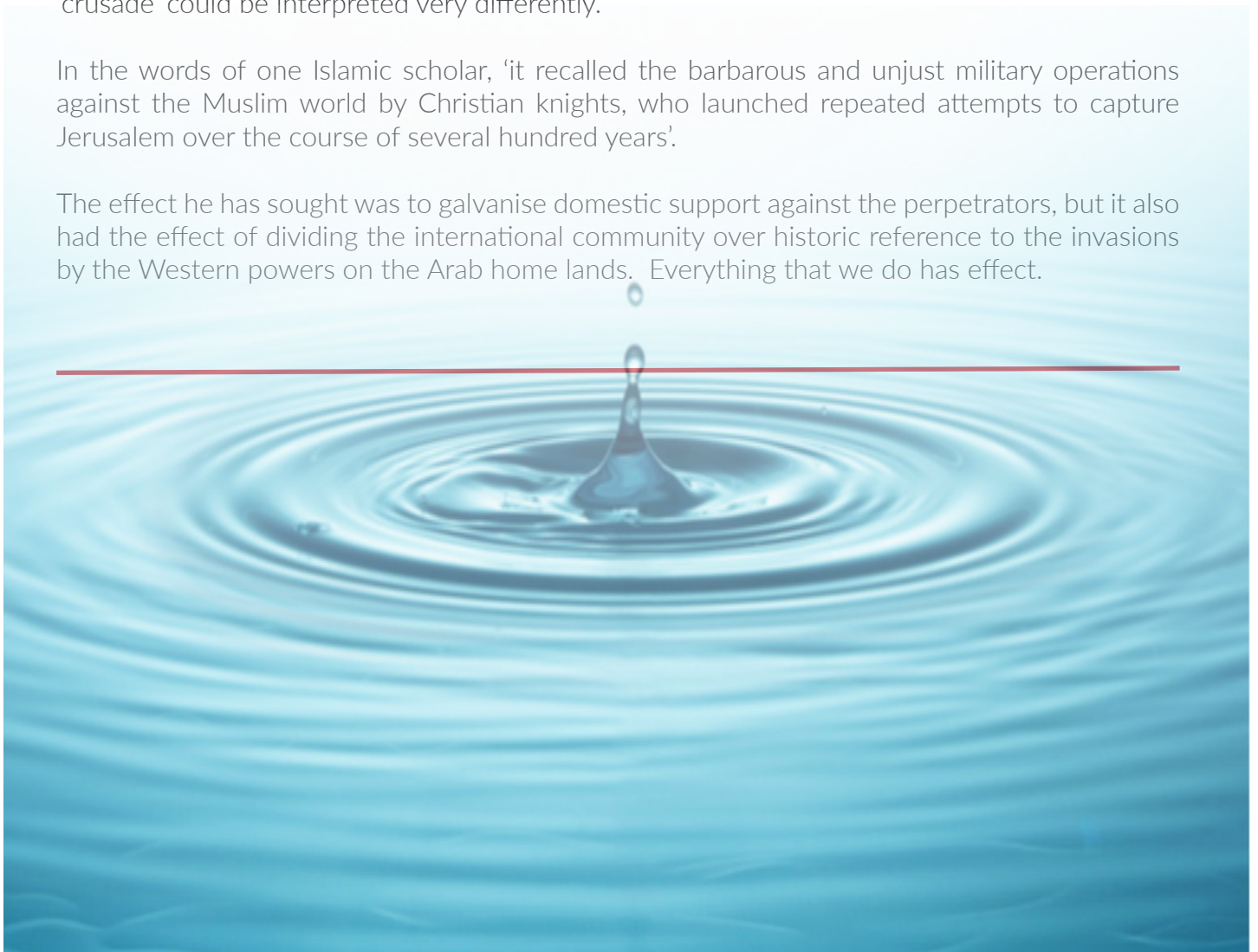
Everything that an actor does in a mission space will have cognitive effect in that mission space: if, for example, an actor changes the combat helmets of its foot patrols for berets it will affect the way in which that actor is perceived by the population they are amongst. Everything we do has effect. That is the first and most important thing to realise. Secondly, everything everybody else does also has an effect and this is largely beyond our control.

An example of the observer effect in action is President George W Bush's crusade remark, made in the wake of the 9/11 attacks. During unscripted comments during a press conference given at the White House on 16 September 2001, President Bush stated, "this crusade, this war on terrorism, is going to take a while".

From the perspective of contemporary US culture, this was a harmless statement as a crusade is understood to be a remedial enterprise undertaken with zeal and enthusiasm. President Bush, however, did not take into account that, viewed from a different cultural perspective, the word 'crusade' could be interpreted very differently.

In the words of one Islamic scholar, 'it recalled the barbarous and unjust military operations against the Muslim world by Christian knights, who launched repeated attempts to capture Jerusalem over the course of several hundred years'.

The effect he has sought was to galvanise domestic support against the perpetrators, but it also had the effect of dividing the international community over historic reference to the invasions by the Western powers on the Arab home lands. Everything that we do has effect.



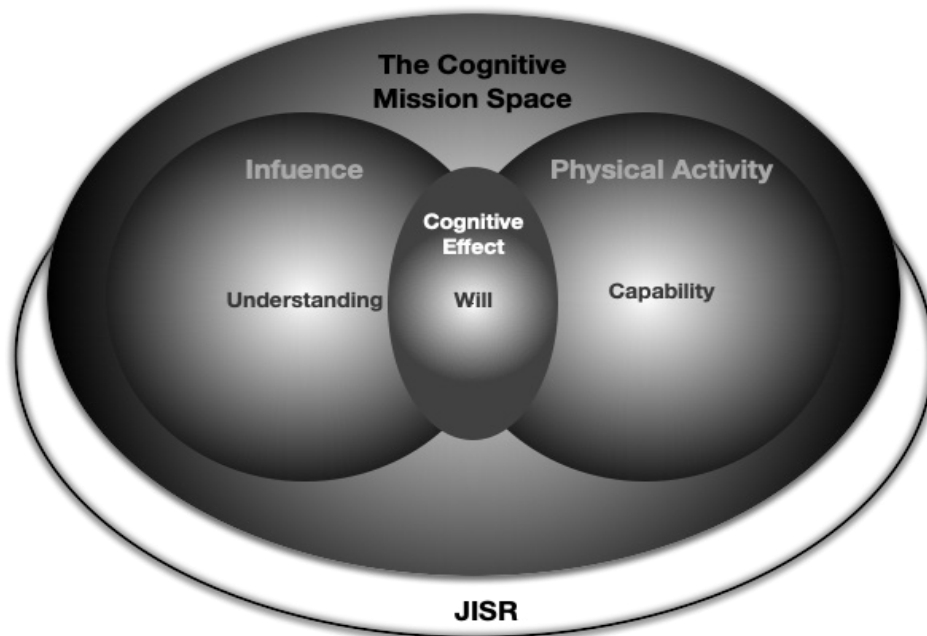


SOLUTIONS

Monitoring the cognitive mission space and the intended and unintended effects therein is highly complex. To do this successfully the JISR mechanism needs to be central to the campaign at all levels and at all stages. At the beginning of any potential operation, the Intelligence staff conduct an Intelligence Preparation of the Environment and create an Intelligence Collection Plan. The purpose of the former is to assist in planning and the latter is to identify critical intelligence requirements that are needed in order to understand the progress toward the end state. In 5GW these 2 previously unloved documents will become the yardstick for operational success. However, the level of skill and knowledge used to compile these documents will need to increase, as will the diligence of maintaining them. Further, as 5GW is typified by a gradual, almost insidious, escalation to physical warfare, the IPOE and ICP need to be both geographically and conceptually broader; we need to be able to detect the changes that are the precursors to open conflict.

The IPOE and ICP also need to migrate from a document to a living real time reflection of the 5GW mission space. This representation of the environment will illustrate how tactical activity affects the operational end state. We can no longer afford to have Commanders fixated on FMV screens displaying the latest aviation assault or Paveway strike. Instead they will be concerned with the JISR picture to show them what cognitive effects the raid or strike have had: both positive and negative, both direct and indirect.

Joint ISR will create the cognitive mission space in which 5GW will occur.

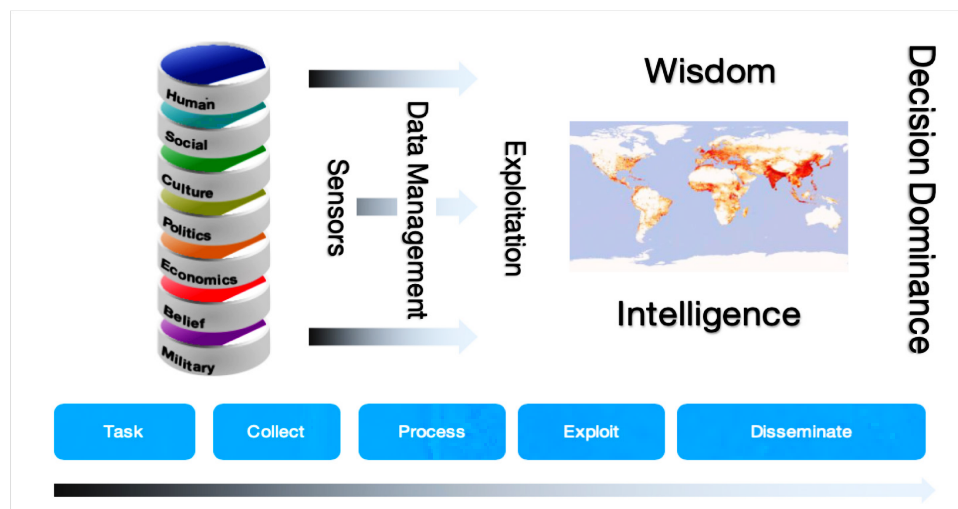


THE ROAD TO DECISION DOMINANCE

What we are asking for, is a JISR Picture that can precede combat by providing understanding of global trends and can measure operational performance by mapping cognitive effect caused by tactical action: a big ask.

This level of complexity will require significant investment in data collection, storage and dissemination, to say nothing of processing and exploitation. Undertaking fifth-generation warfare requires moving data around 'system of systems' networks. There are accordingly two crucial elements: data and connectivity. In terms of data, this must be of an adequate quality that decision-makers can use to take action. In terms of connectivity, this must both connect large numbers of diverse nodes and be sufficiently robust to function during stressful military operations. Neither are simple tasks. Getting these two tasks right will inexorably lead to ever greater Intelligence Dominance which is one element critical to success in 5GW.

Intelligence Dominance is not the end state. The purpose of the JISR system is to provide a decision maker with the intelligence in order to make the right decision. However, unless the decision maker is educated and orientated to the environment in which the decision is needed, even fed with the best intelligence, the decision may be incorrect. We therefore have an additional element which is the decision maker themselves.



Decision Dominance is the critical capability for success in 5GW.

SUMMARY

Many commentators have linked 5GW to technology but waging a 5GW is much more than the application of an asymmetric technological advantage, it is a philosophy that forces the advocate to view the mission space as cognitive and the purpose of activity within the mission space is cognitive effect. The mission space will be broader, more connected and vastly more complex than even a 4G mission space. The insipid nature of 5GW will require vigilance like never before, this activity will need, as Jenifer Sims writes, “sensors, counter intelligence, transmission and anticipation.” Or as has been reported recently, “an information grid, a sensing grid, an effects grid and a command grid.”

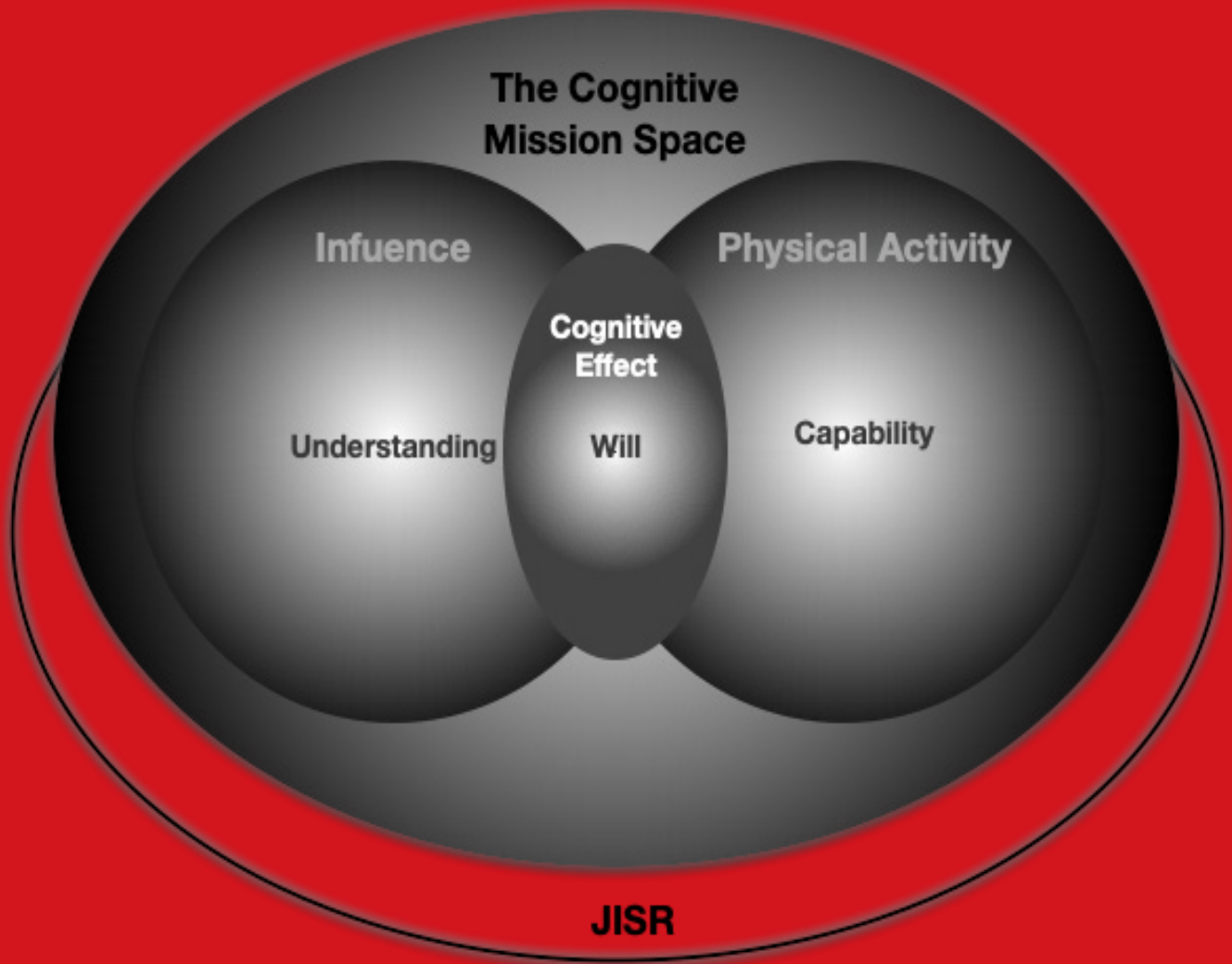
The main element of 5GW will not be hardware or indeed software, it will be human: the 5GW landscape will have a human backdrop. In order to understand the human element of environment, investment should be made in the human element of the team. Training is critical to be able to operate in the 5G mission space.

We have, for decades, been talking about the revolution in military affairs. Perhaps now, we are witnessing the most dramatic revolution. Although 5G warplanes steal the headlines, the 5G conflict will not be won by hardware alone, it be won or lost in the minds of the population.

The addition to the mission space of the socially motivated opponent will change the way we view warfare: it will change the laws of armed conflict as the distinction between combatant and non-combatant becomes irrelevant. The only way in which to prevail in this mission space is through robust joint ISR and intelligence decision makers



Decision Dominance is key



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