

A Listening Art

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Abstract

In the introduction to *Expanding the Horizon of Electroacoustic Music Analysis* Leigh Landy and Simon Emmerson observe that “...there remains a legacy of ‘absolute music’ which persists in some genres [of electroacoustic music] – those that claim a ‘high art’ heritage usually” (21). In this paper I examine this legacy by reassessing the status of the work-concept in electroacoustic music studies. Adam Stanović covered similar territory in his recent article *Beyond the Fixity Fallacy*; I aim to provide a slightly different perspective, based on Lydia Goehr’s “historical approach” as described in *The Imaginary Museum of Musical Works*. I will begin by exploring the core ideals that support the work-concept, and to what extent they remain operative in contemporary acousmatic music practice. Assuming that the ways in which contemporary acousmatic music is composed, performed, and listened to, differ substantially from instrumental concert music of the early 19th century, I hope to highlight aspects of acousmatic music culture and practice that have escaped attention and potentially deserve further study. Unlike Stanović I do not propose a rethinking of, or an alternative to the work-concept; rather, I suggest that acousmatic music demands a different way of thinking about the relations between composers, performers, and listeners, and I believe that the beginnings of a new approach can be found in Roland Barthes’ essay *From Work to Text*. My discussion is limited to acousmatic music, where the “legacy of absolute music” and trappings of early 19th century concert culture are perhaps most evident, though I hope that some aspects of the discussion are relevant to other forms of electroacoustic music. Two case studies, Louise Rossiter’s *Neuronen* and Panayiotis Kokoras’ *AI Phantasy*, serve to illustrate how some of the conflicts between the work-concept and acousmatic music play out at a compositional level.

1. Core ideals of the work-concept in acousmatic music

In Goehr’s account of the work-concept, composers, performers, critics, and audiences subscribed to a set of ideals which began to regulate musical practice towards the end of the eighteenth century (111). These ideals were: first, “...that the score should be as accurate as possible...” (101); second, that performances should be “compliant” (236), remaining “faithful to the composer’s intentions” (281); third, that audiences must remain “...literally and metaphorically silent, so that the truth or beauty of the work could be heard in itself” (236). To what extent do these ideals remain operative in acousmatic music, and how might they influence musical practice?

1.1. Accuracy of the score

The first ideal, that a musical score should be “as accurate as possible,” is complicated by the fact that many types of scores are found in acousmatic music. Denis Smalley identifies diffusion, realisation, and performance scores (“Spectromorphology” 108), and visual representations of sound such as waveform displays used in digital audio workstations and annotated sonograms found in analytical tools could be added to the list. In most cases however these various types of scores and graphic representations would fail the accuracy test, since on their own they would not be able to support a faithful rendition of the work. Arved Ashby has argued that a musical recording represents the work itself, rather than a performance of it (208), suggesting that the soundfile is also a potential candidate. Yet Stanović has expertly dismantled the notion that soundfiles can be a wholly accurate representation of the composer’s intentions, while also demonstrating that in any case the ideal of the accurate score was already unravelling long before the appearance of acousmatic music (2-8).

1.2. Compliant performance

There seems to be some evidence that the ideal of “compliant performance” regulates approaches to sound diffusion. Jonty Harrison implies a kind of embodied fidelity to compositional intent when he remarks that “... the same type of physical gestures that were used to shape material during the process of composition should be used again in performance to enhance further the articulation of the work’s sonic fabric” (118). In a similar vein, Stanović notes that “...acts of sound diffusion may be used to further dramatise, enhance, enlarge, exaggerate, expand and/or spatialise what is on the fixed medium” (12). Both Harrison and Stanović argue that many composers anticipate diffusion and factor this into compositional decision making; thus these “exaggerations” support rather than override the composer’s expressive intent, satisfying the ideal of “compliant performance.”

1.3. Silent reception

The ideal of silent reception is reflected in Peter Batchelor’s description of acousmatic concert culture: “Acousmatic music is presented in a concert setting to (predominantly) a practiced community of listeners who subscribe to an established tradition of fixed seating for an extended duration, circumscribed listening conditions (darkened environment; no visual stimulus) and (often) an entry fee” (151). This description reinforces Lydia Goehr’s claim that the concert hall is an essential component of silent reception: “Performances ...had to be cut off completely from all extra-musical activities... concert halls started to be erected as monuments and establishments devoted to the performance of musical works” (236). The physical and ritual aspects of the concert hall enable audiences to sustain highly attentive listening for long periods of time, while filtering out distractions that might occur in other situations – ideal conditions to engage in the kind of focused listening that acousmatic music demands. Perhaps for this reason the concert is the preferred mode of public presentation for many composers of acousmatic music (Batchelor 148).

However, acousmatic music has a significant audience outside the concert hall. Streaming and file sharing services sustain a growing community of private listeners, many of whom do not attend concerts. While it is certainly possible to listen outside the concert hall in a way that maintains the ideal of silent reception, replicating concert conditions in a private setting is a

luxury available to few non-specialist listeners. As the reception culture of acousmatic music changes, it may no longer be practical to consider the formal concert as the primary means of presentation for acousmatic music, especially given the limitations of the age of COVID.

Listening outside the concert hall also affords listeners greater control over how they choose to listen, facilitating modes of engagement unique to acousmatic music. As Andrew Lewis points out: "... for listeners, fixed medium enables us to engage with sound in a much more detailed way. It can do this because it is repeatable: we can hear the same piece over and over..." Listening to "the same piece over and over" would normally only be possible outside of a concert hall situation – in fact, Lewis could be describing the nonlinear, analytical kind of listening I have been doing at home while preparing the two analyses included in this paper.

1.4. Mimesis and the extra-musical

There is one further aspect of the work-concept and its relevance to acousmatic music practice to consider. According to Goehr, the emergence of the work-concept was dependent on music gaining autonomy from the extra-musical. Works could only be works if they existed independently from social function, religion, text, or individual performances. The result was a "purely musical" art form best exemplified by instrumental music, where the meaning of a particular work was no longer dependent on anything other than the sounds themselves (Goehr 148-57). Music was "intelligible not because it refers to something outside of itself, but because it has an internal, structural coherence" (155). This state of affairs was not limited to absolute music – as Goehr points out, programme music too could also function on a purely sonic level: "...in both [absolute and programme music], meaning was achieved through the unique qualities of instrumental sound" (212).

On the contrary, from the 1960s onwards the majority of composers of acousmatic music have exploited associations between recorded sounds and their perceived origins (Emmerson 7-18). Denis Smalley has shown that even highly abstracted sonic materials can trigger intuitive associations with motion, gestures, and other phenomena in the physical world ("The Listening Imagination" 82-93). If autonomy from the extra-musical is a precondition to producing works, then where does this leave post-Schaefferian acousmatic music?

To summarize briefly, the work-concept and its underlying ideals appear to harmonize with some aspects of acousmatic music practice but not others. The work-concept seems especially problematic for acousmatic music in its demand for autonomy from the extra-musical, and in its prescriptions for appropriate reception culture. Keeping these conflicts in mind, I will now briefly discuss two recent works of acousmatic music, focusing on the structuring and articulation of mimetic sounds. As I hope to show, the way that both composers exploit associations with the extra-musical entails a very different kind of relationship with listeners than that demanded by the work-concept.

2. Case study 1: *AI Phantasy* by Panayiotis Kokoras

Two categories of sound are heard in the two excerpts from Kokoras' *AI Phantasy*. The first is made up of a series of complex sounds created using various electromechanical and physical manipulations of a vacuum cleaner, pan flute, and air compressor. The composer describes the process for creating these sounds as "fabrication synthesis," so I will refer to these as "fab

synthesis” sounds. The second category comprises a large number mimetic sounds that appear to be sourced from a sound effects library, which I will refer to as prefabricated sounds.

[Example 1: Panayiotis Kokoras *AI Phantasy* 0–20”](#)

The work begins with a prefabricated drumroll sound (Example 1) which some listeners may find humorous, hearing associations with the circus or standup comedy: “drum roll, please.” The drumroll is echoed by a sequence of fab synthesis sounds made from iterated noise bursts, mimicking the morphology of the drumroll. The composer notes the extensive use of the *Orcidea* computer-assisted orchestration tool, which may be responsible for these and many other spectromorphological resemblances found later in the work.

Similar iterative sounds dominate the first 2½ minutes of the work, over which time there is a gradual decrease of energy and motion, converging on a moment of silence at 2’33”. This silence is short (about 800ms) but appears suddenly and contrasts with the relatively dense texture of the opening section. Example 2 begins a few seconds before this moment.

[Example 2: Panayiotis Kokoras *AI Phantasy* 228”–3.03”](#)

Immediately following the short silence, the iterative fab-synthesis sound briefly reappears layered with some short impulsive prefabricated sounds. After about six seconds a new and more prominent prefabricated sound appears: a cartoonish train. In the previous section the prefabricated sounds were superimposed upon, and masked to a greater or lesser extent by the busier and spectrally more dense “fab synthesis” sounds, however in this section the prefabricated sounds assume a much more prominent place in the sound field.

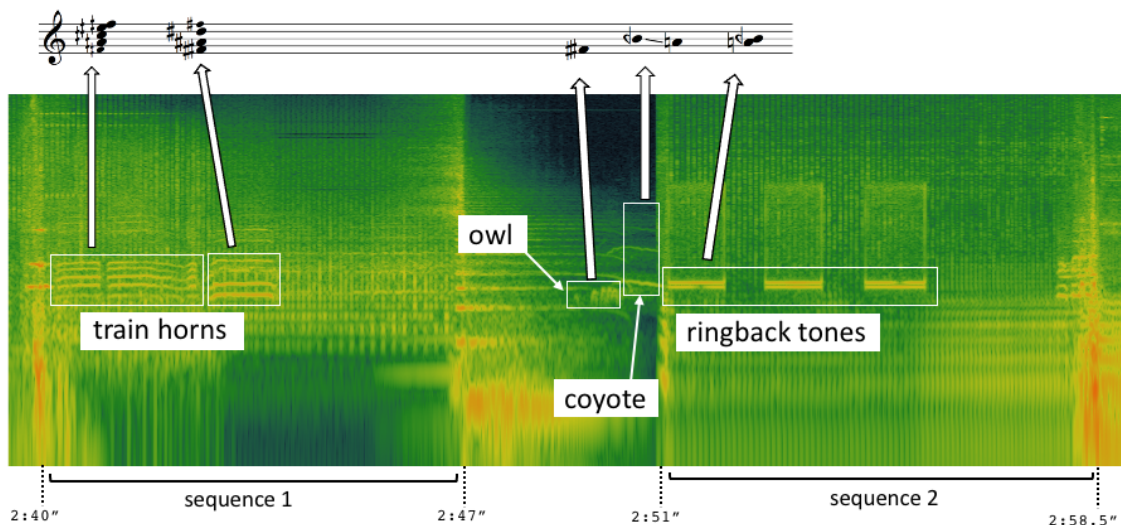


Figure 1: sonogram analysis of *AI Phantasy* by Panayiotis Kokoras, 2:40–2:58.5”

Following the train sounds a series of abrupt edits introduce a short sequence of contrasting sounds: a heavily reverberated pitched resonance, a hooting owl, a howling coyote, then a telephone ringback tone superimposed on another noisy iterative sound. The mimetic associations of these sounds are disjunct, yet they exhibit strong musical and morphological similarities (Figure 1). For example, comparing the pitched elements (train horns, owl, coyote, and ringback tones), all are in the same register with a total range of about one octave. There are a number of pitches in common, and some other interesting relationships; for example the

low F³/₄ sharp of the 2nd train horn is roughly echoed by the owl, and the glissando coyote call neatly outlines the interval of the ringback tones that follow.

Note the two bracketed sound sequences in the sonogram. Comparison of these segments is invited by their similar structuring and duration. Each segment is bounded by a change in dynamic and/or a strongly articulated impulsive sound, and the two segments are separated by a brief pianissimo interlude absent of iterative sounds. Each is about 7.5" long, and the pitched sounds occur in three bursts of roughly 1" duration each in the first half of each segment: three "toots" of the train horn, echoed by three rings of the phone.

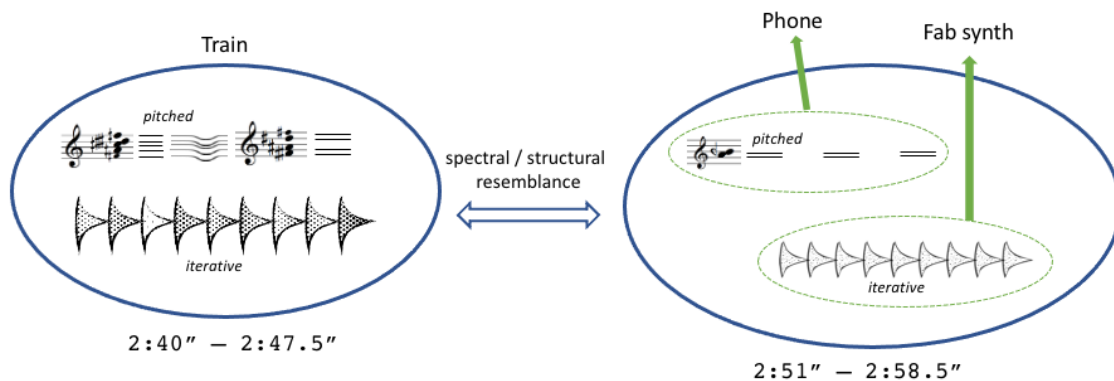


Figure 2: Mimesis and spectral imitation in *AI Phantasy* by Panayiotis Kokoras

These two sequences exhibit an interesting combination of mimesis and spectromorphological imitation (Figure 2). The texture where the phone sound enters is made up of two sounds which mimic two distinct perceptual layers in the train sound: A noisy iterative sound (mimicking the mechanical chugging of the train) with a stable group of pitched sounds (mimicking the horn). The second segment imitates in two directions: it imitates the first one at a purely sonic or musical level, while simultaneously evoking completely different extra-musical associations.

3. Case study 2: *Neuronen* by Louise Rossiter

[Example 3: Louise Rossiter *Neuronen* 0–16"](#)

The opening gesture of Louise Rossiter's composition *Neuronen* (Example 3) is designed to be memorable: a variable pitched component outlines a distinctive contour in a relatively "hot" part of the spectrum, and the sound has a grainy quality, which along with the variable pitch carries (at least for me) associations with turntablism.

[Example 4: Louise Rossiter *Neuronen* 7.17"–7.52"](#)

A version of this gesture is heard at 7'26" after a moment of near-silence, but with some extra low frequency energy and a new answering gesture (Example 4). The repetition of this gesture in combination with the preceding silence stands out from the prevailing texture, functioning almost like a reprise, a kind of "reset" moment that serves to re-focus listening attention. About 20 seconds later we hear the sound of a doorbell; this is one of only two unambiguously mimetic sounds in the work (the other is the ticking of a mechanical clock heard earlier).

According to the composer, *Neuronen* is a response to an infographic from Fritz Kahn's "Das Leben Des Menschen" series. Significantly, the doorbell is the only sound in the piece to find

a visual analogue in the image. This sound carries a rich set of associations: causal (“doorbell” as an object); semantic (somebody is at the door); and as a sound signal from daily life that may evoke an involuntary attentional response from some listeners. It also carries an implied affordance (pushing the button can ring the bell). The sound is very different in both function and morphology from the prevailing texture, and a subtle chord of pitched resonances mitigates any sense of disjunction by prefiguring its harmonic content (Figure 3).

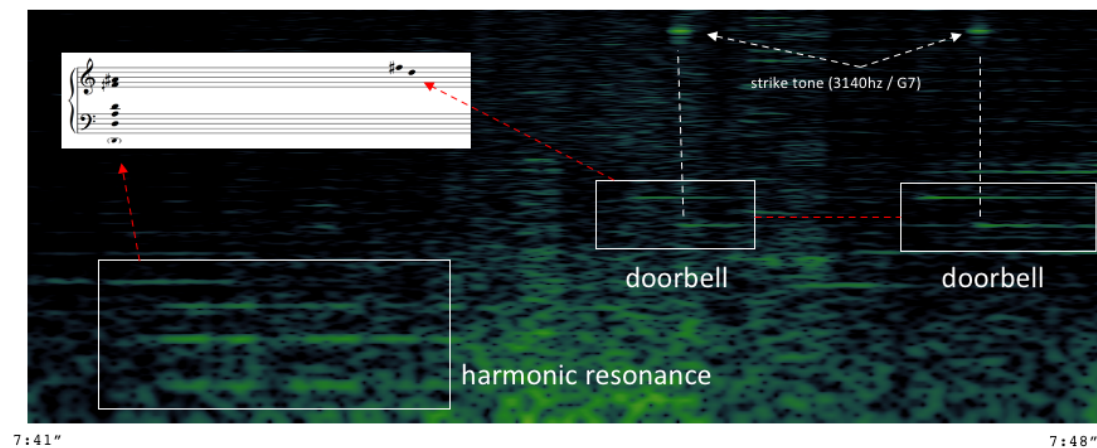


Figure 3: Pitch relations in *Neuronen* by Louise Rossiter, 7:41''–7:48''

Both *Neuronen* and *AI Phantasy* seem to amplify the variety of associations of mimetic sounds, albeit in very different ways: Rossiter skilfully frames a sound that could easily appear clichéd by manipulating listening attention just before its appearance and embedding it inside another texture; while Kokoras creates a stream of disjunct associations through frenetic juxtaposition of prefabricated sounds, relying on spectromorphological similarities to maintain musical coherence. Rather than communicating a fixed meaning or forming part of an explicit narrative sequence, these sounds are deliberately loaded with multiple associations and foregrounded with localised musical processes. As I hope to demonstrate, this variability of association entails a fundamentally different set of relations between composers and listeners than that supported by the work-concept.

4. Towards a concept of sonic text

This change in relations is analogous in many ways to Roland Barthes' "...rethinking [of] the relationship between 'writer, reader, and critic'" in his essay *From Work to Text* (White 131), where he proposes replacing the concept of the literary "work" with a more fluid notion of "text." The text requires a new kind of reading, which Barthes explains using a musical analogy:

We know that today post-serial music has radically altered the role of the 'interpreter', who is called on to be in some sort the co-author of the score, completing it rather than giving it 'expression'. The Text is very much a score of this new kind: it asks of the reader a practical collaboration (163).

Acousmatic music demands a similar form of collaboration from listeners. This is perhaps due to the inherent richness and variability of associations in mimetic sounds, the fact that almost inevitably they mean different things to different listeners (Kendall 31); to paraphrase Barthes,

mimetic sounds possess an ‘irreducible plurality of meaning’ (159). When listeners assume some responsibility for the creation of musical narrative, the roles of composer and listener begin to overlap. As James Andean puts it: “The construction of narrative is ... an act that is shared between composer and listener, with each playing a critical role.” In other words, a complete picture of musical narrative for a work of acousmatic music can only emerge in the encounter between composer and listener.

The type of relationship between composer and listener prescribed by the work-concept is rather different. If we accept that meaning resides in the internal logic of the sounds of a musical work (Goehr 155), and that the composer is in control of these sounds, then it follows that the composer can claim authority over the meaning of a particular work. This is also true of programme music, where even though the structure of a work might derive in some way from an extra-musical idea, this idea and its relation to musical sounds is determined by the composer. Liszt thought of a programme as a kind of preface to the experience of a work that would ensure the listener interpreted it correctly (Scruton). For the purposes of the work-concept, it is expected that listeners (and performers) defer to composers in matters of interpretation and narrative.

5. Future research

In conclusion I would like to highlight several avenues of potential research identified in the course of this discussion. First, given the changing reception culture of acousmatic music, a study of private listening is needed with particular emphasis on the practices of non-specialist listeners. It has been noted that many composers consider the concert to be the primary mode for disseminating acousmatic music, yet it is possible that there is a larger potential audience who do not attend concerts, as is already the case with electronic dance music and other forms of popular music. Under what circumstances do listeners engage with acousmatic music privately, in what ways does the listening experience change, and how might composers factor this into their practice?

The second potential avenue of study concerns the use of prefabricated sound effects in acousmatic music composition. Arguably, in both of the pieces discussed today the sounds with the richest mimetic associations are sonically the most mundane: the doorbell in Rossiter’s *Neuronen*, and the plethora of prefabricated sounds in Kokoras’ *AI Phantasy*. They lack the sonic detail of Kokoras’ fab synthesis sounds, or the beautiful abstract textures in *Neuronen*, which the composers have tailored to a specific creative purpose. They are “out of the box” sounds designed to represent events and images with maximum efficiency. Many of the prefabricated sounds used in *AI Phantasy* could and probably have been used to perform a similar signifying function in radically different artistic contexts such as movies, cartoons, or video games.

This reveals a curious gap in electroacoustic music theory. There is a substantial amount of literature examining how recorded sounds can be transformed so as to obscure their source, but to my knowledge little or no consideration is given to the opposite possibility: how are sounds produced in order to maximise, rather than obscure, their potential for mimesis? In the case of sound effects found in libraries of the type used by Kokoras, it appears that these have been produced in such a way as to reduce sonic information, suppressing anything that might interfere with their signifying function. They tend to be dry, tightly cropped, spectrally not too complex, recorded from a “close up” perspective where possible, and are often band-limited

and have a small dynamic range. The media files are frequently low resolution and / or compressed. Given their convenience and availability, the use of prefabricated sound effects in acousmatic music is probably widespread, thus there is a need for a better understanding of the technical and cultural forces driving their production.

Finally, it might be worth considering the legacy of the work-concept in the context of the debates around terminology in electroacoustic music studies, in particular the search for an umbrella term that can encompass the diversity of genres and practices that engage with sound. Many of the terms that we have now – acousmatic music is a notable exception – refer to sound or music in a general sense, or to the materials of their production: electroacoustic music, electronic music, mixed music, sonic art, sound art, etc. Is this tendency another piece of baggage left over from the work-concept, reflecting its focus on the work as the object of artistic production? Why not an umbrella term that reflects the central role of listening in these various genres and practices? We have the visual arts – why not the listening arts?

6. References

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