AN EMBODIED APPROACH TO ACOUSMATIC MUSIC

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Abstract

Acousmatic music offers a unique laboratory for the consideration of the embodied experience of music. Acousmatic works tend to operate on two simultaneous planes: a more abstract, musical level of gesture, phrase, colour, texture, and motion; and a more literal, narrative level, which references realworld objects, actions, contexts and environments, either more directly – for example through the direct reproduction of such objects and actions – or in a more distanced, mediated manner. These two aspects offer very different perspectives on embodiment, which are enacted simultaneously. On the one hand, the musical aspects of acousmatic music offer an excellent forum for the consideration of more traditionally musical parameters of gesture and phrase as they relate to bodily sensations of movement and motion, in that these parameters, closely linked to the means of sound production in instrumental music, are often divorced from such limiting associations in acousmatic music, and can thus be considered from a broader perspective of embodiment. At the same time, the images and associations embedded in the narrative layer offer the potential for a more direct link to objects, actions and situations recognised from our experience of the world, with all the detail of embodied memory and perception.

Keywords: acousmatic, embodied, electroacoustic

1. Introduction

Acousmatic music is a form of electroacoustic tape music, which developed out of the *musique concrète* of the 1950s. *Musique concrète* was developed by Pierre Schaeffer in the late 1940s and 1950s at the French Radio in Paris. Working first with disc-cutters and eventually with tape, Schaeffer envisioned a new musical language constructed from the sounds of the world around us. Schaeffer imagined this as raw material, which could be musically reinterpreted through what he termed 'reduced listening' (Schaeffer, 1966). This, in essence, is a listening paradigm in which the source of a sound is deliberately ignored, in order to focus on the sonic properties and characteristics inherent to the sound: its internal rhythms, its timbres and textures, maybe some melodic elements... Footsteps become a rhythm; the sound of busy traffic becomes a texture; a train passing becomes a musical phrase with rhythm, melody, timbre and texture – the rhythm as it rolls across the tracks, the melody of the whistle which drops in pitch as it passes, etc.

2. Acousmatic

The term 'acousmatic' comes from Pythagoras, who would lecture his students from behind a screen, because he thought that his physical presence would distract them from the content of what he was saying. He argued they would be able to focus better on what he was *saying* if they weren't distracted by *seeing* him. The analogy is that in acousmatic music, the loudspeaker acts as the screen: because we can *hear* a given sound even though the source is entirely absent, we are suddenly

able to experience the musical qualities of the sound without being distracted by the sources that they signify – there's a car coming! someone's baby is crying! etc. Pythagoras' students were called 'the acousmatics', and the term was appreciated by Schaeffer and his collaborators as a result of this analogy of 'hearing without seeing the source'. (Schaeffer, 1966)

3. Phenomenological roots

Schaeffer was not simply intuitively sculpting with sound; he was very systematic and extremely analytical, in a very explicit attempt to forge a new musical language, rather than simply seeking out new techniques (Schaeffer, 1952). In this Schaeffer was heavily influenced and guided by phenomenology, although to what extent is open to debate – it might be more a question of recognising certain affinities after the fact (Godøy, 2006).

This phenomenological aspect is relevant here because, unlike most other post-war musical attempts to forge new musical languages, Schaeffer's proposals for new syntax and vocabularies were based entirely on our natural perception of sound. It is largely as a result of this constant empiricism that acousmatic music offers such rich territory for the consideration of musical embodiment.

4. Embodiment in acousmatic music

The experience of listening to acousmatic music is a uniquely physical sensation. This is experienced in a number of ways. Some of these stem from the narrative content of acousmatic music. While reduced listening offers new ways of interpreting sound-as-music, it does not negate or erase sound's capacity to act as a signifier for the object or event that caused the sound (Leman, 2010). In other words, although we may now recognise the sound of footsteps as a musical rhythm, we still simultaneously recognise them as footsteps, triggering all the associations and chains of infinite semiosis that this might entail.

In the case of footsteps, the element of embodiment is quite clear: as people who ourselves walk, we immediately recognise the sensation of walking. Here, I think we might have an excellent testing ground for mirror neuron theories; this sensation is sometimes extremely strong in acousmatic music – the extent to which our own body appears to experience what we hear in the work as though we ourselves were performing that particular action.

However, the sound is not recognised only through our own ability to walk; we also recognise the sound of others walking. We associate the footsteps we hear in the piece not only with our own act of walking, but also with our experience of hearing footsteps in our lives, from our experience of the world around us.

5. Causation vs. association

The example of footsteps is, of course, an extremely literal one. Sound sources in acousmatic music need not be so literal, clear, or obvious. They may be processed beyond recognition; they may be from an unknown or unknowable source – for example an amplification of microscopic sounds which we do not recognise; or they may just as easily be synthetic or computer-generated sounds, with no direct causal link with real-world objects.

However, narrative aspects of acousmatic music are not directly tied to the objects or events that caused the sounds, but rather stem from our associations with a given sound, or possibly from our assumptions about what might have made the sound. This can still be fairly literal; for example, one might use synthesis to quite accurately imitate footsteps, and the listener might be fooled into believing these to be real footsteps.

However, this can also be far more abstract. If, for example, I hear a swishing sound on the tape, I am likely to associate it with categories of motion which might possibly generate such categories of sound: for example, holding something in my hand and moving it rapidly through the air, or even simply moving my arm quickly from side to side in front of me. The same for example

with the recognition of the accelerating rhythm when something is dropped and bounces until it comes to rest, or the doppler effect when the sound drops in pitch as a train or a car passes us; and so on. This doesn't mean we necessarily assume that this is how the composer created the sound in the studio, as this is largely irrelevant to the listening experience; rather, it is the association we make with the sound based on our experience of sound in the world around us. (Clarke, 2005; Windsor, 2000) In essence, what we are responding to here is energy trajectories: we recognise the various ways in which energy is heard and experienced in the world, the ways in which energy is expended as movement and as sound. (Frengel, 2010)

6. Embodied composition as embodied performance

The question of the composer's actions in the studio raises a further aspect of acousmatic embodiment. Acousmatic creators constitute an important percentage of the community of acousmatic listeners; in other words, a certain number of the people listening to acousmatic music are themselves acousmatic composers. This means that a given percentage of listeners will recognise not only sources taken from the real world, but also the traces of the composer's actions in the studio: a particular movement of the tape reels, a given twist of the knob, the manipulation of a given piece of software, etc. This then results in a layer of embodiment which is largely similar to the embodied experience of instrumental music, in which the listener feels a degree of physical pleasure through a bodily experience – a kind of sympathetic resonance – of particular movements involved in instrumental performance.

7. Acousmatic embodiment summarised

We have thus established a number of levels on which acousmatic listening is an embodied experience:

- first, a very strong experience of embodiment where we can recognise a sound as being the direct consequence of bodily action, for instance associating footsteps on tape with our own footsteps;
- second, where we recognise or associate a given sound with our experience of the world around us and from our daily lives, for instance the footsteps of others;
- third, a more abstract sense of sound being created by motion – the swishing motion, the bouncing sound, the doppler effect, and so on;
- and fourthly, the embodied recognition of the in-studio gestures of the composer.

8. Acousmatic vs. instrumental embodiment

Acousmatic music also shares some aspects of musical embodiment with instrumental music. Some of the key examples of embodied aspects of music result from the ways in which we interpret our experience through our experiences of our bodies: what we feel to be a natural, satisfying length and shape for a musical phrase is closely linked for example to the duration of a breath, or the length of an arm gesture; our sense of rhythm and pacing is heavily determined by walking with two feet, the beating of our hearts, and other bodily rhythms; and so on (Emmerson, 2007; Godøy, 2010).

In music, of course, this is a two-way street, determined by a mutual, cycling feedback loop between the creation of music and listening to music, in which the gesture or breath used to create the sound determines the resulting musical phrase, which is then heard and interpreted bodily, which then influences how new gestures are played, and so on. Instrumental music is clearly part of this feedback loop; acousmatic music, on the other hand, is not. Acousmatic music is in this sense considerably abstracted, in that the sound results are not necessarily – of course they can be, but are not necessarily – directly linked with the actual method of sound production. A great deal of acousmatic music is not made in so-called 'real-time', but rather crafted 'outside of time' as it were, at the computer for instance. Human bodily

limitations can be entirely bypassed, if so desired. As a result, the composer is in essence freed to consider questions like phrasing, phrase length, pacing, and so on, without any consideration for the bodily requirements of performance – the limits of a single drawing of the bow, or striking of percussion, or a brass player's breath length, and so on.

For this season, acousmatic music has great potential in the examination of musical embodiment. This is somewhat similar to analysing people's natural sleep rhythms using test subjects who are removed from sunlight and kept inside for a number of weeks, to see what rhythms are maintained, or what changes might develop from this experimental isolation. Just as these subjects are not compelled to go to bed because they recognise that it is dark outside, the acousmatic composer is under no compulsion to reference or acknowledge the physical limitations of bodily sound generation.

It is therefore particularly fascinating to find such a strong degree of embodiment in acousmatic phrasing and pacing; perhaps even more so when compared with certain contemporary instrumental composers – Pierre Boulez for instance, or Brian Ferneyhough – who may deliberately ignore or obliterate such physical associations or limitations in their instrumental compositions. Acousmatic works, on the other hand, despite having no practical compulsion to reference the physical characteristics of bodily sound generation, very often do so, to the extent that this is at risk of becoming a defining characteristic of the genre.

We will now consider the opening passages from several works as examples of acousmatic embodiment in action.

9. Example one: John Young's *Pythagoras's Curtain*

Here we have a fairly literal example of bodily mimesis. We all recognise the sound source (or what we assume to be the sound source): the sound of writing on a blackboard with chalk. Of course each listener will have a slightly different experience, and a slightly different interpretation, but perhaps it is fair to suggest that many of us will, first, recognise the experience of writing on the chalkboard ourselves; then, we might recognise the experience of hearing someone else write on a chalkboard, which is likely to lead to a chain of associations – perhaps 'sitting in a classroom as a child'; maybe with feelings of boredom, or of authority, and unfolding chains of association from there.

Young then walks us through a process of abstraction. He has made an extremely narrative statement; some very subtle transformations are made; then a clear knocking at a door, and the door itself, followed by a more dramatic transformation, transitioning rapidly to a potentially more musical – or at least more 'sonic' – experience, but one which continues to be governed by physically-rooted rhythms and gestures.

10. Example two: Jonty Harrison's *Pair/Impair*

The opening of Harrison's *Pair/Impair* is, by comparison with Young's chalkboard, fairly abstract in terms of sound production; we are left without a clear idea of what might actually have been used to make these sounds. They might be heavily processed recordings; they might be made via synthesis or programming; or likely a combination of all of the above.

Despite this, the opening of the piece doesn't 'feel' particularly abstract. While we may have no clear vision of what has made these sounds, they respond fairly clearly to energy trajectories that feel familiar from our embodied experience of the world. It is not that we could necessarily name something specific that behaves in this manner; it is simply that we recognise the energy patterns from the piece as being somehow very physical, very real, very much linked with the world and with our sense of movement.

11. Example three: Adam Basanta's *A glass is not a glass*

It is perfectly clear, from both the title and the opening moments of the piece, what Basanta has used as his sound source: it is a glass. What is interesting, however, is that, in terms of the actions, behaviours, energy trajectories, and so on, we clearly perceive two distinct but simultaneous levels. One of these is tightly associated with the image of 'a glass': the glass is being tapped, struck, rubbed, etc. Our experience of these actions is clearly embodied: it is not simply that we recognise and identify 'the sound of a glass being tapped'; we recognise it bodily as 'that is what happens when I tap a glass'.

However, this is only one level of action embedded in these sounds. In fact, this layer of tapping, striking, and so on is to a significant extent subsumed by an additional layer, which is much busier, more artificial, clearly crafted in the studio. Here, the glass we hear behaves in ways we know a glass could never really behave: it skips frantically, it swims, it dances, it flies, it splinters and is recomposed, it turns backwards on itself... These are impossible sounds, in that the source is very familiar, but the behaviour is impossible.

And yet, we simultaneously *recognise* these movements; we make associations with these energy trajectories. It is not that these trajectories are somehow completely outside our experience or understanding; it is simply that they are trajectories that we do not associate with our real-world experience of a glass. While our bodies easily recognise what it feels like to tap a glass, our bodies further, simultaneously, recognise these other gestures, even though we would be hard pressed to state a direct source for such movements. And when these unrelated identities are made one – are heard simultaneously, as the glass is both struck/tapped/rubbed and made to fly/swim/skip – we are able to experience and respond to both, simultaneously, despite the fact that this combination is impossible outside of the virtual world of the acousmatic work.

12. Mediated embodiment

But, how much faith can we put in an intuitive recognition of the familiar physicality of an acousmatic gesture? We live in a mediated world; we are all used to some degree of electroacoustic sound, be it from film, television, radio, recordings, or electroacoustic works. We easily recognise and accept, for example, the reversed glass that acts as the second half of Basanta's opening gesture. To what extent, then, can we confidently say that our recognition of this forward glass-backwards glass gesture is 'embodied'? This is not an experience we have ever had physically.

We do, of course have a physical understanding of the tapped glass, and the compound phrase – forward glass/reversed glass – follows a gesture pattern that feels like a natural and recognisable phrase, despite the fact that the reversed glass is impossible to physically experience. The gesture presents an energy trajectory that is clearly plausible, even though the source it is being associated with now could never make that gesture.

But, at what point does our mediated language overtake our embodied understanding of the world (Truax 2000)? Do we recognise this gesture as a meaningful trajectory of movement and energy from the world around us, or only as a recognisable phrase from the electroacoustic vocabulary? Has our intuitive sense of plausible energy trajectories been corrupted by a long, slow flood of mediated sound?

13. Conclusion

We have described acousmatic listening as taking place on two simultaneous levels: on a musical level, and on a narrative level. We experience an acousmatic work as sound and music, but also as a chain of references and associations. Footsteps heard in an acousmatic work are simultaneously experienced as 'footsteps' and as musical rhythm.

It is interesting to note that embodiment takes place at *both* of these levels, in constant interplay and flux. When we hear a

phrase of a certain length that rolls away into the distance, for example, we may simultaneously recognise and experience this as the energy trajectory of a musical phrase, but also as the physical experience of something moving away from us at a certain speed.

It is even more interesting to find that acousmatic music is thereby the precise representation of the process of musical embodiment itself. If our sense of musical phrasing and gesture have evolved through a complex web of relationships with our bodies and our physical relationship with the world around us, then in acousmatic music this process has come home again, as it were. Our experience of our bodies and the world has shaped and determined our concept of music; but now, in acousmatic works which take the sounds and gestures of our bodies and our surroundings as their material, we are applying our musical understandings back onto the very bodily and worldly movements and energies that shaped our musical conceptions in the first place. In other words: our bodies and the world have shaped our sense of music; and now, we are using that sense of music to shape the sounds of our bodies and our world.

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