

Analysis of 'Internal Clock' by Monolake

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Introduction

Monolake's 'Internal Clock' was released on the 2009 album 'Silence' on the Imbalance Computer Music label from Berlin, Germany. The piece is an outstanding example of where contemporary dance music, which some might call electronica or IDM, crosses over with acousmatic composition traditions. The main elements of the work are arranged around a fixed metric grid in a 4/4 time signature and timbres associated with IDM are certainly present in the composition of the piece: synthesised kick drums, hi-hats, pads and drones. However, right from the outset 'Internal Clock' introduces sonic elements that behave in a way which is less akin to the synthetic sounds we hear inside more 'conventional' forms of electronic dance music, and are more evocative of 'real world' concrete sound elements which might be more typically associated with acousmatic music. The synthetic and the concrete sounds inside the work appear to have equal importance placed upon them which creates an interesting sonic relationship. Further parallels can be drawn with acousmatic music in the way that the sonic elements inside the work are arranged based on their intrinsic properties rather than extrinsic meanings associated with them. It could be said that way the sonic materials are not just concrete in origin but are arranged in a way that is also concrete.

As is the case with many works within the genre, space is treated as a primary compositional tool in 'Internal Clock' which results in sonic morphologies from the dry and close to reverberant and distant which generates tension and discourse within the work. All of the tracks on 'Silence' explore the ideas mentioned above, but because of the use of synthetic and concrete sound objects the pieces are almost always a combination of aural and mimetic discourse¹. Intrinsic

¹ As defined by Emerson in *The Relation of Language to Materials* Emerson, S. (1986). The Language Of Electroacoustic Music. London, Palgrave Macmillan.

(abstracted) sonic properties of the concrete sounds are used to create musical meaning but all are arranged using extrinsic (abstract) western musical forms such as time signatures and pitches. Rather than this combination being a compositional 'mistake' resulting in a mismatched sonic landscape, the fusion of synthetic and organic sound worlds inside a composition of this kind can create exciting and dynamic relationships as they combine. This analysis will explore some of these crossovers and begin to unearth some similarities between two forms of music which might be considered compositionally and stylistically quite distant from one another.

Methodology

The intention of this analysis is to employ selected current theory from the canon of electroacoustic thinking in order to explore a work which sits outside what might be considered to be a 'regular' acousmatic piece. Whilst I acknowledge that the distinction of what is 'regular' and what is not is difficult to define, the purpose of this analysis is to point out similarities of compositional ethos rather than differences. It is therefore outside the scope of this analysis to begin a discussion on why certain musics fall on different sides of a theoretical and very much blurred boundary. I also acknowledge that the composer of this piece, Robert Henke, is associated not just with the composition of electronic 'dance' music but all manner of musical activities from installations, multichannel performances, software development and academic thinking. However, rather than detracting from the value of this analysis I assert that this actually enhances its importance.

Within the work there are identifiable uses of mimetic sound materials which can be described and analysed using Spectromorphology (Smalley 1997). I am in no way suggesting that this piece entirely surrenders itself to acousmatic traditions, nor am I suggesting that we can describe all that we hear in the piece in terms of Smalley's theories. However, this piece inhabits an area within contemporary electronic music that blurs the boundaries between acousmatics and IDM/

electronica in a way that deserves some deeper investigation and analysis in order to uncover exactly what it is that we are hearing.

It is envisaged that this analysis will act as a point of departure for a wider analysis and discussion of the genre and will hopefully serve as a way of linking forms of exploratory electronic music together. This piece by Monolake was chosen due to its deliberate use of concrete sounds² and the way in which they interact with each other and the synthetic material within the work. This analysis seeks to explain the use of causality, growth processes and spatial movement within the work as defined in Denis Smalley's article 'Spectromorphology: explaining sound-shapes' (Smalley 1997). The analysis will also comment on the use of space frames (Emmerson 1999) and will include a discussion of how we can relate Emmerson's language grid to the piece.

The Acousmographe software was used to undertake this analysis and all images are from its spectrogram view.

Analysis

The piece starts out with a collection of mimetic sounds in a mid-distant space frame³ which have a loose causal relationship with drier-sounding metallic material which they introduce. The opening three gestures in the composition have an energy motion trajectory that suggests real world or concrete interactions are taking place with the sound-emitting objects which gradually come to rest. This interaction shifts from the opening timbre to a more metallic sound which indicates a link between the sound-emitting object and the object imparting the energy that causes the sonification to occur. As this timbral shift takes place the space frame moves closer as the more reverberant material gives way to sounds which are dry

² As defined by Pierre Schaeffer in 1948.

³ Documented in Emmerson, S. (1999). "Aural landscape: musical space." *Organised Sound* 3(2): 135-140.

and contain less low frequency content. This can be seen in Figure 1.1 below where the opening three gestures are shown in yellow/red on the left-hand side of the image with their associated tails, while the metallic material is the spectrally richer sound on the right-hand side of the figure.

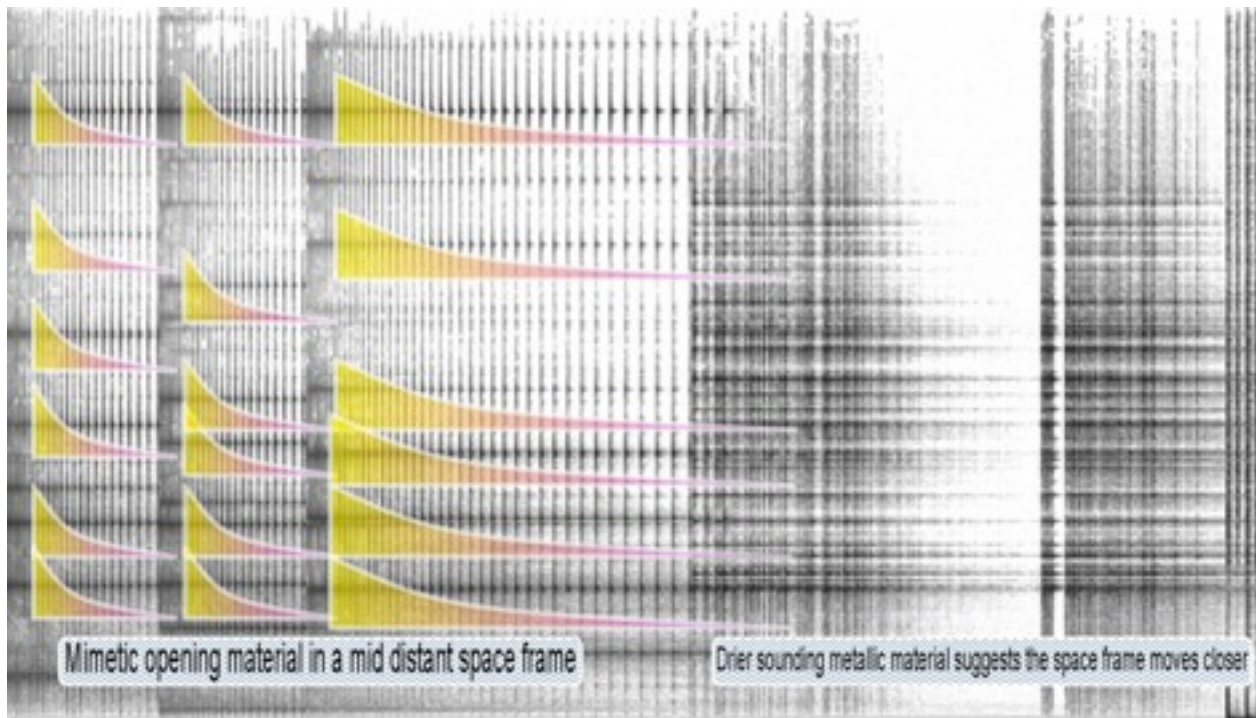


Figure 1.1. Opening section of 'Internal Clock' (00m00s - 00m14s)

At 14 seconds we hear the first sounds which can be described as having an abstract syntax in the form of a kick drum and hi-hat pattern. This collection of sounds is synthetic and percussive in nature and sets a familiar rhythm and time signature based structure which much of the rest of the material in the work is arranged around. Whilst these sounds are from a source not normally associated with spectromorphological behaviour, namely a drum machine, *some* subtle morphology is present within the arrangement of the sounds in the form of shifting timbral components. Rather than being a focal element of the work this subtle shifting of timbre creates an added sense of energy to the kick drum pattern.

At 23 seconds we hear our first very strong causal relationship between a gestural⁴, metallic sounding, concrete object which instigates the onset of a textural⁵ elongated synthetic sound. This forms a building block for many of the compositional components which follow where strong causality features at regular intervals of time, normally in 16-bar patterns. Whilst the piece remains primarily gesture-carried (Smalley 1997) there are textures which swell in and out of the mix and which exist in a distant field which Emerson might describe as being in a 'landscape' frame (Emmerson 1999). Figure 1.2 gives an illustration of this causality. In figure 1.2 the section in green indicates the mimetic/gestural metallic sound and the section in purple indicates the textural synthetic sound and its growth.

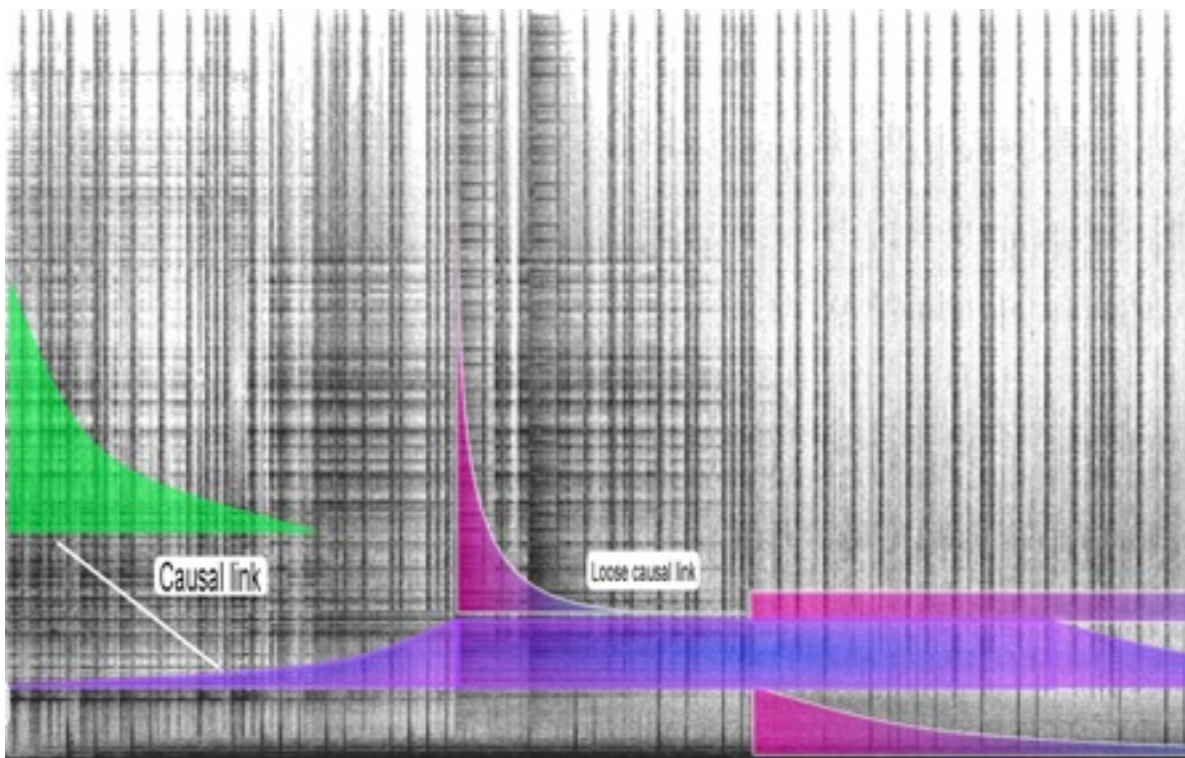


Figure 1.2. Visual representation of causality between gestures and textures (00m 23s - 00m37s)

⁴ As defined by Smalley in his 1997 Spectromorphology article in the heading 'Gesture and texture as forming principals'.

⁵ Again, relating to the same section as the previous footnote.

At 44 seconds into the piece we have the first appearance of a new sound object which is primarily abstract in nature, in that it contains intervallic pitches. However, this sound also has timbral mimetic properties and behaves like it could have been set in motion by a physical energy acting upon it which we might find in concrete material. In Figure 1.3 below this is indicated with a green zig-zag and a green arching line to illustrate the reverberant link between the sounding objects. As before, this sound instigates a textural synthetic element at 50 seconds which in turn sets in motion a series of clicks or cyclical sounds, illustrated in yellow below, which have the aural equivalent of slowing down or coming to rest. This is a good example of sound behaviour which might well be heard within more acousmatic music circles.

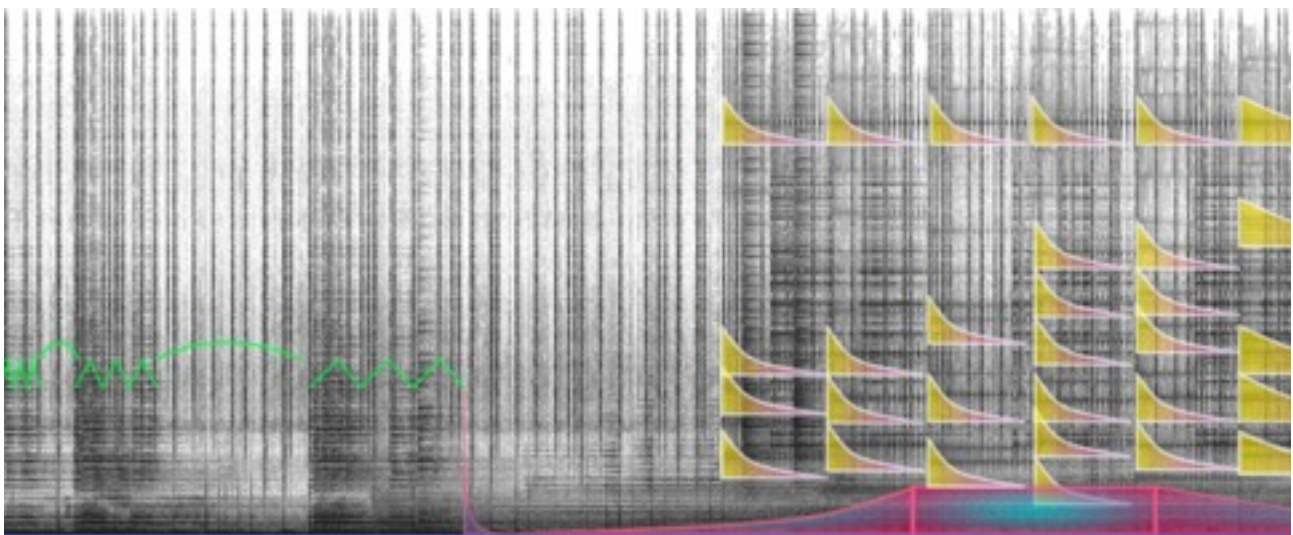


Figure 1.3. (00m43s - 01m04s)

Between 55 seconds and 1 minute 22 seconds there are a group of sounds that are highly structured and intricate. There are reversed elements within this section which are highly aural and textural as well as elements which behave in a more concrete mimetic way. Throughout this section the regular beats maintain a 'something to hold onto factor' (Landy 2007) and the textural elements maintain an unmoving static feel to the work whilst maintaining a distant space frame at a landscape level.

The piece continues to evolve based around a 16-bar structure which is punctuated by an off-beat synthetic sounding open hi-hat or noise-based percussive sound which sits at the end of the 16-bar phrase. This sound sets up many of the causal relationships within the work which in turn encourage other elements to spring into spectral life. This is clearly evident between 2 minutes 17 seconds and 2 minutes 45 seconds which is illustrated in figure 1.4 below. The beginning of this phrase is set in motion by the previously mentioned synthetic sounding open hi-hat; causal linkage between these elements is prominent in this section. Towards the end of this phrase spectral life appears to die down over time only to be re-energised by the next repetition of the synthetic-sounding open hi-hat at 2 minutes 45 seconds.

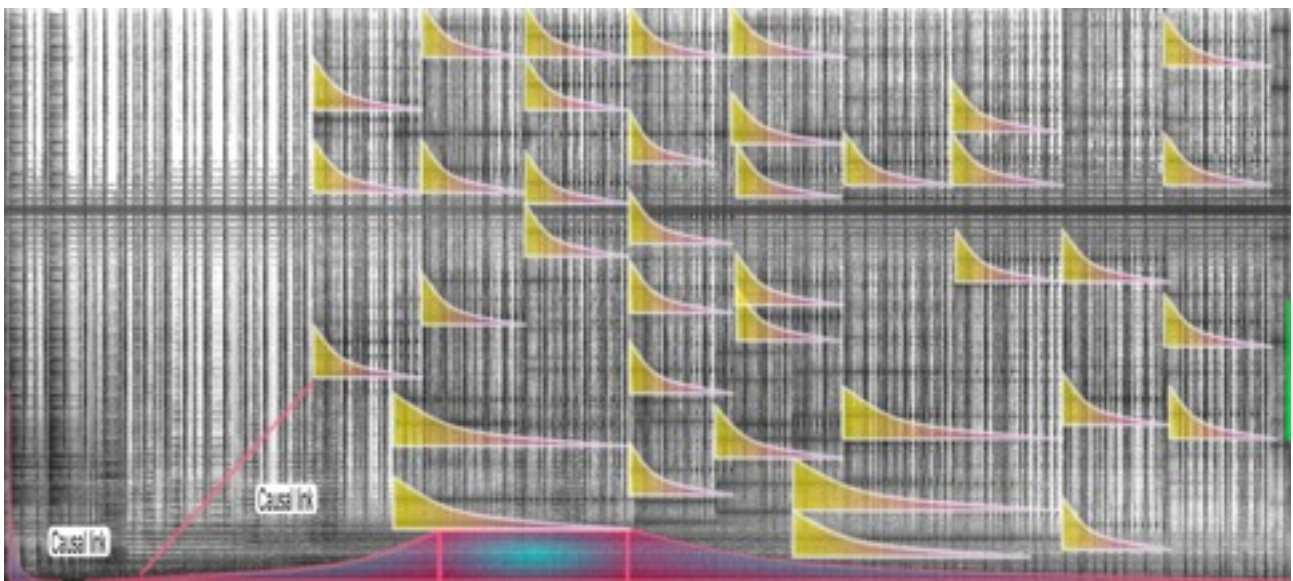


Figure 1.4 (02m17s - 02m45s)

The same could be said for the section between 2 minutes 45 seconds and 3 minutes 12 seconds. Again, there is a repeating 16-bar off-beat open hi-hat pattern and strong causal relationships are evident inside this phrase; local and distant sound frames are present and there is a musical dialogue happening between the sounds which are inside a local frame (dry/gestural) and distant frame (reverberant/textural).

The sound first heard at 3 minutes 49 seconds instigates a brief compositional shift. This very percussive gestural sound behaves as if something is striking it and then coming to rest due to lack of input energy. This behaviour is spectromorphologically related to the series of clicks or cyclical sounds that were heard first at 55 seconds and at other points dotted around the first half of the piece. This new sound then undertakes timbral shifts and movements through various space frames from a local level to a distant frame reaching a very distant space by 4 minutes 20 seconds. The sound is then transformed into a new sound object at 4 minutes 32 seconds which takes over this space frame and behaves in a similarly spectromorphological way to the sound preceding it. The spectromorphological attributes here are clearly linked and the space frame 'take over' appears to emphasise this linkage between sound objects. This behaviour where objects are set in motion and then left alone to come to rest is certainly a compositional theme within the work, again pointing towards the links this piece has with more acousmatic music traditions. There appears to be a dichotomy in the piece between the sounds that seem to behave in a more Newtonian way⁶ and the unrelenting rhythmical elements of the piece which do not behave in the same way as the more mimetic/concrete sound materials inside the work. This inclusion of both concrete and synthetic sounds and their structural relationship within the work serves to create tension and release. Further to this the concrete, abstracted, gestural sound element that was introduced at 4 minutes 30 seconds forces out the abstract sounding objects creating a short-lived mimetic section between 4 minutes 46 seconds and 5 minutes. This shift from aural to mimetic discourse creates a powerful sense of tension to the piece which is then resolved by the return of the percussive synthetic elements at 5 minutes.

From 5 minutes onwards the piece uses similar structuring elements to the first half of the composition based around the 16-bar phrase. Causal relationships feature strongly and the gesture-carried focus remains to the end of the work in the

⁶ Relating to Isaac Newton's third law of motion "To every action there is always opposed an equal reaction." Elert, G. (2011). "The Physics Hypertextbook." Retrieved 1st November, 2011, from <http://physics.info/newton-third/>.

form of programmed drums and transient sounds punctuating the more textural elements of the work. The piece draws to a close with the mimetic material from the start of the piece finishing the composition at a little over 8 minutes in duration.

Conclusion

This analysis has shown that it is possible to employ theories from acousmatic music practices and apply them to musics that sit outside what might be deemed as 'regular' acousmatic musical thinking. Whilst this work uses regular tempo and time signatures to structure and carry the musical material inside the work it can clearly be seen that spectromorphological thinking can be employed with conviction inside a piece such as this which is bound by the rules of time signature and meter. Whilst the use of concrete sounds inside more commercial forms of music is not a new phenomenon by any stretch, the way the sounds are used inside this work, and many others like it in the IDM tradition, is much more closely associated with the practices that are present in musique concrète. The sounds are not used as referential tools to extrinsic meaning, but rather are concerned with the intrinsic properties of the sound that can be used to create meaningful musical relationships within a piece. This indicates an elaborate compositional approach, conscious or not, which goes beyond the simple inclusion of a sample or field recording; and one which is bound up with the ideas of reduced listening and Schaefferian theory.

Bibliography

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Appendix

More information about Silence by Monolake can be found here:

<http://www.monolake.de/releases/ml-025.html>