

Decision-making in Improvised Music

Abstract. How can instrumental music that relies solely on texture for its direction be explained contextually from a teleological standpoint? In order to examine musical, cognitive, cultural, and ideological perspectives, a re-evaluation that does not only rely on accepted norms is needed.

In improvised music where the outcome of musical motion is unknown at the outset, a sense of narrative is always present within audible signs. Here we move into the philosophical realms of transvaluation and semiotics for formulative and presentational perspectives.

Sound-based instrumental music procedures are based around creating a texture from extended techniques, and strategies are built by managing tension and relaxation in unconventional ways. For example, textural ambiguity within the transformed sound event, caused by the qualities inherent in the morphology, is often intentional in the musical movement. We will investigate how pressure and dissipation are accomplished; the interplay between expressions of uncertainty and lucidity can manifest in various ways. In other words, an exploration into how the passage of sound events and aural expectation become projected strategies.

With the focus on extemporisation, a recent video produced by Kay Grant (voice) and Martin Vishnick (classical guitar) will be used to illustrate. Apprehending the music from the two instruments masked by video manipulation will show how making decisions and choices through single, successive, combined, and superimposed sounds produces a way of comprehension through a sense of coalescence.

Keywords: improvisation, sound-based, spectromorphology, narrative, interdiscipline.

1. Introduction

In this paper, I will be reporting on related topics from my research into decision-making in music that involves improvisation. It amounts to an appraisal of areas that come into consideration for more detailed future research.

There is now evidence of a large canon in the freely improvised arena. This is mainly historically manifest in recordings and descriptive writing. Significant studies can be found in various places. For example, the London Improvisor's website and David Toop's book *Into the Maelstrom*. I have laid out more details in an appendix. The content of this article is grounded on a recent online broadcast by Kay Grant (voice) and Martin Vishnick (classical guitar) called "Reciprocal Parallels"; the production was first aired on 14 September 2020 during the programme *Freedom: The Art of Improvisation*.¹

Initially, we will explore the sounds before moving on to including the images. To examine and re-evaluate the product of sound and image from a teleological standpoint we look into musical and cultural perspectives, and move past accepted norms; we will also touch on some cognitive and ideological aspects. Furthermore, for a satisfactory outcome, the dependency on building meaningful and successful musical textures is paramount. To this end, an exploration into how the motion of sound events and aural expectation become projected strategies is needed.

We will concentrate on the genre termed 'sound-based music'. As summarised by Leigh Landy: "*Sound-based music* typically designates the art form in which the sound, that is, not the musical note, is its basic unit" (Landy 2007: 17). It is obvious that music grounded on notes is constructed on the standard Western paradigm, fixed on a grid system. Trevor Wishart calls it a 'Lattice' system; however, he reminds us that "music does not have to be lattice-based at all" (Wishart 1998: 11). Music based on sound is rooted in timbres heard every day, and includes sounds that may fall between the standard Western notes (see Vishnick 2015: 150).

Sound-based instrumental music procedures focus on creating texture from extended techniques, and strategies are built by managing tension and relaxation in unconventional ways. For example, textural ambiguity within the transformed sound event, caused by the qualities inherent in the morphology of the extended technique, is often intentional in the musical movement. We will investigate how pressure and dissipation are accomplished; the interplay between expressions of uncertainty and lucidity can manifest in various ways.

From a fundamental pedagogical point of view, the reason for learning to play and control extended techniques is that these sonic designs help musicians create textural motion during improvisations; creating

¹ "Reciprocal Parallels" is a live Zoom improvisation and recording. *Freedom: The Art of Improvisation* sessions (usually held every second Monday of the month in London at the Vortex Jazz club) is curated by Orphy Robinson, Cleveland Watkiss, Tori Handsley and Paul Bradshaw – <https://www.facebook.com/587484409/videos/10159202498379410/>

textures to aid musical outcome is why extended techniques exist in managing goals. In support of this point, in *Free Composition* Heinrich Schenker mentions: “The goal and the course to the goal are primary. Content comes afterward: without a goal, there can be no content” (Schenker 1977: 5). In my performances, a musical event begins and instinctively I feel drawn forwards, anticipating and allowing textures to unfold.

Vocal and guitar morphologies will be used to delve deeper and we will look into musical textures, behaviours, narratives, and interdisciplinary endeavours. I will be touching on many and varied points, and include relevant references.

2. Texture

Given that sound-based instrumental music procedures are based around creating texture from extended techniques, for an all-encompassing view we can look to Denis Smalley’s work on *Spectromorphology*, a term he invented for defining sonic phenomena. Smalley developed the concepts and terminology as tools for describing and analysing the listening experience, particularly interaction between sound spectra (spectro-) and ways they alter and are shaped through time (-morphology); they are entirely interdependent. He says: “Something has to be shaped, and a shape must have sonic content” (Smalley 1997: 107). We will see that this term is especially fitting here as the terms also belong to other disciplines, such as visual, and semiotic, for instance.

Inspired by Smalley’s work, my thinking is to provide a framework for understanding structural relations and behaviours as experienced in musical flow. Here we can look at classifying morphologies from certain vocal and extended guitar techniques in relation to the archetypal attack/resonance/termination model, and variants of the archetype. My approach is to set out spectral and morphological models and processes (see Vishnick 2014: 5).

2.1. Functional structures of motion and growth

Expectation is an integral function of musical structures. Sound-based music is not alone when it comes to the outcome of probable designs, which are also part of cultural associations and the spectral changes perceived in many sounds. Smalley tells us that, “during listening, we attempt to predict the directionality implied in spectral change” (Smalley 1997: 114). For example, is this gesture leading to something else, or staying the same, will it merge with another sound or be interrupted unexpectedly, and so on.

onset	– attack, upbeat, downbeat, anacrusis, departure
resonance	– decay, maintenance, transition, phases, refraction, extension, damping, horizontal and vertical surface
termination	– relative silence, close, release, interruption, arrival

Figure 1. List of possible functions

In Figure 1, I have expanded archetype and variant morphologies into a list of possible functions used to interpret the significance of musical events and situations; for example, attention could be focused on types of textural growth or motion processes. A good instance for us is in the opening few seconds of “Reciprocal Parallels”, where the guitar starts with short muted morphologies that are weighted towards noise before high-pitched short vocal sounds occur. From the information in Figure 1, we can say that the *onset* of the muted morphologies is an attack followed by a very short damped *resonance* with *termination* to relative silence.

Another example that features the guitar occurs at one minute nine seconds. It comprises two “snare drum” sounds that can be explained based on trajectory occurring after an attack; utilising strings five and six, a downward microtonal glissando played at the twelfth fret that lasts approximately one second is followed immediately by a refracted resonance. The sound is interrupted by a subsequent shorter similar morphology that maintains its relative pitch for approximately half a second.

Therefore, these possible functions for motion and growth are extremely useful for considering sound-based discourse. We can no longer depend on traditional concepts of rhythm and notes to describe gestural contours when textural motion is expressed through extended techniques. Furthermore, sometimes sounds prompt me to listen to motion and growth processes outside music; therefore, it is important to think of these kinds of connections. Smalley reminds us that: “Since motion and growth have spectral contours, they

are set in spectral space” (Smalley 1997: 115). Consequently, some of the terms used in Figure 1 are symbolic of something else. Furthermore, as the sounds reside in spectral space and possess spectral density, inclusion becomes important. An example in spectral space would be when morphologies may overlap or perhaps collide. This impingement is directly related to motion and growth processes.

2.2. Behaviour

Using the word ‘behaviour’ is apt here as it allows us to develop a system to describe relationships amid varieties of morphologies that act within a musical flow. As a listener, my behavioural relationship recognition in a sound-based context is intuitive; in turn, this affects personal reacting and interpreting habits.

In the type of freely improvised music we are dealing with here, the freedom of morphological content, function, and motion serves as a referential supply, which changes over time. We can look at motion in respect to horizontal and vertical aspects of events through energy and trajectory; the context being the urgency of onset rates and the type of motion that ensues. An important feature of sound-based behaviour is where an event seems to trigger another or alter concurrent sounds.

Motion coordination in terms of vertical synchronisation – sense of proximity, togetherness expressed along a tightness/looseness axis.

Motion passage in terms of horizontal dimension – morphological direction intensity expressed as degree of energy-motion trajectory.

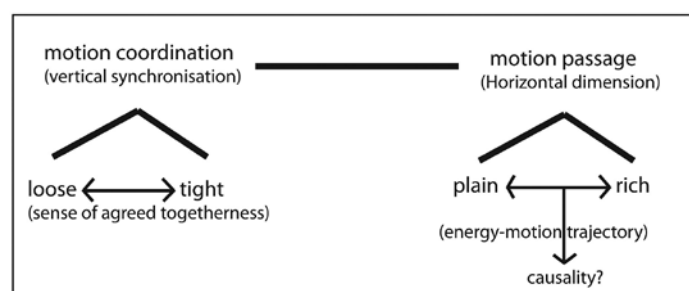


Figure 2. Motion coordination and passage

From Figure 2 we can see that a passage of motion in the horizontal dimension engenders an energy-motion trajectory, where the determinant factor is how one event appears to cause the onset of a successor or alter a coexisting event in some way; the process of one context can give way to the next. The gestural strength is directly related to how closely together the events occur within the vertical plane, factors that can be analysed as structural goals.

We note here that functional attributes to a particular context or event are not a simple cognitive process. Structural levels and effective actions of satisfactory hierarchical variety are decisions for the perceiver (see Smalley 1997: 114–115). An analysis will be based around interpreting behavioural relationships such as sounds that dominate or are subordinate or depending on their function in the discourse, perhaps ones that conflict. For example, two dominant sounds could vie for supremacy, or one may become conflicted, however, they both coexist. There are many scenarios.

In the *motion coordination (vertical synchronisation)* section, we have a sense of proximity, togetherness, expressed along an axis of looseness to tightness; we note there is always the possibility of internal change. For the *motion passage (horizontal dimension)* area, morphological direction intensity is expressed as the degree of energy-motion trajectory along a continuum of plain to rich; textures that can be described as plain and distant but full of interest to complex and pithy. Generally, strong determinant factors rely on musical gestures and coordinations that may be regarded as structural outcomes.

Moving forwards, we can take inspiration from Fred Lerdahl and Ray Jackendoff’s work in the music theory field, as aspects of their studies may prove useful for interpreting sound-based music. In short, according to its authors, the purpose behind *A Generative Theory of Tonal Music* is to “present a substantial fragment of a theory of classical Western tonal music” (Jackendoff and Lerdahl 1983: 4). Lerdahl has continued to expand his theories, in the book titled *Tonal Pitch Space* (2001), for example. The eventual goal is a theory of

musical cognitive capacity, with the proposition of a grammatical rule system as part of the analysis. Since its inception, *A Generative Theory of Tonal Music* has inspired many researchers and commentators (see Appendix 2).

Lerdahl writes about the development of a system capable of dealing with atonal music hierarchically by looking into pitch space as a mode for atonalistic structures. He argues for replacing the stability of the time-span component with “salience conditions” for dealing with the ordering scheme systems within serial music. As salience is often used in neuroscience for contrasting noise levels and in the visual system context, it may prove a useful research area for sound-based music that is tied to moving images.

For analysing sound-based structures, I can see problematical areas in Lerdahl’s model. For example, calculating the perceived distance of related sonorities in reference to interval-class content may not be appropriate for dealing with purely sound-based passages, especially where the noise to pitch ratio is high. However, developing his theories on detailing stability conditions further could prove valuable. Lerdahl’s thinking on surface tension, modes of attraction, and durational structures would be useful as part of a strategy for dealing with the pitch content within sound-based music. I will look at this for possible enfoldment into the ongoing development of my all-inclusive approach to studies of the morphology of sound, looking seriously into the areas of spectromorphology, spatiomorphology, spectral qualities, performance space, and performance aspects.²

Of course, it is possible that in sound-based music, the traditional pitch can be an important factor, especially the functionality issue of consonance and dissonance within pitch-oriented situations. Smalley explains this issue very well:

“The spectral components of the note remain largely unheard, or at least ignored because it is the note itself which matters most to the context—the note and its colour are perceptually fused. An alternative view (as permitted, for example, by a close recording of an instrumental note), takes the ear inside the note so that spectral components can be heard” (Smalley 1997: 119).

So, from an alternative view from inside a sound (for Smalley this is common in acousmatic music), pitch relationship components can be comprehended. For our study here, we note that predominantly harmonic relations will be present within vocal and guitar notes, taking into account the weighting of components of the harmonic series. We have a duality between a note when heard externally, and a sound with more complex elements when entering its interior. Furthermore, this internal spectral focus is an area for musical development in the sound-based arena for improvisers, especially when amplification is used creatively.

On occasions, pitches may move very quickly and it becomes difficult to hear intervals, or they become superimposed and dense, pitch perception significance can easily cease. Therefore, we must find a method for differentiating between intervallic and relative pitch; for the former, we can differentiate pitch-oriented intervals, for the latter we are dealing with perception within spectral space.

Approaches to merging intervallic and relative pitch are common in sound-based music. For the composer, performer, and listener, judging borders between intervallic and relative is equally valuable. Defining this boundary is not easy, as it is directly related to perceptual skills, and if pitches are present it will culturally be a natural auditory focus. Smalley tells us: “In intervallic pitch we can hear pitch-intervals, and therefore their relationship to cultural, tonal usage will become important. In relative pitch contexts, we hear with much less precision the distance between pitches and can no longer hear exact pitches or intervals in spectral space” (1997: 119). The result is an inclination to follow note combinations within gestures and motions.

It should also be noted that there is a need for more than a single pitch for it to become perceptually relevant. There may be circumstances where the pitch is a recognisable quality of a morphology, without another pitch to relate to there can be no intervallic relationship, making the sound a background factor. However, contextually there may be other significant morphological attributes.

² For the early stages of the author’s research see *Sculpting Sound on the Classical Six-String Guitar, volumes 1 and 2: A Survey of Extended Techniques with Appended Studies in New Morphological Notation* (2015), published by Create Space. – https://www.amazon.co.uk/Sculpting-Sound-Classical-Six-String-Guitar/dp/1514651157/ref=sr_1_1?ie=UTF8&qid=1446021250&sr=8-1&keywords=martin+vishnick.

More recent developments of the principles and theories into the morphology of sound can be found in *The Morphological and Audiative Interconnectedness of Sound: Equivalence in a Multidimensional Soundscape* (2021), published by ART-platFORM – <https://art-platforma.kmaecm.edu.ua/index.php/art1>.

3. Narrative

In sound-based improvised music where the outcome of musical motion is unknown at the outset, a sense of narrative is always present within audible signs, an imagined history in sound may be perceived by the listener. Here we move into the philosophical realms of semiotics and transvaluation for formulative and presentational perspectives.

In order to engage with the characterising details of musical flow, an awareness that narrative qualities have a wider representational context that connects to a personal referential code becomes important; narrativity infers the capacity to generate an imagined story world.

Ideas for ongoing narratological analysis development are necessary; therefore, finding ways to investigate communicating the concurrent events through their journey is useful. For example, analysing practices that may be used to better articulate the symbiosis between music and image that can be associated with sound-based music structures. In *Essays on Sound and Vision* John Richardson and Stan Hawkins talk about the interdependence of musical and cultural texts in relation to one another, and the assumption of an absence of fixed boundaries: “In a sonic text, other sonic texts are always present with the text, and as a temporal event, musical sound is produced as a mediator of values in relation to other texts” (Richardson and Hawkins 2007: 17). When considering how a text exists in relation to others, it is not only related to other similar genres, but to all audio-visual proceedings. How we read a series of actions or events is inexhaustible and only becomes meaningful through active reading.

Trying to properly describe the cognitive space of anyone involved in producing or listening to music is a problematic area. Research into the way that musical discourse may actuate personal traces of thought patterns and imaginary possibilities is a possible way forward. We should also note that awareness for the listener of extreme intensification of morphological activity could lead to deconstructive reasoning arising from the occurrence of the complexity of events. This is a meaningful point as although we can say that the more avant-garde practices may introduce disruption to the events, yet there is still a narrative purpose even if it seems to be very difficult to decipher.

If we wish to develop a theory of musical narrative for this genre, there is a need to look into the use of signs from a teleological standpoint. This means an examination of the critical role played by the interpreter’s perceptual, cultural, and ideological frame of reference in formulating and presenting an interpretation.

If we attempt to relate narrativity to culture and ideology, many fundamental questions arise for listening to sound-based musical structures. For example, in *New Sounds, New Stories: Narrativity in Contemporary Music* Vincent Meelberg mentions the possibilities that lie behind the narrativisation of cultural expression regardless of the creator’s intentions (see Meelberg 2006: 197). Moreover, when talking about grasping contemporary musical forms he says, “listening competencies are not fixed, but change along with cultural changes” (Meelberg 2006: 208). However, to comprehend contemporary music it becomes necessary for the listener to make an effort to learn new musical conventions.

The pedagogical development of learning to deliberately devote oneself completely to listening and explore instinctive paths that lead from the purely sonorous to the essentially musical is one of my goals. Research in this area has to lead me to link with the *Deep Listening* principles of Pauline Oliveros and the *Reduced Listening* practice expounded by Denis Smalley.

Through cultivating methods of apprehension unhindered by preconceptions, Oliveros tells us: “One of the Deep Listener’s goals is to listen to each and every sound exactly for what it is, nothing more, nothing less” (Oliveros 2005: 4). Engaging with Pauline Oliveros *Deep Listening* principle we can learn to, “remove cognitive filters in order to experience deeper forms of audition” (Ibid.). My intention is to develop tools to describe the features of perceived sounds, and explain how they work in the context of the music.

For an all-inclusive approach, a method for aurally recognising small changes in timbre is useful. Here we can tap into existing electroacoustic research, in particular the concept of *reduced listening*.³ This type of concentration occurs through focused and continual listening. For Smalley, “it is an investigative process whereby detailed spectromorphological attributes and relationships are uncovered” (Smalley 1997: 111). In order to pay full attention to refining the detail and quality of sounds, the listener tries to suppress any distractions. Smalley again: “Reduced listening is, therefore, an abstract, relatively objective process, a microscopic, intrinsic listening” (Ibid.). Therefore, concentrating on the characteristics of the sound is essential.

³ Reduced listening is a Schaefferian concept. See Schaeffer 1966 for a full discussion.

Smalley and Oliveros concur as they focus attention on how listening is an act of cognition; it can shape perception. This form of perceptual scrutiny is generally employed in the creative process. I believe it is important to bring this type of listening into the performer–listener and audience–listener arena.

From our discussion, we can see that sonic events may convey extra-musical connections that can mean many things. However, for our survey here we will concentrate on actions that relate to the two musicians. For example, the vocal sounds mean that a person created them; our internal image of someone denotes the production of these events. Aki Pasoulas tells us that listeners “are able to detect the source–cause because the sound reveals through its spectromorphology many properties of the medium with which it was produced” (Pasoulas 2011: 48). On many occasions in “Reciprocal Parallels”, the two performers are responding to audio cues that are a semiotic basis for producing morphological outcome. For example, at circa eighteen seconds the voice is emulating the guitar gesture shortly after its initiation; the singer is using the guitar morphology as a cue for a signing procedure. Then slowly the two parts start to diverge and transform into quite a different texture.

The resultant musical narrative is grounded on the commonality of the performers’ musical experiences, and there are many points of commonality. For example, both players have previously worked in a variety of genres, bringing these multiple influences to bear in the improvisation with a resulting depth of stylistic choices; both practitioners accept the notion of silence as a strength within the musical flow, and an acceptance to allow humour in music as an important aspect. The dignity and seriousness of purpose are countered by surprise and playfulness, and these attributes help to create a type of music filled with ideas, always shifting yet balanced with stillnesses that keep things buoyant without being too dense. The range of dynamics and textures, moving from softness and gentleness to more sudden bursts and expressive interjections, help to create a feeling of the story.

3.1. Interdiscipline

Let us now look closer into including another practice with the music, namely moving images, and focus on the commonalities shared between music and visual arts with an emphasis on contemporary art approaches.

As with all the arts, the visual arts are an essential part of any well-rounded curricula. We look to the expressive qualities inherent in both visual art and music that contribute to positive enhancements in social-emotional learning and student engagement. Through their inherent expressive qualities, we can delve into contributions of positive enhancements in apprehension, an area for pedagogical concern. We can seek occurrences where visual artists have been inspired by music. For example, Nick Cave has used pencils, mops, raffia grass, and a variety of other materials that when worn create subtle sound through expressive movement. These materials can be used and modified as materials to make sounds.⁴

Concerning a title for this genre, in conversation with Rodrigo Sigal, who works in this media, he says, “the best definition I have heard so far is *visual-music*”.⁵ Fundamentally, the purpose of this art is to create value by superimposing artistic visual techniques on sound, or vice versa. This is where a narrative is shaped through vision and sound to form interdisciplinary meaning. Within this medium one can develop devices that reflect and influence creative interpretation; we can play with allusion, quotation, calque, pastiche, and parody, for instance. These references may be influential for reappraising the composer/performer/listener arena and add layers of depth to the successions of events.

Here I would like to connect certain aspects of Byron Almén’s thinking on evaluating musical narrative principles and apply them to the realm of visual music, especially when it comes to a sound-based music perspective; in particular, when he talks about conceptual considerations. We can think about placing musical narratives beyond instrumental music and link to the emotive trajectory of the visual narrative; experiences and sentiments caused by the performers that are particularly acute in audiovisual settings, especially as the visuals in “Reciprocal Parallels” are so closely linked to the music. In his paper “The teleology of the sign user”, he argues that “narrativity in music can be productively understood according to the principle of transvaluation” (Almén 2014: 1). This principle can be explained as the critical role played by the interpreter’s cognitive, cultural, and ideological perspective in formulating and presenting an interpretation, and therefore describes the user in a teleological manner.

⁴ Nick Cave is an artist and educator working between the visual and performing arts through a wide range of mediums including sculpture, installation, video, sound, and performance. His best-known work in this area is the *Soundsuits* series, costumes that completely cover the individual’s body, see <https://nickcaveart.com>

⁵ Taken from an email of 22 February 2020 between Dr Rodrigo Sigal and myself – <http://15.cmmas.org/cvs/dr-jorge-rodrigo-sigal-sefchovich/>

Articulating a narrative-based theory for visual music will inevitably be complex. The integral features of the two media will obscure the disparate functions through which they are typically non-ambiguous. Usually, the related dramatic events are realised immediately by the characters, and musical narrative generally displays changes in ordering configurations through time. However, in “Reciprocal Parallels” we move into a mysterious arena where the visual blurring of the characters and the abstract nature of the music eschews a hyper-real identity. We may perceive the proceedings as real, though potentially unreal.

When viewing the narrative in “Reciprocal Parallels” in a general sense, the notion of one single correct interpretation of a work is abandoned and sensitivity to context is encouraged. We can move beyond a general usage and consider ways in which visual music may be more fully characterised; in particular, the fundamental formative roles such perspectives can play in shaping and directing interpretive details. Through technology, we can explore the interactive potentials and functions of music in combination with other narrative media, in our case film. It has become obvious that the computer screen has become a dominant medium for communication. We can now question how meaning is constituted within the interaction of different media, hence the importance of up-to-date research of visual music.

With the production process used in “Reciprocal Parallels”, the diegetic sound originates from within the film; perception of these sounds will affect one’s senses. The sound may be presented within the visual source, or off-screen. Here the visual aspect arises from the initial improvisation session but was reinitialised later. Moreover, in a showing of the film, we may perceive the visual and sound as a oneness, or separation if the speakers are remote from the images. The impact of apprehending both aspects may feel it has a linear or non-linear communication. This raised further thoughts: Does the discourse relatively possess a unified and coherent narrative, or the suggestion and the possibility of an alternative yet still viable narrative? The detail of these points may be for another paper, and studies in this area may be found.⁶

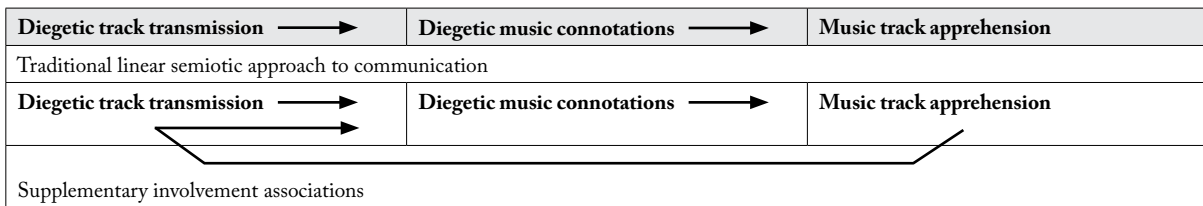


Figure 3a. Linear or non-linear pathways

Diegetic track transmission	Diegetic music connotations	Music track apprehension
Where simultaneous recording of sound and image occur	Recording seems simultaneous, but in reality is synchronised later	Recording and post-synchronised are separate
When image and sound are coherently related	Image and sound are synchronised precisely	Image and sound are related thematically, emotionally and rhythmically
Occurrence of natural sounds	Music appears to be from the natural world	Environmental music
Referentiality	Image and sound refer to something, for example, like in a dream	Dream like
Real	Real and imaginary coalesce, perhaps ideologically-based	Imaginary

Figure 3b. Supplementary involvement associations

Figures 3a and 3b draw the events together. Grasping diegetic track transmission nuances, diegetic music connotations, and music track apprehension may capture the various scenarios; plus, there is an expansion on the possible associated relationships. The diagrams show the conventional chain of semiotic communication and contributory involvement interconnections. However, we can see that involvement in the nature of

⁶ I would like to point to the reader two contemporary studies into the ambiguity of bifurcated musical narrativity, where the mixing of media generates a range of relationships; *Telling Tales: A Survey of Narratological Approaches to Music* by Russell Millard, 2018, pages 33 and 34, and *Essays on Sound and Vision* by John Richardson and Stan Hawkins, pages 15 and 16.

visual music leads to the creation of additional or entirely new meanings other than those originally intended by the improvisers. Changes in reception and transmission may occur. For example, the original comprises a video and two performers, but through own experiences, additional meanings may occur that produce supplementary connotations.

In the video “Reciprocal Parallels” by Grant and Vishnick commonalities may be apprehended; for example, a belief in the validity and strength of mixing melodic and textural contributions in improvisation. Grant was the moving-image artist for this work, and she had a vision of how the flow was to be presented using the original Zoom video as the source. In her words:

“The visual space has been manipulated into four quadrants: upper and lower halves for Martin/Guitar on the left and Kay/Voice on the right. Each quadrant has then been divided into a series of 200 vertical strips. The colours have been treated to create a richer visual experience”.⁷

It becomes obvious that the organic and dynamic strips that Grant mentions are, in fact, the two performers playing and singing in our respective environments, namely respective home studios. From observing Figures 3a and 3b, we can say that the contents of the video portray diegetic music connotations that have supplementary involvement associations in a recording that seems simultaneous but in reality, is synchronised later.

4. Concluding remarks

Morphological thinking is concerned with the perception of spectral energies and shapes in space, their behaviour, motion, and growth processes, plus their relative functions in a musical context.

For the musician or listener who is not used to sound-based music the detail of morphological description may be difficult to follow, however, there is a vast amount of work in this genre. A fundamental principle of music based on spectral morphology may be easily understood as being founded on our experience of sound apprehension. However, some extended techniques morphologies can sound remote from the source. We can see that this derivation is from a shared common base that provides a framework for individual and cultural work. Examining these links is important for all concerned and the language needs to be discovered and defined within a shared natural–cultural basis to make sense.

In order to help understand why and how the music exists, the workings of a sound-based discourse must be explained at some stage; this will also enable a means of articulating problematic reactions to particular work. This is especially important to music that is strange to comprehend immediately to a lot of listeners, particularly since traditional instrumental and vocal gestures are often absent or not immediately apparent.

Creating textures in the visual-music arena that may or may not be fulfilled by internal representation can cover a wide range of associations; therefore, human agency is required to create narrative interest. Furthermore, for me, a narration involves at least some sort of indeterminacy to create suspense, which serves the characteristic musical attributes and processes of shaping the outcome, and is played out within the various aspects of the stylistic improvisational convention and normative practice to serve either deterministically or teleologically; it is here that we garner significant discursive attention.

The next line of a research enquiry into developing the pedagogical potential embedded in this paper will be to look into correlations between Smalley’s spectromorphology principles, Lerdahl’s timbral hierarchy systems that entail salience and prolongation, and the authors work on morphology; with the goals of collecting relevant data and postulating the possible results for a comprehensive sound-based musical theory, where ordering can be redefined for morphologically oriented musical structures.

The investigation would cover the shaping of sonic content by looking into the implications of spectral change, moving beyond models rooted in standard pitch theory, and structuring archetypal and variant sounds based on the perception of morphological sound designs. For now, we have the elements to start contemplating building a theoretical system for music based solely on sound, where pitch content forms only part of the analytical content.⁸

I am going to finish with a perceptive statement by Kay in regard to the collective improvisation endeavour associated with “Reciprocal Parallels”: “The result is predicated upon our interpersonal interaction, our shared experience, our backgrounds, our inspiration, our listening and our response in the moment.”⁹

⁷ Taken from an email between Kay Grant and myself on 24 October 2020.

⁸ This would be building on Landy’s theory of note-based versus sound-based music, see Landy (2007).

⁹ Taken from an email between Kay Grant and myself on 24 October 2020.

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Appendix 1

The list below links to important information on the genre of Free Improvisation; varied sources are referenced. However, it is by no means extensive.

Books

- Bailey, Derek (1980). *Improvisation*. UK: Da Capo Press.
- Richardson, John and Hawkins, Stan (2017). *Essays on Sound and Vision*. Finland: Helsinki University Press.
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- Toop, David (2019). *Inflamed Invisible: Collected Writings on Art and Sound, 1976–2018*. UK: Goldsmiths Press / Sonics Series Publisher: London: Goldsmiths University.
- Watson, Ben (2013). *Derek Bailey and the Story of Free Improvisation*. UK: Verso Books; 2nd revised edition.
- Wigram, Tony (2017). *Improvisation: Methods and Techniques for Music Therapy Clinicians, Educators, and Students*. UK: Jessica Kingsley Publishers.

Magazines

- Zorn, John (2000). *Arcana: Musicians on Music*. USA: Granary Books.
- Walmsley, Derek (1982). *The Wire Magazine*, London: Tony Herrington.¹⁰

¹⁰ Writers include Clive Bell and Phil England.

Record Labels

Davidson, Martin and Davidson, Madelaine (1974). *Emanem Records*. UK: London.

Wastell, Mark (1996). *Confront Record Label*. UK: London.¹¹ Websites: <https://www.confrontrecordings.com/> and <https://www.discogs.com/label/57933-Confront>

Zorn, John (1995). *Tzadik Records*. USA: New York City. Website: <https://www.tzadik.com/>¹²

Collectives

Morris, Lawrence 'Butch' (1997). *The London Improvisers Orchestra*. Website: http://www.londonimprovisersorchestra.co.uk/?fbclid=IwAR0kTAD3nL_e0hDpyz3_dZ18Sd2VvGjgXVVVhVUrCccb4Bfr6kaix10uqrA¹³

Thompson, Walter (1974). *Soundpainting*. Website: <http://www.soundpainting.com>¹⁴

Appendix 2

Here is a fairly broad list of works that look into aspects of Lerdahl's award winning work; more research may easily be found.

Chattah, Juan Roque (2006). *Semiotics, Pragmatics, and Metaphor in Film Music Analysis*. PhD Dissertation: The Florida State University College of Music.

Jackson, Tyreek Antoine (2018). *The Improviser and the Improvised: The Relationship Between Neural and Musical Structures, and the Role of Improvisation*. Doctor of Education Dissertation: Teachers College, Columbia University.

Corey Knoll, J. (2006). *Prolongation, Expanding Variation, and Pitch Hierarchy: A Study of Fred Lerdahl's Waves and Coffin Hollow*. MMus Dissertation: Graduate College of Bowling Green State University.

Martinez, Cecilia (2007). *The Cognitive Reality of Prolongational Structures in Tonal Music*. PhD Dissertation: School of Education, University of Surrey.

Sprendimai improvizacinėje muzikoje

Santrauka

Kaip iš teleologinės perspektyvos galėtume kontekstualiai paaikškinti instrumentinę muziką, kurios vystymo kryptis yra visiškai priklausoma nuo faktūros? Norėdami išnagrinėti muzikines, kognityvines, kultūrinės ir ideologines perspektyvas, turime iš naujo permąstyti visas šias kategorijas ir nepasikliauti vien tik nusistovėjusiomis normomis. Improvizacinėje muzikoje, kurios muzikinio vyksmo baigtis nėra žinoma, garsiniai ženklai užtikrina nuolatinį naratyvumo pojūtį. Čia mes persikeliamo į filosofines vertybių perkainojimo ir semiotines *formuluojančios* ir *prezentacinės* perspektyvos erdves. Skambesiu grindžiamos muzikos (angl. *sound-based music*) muzikinį vyksmą palaiko išplėstinėmis grojimo technikomis kuriama faktūra, o strategijos įgyvendinamos nekonvencionalių įtampų ir atoslūgių valdymu. Pavyzdžiui, faktūros abstraktumas transformuotame garsiniame įvykyje, kurio savybės yra neatsiejamos nuo jų suformavusio morfologinio elemento, muzikiniame vyksme dažniausiai yra intencionalus. Šiame straipsnyje patyrinėsimė, kaip sukuriamas *slėgis* ir *išsisklaidymas*, kokiais įvairiais būdais gali pasireikšti sąveikos tarp *netikrumo* ir *nušvitimo*. Kitaip tariant, kaip garsinių įvykių seka ir garsinės ekspektacijos tampa projektuojamomis strategijomis. Sutelkdami dėmesį į ekstemporizaciją, panagrinėsime vokalistės Kay Grant ir gitaristo Martino Vishnicko sukurta vaizdo klipą. Analizuodami muziką, sklindančią iš dviejų vaizdu užmaskuotų instrumentų, matysime, kaip pasirinkti pavieniai, vienas po kito einantys, kombinuoti ar kartu skambantys garsai formuoja tam tikrą supratimą, pasiekiamą per susiliejimo pojūtį.

¹¹ Sub-labels are *Sound 323*, *Confront Collectors Series*, *Confront Core Series*, and *London Preservation Series*.

¹² The label was established by composer and saxophonist John Zorn, specialising in avant-garde and experimental music.

¹³ The London Improvisers Orchestra is dedicated to free and conducted improvisation. It is currently run by a small group of players connected to the groups' origine.

¹⁴ Soundpainting is the universal multidisciplinary live composing sign language for musicians, actors, dancers, and visual Artists.