Acoustic Ecology as Therapy?

Louise Rossiter

Abstract

As a musician, I have been interested in the potential effects and benefits of music as a therapeutic tool. I have also been in a fortunate position to experience the deployment of music as a 'hands on' tool to interact with children and young people within both communities and residential care settings.

Keywords

Acoustic ecology, electroacoustic music,

Corresponding author:

Louise Rossiter, Musician and Student MMus Composition, University of Edinburgh

Introduction

'Where words fail, music speaks...' (Hans Christian Andersen at Thinkexist, 2011).

As a musician, I have been interested in the potential effects and benefits of music as a therapeutic tool. I have also been in a fortunate position to experience the deployment of music as a 'hands on' tool to interact with children and young people within both communities and residential care settings.

Although I have had an interest in music therapy and residential childcare for a number of years, I have undertaken no formal training or qualification in music therapy. My main activity as a musician is as an electroacoustic composer. This means working with sound and technology to create soundscapes which are performed over multiple loud-speaker systems in performance, giving the listener a 360 degree experience.

Most therapies are centred on the human interactions of eye contact, facial expression, gesture, touch and verbal communication. What is often overlooked is the power of the human ability to listen, taste, smell and imagine. Research has shown that negative environmental factors as defined in ecological theory have a direct impact on a child's age and stage of development (Bronfenbrenner, 1979).

This can be demonstrated in children in residential child care who are often at a lower stage of emotional, social and cognitive development. As a result, many are unable to communicate their emotions verbally. Therefore, the use of traditional therapies, which include counselling, may not be effective in meeting the young person's needs at any particular time.

Sound was used as a form of communication before language was developed. This is still a powerful medium for children and young people who are unable, for various reasons, to communicate using language. This paper will propose a method of using audio technology and compositional techniques supporting life-story work, which is commonly used within the residential child care setting.

Life-story work is used to help children and young people develop an understanding of why they have become 'looked-after', and enable them to archive past events and people. Traditional life-story work is often dependent on detailed and accurate information from a young person's carer or family; it focuses on physical artefacts evoking memory such as photographs, birth certificates, and written prose.

What I feel is missing from these traditional models is an awareness of the strong associations between sound, memories and emotion. For example, the sound of a child's creaking bedroom door in a residential unit may evoke vivid memories - both positive and negative - from their past. This may be having an impact on their current behaviour. Capturing aural events is as important as capturing visual and material events. New technologies could provide this aural dimension in which a child or young person can explore and record their past and make sense of it in a creative context.

In this paper, I will discuss the potential of using audio technology and compositional techniques in life-story work, supported by examples from my experience over the past year. I will also underpin this with theories to illustrate how these methods could contribute in a positive way within a therapeutic residential child care environment.

A Background to Electroacoustic Music

As mentioned in the introduction, I consider myself a composer of electroacoustic music. I am currently undertaking my MMus in Composition at the University of Edinburgh, with my career aim being to achieve my PhD and work as a lecturer and freelance composer, with a focus on Music in the Community. Electroacoustic Music can be defined as follows:

Electroacoustic music is an umbrella term, encompassing a number of sub-genres [of music] which have come into being over the last 60 years or so, such as music concrète, electronic music, computer music, acousmatic music and sonic art, to name but a few. What each of these sub-genres has in common is that the areas of creation and dissemination necessarily involve a symbiotic relationship between technology and sound (Stollery, 2010).

In essence, electroacoustic music is a very open way to explore creativity in composition through sound. Indeed, this is what attracted me to the genre. The working methods employed as an electroacoustic composer involve finding sounds and capturing these with a microphone and then using computer software such as Pro Tools or Logic to improvise with the sounds. The improvisation part is achieved by trying to 'mine' as much as possible out of a particular sound. With the use of plug-ins and sound effects of which are easily obtainable the possibilities are endless (KVR Audio, 2011).

Mapping History Through Sound: Projekt Berlin

Although I am passionate about music, sound and electroacoustic music, my main research area is in the field of Acoustic Ecology. Inspired by R. Murray Schafer, according to The World Forum for Acoustic Ecology (WFAE), it is defined as 'the study of the social, cultural and ecological aspects of the sonic environment' (WFAE, 2010).

It is this interest and my latest research project Projekt Berlin (Rossiter, 2010) that led me to develop the idea of using electroacoustic music (or rather sonic art) with young people and children in residential care. In 2009, I embarked on Projekt Berlin, which features a sound documentary and three other works of electroacoustic music. In order to carry out the project, I travelled to Berlin for a week and took field recordings, in order to construct a piece of work based on memories recalled by my mother.

My mother was a British civilian working as a nanny with the British army during the time that the Berlin Wall was in situ over 25 years ago. She had not returned to Berlin since the wall had fallen and so her experiences were still rather vivid, and unique. Projekt Berlin set out to recreate my mother's experiences, as well as creating a sonic map of various areas of significance in Berlin and the changes that have been occurring since the fall of the wall in 1989.

The project is in two main parts. The first is an interactive website featuring a map of Berlin. Pinpoints are placed on a map in specific locations accompanied by recordings of my mother speaking about her time in the city. The website also includes historical photographs and photographs taken in the same locations when I was undertaking the project, in order to map the physical changes that have taken place in the contemporary city. I also recorded my mother's memories both before and after the trip to Berlin. This created a full package of memories, including those that were brought back vividly, during the trip either to Berlin or in a period of reflection after the trip.

My work on Projekt Berlin led to the idea that children in residential care may benefit from this. Over the past year, I have been undertaking work with young people through the opportunities provided to me on my undergraduate course at the University of Aberdeen as well as through my mother who still works within a residential child care setting. In my final year at university, I worked with my supervisor, Professor Pete Stollery on a school project with thirty young people, which was based on the Sonic Postcards project. This involved the young people recording aural environments and then using technology to create a piece of sound art (www.sonicpostcards.org). Whilst the application of audio technology in this instance was an educational one, I saw the potential of its use in other settings such as residential childcare.

I gave a workshop, along the same lines as Sonic Postcards, to a school for looked-after children. Although this was only a one-day workshop, it was highly successful. I have outlined this experience below.

Listening and Composing Workshop

In early 2010, I was approached by staffs at a residential school who were interested in working with me to develop activities working with sound and music technologies with two of their pupils. After introductions, the teacher discussed the day's activities with the pupils. In lessons prior to the sound day, the teacher had already introduced some listening activities to the pupils. These included listening to sounds in the garden, and writing about them as well as listening to some of my electroacoustic materials.

The workshop activities were incorporated into a golfing activity and the day's events started off at the driving range. I had agreed with the teacher that I would work the sound activities around the golfing activities in order to keep the pupils as engaged as possible. I recorded sounds myself at this stage so that we could compose when we got back into the classroom. We also decided that it would be beneficial for pupils to record and work individually, with the opportunity to work together later in the day. This demonstrates the flexibility in using such a project in this manner.

We linked in the previous day's activities undertaken by the teacher and listened to all the sounds around us. We picked out all the different sounds that we could possibly record at the golf range. These included coins going into the golf ball dispenser machine, the golf balls coming out of the machine, and the electric tees as well as the hitting of golf balls.

We then split into two groups within the driving range. I was working with the support assistant and Pupil A in one bay, recording sounds, whilst the teacher was coaching Pupil B in the other bay. Both bays were open and therefore we could communicate clearly with each other.

Pupil A was very inquisitive and after I introduced him to the recording equipment, he was very keen to play about with the levels. Pupil A participated well and had the opportunity to record sounds and to be recorded. Pupil B was not as interested in recording sounds, so I recorded sounds for him so that he would still feel involved and would be able to take part in the activities when we returned to school for the afternoon session.

On return to school, the teaching assistant involved the pupils in some other activities whilst I edited some of the sounds we recorded earlier in the day. The teacher and I agreed that in the afternoon we would briefly come together as a group. It was decided that I would play part of an electroacoustic piece for the pupils and then show them how to use the Audacity audio editing software, using the interactive whiteboard and some sounds that I had edited and arranged.

After lunch-break, I played the first minute of one of my pieces, an extension of the activity the classroom teacher carried out on the previous day. The pupils discussed what they thought the source sound was. I followed this with a simple overview of the software and explained how easy it was to create sound art using it. I worked with Pupil A and the classroom assistant with Pupil B.

I found that Pupil A was again very inquisitive and it was not long before he was showing me what to do with all the programme's functions. We used my template as a structure

for the piece. Pupil A was meticulous with levels, using the volume control and 'fade in' and 'fade out'. We did not have to add many new sounds and by the end of the task he had a really good understanding of the software and was well on his way, comparing effects and making artistic decisions as to what sounds he would keep and which he would put to one side.

We then went through to listen to Pupil B's piece. I was surprised and encouraged with Pupil B's motivation, considering his lack of interest earlier in the day. The teaching assistant and Pupil B were working together and had created what sounded like a 'rap' track using the sounds. The classroom teacher told me that Pupil B lacked confidence in his abilities and if he thought something was too difficult, he would not do it. However, with some encouragement and a little experience with the software, he was thoroughly enjoying himself. At the end of the school day the responses from both pupils and staff were very positive.

Discussion

Whilst there are already computer packages available to support life-story work, I feel there could also be a use for the compositional techniques used in electroacoustic music in this particular area. Most of what you need to carry out such a project is either free of charge (the software and effects) or easily obtainable (recording equipment of some form).

The main advantage of using my proposed model is that each stage of the project does not have to be completed all at once. Young people can go back to the project time and time again or work on it in their own time.

Typically, the young person(s) would work with the musician/composer/ member of staff in two main sessions. In the first session, the young person(s) would be encouraged to listen to sounds in their own environment and write about them. Such a setting could be in a garden, and listening to sounds of birds:

- Are they high or low pitched?

- Are they fast or slow?

- What do they remind you of?

- How do they make you feel?

The same ideas could be applied to any sound whatsoever. The purpose of this is to encourage the young person(s) to listen to sounds around them; it will also make them more receptive to recording sounds in the second part of the first stage of the project with the therapists. Then the composer/musician would work with the young person(s) actively listing sounds they would like to use in their pieces for history. Then the hunt for these sounds would begin. Using basic recording equipment, the young person(s) would, working with the composer/musician, record the sounds they want to use. This would be the end of the first part of the project and all parties would have a chance to reflect.

The second part of the project involves the young person(s) working with the composer/musician to decide on what sounds to use in their pieces. They will start to use basic sound editing software such as Audacity (which is free and very effective for such a project) to edit their sounds. Examples will already have been given on how to transform sounds. The young person(s) can then be given time to work on their sounds and, very importantly, to write down why they are changing each sound, with an explanation in such a way that provides important documentation for future reference.

This proposed model is close to that of the Alvin model which is based around free improvisation and centres on listening to or making music, and can use any form of musical activity which this proposed model fully encompasses.

> Most research shows that the effects of music are greater when the music has more meaning for the listener. Because of its dynamic quality, our primary attraction to music is both physical and emotional. In a physical way, the music causes pressure waves that are felt bodily, and for the emotional effect, music creates mood environments to which we respond at a subconscious and non-verbal level.

The physical aspect of this is demonstrated by the young person being able to manipulate the sounds in such a way that all aspects of the sound they have chosen to record are affected - for example, the tone, the volume or the depth of the sound which can be felt during the composition and 'mining' processes. The emotional effect is demonstrated by the individual's use of their sounds at the time of composition. Their emotions experienced at the time of working on these pieces would dictate the mood of the final piece.

A young person may recall and record familiar sounds/voices from their home environment. These could include sounds from the street, and / or within certain rooms of their house, school etc. Depending on how they felt at the time of recording/recalling the sounds, they can use effects within the programme to convey their feelings. For example, they could distort or manipulate the sound that reflects a particular emotion, whether this is anger, happiness, confusion, anxiousness etc.

> Emotional reactions are often due to associations, memories and past experiences that may be good or bad (Wigram et al., 2002, p.57).

They can then create one or several pieces of music totally unique to the individual which would be burnt on to a CD and used in a therapeutic manner.

My proposed model links in with psychotherapeutic music therapy,

where music is used to help the client gain insight into their world, their needs and their life and where an active, psychodynamic approach will involve gaining awareness of issues, thoughts, feelings, attitudes and conflicts (Wigram et al., 2002, p.57).

It is anticipated that a pilot project using the model proposed in this paper will take place in Scotland this summer, with the outcomes being published later in the year. Any parties

interested in the pilot and the methods discussed in this paper should contact the author directly to discuss this.

References

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge: Harvard University Press.

KVR Audio (2011). Examples of free audioware. Retrieved on 24th February 2011: www.kvraudio.com/get.php?mode=results&st=q&s=8

Rossiter, M.L. (2010). Projekt Berlin. Retrieved on 25th August 2010: www. projektberlin.com. Stollery, P. (2010). *Introduction on acousmatic music*. Lecture at University of Aberdeen, February, 2010.

Thinkexist (2011). *The quotations of Hans Christian Andersen*. Retrieved on 25th February 2011 at http://thinkexist.com/quotation/where_words_fail-music_speaks/147006.html WFAE (2010). Definition of acoustic ecology. Accessed on 24th February 2011 at www.interact.uregon.edu/MedialLit/WFAE/about/index.html

Wigram, T., Pedersen, I.N. & Bonde, L.O. (2002). *A comprehensive guide to music therapy: Theory, clinical practice, research and training*. London: Jessica Kingsley.