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Phill Niblock and identity in reductionism

Within the area of reductionism in drone music, how can an identity be retained? Is a drone just simply a drone? Or can music consisting solely of sustained tones develop a particular character, a uniqueness, which identifies it from other, similar music?

The American composer Phill Niblock has been composing for over forty years, and has been engaged in a single-minded compositional aesthetic which has developed its own very unique identity within the broader area of experimental minimalism.
This paper aims to present how Niblock has defined that identity, and how we, as listeners, experience this music, investigating the consequences on our perceptual and recall processes.

First, a quick word on drone perception.

The term "rehearsal" in cognitive psychology describes our ability to 'play back' a short section which is stored in our memory. The more we rehearse a section, the more familiar we become with it. Redundancy in information acts as a kind of implicit memory rehearsal, that is to say there is no new parametric information to engage the perceptual processes with, and there are fewer better examples of redundancy in audition than drones. This constant rehearsal by the listener of a drone enables a far greater perception of similarity between successive sections.

A feature of many nerve cells is that if they are continuously stimulated, their output of neural impulses does not stay the same, but drops off fairly quickly. Therefore, those nerve cells in the inner ear activated by a particular area of the basilar membrane, caused by a particular sustained frequency, will not emit the same level of neural impulses throughout the duration of the sustained tone; so, our perception is directed away from the frequency of the tone, and towards other events which may appeal to our sensory system.

Considering this information, I want to discuss two contrasting pieces from Niblock's output. The first is *Five More String Quartets* from 1991, for live and pre-recorded string quartet.

[SLIDE]

To briefly sum up the realisation process, the quartet perform five different versions of microtonally-tuned octaves, wearing headphones playing sine waves which they then match on their instruments. These five versions are then multi-tracked to produce a dense microtonal cluster.

[SLIDES]

[PLAY CD]

The form of the piece is evidently extremely goal-oriented, with the microtonal cluster thinning throughout until unison octaves are achieved at the end. The specific frequencies in the score are arbitrary choices made by the composer from within the set clusters described in the overall form.

While this is a simple formal shape, I want to raise a well-used quote from Robert Morris, "simplicity of shape does not necessarily equate with simplicity of experience".

The second piece I want to present is *Tow by Tom* for two orchestras written in 2005;

[SLIDE]

This piece provides an interesting contrast to *Five More String Quartets* due to the multiplicity of timbral qualities available; however, the piece feels very much of the same aesthetic, and seems to be Niblock translating his own approach onto an alternative medium, in this case an orchestra.

The score is significantly different; this is a small extract from the whole score.

[SLIDE]

The score is accompanied by a page of detailed instructions. Each of these parts is assigned to a different player, who plays the relevant pitch more or less continuously at a loud dynamic – the time is indicated by a conductor or stopwatches.

[PLAY CD]

The form differs from the string piece as well; here is a simplified version of the various clusters occurring throughout the whole piece.

[SLIDE]

While specific cent ranges are given for the differing variations of equal temperament, the pitch notation remains intentionally indeterminate in comparison to *Five More String Quartets*. Niblock states that he was "interested in many musicians choosing different microtones", and one of the interesting qualities of this score is that players are instructed that "every time a note is played again, it should vary very slightly in intonation from the one before." This is in direct contrast to *Five More String Quartets* which is extremely specific about tuning, although has the advantage of being a studio-recorded piece using headphone feeds of specific frequencies.

On a formal level, both pieces trace slow glissandi throughout their durations. The very gradual rate of change in these glissandi is similar to other musics, for example the long slow sweeps of Lithuanian composer Rytis Mazulis, or Canadian composer Chiyoko Slavnics; however, it is the dense multi-tracked nature of this music, the 'mush' as Niblock describes it (44 possible separate lines in *Tow by Tom*), that ensures the glissando gesture is hidden within the clusters, and remains noticeable only with a visual representation of the form, whereas the other composers concentrate more on clarity of the individual glissandi.

One of the primary dialectics within Niblock's music is between convergence and divergence - *Five More String Quartets* is based on an elongated convergence towards unison octaves. These octaves form a syntactical closure, signifying the ending of the convergence. Interestingly, in *Tow by Tom*, this method is actually arrived at in the very centre of the piece (albeit a unison equal-tempered cluster, not octaves), before these notes diverge out again into larger microtonal pitch clusters. While octaves have been used as a syntactical closing gesture in many musics throughout history (notably to confirm a tonal centre established previously in the piece), Niblock's closing octave unisons are less of a gesture, and more of a logical thinning out of the thicker densities.

We tend to only realise that the final point has been reached only *after* we hear it, due to the downward motion of parametric values such as pitch density and dynamic. Niblock employs a completely linear syntactical closure – the movement towards unison is always rational, a logical continuation of previous material, rather than a sporadic gesture. Although this is the first time we hear the unison octaves, the clusters we have experienced throughout the piece have always bordered these octave frequencies, so, through rehearsal, the octave relationship has become more familiar. This affects our sense of our time passing, as perceived durations seem longer than absolute durations as we approach completion of a goal-oriented task.

In "The Time of Music", Jonathan Kramer states that "in music without phrases, without temporal articulation, with total consistency, whatever structure is in the music exists between simultaneous layers of sound, not between successive gestures. Thus, I call the time sense invoked by such music "vertical' ". This is a helpful term to describe certain static music, but when we read on we encounter statements such as "a vertically conceived piece, then, does not exhibit large-scale closure..."; this differs from what we know of Niblock's music. There exists a clearly apparent sense of closure in the sustained octave unisons. In this way, Niblock's music, while certainly exploring the simultaneous layers of sound and their interaction, defines its own aural experience through simple goal-oriented structures.

This octave closing gesture provides a link to an extension of convergence and divergence – that is, the changeability between stability and instability in the overall soundworld. While perceived unison pitches provide a certain stability, a pivot point within the global cluster, small microtonal clusters create an opposing instability, offering up a perceived dialectic. However, it is often very difficult to individually perceive specific pitches within the global structure, much less define pitch relationships within the soundworld. It becomes important to adopt a phenomenological approach to describing this music. Whilst the scores themselves contain all the information they need for performance, the actual *experience* of the piece is where many extra-notated events become actualised – we need to look *beyond* the notated score to fully understand this music. The music is constructed in such a way that acoustic phenomena will be prevalent in a significant manner upon performance, and so we need to explore how these affect our listening experience.

Chunking, an information theory term, is how we detect divisions within a message – for example a piece of music. We detect divisions by perceiving changes in parametric values, and then applying sectional boundaries to break the message into chunks.
In Niblock's music, there is very low informational change within primary parameters such as pitch, rhythm, timbre etc., as these tend to remain relatively static throughout a piece – apart from densities, which do transform gradually over time. With low information, the issue is the inability to chunk easily; our ability to arrange hierarchical phrase structures is lost, as is our sense of time-order.

The term "parametric values" can also be applied to extra-notational acoustic phenomena. These include audible beating patterns, high harmonics and both summation and difference tones; for this argument I will focus mainly on beating patterns created from multiple tones very close in pitch proximity.

We chunk these beating patterns into separate gestalts, and although we remain aware that these patterns have no long-term ramifications on the form of the piece (they are not in any way part of a narrative), their duration, speed, frequential register and dynamic all contribute to our grouping them into different sections. According to Bob Snyder, a change in a single parameter doesn't constitute a sectional boundary, but rather an articulation or variation *within* a section. So, if we hear a continuous transformation of speed in a beating pattern over a period of time, we perceive this as *articulation* in the gestalt; clearly we don't interpret this as some kind of narrative articulation, but we certainly attribute a value to it. Snyder uses the word 'syntax' to define sets of relations between identifiable patterns, and so we can perceive that syntax generated by different beating patterns. Returning to the idea of stability/instability, a clear dialectic is set-up between moments of pure global unison, and sections with beating patterns. Between these two states there are clearly a number of parametric changes occurring, so consequently we apply sectional boundaries, and perceive separate gestalts – although this does rely on these sectional changes lasting for a length of time longer than the limits of short-term memory, usually three to five seconds. Again, I should repeat that I am not implying that these sectional changes are in any way interpreted by us as teleological, or involved in a programmatic dialogue, but rather help us to be more successful in applying a hierarchy to different sections and recalling correct time-order.

It is the abundance and variation of these beating patterns and combination tones which I believe gives identity to Niblock's music. The aural experience, far from being static, is involved in continual shifts, creating multiple sectional boundaries and chunks of varying make-up.

In his book 'Music and Memory', Bob Snyder writes that "a message cues memory only to the extent that it cues something in a way we are not completely familiar with, and this is related to change or difference". Many other drone musics operate on *very* low information that exhibits no change or difference which leads to the use of the somewhat ethereal term 'timelessness' due to the lack of cues for memory, yet the variety in Niblock's music to the engaged listener gives enough change, enough opportunity for chunking, that recall functions can be employed and hierarchies created through comparative memory.

The use of live instruments in the realisation of these pieces is a significant contributing factor towards the unstable nature of the music. Unlike composers such as Alvin Lucier, Niblock is not directing the performers towards generating specific beating patterns in the sound; instead, he allows the beats to appear organically – brought about through different degrees of instructional specificity, as demonstrated in the two pieces presented in this paper. Refer back to Niblock's instructions in *Tow by Tom* for a note to vary very slightly in intonation from the one before, and that players should aim at a multitude of beatings. If this piece were constructed electronically, this organic instability would be in the control of the composer, and that is certainly not Niblock's experimental aesthetic intention. Even *Five More String Quartets* allows for this instability: the effect of a violin, aiming for 101 Hertz but drifting between 100 and 101 Hertz over a 50 Hertz tone creates these articulations, perhaps even sectional boundaries, propounding the dialectic of stability and instability.

Consequently our own subjective perception of the passing of time is affected: moments of instability, with parametric changes occurring, are described as taking up more memory space (although this is used as a metaphor rather than a physical description) than stable moments of low information. Thus, duration experienced during instability is perceived as being shorter, but remembered as being longer, whereas the opposite holds for sections of stability – perceived as longer durations, but remembered as shorter. The flux between parametric change and parametric stasis ensures our perception of both experienced and recalled temporality is also in flux; to paraphrase Jonathan Bernard, this is music which is *about* time".

I hope to have presented at least some evidence as to how identity can be established in drone and reductionist music; while various elements of Niblock's music have been explored thoroughly by other composers over the last fifty years, it is the single-minded combination of *all* of these elements which I believe provides an unique identity to the Niblock sound.