

Listening to the inner soundscape: A pedagogical tool for opening minds to sound-based music.

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Abstract

This paper describes the context and methodology for research into developing heightened listening as a pedagogical and compositional tool. It builds on my previous research into whether heightened listening (which is defined as a close concentration on sound that allows for external associations with the source) can be effective as an access tool for electroacoustic music. The paper describes the results of my previous project and outlines how my current research aims to build on this to help facilitate a greater interest in sound-based music, for school children, through creative practice.

In the current research writing exercises are being used to help participants listen to their 'inner soundscapes' (Tzedaki, 2011). They are then required to create their own narratives and, when composing their pieces, use sounds that will support that narrative. In working this way, participants can begin to make the step to listen as composers by internalizing their initial listening, rather than just as listeners, an approach advocated by the composer Michelle Nagai (Nagai, 2011). It is hoped that through this process a deeper interest in sound-based music will be cultivated.

Introduction

It has been over 20 years since the issue of access to electroacoustic music was raised by Leigh Landy in a paper at the International Computer Music conference in 1990 (Landy, 1990:369). However, it would appear that the situation has not improved greatly since then, for example in 2010 Katharine Norman noted that 'entire audiences for electroacoustic music can sometimes fade into a collective entity of like-minded peers, still largely situated within either academia or other rather esoteric cliques' (Norman, 2010:117). One difficulty in widening access is that those unfamiliar with this music often do not know how to listen to it (Landy, 1994:50). In order to address this problem, my Masters project proposed a heightened listening strategy as a means by which inexperienced participants might appreciate this music more fully. Building on that research this project seeks to develop heightened listening as a compositional and pedagogical tool by utilizing approaches from other artistic practices such as creative writing.

In contrast to my previous research participants in this study are encouraged to learn through creative practice. This is in part due to lessons learnt from my previous experience, but is also inspired by practitioners such as Thomas Regelski who proposes a praxial approach to music education that allows students to produce their own sound compositions. He argues that this enables them to learn "from 'inside' music through intimate experience with organising, performing and listening to sound pieces of all kinds" (Regelski, 2002:40). Anne Marie Higgins and Kevin Jennings have also suggested 'that students should work directly with sound instead of hearing

about it' (Higgins and Jennings, 2006:179). It is hoped that building an understanding through practice will also result in a greater engagement with 'sound-based music' (an umbrella term created by Leigh Landy to describe music where sound is the basic unit, rather than the musical note (Landy, 2007:17)). My methodology will be described later but first I will outline my Masters research, as this provided the foundations for the current project.

The Heightened Listening (HL) Project

The heightened listening (HL) project (Holland, 2011) investigated the potential for widening access to electroacoustic (E/A) music through learning heightened listening skills. It built on the Intention/Reception (I/R) project, which demonstrated that a significant percentage of inexperienced listeners can appreciate E/A music, particularly when real world sounds are used as material (Weale, 2006:196).

In 1999, in an article where Leigh Landy made a plea for greater triangulation within the musicology of (E/A) music (Landy, 1999:61), one area he gave as an example where E/A musicology was moving forward was the debate on listening strategies (ibid:67). As part of this he described Mark Taylor's concept of 'heightened listening', which relates the experience of the visually impaired to the acousmatic listening situation. In this situation sound itself becomes the main focus encouraging listeners to concentrate more closely, a skill which is more developed among the visually impaired and regular listeners of electroacoustic music.

For the HL project it was proposed that

heightened listening be defined as a close concentration on sound that allows external links to be made. This is distinct from reduced listening that actively ignores any external information in order to concentrate purely on the sound itself. Heightened listening allows shifts in focus between the internal (the sound itself) and external (source or associations) depending on which is more appropriate for a particular listening situation. While appreciating internal qualities it also encourages the use of memory and imagination, which can help to develop an acute spatial awareness (a skill often associated with blind people). The HL project proposed that learning these skills can make the appreciation of E/A works that include real-world sounds (particularly soundscape pieces) more likely. While it was not thought that inexperienced listeners could acquire this level of skill in a short period, the project aimed to investigate if simply raising their sonic awareness (beginning a practice that might develop over time) would influence their appreciation.

Methodology

The goal of the HL project was to investigate whether, over the course of two workshops, raising aural awareness would increase appreciation for inexperienced listeners in schools. As with the I/R project it used largely qualitative questionnaires to solicit data but also incorporated triangulation into this process. Triangulation, which is often used in action research, 'allows information to flow between the maker and 'taker'.... allowing us to investigate whether that which is intended and received meet adequately' (Landy, 1999:68). A soundscape piece was composed as test material, which was reworked based on case study

feedback from the different groups to investigate whether triangulation would produce a more accessible work. As a reference, similar tests were proposed with blind or visually impaired listeners to investigate how they, who through daily practice should already possess a heightened sense of listening, would respond to the same work.

After running beta tests workshops were organised in 4 separate schools. The workshop structure went through a number of revisions during the beta tests, below is an outline of the final structure used in the main tests.

First session (approximately 1 hour long)

- Brief introduction and outline of what the workshops involve
- Listen to a recording of a soundwalk in surround sound
- Brief introduction to heightened listening and E/A music
- First listening to piece in surround sound
- Complete first questionnaire
- Ear-cleaning exercise
- Participants given information concerning composer intention
- Piece listened to again with eyes closed, lights dimmed
- Complete second questionnaire
- Questions and discussion

Second session (approximately 40 minutes long)

- Ear-cleaning exercise
- Second listening exercise using recordings
- Recomposed piece listened to with eyes closed and lights dimmed
- Complete third questionnaire

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- Further opportunity for questions and discussion

Results from the research: The influence of aural awareness on appreciation

One of the central questions the research tried to answer was the effect of increased sonic awareness on appreciation. As shown in the table below, overall three quarters of participants felt the listening exercises aided their ability to listen closely.

YES (listening exercises helped)	NO	UNDECIDED
75%	22%	3%

Responses to the question - Do you think the listening exercises in each session have helped you to listen more closely to the sounds?

Nearly 90% of those who felt the listening exercises helped also said they found the piece interesting during the first two listenings. This suggests a connection between sonic awareness and appreciation. Additionally, the proportion that found the listening exercises to be beneficial increased in proportion to the number of positive responses given to all the questions concerning appreciation.

Future access to sound-based music

Questions concerning future access were central to the project because if participants do not want to listen to this type of music again then heightened listening could not be presented as an effective access tool. At the end of the workshops, 66% answered positively to

whether they would like to listen to sound-based music in the future, and the majority of these also said they found the listening exercises helpful.

Blind and visually impaired participants: A fascination with sound

These participants came from a range of age groups, had different levels of visual impairments and a range of abilities. Consequently, their results are not directly comparable with the school groups and the most interesting data was anecdotal arising from discussion or conversation. Even though the small sample of useful data from this group meant it could only be used as a reference point, the data that was collected appears to support the HL project hypothesis. The two most articulate participants demonstrated the key characteristics of heightened listening, were fascinated by sound and had a keen interest in the examples of E/A music that were played to them.

Some of these participants described their use of mental mapping in order to form a picture of their surroundings through listening. These descriptions are interesting in view of neurological research that shows that the visual cortex still functions and is used by blind subjects (Sacks, 2008:175). They also illustrate the imaginative visual aspect of heightened listening and suggest its suitability for acousmatic music, which can be a 'quasi-visual... experience' (Smalley, 2007:40), and in particular soundscape music where an evocation of a particular place is important. The 'quasi-visual' nature of listening was apparent, to a lesser degree, in some responses given by sighted participants, as demonstrated by participants A and B below:

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A. Sound based music paints pictures in my head which I think is quite good

B. When my eyes were closed I could imagine the place much more. It was more visual

This suggests the extent to which a listener experiences sound through transmodal perception, could influence their level of appreciation for soundscape works. However, as demonstrated by the greater accuracy and detail in the answers given by blind participants, this is clearly an ability that needs time and practice in order to develop.

Extending heightened listening through greater participation

Conversations with teachers, as well as observing the loss of concentration among some listeners during the workshops, indicated that the results, particularly in terms of future access, could have been more convincing given extra time and greater participation. The encouraging responses in other projects where this has been put into practice reinforces this, not only at De Montfort University (Therapontos, 2012) (Wolf, 2013), but also in other projects such as Anna Maria Higgins' research with 16-17 year old music students, which proposed:

That comprehension of and focused listening to electroacoustic music can be better achieved through composing (Higgins, 2004:15).

The imaginative aspect of heightened listening also showed potential for development if combined with this element of participation. Additionally

narrative emerged as a theme in explanations for positive responses, as indicated by these participant's answers:

C. Yes because you hear sounds you've never heard before and it's more natural music. It's also in a way telling a story

D. Yes it was very interesting as I could hear sounds that I didn't really hear before or things I don't really pay attention to. The music almost told a story.

An interest in the creative possibilities of sound-based music and how this can stimulate the imagination was evident in responses given throughout the workshops, as demonstrated by the examples below:

E. Yes I would because it is different and not something that I'd usually think about. It will also be fun to make our own compositions

F. Yes because there is no limit to the sounds you can make in it. It really helps you imagine you're somewhere else.

Final Conclusions from the HL project

The overall results indicated that raising aural awareness through listening exercises can enhance the appreciation of real world sound-based music. The majority of participants engaged with the piece, said they would like to listen again to sound-based music and found the listening exercises useful. In addition, the connection between sonic awareness and appreciation appeared to be highlighted in the overall data and individual responses.

Measuring appreciation is not always straightforward and there are limitations to what any qualitative questionnaire can discover about how respondents really feel, especially when asking about an experience as subjective as listening to music. As has been noted by other studies on music appreciation (Kopiez and Lehmann, 2008:136) questions that offer a scaled choice might be influenced by what participants think the workshop co-ordinator (or teacher) might want them to answer, rather than their own subjective interpretation. However, even with such factors influencing the data, when considering the current low profile of E/A music amongst young people, these results suggest that there is a clear potential for developing more interest in real world E/A music. The HL project therefore laid the foundations for future research where participants could learn listening skills through engaging in creative practice via a use of imagination and narrative. The next section will outline the aims and methodology for my current research in greater detail.

The new research project

Building on the HL project the research aims to explore more deeply the concept of heightened listening and how this can be used to engage inexperienced listeners with sound-based music. The research investigates whether this can be effective as a pedagogical tool in schools in order to help facilitate greater interest in sound-based music, as well as building musical confidence in students of all abilities. Sound-based music can provide a unique opportunity to allow children with little previous musical experience to creatively explore communication through sound.

The inclusive potential of this is partly revealed by the following answer given by a pupil who took part in the HL project:

G. Yes because I am not very musical but I like spotting all the different sounds. I would also like to start composing some sound based music in the near future

This student regards herself as not being 'musical' but would clearly like the opportunity to be creative with sound. For the current research I aim to build on this by enabling children to listen beyond initial associations incorporating an internal listening that explores memories and the imagination. Before describing my methodology I will explore further what is meant by the idea of internal listening.

Imagination, memory and metaphor - defining internal listening

In contrast to reduced listening many composers connected to the soundscape tradition advocate a type of listening that uses the imagination. Listening in this way can enable hidden metaphors and associations to come into view, and as Darren Copeland comments (Copeland, 1999:7), this is an area that has not been fully explored in E/A music.

Katharine Norman uses the term 'referential listening' to describe the way in which we 'understand sounds as referring to objects and events' (Norman, 1996:2) and how we use memory to do this, but although 'real - world sounds are loaded towards referential listening' this doesn't mean that the imagination cannot play a part (Ibid:5). By using a more 'reflective

listening,' such as when hearing 'the song of the sea' (Ibid), 'we use our ears and minds to create, or reinterpret, imagined meanings for the sound' (Ibid:6). This type of listening is a 'creative, enjoyable appraisal of the sound for its acoustic properties' (Ibid:5).

Norman argues that we want to make sense of sounds according to our experience, 'to contextualise them. And, I contend, we retain this participatory activity in listening to real-world music' (Norman, 1996:9). Norman believes 'that real-world music, like poetry, is impelled by a desire to invoke our internal 'flight' of imagination so that, through an imaginative listening to what is 'immanent in the real', we might discover what is immanent in us' (Ibid:26). Hildegard Westerkamp supports the view of Norman that listening is a creative act and that real world compositions create 'a place of balance between inner and outer worlds, reality and imagination' (Westerkamp, 1999).

This expands the imaginative aspects of heightened listening by enabling listeners to subjectively interpret sounds in relation to their own experiences. Norman has talked of listening that explores what sound 'might mean, signify or even merely feel like' (Norman, 2004:95). It involves going 'beyond listening to the sounds' (Norman, 2010:117) meaning an imaginative creative listening that goes beyond identification or the immediate associations triggered by sounds. By internalising the initial listening experience, a listener can explore how this might resonate with their personal experiences and feelings. As the composer Michelle Nagai remarks, this can thereby offer a 'doorway' into creating a composition, 'suggesting both the real-world place from which it

arises and the imagined realms to which it leads' (Nagai, 2011:218). Similarly, Katerina Tzedaki refers to the 'inner soundscape':

Our inner soundscape is a personal sound scene, consisting of our thoughts, music remembered or improvised, fragments of filtered memories, imagined sounds and scenarios, voices of people we know, dreams we remember. (Tzedaki, 2011: 54).

Navigating the 'inner soundscape' could involve listening to what sonic artist Isobel Anderson has called, in reference to psychology, an 'inner voice' (Anderson, 2012) that can link our inner and outer worlds. As described by Anderson, when interpreting sounds, the inner voice can be used to search our 'internal archive of experiences and associations, gently muttering through the instances and memories' (Anderson, 2012), which can then be used to provide material for forming a type of narrative. This does not have to be linear but could simply be a 'narrative of experience' (Norman, 2010:117). For Norman sharing this kind of narrative within a sound work can then appeal to the listener to internally organise and access their own experiences in relation to the work and that this 'might be deemed akin to narrative prose in some respects' (Norman, 2010:117).

Norman goes on to explain that this 'recognition of a 'narrative' of organised experiences moves listeners towards finding somehow comparable stories in their own experience, a commitment that brings a convergence of autoethnographies (an autoethnography is an autobiographical narrative that explores the writer's personal experience)' (Ibid). Such a narrative might rely on anamnesis,

which is when a memory or past situation is evoked by sound (Augoyard and Torgue, 2005:21). Although this is frequently subjective there are common aspects, which are often cultural. There are many shared experiences that can produce archetypal anamneses, which are common references produced by sounds for people from a particular culture (ibid:23). Composers could exploit these types of anamneses in order to create narratives that a particular audience could identify with.

There were examples in the HL project of participants using their listening to make more imaginative connections that drew from their experiences of the world. Additionally it indicated that narrative or the idea of 'telling a story' through sound was recognised by children, as demonstrated by this response:

H. You could understand what was happening in the piece as it was like a story of music

For this project writing can be used as a method to help clarify and develop a participant's autoethnography in relation to particular sounds that have been chosen as material for a work. Furthermore, this inner listening can be used as a means of opening up the imaginative and creative possibilities of real world sound-based music to children. How to enable children, in practice, to learn to listen and work with sound is explained by the methodology.

Methodology

Using writing methods to help students explore their imaginations through sounds, the research aims to further develop heightened listening as a way that non-specialist listeners can positively experience sound-based music.

Written exercises are used to help

imaginatively explore sounds and establish a narrative that can form the basis of a composition. Participants are required to use sounds that will support that narrative, sometimes through metaphor and association. These techniques are incorporated into workshops, which are organized as described below:

- Research conducted with Key Stage 2 children (7 – 11 year olds) over a series of workshops, this is because, as was discovered in the Masters research, listening habits appear less entrenched at an earlier age and the children might be more open to new ideas about music (as indicated by the 'open eared hypothesis' (Hargreaves, 1982:51).
- The workshops begin with simple listening exercises, which are then extended through a soundwalk.
- The children are given the opportunity to record sounds using digital recorders.
- The children then engage in written exercises designed to help them explore a more 'inward' type of listening.
- In the remaining sessions the children create compositions based on a narrative that they have developed.
- Finally, there is a concert at the end of the workshops where each composition is played to the whole group, which gives the children extra motivation to produce the best work they can.

The concept of 'sound-based music' is introduced midway through the workshops and demonstrated with short excerpts from established pieces. However, the word 'music' is not

emphasised because the goal of the project is to investigate if children can be more engaged with sound-based music through creative participation, not to deal with the much wider question of defining what music is.

In order to test the efficacy of the research (in encouraging the children's interest in sound-based music) a number of methods are employed to provide an accurate picture of the qualitative experience of the participants. As discussed earlier, questionnaires can have limits in assessing an individual's true thoughts and feelings in relation to a particular experience. However, other research has indicated that children like the opportunity to discuss their experiences as composers and this also helps them to develop a language for doing this (Burnard, 2006:127). It is important that the research places emphasis on the child's perspective by allowing them open opportunities to voice their thoughts and this can be done by recording vox pops where the children talk about their experience of the workshops.

Conclusion

Rather than simply aiming to raise aural awareness in children, this research intends to facilitate a deeper awareness that enables them to investigate the imaginative associations inherent in sounds and learn to listen as composers. Through expanding this awareness into a compositional tool, it is hoped that learning about, and a deeper engagement with, sound-based music will develop. Therefore, the research will go beyond the template laid by the I/R project by asking participants to become both receivers and creators. Through adapting techniques and ideas that have already been applied in soundscape education

and by composers working with real-world sounds, it seeks to establish a methodology that can be used in education and the wider community as a means of broadening access to this type of music. By linking into other art forms such as creative writing, it has the potential to extend pupils' creativity and offers them a method for organizing sound compositions that they can relate to.

Traditionally, mainstream music education has emphasized music theory (pitch and rhythm) rather than developing an ability to communicate through sound (Ellis, 1997). This research, like sound therapy developed by Phil Ellis, which has been used for children with learning difficulties, will aim for progress to be made from the 'inside-out' (Ellis, 1997). This encourages the internal motivation of the child by giving them control (with certain parameters) of their own creativity. Children can be allowed to experiment in a 'facilitating environment' (Winnicott, 1991) that enables them to have the freedom to make mistakes. This then allows creativity to flourish so that they may manage to express their personal experience of sound in a way that might resonate with other listeners. Furthermore, this kind of practice could have wider benefits such as improving general listening skills, aiding listening to and composition of all music forms, developing creativity, building confidence and improving practice in other disciplines connected to the arts, literature or writing. It is also hoped that in the long term it might help promote well being for participants and their community, partly by better appreciating their sonic environment but also in thinking about how it might be improved in the future (as supported by acoustic ecology).

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