Jazz Research & Transcription

Kornelijus Pukinskis
Assessment type: C (Audio/Video Recording demonstrating research)

I’ve always had the interest in uncommon things. My passion for explorations both in music and life led me to investigate microtonal Jazz music. Inspired by African and Indian cultures, Ornette Coleman was the first one who started really think about unusual scales and intervals in early 1960s, by bringing us his own concept called ‘Harmolodics’. His playing was often called as ‘out of tune’, and it really was. But that was also the beginning of ‘Microtonal Jazz’ and ‘Free Jazz’ music. Nowadays, saxophonists started using microtonal fingerings, instead of lifting up or bending down their lip. During the research, I am going to rely on Ornette Coleman’s and Philipp Gerschlauer’s experimental playing and microtonal compositions, by composing my own pieces. My goal is to study the notation of microtones and deepen my knowledge in uncommon intervals, scales and sounds. I believe that this will be a very valuable experience to me because I will be able to compose, hear and improvise different kind of music.

Ornette Coleman is one of my biggest inspirations in music. I grew up studying his approach of playing. He was one of the first saxophone players, who started avoiding common musical methods with his ‘Harmolodic’ (mixture of movement, melody and harmony) concept, which is about freeing music from tonality, standard harmonic structures, and usual rhythmic patterns. In 1950s, Coleman could play Charlie Parker’s tunes note by note, he knew bebop very well. However, it wasn’t the right sound Coleman was seeking for. ‘They were playing changes... they weren’t playing movements. I was trying to play ideas, changes, movements and non-transposed notes’ (Purcell, 2007, p1). It looks like he was bored of the same intervals, being played over, and over again. ‘...let’s face it, it’s only 12 notes, and all the music we ever heard is played by the same 12 notes.’ (Hamilton, 2015, p1). Soon Coleman started to experiment with his sound playing microtonal notes by bending down his lip, and some people called it ‘bluesy’, others - as ‘out of tune’. ‘Coleman’s attitude toward intonation is unconventional. The classical composer Hale Smith once spoke to me of Coleman’s “quarter-tone pitch,” by which he meant that Coleman plays between the semitones of an ordinary chromatic scale. The core of Coleman’s genius, Smith felt, is that, however sharp or flat he is from accepted pitch, he is consistent from note to note. Coleman hears so acutely that even when he is out of tune with the rest of the musical world he is always in tune with himself’ (Giddins, 2008, p1). That made him very unique.

Subsequently, Coleman became interested in Indian and African cultures. In 1968, during Italian tour with his quartet, Coleman played ‘Shehnai’ (Indian instrument, which is used in temples or various marriages and processions) on his piece called ‘Buddha Blues’ and recorded an album ‘The Love Revolution’. ‘[Coleman] got interested in the way Indians prayed. They had a relationship with their own culture that anyone could relate to... [Coleman] went home and started writing ‘Skies of America’’ (Blumenfeld, 2015, p1). Following that, in 1973, he traveled to Morocco, to the Rif mountains, to play with ‘the Master Musicians of Jajouka’. There’s a short recording, appearing on album “Dancing in Your Head”, released in 1977, called “Midnight Sunrise”, where they all play in an untempered approach. Coleman’s playing was
highly influenced by these two cultures. He remained devoted for hitting notes a quarter-tone flat or sharp, and refused to resolve his saxophone with Don Cherry’s trumpet, trying to always ‘run away’ from the well-tempered scale. This approach was derived from African and Indian cultures and it was the beginning of microtonal Jazz music.

The ‘equal temperament’ divides the octave to 12 equal notes (semitones, or 1200 cents), which means that every semitone is 100 cents apart. Term ‘microtonal’ is associated with an interval smaller than a semitone (less than 100 cents). In some cultures, there are plenty of traditional scales including some of the quarter tone intervals (an interval which is half a semitone, in other words - 50 cents) which are taken from ‘quarter tone scale’ (24 equal temperament), where all the notes are 50 cents apart after every other.

(A. Eric Heukeshoven, 2012)

Video footage of me playing this scale: https://www.youtube.com/watch?v=Z4jywKeHt8g
For example, music from Middle East contain Assyrian/Syriac Church modes (maqams): Bayati, Rast, Sabba, Siga.

(A. Eric Heukeshoven, 2012)

Video footage of me playing these scales: https://www.youtube.com/watch?v=nihs6RmMTDU

The quarter tone scale provides us with the whole new spectrum of intervals. It was really tough finding each name of the interval, because some of these are titled under 4-5 names, for example: septimal major second, tridecimal 5/4 tone, thirty-seventh harmonic, semi-augmented whole tone, semi-augmented second. But I stuck to one pattern, which was available at: www.quartertonesaxophone.com.

Piano

Quarter tone scale intervals
Ornette Coleman definitely had some of these in his improvisation. His approach of playing these notes was by bending down the lip, thus hitting desired quarter tone, which is straightforward when you get used doing it. In order to learn Coleman’s approach, I had to practice using quarter-tone tuner (available at: www.quartertonesaxophone.com.) so, I start hearing all these cent values. After I managed to be in tune with all of these microtones, started using quarter tone interval ear training app from the same website and it was very challenging. It took me weeks to start hearing these intervals. Later I got better at hearing microtones, made myself some exercises, and practiced it for a few days.

Microtonal exercises

Video footage of me playing these exercises: https://www.youtube.com/watch?v=moildQ_sqVo

Once I felt confident about playing quarter tones, composed my own piece “Lonely Man”. Video performance, featuring Conor Murray on bass and Dominykas Snarskis on drums: https://www.youtube.com/watch?v=UHV_n1eAKak
Nowadays, some saxophonists started using quarter tone fingerings. There’s a huge amount of different combinations you can find on the instrument. Occasionally, the same fingering which works on one saxophone, doesn’t work on another. This is just basically because that each horn is produced differently, for example, with or without some keys (F# side key), and for other reasons, such as brand type quality, when it depends on the sound of the instrument. Additionally, it’s really not that easy to master quarter tone fingerings on saxophone, because some of these fingering combinations are really difficult to play. Nevertheless, there’s something even more difficult than just quarter tones. In this modern world, people started investigating microtonal fingering combinations on saxophone, and some of these notes are 1 cent away from each other. After seeing this video, where Philipp Gerschlauer plays 128 notes per octave, it immediately caught my eye, and I instantly told to myself – I know what I will be doing for my research project.

(2015) 128 notes per octave on Alto Saxophone – Philipp Gerschlauer, Available at: https://www.youtube.com/watch?v=lGa66qHzKME/

Philipp Gerschlauer, alto saxophonist and composer born in 1986, Berlin, Germany. He first started to get interest in microtonal music, when he was 22 years old. At the same time, he studied jazz saxophone. Being influenced by Hayden Chisholm’s (multi-instrumentalist, performer of improvised and contemporary classical music from New Zealand) playing, Philipp started to deepen his knowledge in quarter tones. Soon, he found some fingerings, which produced a note in between semitone (in value of 50 cents). Philipp then found all of these required notes to be able to play quarter tone scale. This system was used and explored even more with his own band ‘Besaxung’. After two years, his playing really ‘improved because [Philipp] composed more and more tunes based on quarter tones. Writing songs established a deep emotional connection to the melodies and harmonies and helped [Philipp] to use... melodies in other contexts.’ (Gerschlauer, 2015, p1). Ultimately, he started studying fingerings to able to play 48 notes (instead of 24). It wasn’t easy. There was a problem when he was playing together with piano - it sounded ‘out of tune’. Philipp enjoyed it in a way, though, he began looking for other options. After graduating with his Bachelor’s degree in Berlin, 2012, friend of his, Double Bass player, Greg Cohen, suggested using a microtonal piano. After one year of work, and meeting the right people, microtonal piano was programmed by Jonathan Hoffmann and Felix Roßkopf. ‘[Philipp] was now able to play Harry Partch’s 43-tone scale or any other scale in the audible area’ (Gerschlauer, 2015, p1). Experiments with his band ‘Besaxung’ started, and new pieces were composed. Philipp stopped using normal saxophone fingerings, instead, just played the microtonal ones. Regular fingerings sounded wrong. All sounds, notes, were exclusively chosen for each composition (at the same time he was studying his Master’s degree at the New York University with Chris Potter, Stefon Harris and Tony Moreno).

Following that, Philipp was lucky to meet bassoon player Johnny Reinhard, who introduced him to an ‘eighth octave overtone tuning’ concept, which he developed in 2011.

(J. Reinhard, “First 256 overtones in the harmonic series” 2011)
In music, every tone has an infinite number of partials that express the sound – that’s “Overtone Row”. By each octave, the amount of tones doubles from root to root. ‘The first octave above the root only has two notes, the second octave 4, the third 8, the fifth 16, the sixth 32 and the seventh 64. The eighth octave of the overtone series divides the octave into 128 notes per octave.’ (Gerschlauer, 2015, p1). At first, Philipp couldn’t believe, that this concept works. ‘It sounded unreal to divide the octave on the bassoon into 128 notes per octave. Those intervals seemed to be too narrow to be expressed accurately by fingerings.’ (Gerschlauer, 2015, p1). But Johnny Reinhard demonstrated it to Philipp, and encouraged him to investigate this system on saxophone. There was only one way to play these tiny pitches exactly, and that was playing saxophone without changing embouchure. However, saxophone requires the embouchure to be slightly changed sometimes, especially when you are playing high/low notes. ‘... the adjustments I would need to make with my embouchure would be 3.5 to 6.5 Cents.’ (Gerschlauer, 2015, p1). But that’s still totally possible to be done. From that point, Philipp began working on a microtonal fingering chart in a simple way. When he played next higher fingering after A, he switched back to A, and he followed his instinct to find a note in between. After finding it, he searched for a fingering, which would fit in between again. When he felt confident about his playing, made himself a backing track, using microtonal keyboard. ‘So, I created a play along of over three minutes which would accompany me for almost a whole year... I looked into my fingering chart and tried to find the fingering which would match to the play along best.’ (Gerschlauer, 2015, p1). Occasionally there was a problem of the different room temperature, it affected saxophone and its’ tuning, but he got used to it and practiced more. It was very challenging to Philipp, sometimes, he had to forget what he has learned and come back to fix the fingering. ‘Sometimes I had to go back and dismiss fingerings I had found before. Everything would change a lot... a fingering would be uncomfortable to play or would sound poorly’ (Gerschlauer, 2015, p1). Nevertheless, his ears got better at hearing such tiny intervals. ‘The more my ears developed the more possibilities I found’ (Gerschlauer, 2015, p1). Philipp plays Selmer Super Balanced Action Alto Saxophone, made in 1951, which means it doesn’t have a high F# key. He thinks that having this key, more microtones would be playable. However, developing a chart and practicing 128 notes per octave increased his playing skills. ‘It enabled me to play any pitch and to deal with microtonal music of any kind. Modulation inside just intonation or inside different scales of equal divisions of the octave is not a problem anymore. I just have to use my chart’ (Gerschlauer, 2015, p1). In my own opinion, I think that’s something really revolutionizing in jazz, and for me, this is a really interesting and inspiring topic to talk about, and research.

Accordingly, after further investigations, I managed to contact Philipp Gerschlauer and ordered his book “Microtonal Fingering Chart for Alto Saxophone”, so I can start practicing all of these microtonal fingerings and use it in my playing.
And the process of learning started. It was really difficult to hear some of these tiny intervals, so I had to use tuner, in order to play it correctly. At the very start, I didn’t even think that it will be so challenging. I tried my best to keep my embouchure steady, but unfortunately, I always moved it a bit and because of that, I couldn’t hit desired notes. You have to be really focused in order to play intervals, smaller than 50 cents. After a while, I improved and it started to get easier playing and hearing it. I was also curious about the notation of microtones, and found it out, that’s not too hard. You just put required cent value above the note.
At first, it was confusing seeing negative cent values, but then I contacted Philipp and he explained me. ‘Negative number indicates that the note is lower than the half note. So, C-30 means it’s 30 cents lower than C. I always write +50 and -50 max to make it easier to read’ (Gerschlauer, 2019, private email). It was simpler than I thought. So, went straight to experimental and compositional process. After listening through all possible Philipp’s released albums, I got inspired with plenty of different thematic ideas for my pieces. His album “MikroJazz (Neue Expressionistische Musik)” is one of my favorites. There, he plays with David Fiuczynski (fretted and fretless guitars), Jack Dejohnette (drums), Matt Garrison (fretless bass) and Giorgi Mikadze (microtonal keyboards).

(P. Gerschlauer, “MikroJazz (Neue Expressionistische Musik)”, 2017)

After studying Philipp Gerschlauer’s book, I had to pick out the best fingerings for my saxophone (some of these didn’t work). After I felt confident with all of it, I started writing tunes. I used two methods for writing my own compositions:
1. Write entire piece using regular notes, then add microtones on top;
2. Write whole piece using microtonal intervals straight off.
In my opinion, both of these ways worked pretty well. It wasn’t very tough to learn these tunes, but I had difficulties improvising using microtones, couldn’t remember any of these new fingerings. Thus, I decided to go through all of his book once again, and wrote down all the best sounding microtones on the sheet, and started practicing improvisation using these alternate sounds.
After a while, we started rehearsing with the band and built our sound together. Dominykas and Conor had a great time improvising and musically responded to my microtonal playing. We all had great time and unusual experience.

This composition is called “XY2” and it features Conor Murray on bass and Dominykas Snarskis on drums.  
https://www.youtube.com/watch?v=HFkwKTqChkw

This composition is called “Trippin’ Blues”, featuring the same musicians.  
https://www.youtube.com/watch?v=QBPY-5ZPPgU
All in all, I had the most wonderful time doing this research. My ear improved a lot, and I started hearing/feeling miscellaneous music. This investigation was very beneficial to me because I learned the notation of quarter tones and other microtones. Ornette Coleman’s quarter tone technique is simple, but still contemporary to this day, while Philipp Gerschlauer’s microtonal playing is absolutely fresh in Jazz music scene. I believe that one day this method will be acknowledged as the new style of Jazz music, and Philipp will be the avant-gardist of that movement. I think that there’s no limits in music and art.
BIBLIOGRAPHY: