MIMICRY, MANIPULATION AND MUTATION: A PORTFOLIO OF ECLECTIC COMPOSITIONS

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ABSTRACT

Aim: to create a portfolio of acousmatic and mixed compositions for stereophonic and multichannel formats. In making this portfolio I intend to use a wide range of musical and non-musical sources. I will draw influences from both acousmatic and popular music genres in original compositions. The work will form a portfolio exploring music and the ambiguity of musical boundaries. I will also be using detritus and noise and considering some of the implications associated with these types of sounds. The work will also focus on the use of play and improvisation in music creation.

DEDICATIONS

This portfolio of work is dedicated to my partner Jesse Lyons for all of her help and support and to my parents Brenda Baker and Michael Baker, and my brother Neville Baker, for their continued encouragement.

Wit and Wisdom, is dedicated to Terry Hudson (1964-2013).

ACKNOWLEDGEMENTS

I would like to thank my supervisor Scott Wilson for his continued support and patience over the many years. I should also thank the various members of staff in the Department of Music at the University of Birmingham who have assisted me during this time.

Other notable mentions should go to Richard Sayers for performing with the megaphone on *Are You There?* and to Sarah Jane Knight for playing the trombone on *Home to Roost*.

Finally, I'd like to thank the people, past and present, at *BEAST* for offering an experience and opportunity that I will always cherish. Thank you for continuing to provide the opportunities and a platform for composers of electroacoustic music.

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LIST OF ABBREVIATIONS

DAW = Digital Audio Workstation.

EQ = Equalisation.

Mono = Monophonic.

Sub = Subwoofer speaker

ST = Stereo/Stereophonic.

INTRODUCTION

This document supports the submitted portfolio of musical compositions.The compositions will be reviewed for technical approaches, aesthetic intentions and outcomes. There will also be reference to some of the wider issues associated with electroacoustic music and the influence that popular music has had on some of the works in the portfolio.

The pieces vary in terms of context, approaches, content, meaning, and outcome. Some of the pieces are very personal and contain some emotive content, while others are closer to being studies on a theme or object. More detail concerning the compositional themes is discussed later in the document.

One of the early influences on my work was reading the translation of Schaeffer (2012). It was clear from reading this book that Schaeffer was ‘searching’ for ideas and often doubted his own theories, approaches and conclusions. Schaeffer’s sense of self-doubt and desire to search and explore resonated with me. I began working on my portfolio in the spirit of searching and exploring.

RESEARCH PROPOSAL

The original proposal discussed drawing on influences from a wide variety of sources and implementing them in electroacoustic music (Appendix A). Having worked in popular music for many years, often in a highly structured way, the idea of making music that could incorporate different approaches and ways of working was appealing.

Some of the pieces were influenced by an existing piece of music. Others were driven by the sounds whose iterations often dictated the direction of the piece. The portfolio contains some collaborative pieces and the influence of popular and experimental music runs through most of the work.

The connection between the initial concept and the outcome fluctuated while composing of some of the pieces. This was most evident in the collaborative piece, *Are You There?* where the concept and presentation were formed over time as the piece developed. However, in other pieces, the focus was on the sound source or the techniques being used, which was evident in *Vapourise* and *To be Forgotten*.

One of the key research areas for this portfolio was the use of ‘noise’ and detritus in acousmatic and electroacoustic music. In this context detritus can be defined as the artifacts and unwanted elements of a recording whether they are glitches in the recording and coding process, or errors in the physical recording such as performer mistakes (Cascone, 2000). The concept of ‘noise’ in my work refers to Russolo’s (2004) definition of the industrialisation of sounds emanating from modernity. One of

the main aims was to weave the elements of noise, detritus and accidental error into the compositions without them necessarily being the focus of the pieces.

The portfolio of music also has recurring themes of mimicry and parody, where some of the pieces contain sounds that are exaggerated or faux versions of the source. At times, the created sounds have a close resemblance to the mimicked sound source and at other times they are extreme renditions of both the source sound and the constructed copy. The sense that there is a sinister undercurrent that lies beneath the apparent playfulness is a recurring theme in some of the pieces and mimicry is one of the methods used to achieve this. Often, pieces that are apparently playful and potentially light in subject matter contain aspects of discord and dissonance that create an undercurrent of foreboding.

The work also deals with play and improvisation as ways to engage with instruments and objects. Improvising in this context involves working with, and responding to, the sounds made by broken or damaged instruments and hacked hardware. Approaching the creation of sounds without preconceptions about the outcome often helped to set the tone for the creation of the pieces. The importance of spending time getting used to the idiosyncrasies of these sources while exploring their possibilities was also a key part of the process of play.

BACKGROUND

I have been playing music since the age of 14 when I taught myself to play the guitar. Influenced by the DIY nature of Independent music of the late 1970's and early 1980's. I started recording using a stereo microphone from a Tandy store, plugged into a tape recorder that was part of a hi-fi system owned by my parents. From there I went on to use four-track tape-machines, reel to reel recorders and eventually digital recording formats, always retaining a fascination for studio recording techniques and sound creation (Appendix B). One of my interests throughout my time working in music has been technology and how this has changed how music is made.

COLLABORATION

The collaborative pieces were jointly composed and as such, both composers are credited with writing 50% of the pieces.

Motostasis, *Accordion with EarNest* and *Are You There?* were all created in collaboration with Jesse Lyons who was studying for a PhD in Music Composition at the University of Birmingham, supervised by Jonty Harrison. Working on pieces of music together was not something that we had done before and we learned over time how to combine our interests.

Jesse's work was influenced by Trevor Wishart and involved the use of the voice as both a recognisable sound as well as a source for mimicking and reinforcing other sounds. We were keen to integrate these vocal techniques with instruments and objects; we decided that working with eight-channels[1] would be the best approach for realising our ideas (Figure 1).

[1] An eight speaker french ring speaker set-up with one subwoofer..

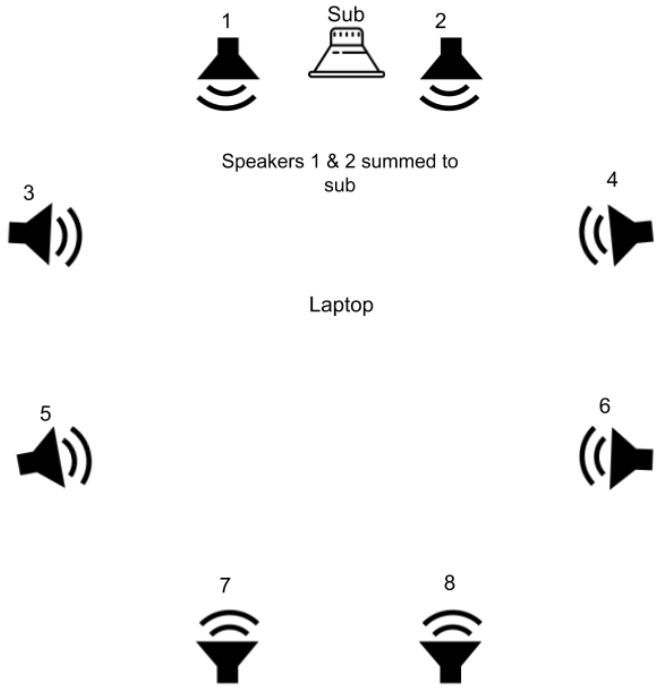


Figure 1 - home studio 8-channel system.

Deciding on a starting point was always interesting. We would discuss and un-pick various preliminary ideas and quite often our differing approaches would result in ideas being rejected as they contained either too much of what I felt was prescriptive narrative, or they were too loose and broad for Jesse to work with. We found a compromise in the first piece that we made together (*Motostasis*), by using a piece of existing music as a reference point[2].

In *Accordion with EarNest* the general mood of the piece was a lot lighter than in *Motostasis.* The use of the sound of a broken accordion with improvised vocalisations gave the piece a playful feel and mirrored the working practices that we were undertaking. The piece seemed to transfer to the performance setting well and

[2] Giacinto Scelsi's String Quartet No'5

some of the dynamic gestures were enhanced when played through the BEAST diffusion system[3].

The last of the three collaborative pieces was *Are You There?* and this was the most symbiotic of the pieces that we made together. *Are You There?* worked both as a theoretical exercise, and as a performance piece. The sonic setting we used was an imagined environment that sounded familiar, but that was also clearly artificial.

When a space becomes the setting for a physical performer, formerly only heard as part of the fixed tape playback, the relationship between what Chion (1990) describes as the *acousmêtre and de-acousmatization* is realised. This relationship is explored further in the analysis section for the piece.

[3] BEAST multi-loudspeaker system
https://www.birmingham.ac.uk/facilities/ea-studios/studios/index.aspx

MATERIAL SOURCES

While using new technology has always been exciting to me, I also like to incorporate instruments, objects or sounds that resonate with me in some way despite their age, condition or quality. In these compositions I have used: a Minimoog synthesiser, circuit bent samplers, old modified toys, a bicycle, the contents of my garden shed, as well as broken objects and instruments. I have also used recordings of site locations and my pet parrots and chickens (Appendix C).

The equipment, techniques and software used will be reviewed for each of the pieces. Some of the outcomes that resulted from my compositional decisions are also explored later in the document.

Un-romance for Guitar, was one of my first electroacoustic compositions and it was a good place to begin challenging my previous approaches to instruments and ways of making music. While writing popular music using a guitar I had developed an almost unconscious compositional approach of creating rhythmic chord patterns and generating melodies. This was something that I tried to be aware of in this piece and by using different methods for playing and recording the instrument.

By using the instrument that I had played in a given way for most of my life, I was able to challenge myself to view the process as an exploration. This involved changing my perception of the guitar and the different ways it could be used to make sounds. This approach influenced how I worked on later compositions with an emphasis on re-thinking how sources could be manipulated to generate sound.

The piece *Ascent* also uses the guitar as the main sound source. However, in this instance, I used an electric guitar played using an EBow[4]. *Ascent* was influenced by a technique used in the song, *I'm not in Love* by 10cc[5]. This involved creating layers of droning guitars in a similar way to the layers of voices used by 10cc. The techniques that I used are explained further in the composition page for the piece.

The piece *I've Got a Bike Syd* directly references *Bike,* by Pink Floyd.[6] Drawing on a range of influences has always been important in my work and mixing and matching often quite disparate and seemingly antithetical styles of music. The bicycle as a sound source and the original song provided some direction as well as some parameters for the piece.

Vapourise, I've Got a Bike Syd, and *To be Forgotten,* were all made using objects that had some potentially interesting sonic qualities. In *Vapourise,* I explored objects that produced some effervescent sounds. *To be Forgotten*, was composed solely using objects found in the garden shed. The objects and instruments used in the pieces were often played using additional ephemera[7].

Improvisation and playfulness is a recurring theme for much of the portfolio. Meelberg (2012, para. 5) states that the aim of research should be to "make explicit how musical improvisation can teach us about dealing with interaction, sonic expression, with the unknown, with innovation. In other words: to show the relevance and importance of musical improvisation through the practice of improvisation itself."

[4] An electronic device that sustains individual guitar notes indefinitely https://ebow.com/
[5] Sound on Sound magazine: CLASSIC TRACKS: 10cc "I'm not in Love" Published June 2005 https://www.soundonsound.com/techniques/classic-tracks-10cc-not-love
[6] Pink Floyd 1967, *The Piper at the Gates of Dawn* https://www.discogs.com/Pink-Floyd-The-Piper-At-The-Gates-Of-Dawn/master/19546
[7] Combs, paper, drumsticks and beaters, metal rods, brushes, pens and any other object to hand.

Improvisation in my compositions often involved responding to the unpredictable circuit bent hardware and then working with the resulting sounds. Learning how to utilise these unexpected events became part of the compositional process and being able to respond and improvise reminded me of how I learned to play music[8].

Another source for sounds has been birds, which have featured on most of the pieces in this portfolio. *Home to Roost, Artifice,* and *Are You There?* all make use of recordings of birds alongside emulations of bird sounds using a variety of vocalisations, synthetic reproductions and manipulated sounds. These were conscious efforts to blur the line between the real sound and the emulation to the point where it is often difficult or even unnecessary to make the distinctions.

Bird sounds feature on many of the pieces in the portfolio in both a planned way, as in the pieces mentioned, and also as a consequence of living with many birds and recording at home. While recording in my garden or home, the birds are inevitably picked up on the recordings and this has almost become a signature sound in each of the pieces in the portfolio. Birds are an important part of my life and it seems appropriate that they feature heavily in the portfolio

The portfolio is a body of work that I have composed during the past nine years. There are varying themes, including humour, playfulness and mimicry. There has also been a conscious decision to incorporate discarded sounds or detritus present in both the digital recording and manipulation processes as well as errors made by

[8] Self-taught musician learning guitar by ear playing along to the radio and television which meant responding to often previously unheard material

the performer during the recording process. The sounds that would normally be removed or avoided have been actively sought out and used with more prepared sounds.

While working on the portfolio I have learned a lot about myself as a composer and as a teacher. Performing with the BEAST diffusion system proved to be a steep learning curve but using the system over the years I was able to temper the pieces to suit the playback system. Performing with BEAST I gained so much by being in the company of people whose passion was acousmatic and electroacoustic music. Being able to perform at the same concerts as people who I admired was both inspiring and humbling. I hope that the portfolio incorporates some of the eclectic influences that I cite. The joy of making and recording sounds is something that I have always appreciated and I hope that this portfolio reflects that in some way.

COMPOSITIONS: SUMMARY OF WORKS

Title	Composition type	Format
01 Un-romance for Guitar	Tape	Stereo
02 Artifice	Tape	Stereo
03 Vapourise	Tape	8-channel
04 Home to Roost	Tape	8-channel
05 Motostasis*	Tape	8-channel
06 Accordion with EarNest*	Tape	8-channel
07 Are You There?**	Tape and live performer	8-channel***
08 To be Forgotten	Tape	8-channel
09 1125 S&H	Tape	8-channel
10 Ascent	Tape	8-channel
11 Wit and Wisdom	Tape	8-channel
12 I’ve Got a Bike Syd	Tape	8-channel

* Denotes collaborative pieces with Jesse Lyons composition weight 50-50

** Denotes collaborative piece with Jesse Lyons and includes a live performer with a megaphone. Composition weight 50-50

*** Denotes stereo recording of live performance as submitted piece

01 Un-romance for Guitar

Year of Composition: 2013

Format: Stereo

Duration: 9:52

Acousmatic

Synopsis

Romanza also known as *Romance for guitar, Spanish Romance* and *Romance d'Amour* is a well-known and often played piece of music (Figure 2). The origins of the piece are vague and it is thought to have been written in the late 19th century as a solo guitar piece[9]. The piece modulates between a minor key for the first half, to a major key for the second half, until it resolves back to the minor key and has been used in many different formats and arrangements.

Un-romance for Guitar was composed using the acoustic guitar and is a stereo piece of music made as part of the MPhil; brought forward to be part of the PhD portfolio. This was the first piece that I played at a BEAST concert in May 2013 and was added to the portfolio to provide context with the later multi-channel work.

[9] Galaxy Music Notes 2020. Learn about the uncertain origin of the guitar piece "Romance" https://galaxymusicnotes.com/pages/about-uncertain-origin-of-romance

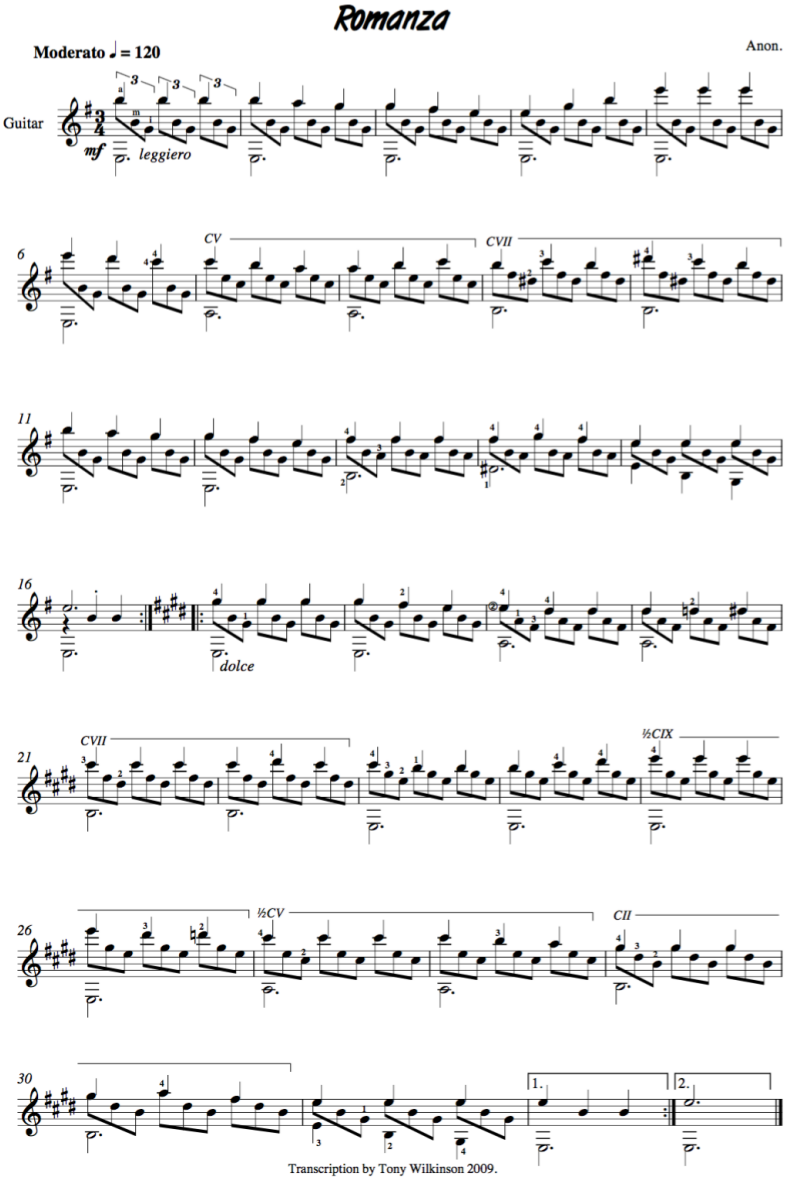


Figure 2 - Romanza

Structure

In order to create a link between the original and my interpretation, I decided to create two clearly different sections that were demarcated by guitar harmonics. In the original piece, the harmonics mark the change between minor and major parts and I have used a similar technique to separate the sections in my piece.

The length of the sections in *Un-romance for Guitar* are roughly proportionate to that of the original, so that it mirrors the shape and form. Some of the notes from the tutorials that I had with my supervisor while composing this piece suggested making the second section significantly different from the first section. I did this while being mindful to keep the sense of pace and balance of the original piece. I was also conscious of the fact that the two sections had to be significantly related as in the original.

Recording

The recordings were made at home using a homemade cigar box guitar with a very cheap piezo contact microphone. Tapping the instrument with a plectrum across the surface of the guitar produced different tonal and volume variations that were used in various parts of the piece. The other guitar sounds were made using an inexpensive basic electro-acoustic guitar which I attempted to make sounds with rather than play in a more conventional way. This meant scratching, tapping, shaking and using all of the surfaces and hardware as potential sound sources. The recordings for this piece were made using very basic instruments, with low quality contact microphones, as a conscious decision to move away from the usual desire to use the best instruments and microphones available.

Gestures

At this time I had been reading papers that categorised and formalised various gestures. Basanta and Eigenfeldt (2010) was a useful starting point as they analytically dissected various gestures observed in Francis Dhomont's *Novars*, Denis Smalley's *Wind Chimes*, and Jonty Harrison's *...et ainsi de suite...,* and discussed

how they were contextualised in these pieces. Categorising sound shapes helped me to consider the relationships between the individual sounds and the ways they might be combined to create movement and direction.

In *Un-romance for Guitar* the gesture at 3:59 used a basic guitar sound that includes the low E string and a harmonic plucked on the twelfth fret of the high E string (Figure 3). The pluck appears relatively unprocessed in the first instance but is repeated in a highly processed form. This had been created by passing the guitar sound through the Akai S20 circuit bent sampler[10], which produced some digital noise associated with circuit bending. This demarcates the sectional change but by using an iteration of the initial pluck there was a sense of continuity between the sections which occurs as a key change in *Romanza*.

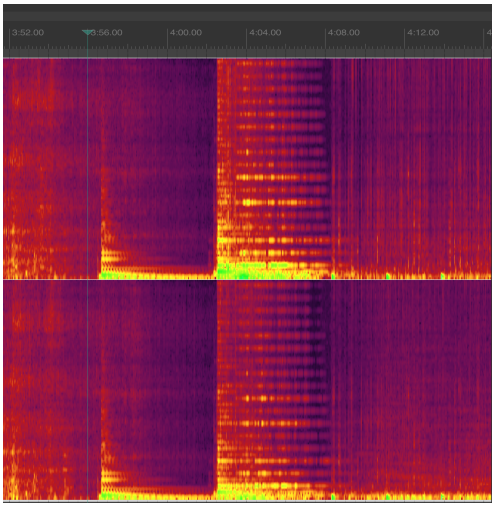


Figure 3

Another gestural approach influenced by Basanta and Eigenfeldt's (2010) paper that was used in this piece was the foreground to background, background to foreground. Sounds that emerge and recede can be used to change the direction or mood of the

[10] Circuitbenders.co.uk - circuit bent Akai S-20 sampler https://www.circuitbenders.co.uk/synthmod/S20.html

piece while still maintaining a sense of coherence and development. Using these techniques helped to root the piece and provide a similar level of consistency and development observable in *Romanza.*

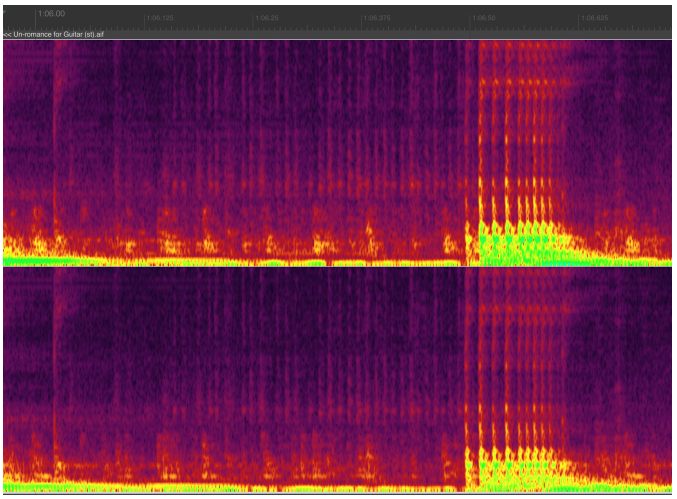


Figure 4

Figure 4 shows an emerging gesture starting at 1:04. The gesture is triggered by the sound of several plectrums being dropped onto the body of the guitar. The low frequency that was extracted from the plectrum drop emerged from behind some of the processed plectrum iterations. Using the low frequency sound in this way helped with the organic development of the section.

A ‘macro’ gesture, where a foreground causal element creates an outcome in the foreground, was also used in this composition (Figure 5). This occurs at 7:07 where a textural layer emerges from a processed guitar chord. The texture is a stretched, blurred and processed version of the first chord. In this example the foreground sound is the catalyst for the processed variations (Basanta and Eigenfeldt 2010).

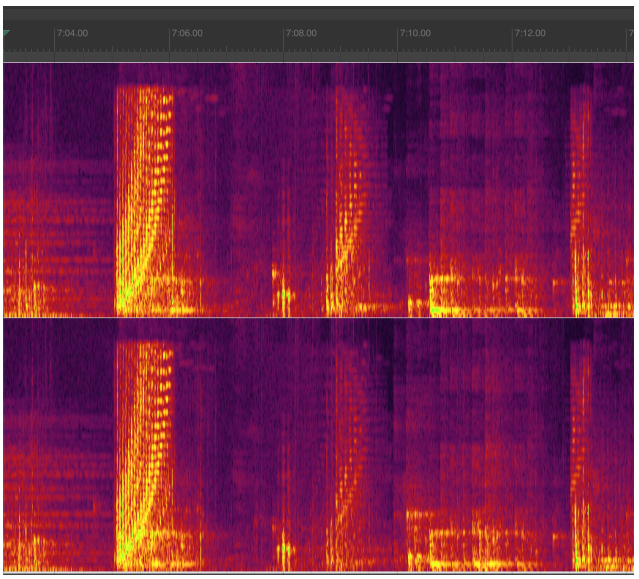


Figure 5

Figure 5 shows the spectrograph of the gesture and its further foreground developmental changes.

Smalley (1997) described techniques for categorising various visual and sonic aspects of acousmatic sounds. Blackburn (2011) using Smalley's notion of Spectromorphology, suggested that this was not only a descriptive tool, but that it could also be used as a compositional aid. Blackburn suggests that visualising and categorising the sound events can not only assist with the understanding of the function of a given sound, but also its relative place within a piece.

This deconstructed approach helped to clarify and demystify some of the codes associated with the music. The ideas also provided a good theoretical basis with which to begin composing and constructing the piece. The process was guided by my constant reference to the shapes and their relationships. In later pieces I moved away from my earlier approach. The inspiration to do this came from a public

performance of *Un-romance for Guitar*. The result was a shift from composing analytically to a more organic approach which will be discussed later.

In *Un-romance for Guitar* I used approaches that would inform some of my later work. An example of this appears at the midway point of the piece where the guitar root note and plucked harmonic are recorded in a deliberately unsophisticated way. While recording a guitar part for any genre of music, the aim is usually to achieve the microphone and room placements positioned such that the instrument and room are complementary. The microphones are usually placed in the ‘sweet-spot’[11]. However, I made recordings of the guitar that did not flatter or enhance the sound. This lack of emphasis on high-fidelity was the early formation of the idea to utilise a similar aesthetic approach in later pieces.

[11] The "sweet-spot" refers to an ideal microphone positional placement that captures the nuances and details of the given sounding source and the space in which it is recorded. To capture a larger space or more detail multi-microphones are often used. https://mynewmicrophone.com/top-23-tips-for-better-microphone-placement/

02 Artifice

Year of Composition: 2013

Format: Stereo

Duration: 5:39

Acousmatic

Synopsis

This piece was written using recordings of mechanical toys. It was mixed with samples of recordings of my parrots and the wide-ranging vocalisations, chirps and clicks that they make. The idea driving the piece was the blurring between the artificial and the 'real', relying on the recorded sounds of the parrots being almost indistinguishable from the processed toy sounds. It can be argued that the origin of a perceived sounding source is not important compared to the composed or perceived outcome. The use of sound variations in this piece, from authentic to mimetic, plays with the point at which the distinction between these categories becomes redundant. Whether the sound is a recording of a bird or an artificial representation of that recording is no longer important within the context of the piece.

Chion (1983) realised the problems with analysing sounds using solely physical descriptions of frequency and mathematical science. Chion (1983, p. 15) was cautious when relying on the scientific analysis of music which he suggested neglected "the active role of the ear in constructing and defining the characteristics of perceived sound" by virtue of the fact that "the ear perceives fundamental notes that do not physically exist"[12]. Chion stresses the importance of the psychological

[12] Psychoacoustics and the active role the brain takes in interpreting sound.

response and perceived listening as being not a response to the measurable frequencies but an experience that is tied in with our subjective emotional state.

The academic analysis of musical forms used by composers to express a time, place, mood and emotion have often focused on characteristics associated with western classical and popular music. Nattiez (1990 p. 123), states that “many meanings that we perceive as ‘natural’ are the result of codified systems to which we have become acculturated.” Nattiez (p. 126) goes on to state “semantic analysis of musical work must be able to verify whether the meaning that a composer invests in the work is understood by performers and listeners-and if so, how.” Clearly the connection between meaning and response is difficult to measure and substantiate in any scientifically categorical way and yet composers still use musical content to suggest or enhance the emotional response of the listener. Therefore, the importance of the cultural context cannot be underestimated in terms of the intention of the composer and their own understanding of the musical signposts; the recognition, understanding and interpretation of the composed meaning by the performer and the perception of the listener.

The ‘listener’ is also a complex term in that some will understand the significance of the associated theory while the casual listener may seek to understand the music using the terms of reference associated with music from a given cultural context. Chion (1983, pp. 19-33) suggests that there are further listening modes characterised as Listening, Perceiving (concrete forms), Hearing and Comprehending (abstract forms). These distinctions are useful tools for understanding the complex relationship between intention (composer) and response

(listener). The composition and construction of the piece was underpinned by this ongoing taut theoretical internal dialogue.

Composition and Structure

This piece has a similar sound quality to *Un-romance for Guitar,* mainly due to using the same software, plug-ins and recording tools for both pieces.

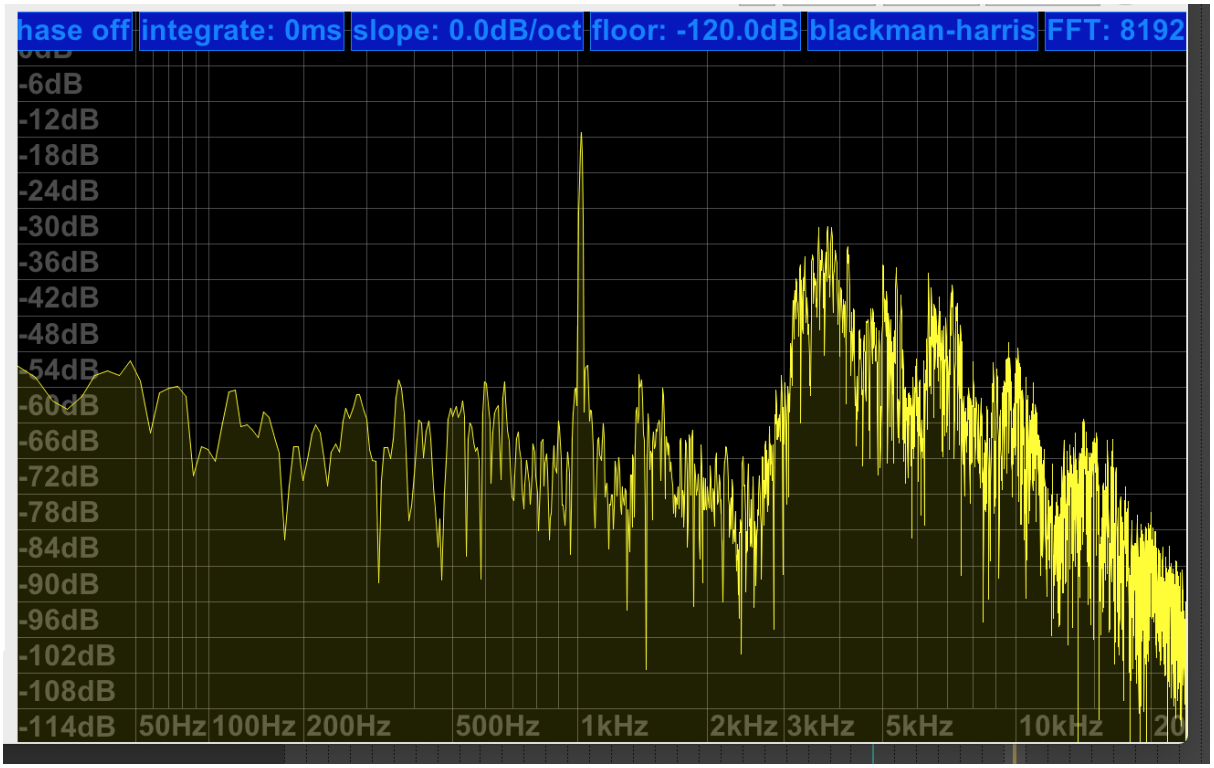
The piece begins with a scraping and rattling sound that came from the bellows of an old accordion[13] which appears again later in the piece as a short drone. The sound emerges from the distance and morphs into the sound of toys being wound up, as if being prepared for action.

One of the factors in making this piece of music related to working with the non-pitched sounds of the bird sounds used in its construction. The toys and parrots made sounds that can be measured and deconstructed in terms of hertz, amplitude, envelope and time; however, the specific frequency intervals within a bird call do not correspond with an equal temperament tuning measurement. In this sense it is more accurate to describe the bird sounds, and to an extent objects, as having fundamental or dominant frequencies that become significant when generating faux copies. This meant analysing the frequencies of the source material, birds and toys, and using those frequencies to create and shape the imitations.

Once again it is important to consider why I might want to measure the bird song against the index of equal temperament tuning. The pervasiveness of the dominant

[13] This sound source appears later in the portfolio in the piece *Accordion with EarNest*

tropes and conventions that guide both popular and classical music had some causal effect on the working processes. Clearly, on a practical level, working out the pitches of the bird calls required a starting point and going to a conventional instrument was a useful aid in approximating pitches and relationships. However, closer inspection of the individual bird calls revealed far richer and denser harmonic and frequency relationships. This can be seen in the pitch measurements taken from some of the sounds made by the African Grey parrot (Figure 6).



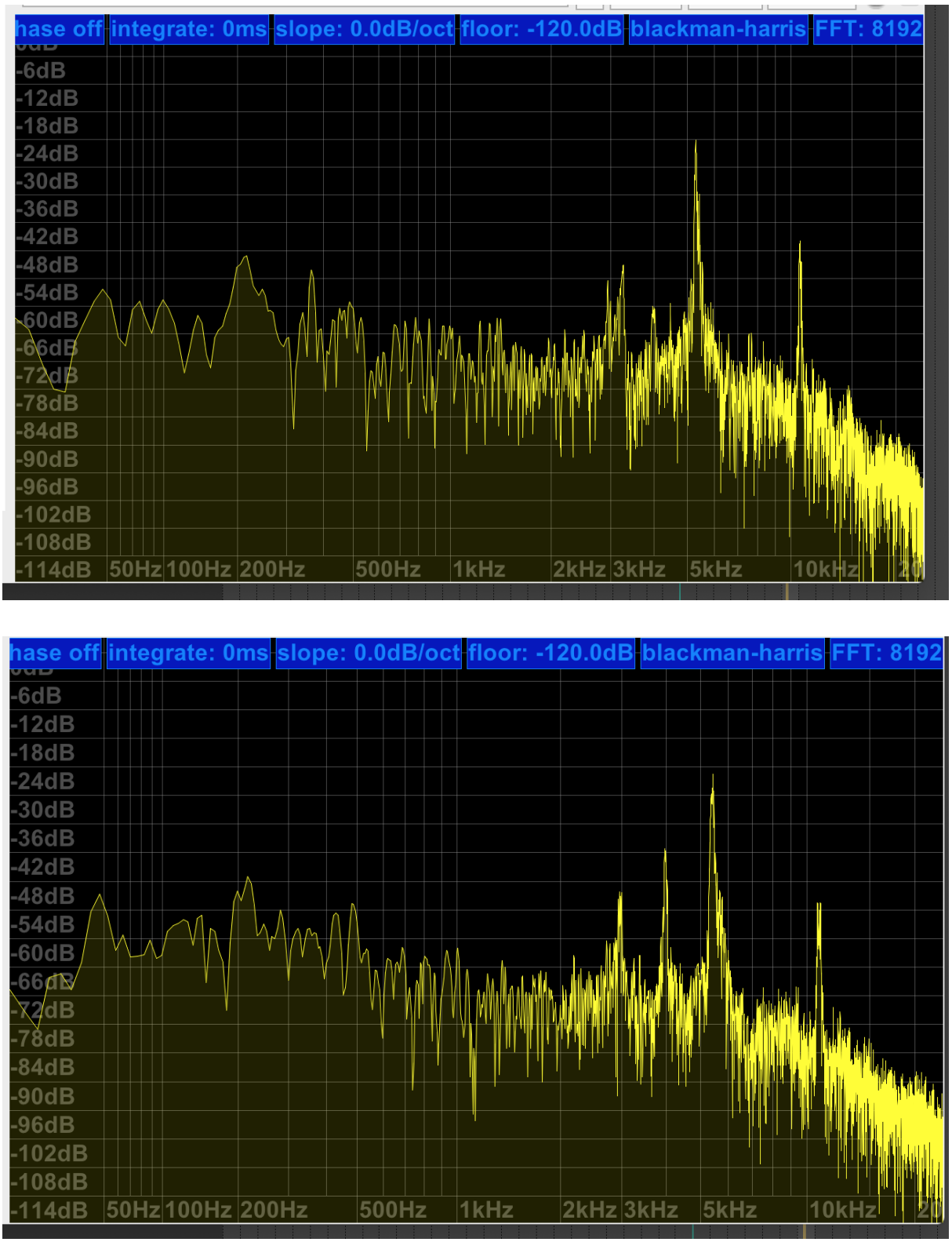


Figure 6 - Parrot call pitches spectrographs

The first iterations of the processed parrot calls appear at 0:44. The importance of the connotation that the sound represents is as interesting as the source itself. Whether the source is a recording of a ‘real’ parrot or an artificial representation of the sound of a parrot is only important to the extent that the listener makes a connection. Even a sound that is far removed from its source can often have sufficient information that the listener can discern a sense of the source without fully recognising the specific origin. Further, the importance of context of the sound in identifying their origin cannot be underestimated. Whether the iterations are perceived as bird-like relies on the listener's previous knowledge of bird sounds and the way that their sound occurs in their habitat

The variations of the source sounds act to foreshadow the later reveal of the origins of the sounds and present the listener with a sense that what they are about to hear is familiar in some way. Sefchovich (2003 p. 87), suggests that foreshadowing occurs by “varying the morphological features of similar sounds.”. Foreshadowing the parrots with iterations of the sounds that share similar attack, pitch, time and release qualities guides the listener using suggestion and repetition.

Sefchovich (2003, pp. 87-88) goes on to say “A sound can be repeated within a short period of time with different imposed morphologies which work to consolidate the internal coherence of the musical fragment. By foreshadowing a sound prior to its variation, morphological transformations are emphasized as being relevant at a microstructural level.”

Sefchovich’s assertion that by using a microstructure as a template, a given sound

and its variations, can act in a similar way to a motif within the piece. This idea was important when constructing the piece and the variations of the bird sounds, whether taken from toys or parrots, can become extreme in places but are still anchored by their microstructural relationships with the previous iterations.

From approximately 4:55 the distinction between the processed toy bird sounds and the processed parrot sounds are blurred. The sense that mimicking the ‘real’ sounds of the parrots, in this case using manipulations of the original, to suggest a sense of shape and form to the listener, can therefore be seen, in some sense, to bring into doubt the authenticity of the source material. This is further confused by the fact that the source of the sound, the parrot, learns sounds through mimicry and they are often imitating other bird and non-bird sounds that occur in their environment. Moreover, some of my parrot’s phrases and calls have been learned by copying calls that I taught to them. My bird calls were non-specific whistles rather than exact copies of actual bird songs. Therefore, the extent to which we can call the parrot sounds definitive, in this instance, is questionable.

03 Vapourise.

Year of Composition: 2014

Format: 8-Channel

Duration: 8:06

Acousmatic

Synopsis

Vapourise was the first piece of music that I wrote using an eight-channel French ring loudspeaker array (Figure 7).

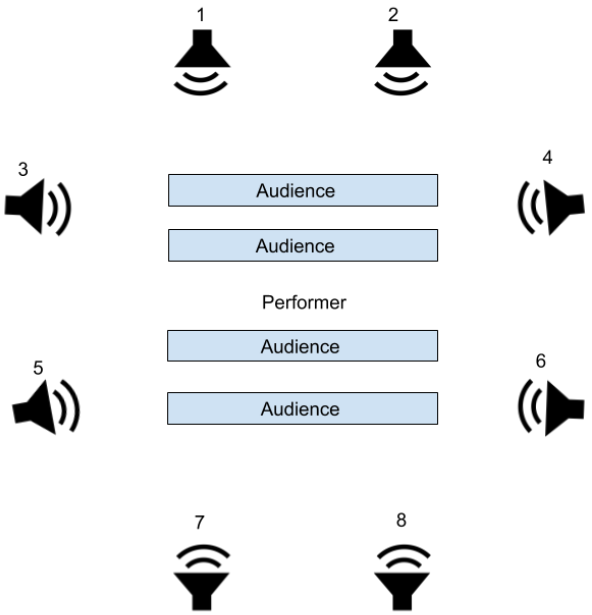


Figure 7 - 8-Channel Loudspeaker array

This piece was formed around the sound of effervescence generated by carbonated drinks and dissolving tablets and incorporated sounds made using an electronic cigarette and a rainmaker. I also used some of the sounds associated with the carbonated drinks such as opening cans and lids, pouring the drinks, and tapping the bottles, which were then processed to generate some of the other sounds used in the piece.

Composition and Structure

Vapourise starts with the sound of air being inhaled and exhaled through an electronic cigarette. Using the 8-channel French ring format for the first time, I decided to push the sound from the back to the front of the space to make the most of the loudspeaker array. The piece ends with a processed, granulated and stretched version of the sound used at the start, which fades towards the front of the soundfield. This was done to create a sense of continuity and completion despite the sounds from the coda not being identical to the introduction.

One of the techniques that I used in *Vapourise* was to try and mirror some attributes of the sources, such as the movement of the sounds that accompany the stretched and granulated sounds in the introduction (Smalley, 1997). An example of this occurs at approximately 1:15 where a gentle fizz texture and a sliding, scraping counterpoint act as part of a gesture that includes an effervescent, processed release at approximately 1:24 (Figure 8) .

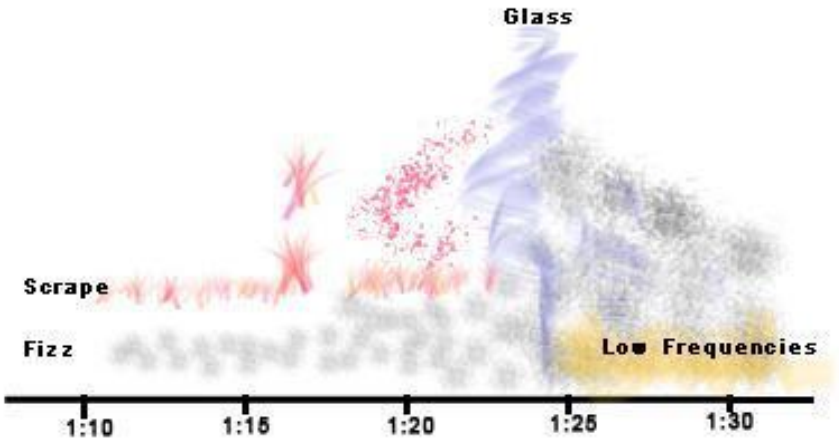


Figure 8

A further example of creating continuity between sounds relates to the low frequency that is used in the piece. This was generated by layering pitched and stretched versions of the modulating sound of the metal spring that forms part of the rainmaker, with pitched versions of the sound of the effervescence (Sound clip 01). In context, this sound adds body to the piece, yet still maintains a connection, by using sound sources already present in the piece. By mirroring the modulation that occurred in the recording of the spring attached to the rainmaker, and applying it to the stack that contributed to the layers of the low frequency sound, I was able to enhance the sense of homogeneity within the piece (Sound clip 02-bass, Sound clip 03-rainmaker spring).

In *Vapourise* at 2:30 a sound rises from a gesture to circle the listener. The sound emerges from a dominant gesture at approx 2:18 made using stacked layers to create a density of sound. The sound used to move through the space was made by scraping the spring attached to the rainmaker which was processed using various pieces of software[14]. There was an element of experimentation and playfulness when using the tools. I did not necessarily set out to use the software with specific intentions and goals in mind, but went to ‘play’ with the software and sounds to see what would happen. The idea of experimentation and improvisation were present in the construction of the elements used for the piece; the resulting sounds informed the direction of the composition.

[14] GRM reson https://inagrm.com/en/store/product/3/classic and BEASTtools Barreiro D, et al, 2011, BEAST, University of Birmingham, https://www.birmingham.ac.uk/facilities/ea-studios/research/beasttools.aspx

The last section of the piece from approximately 7:18 is denoted by the use of a descending filtered sound made from the effervescence sound. This sound suggests a decrease in energy to assimilate the last fragments of liquid dissipating. This loss of energy in the source sound is mirrored in the structural arc of the piece and this is highlighted in the final minute.

Russolo (2004) argued that the advent of industrialisation brought with it a surge in previously unheard sounds that in some way disrupted the sonic landscape forever. He suggested that the orchestral sounds used in previous musical works were insipid and dull compared to the sound of industrialisation. Russolo (2004, p6) went on to suggest that the modern listener gained more satisfaction “imagining combinations of the sounds of trolleys, autos and other vehicles, and loud crowds, than listening once more … to the heroic or pastoral symphonies.” The use of sounds associated with modern culture resonates with Russolo’s idea that industrialisation, and its new sonic landscape, can be an important part of a composer’s tool kit.

The use of manipulated sounds in this piece that had artifacts associated with the technology that was used to generate them relates to Russolo’s (2004) idea of breaking the distinction between noise and pure sound. Actively using sounds with some sonic detritus meant incorporating flaws that are often hidden from the listener in some music. The choice of sound is also important as the initial elements used were products of an industrial soundscape[15] rather than a pastoral one.

[15] See Appendix C - Sound sources by piece

Kahn (2001, p.25) describes noise as being the ‘imperfections’ of communication that can be seen to be always on the borderline of becoming “impassable noise”, rendering the intended meaning of the statement to be lost to the listener. For the communication to be successful, he suggests that the noises that do not add to the meaning are absorbed and ignored in an attempt to impart and extract meaning successfully. However, Kahn (2001 p.26) states that when noise itself is the object of exchange it is “transformed into an abstraction”. He goes on to suggest that it is the perception of the status of a sound that defines it as noise. That is whether the sound is considered to be detritus, or whether it is a consequence of stylistic choices taken by the creator, situationally linked as a result of physical circumstances, or the result of some other dysfunctional issues.

In *Vapourise* I chose to use sounds that enhanced the initial source sound. The sound of the electronic cigarette, fizzy drinks and their packaging, helped to create a piece of music that referenced modern culture. While the piece began as a study of the sound of effervescence, the combination of reading theories and playing with the sounds produced something that brought together some of the theory and practice.

04 Home to Roost

Year of Composition: 2015

Format: 8-Channel

Duration: 9:09

Acousmatic

Synopsis

This piece was made using manipulated recordings of my pet chickens which were used as the main source of sounds. To counterpoint the chickens' noises, I interweaved some trombone parts that were played loosely to add to the overall comedic sensibilities. Despite the piece being constructed using chicken sounds, commonly considered comical, and a trombone, which could also be construed in this context as being light-hearted, the piece has a sinister undertone; more of which will be discussed below.

Context

Some of the considerations I had when constructing this piece related to the perception of animals in Western culture. Some animals are considered to be pets and people acknowledge the cultural bond society has with them (e.g., cats and dogs). However, other animals are considered culturally to be food (pigs, cows and chickens) . The treatment of both categories of animals is in some way, defined by their ascribed status; pet or food. Pets are generally treated well and loved by their owners but this is not necessarily the case with animals considered to be part of the chain of consumption. This distinction is not based on anything other than the perceived status of the animal within a given culture (Matejka, 2010).

Structure and Composition

The piece opens with a heavily processed cockerel sound. The sound was processed using a selection of *BEASTtools*, to generate spectral blurring and movement across the eight loudspeakers. The sound was processed several times to create textures of sound.

At 1:13 the trombone appears and mimics a gentle sound made by the chickens (Collias, 1987). This is followed by a combination of time stretched clucks and calls and trombone melodies. The melodies were generated by asking the trombonist not only to mimic the sounds of the birds, but to improvise some melodies that were suggested by the chicken sounds (O'Callahan, 2015). To do this I found the approximate key for each of the sounds, many of which were close to *Bb* and *Eb; however*, this modulates approximately to the dorian mode of the C scale in the final section.

The trombonist was asked to re-tune their performance to the chicken samples when playing notes and melodies. I did this so that the chicken sounds dictated the content of the piece rather than trying to adapt the sound of the chickens to fit equal temperament tuning. By using the instrument as a mimetic source, it can be seen to be, in some sense, abstracting the sound of the chickens due to the 'tension' between the entities. O'Callaghan (2015, p. 238) suggests that: "We are pulled into a tension not only between source bonding to the 'real' sound source of the instruments and their mimetic antecedents, but also between listening to the source

and the inherently abstracted quality of the transcription. The instruments, then, recontextualise the environmental sounds as abstract to a certain extent.”

At around 1:58 there is a trombone pattern that descends to a final held note. This is accompanied by clucks and wing flapping that circles the room. This sound then builds into a cluster of what sounds like distressed hens, generated by *BEASTtools*, until a gesture made using a metal cage door brings the section to an end. The aim was to signify the distress and stress caused to birds that are kept in industrial battery style conditions. The distress sound made by chickens is usually reserved for moments of extreme danger (Collias, 1987).

There is an unprocessed cockerel sound that begins the second section at 2:38. There are some gestures included that were generated by heavily processing the cockerel’s call. These recede into the background and the trombone enters and comes to the foreground. Some of the exchanges between trombone and cockerel are light and playful where, at points, the trombone and cockerel are being used as a simple call and response mechanism. However, as the sounds begin to merge the relationship between the sounds can be seen to change. Emmerson (1998) in his analysis of Smalleys’ piece *Clarinet Threads,* suggests that there is a relationship between the transition from *gesture* to *texture,* particularly when instrument and electroacoustic sounds vye for the listeners attention. He goes on to suggest that the shift from hearing the call and response as a set of gestures, to a texture can be a fluid one despite the source material not changing dramatically.

Some of the more sinister sounds begin to appear after the (dis)chord generated by the layers of trombone at around 4:30, leading into a section that has stretched and manipulated chicken and trombone sounds, where the *Homogenisation* (Emmerson, 1998) results in the two sounds becoming almost indistinguishable. This is an approach often used in electroacoustic music, where different spectral forms are layered and merged to become a separate entity (Smalley, 1997).

The final section of the piece begins at around 6:00 with a melody played by the trombone. The root note that underpins the section corresponds approximately to a *C* note while the melodic line is from the dorian mode of that scale. At 6:50 the root note shifts from *C* to *D* which anchors the dorian scale. The major 6th interval present in the scale provides brightness to an otherwise minor scale. The low note then resolves to an *Ab* which appears as a flat fifth of the dorian scale, provoking an unsettling resolution to the melody. The movement of pitch in this section is similar to some of the techniques used in film and cinema soundtracks to enhance the narrative. Using what approximates to a dorian mode, provides a vague sense of sadness that the day is over mixed with a sense of optimism and this is partly due to the connotation of the major 6th interval.

The sounds used for the coda are an attempt to suggest the winding down of the day, when the light begins to fade and chickens go to roost. The chicken samples for this section were created while my birds were going to roost and they were merged with trombone samples that emulated the gentle clucking sounds made by the chickens at roosting time (Collias, 1987).

Summary

In *Home to Roost,* the detail is found in the interaction between the trombone and the chicken sounds. The distinction between chicken and trombone becomes important only by their interactions which in themselves are a product of the environment imagined for the piece. The sources of the sounds, and their sonic iterations, are to some extent lost with the listener's attention drawn to the seemingly comical interplay between the sounds. This provides a cartoonish backdrop to a piece that has some serious undertones. The context of the sounds and the playfulness of the piece encourages the listener to suspend the notion that this is an attempt to faithfully represent the sources, in order to immerse themselves in the constructed environment.

05 Motostasis

(by Adrian Baker and Jesse Lyons)

Year of Composition: 2016

Format: 8-Channel

Duration: 7:45

Acousmatic

Synopsis

This piece was influenced by Giacinito Scelsi, *String Quartet No. 5.*[16] Scelsi's work was most notable for his use of microtonal tunings and intervals. *String Quartet No. 5* was one of his later pieces of music, written to mark the death of the French poet Henri Micheaux. The piece is structured around a series of gestures that have slight microtonal variations.

Motostasis was made using the sound of a bass guitar to provide the initial gestural elements. As with *String Quartet No. 5,* the gestures themselves have similar attributes, particularly in terms of envelope shape and sonic content, that vary as the piece develops. This idea of the events being similar and yet subtly different is a recurring theme in this piece of music. The gestures are accompanied by a voice and various other sounds that punctuate the spaces between the gestures.

Composition and Context

During discussions about the collaboration with Jesse we decided that creating a fairly stable and static environment would provide a setting or location for the piece.

[16] Giacinito Scelsi, *String Quartet No. 5.* All Music https://www.allmusic.com/composition/string-quartet-no5-mc0002502315

We also talked about how we could use the dramatic elements to enter the space and provide the dynamic counterpoint to the fairly steady bass gestures. The importance of the imagined space, where the drama of the sounds could unfold, was a key part of the composition process and the mechanics of creating the space became the first task. Composing an environment in which the drama could unfold became a feature of our collaborations included in this portfolio.

The combination of the spatial sounds and the gestures create a soundfield or artificial space in which the events occur. This can be described as an “acousmatic space-form” in which “source-bondings and spectromorphological relations" act as a backdrop for the acousmatic events that define the space (Smalley, 2007. p.40).

The title for the piece is an amalgamation of the words “motor” and “stasis” and this term has been created to highlight the movement of the sounds around the fixed and static gestures. The voice and other sounds are used to create a sense of drama as they move around and between the gestures to create a playful antidote to the repetition of the bass gestures. The sometimes emotional content triggered by the gestures, in the form of vehicles and vocalisations, has a direct effect on the timing of the subsequent gestures in a developmental way. As the piece progresses, the demarcation between gesture and response becomes blurred until they are difficult to untangle and distinguish as individual elements.

Some of the sounds used have a clear source-bonding relationship, particularly the sounds of vehicles. Many of these sounds are loaded with associations that can be used to set the scene and to provide the listener with a sense of place and

groundedness, even when the imagined environment is far removed from anything that we might recognise as being realistic. Using sounds clearly associated with an industrial environment ties in with Russolo's (2004) argument that industrialisation has changed both the potential sonic palette for the composer and the perception of the listener.

The temporality of the constructed environment has a direct effect on a piece where the listener can "reconstruct and re-imagine such forces and causes at work" (Adkins, Scott and Tremblay, 2016. P. 110). As the piece progresses, the distinctive relationship between the sounds break down as they begin to merge and emerge. This movement from gesture to texture in some sense highlights a personal theoretical shift relating to my understanding of post-acousmatic music.

Collaboration

This was the first piece of music created in collaboration with Jesse Lyons. It was also the first time that we had jointly composed electroacoustic music. This meant that we were both trying to understand our differing approaches and aesthetic requirements, and how we could find some symbiosis between them.

Creating sounds for the piece involved various processes relating to the voice and vocalisations. We recorded these parts in two distinct ways. First, we recorded Jesse, who was improvising vocally with the bass gestures that, at this stage, were roughly outlined. We sorted through the vocal performances together to find the most interesting parts. Secondly, we recorded dedicated vocalisations[17] that were used to

[17] Clicks, lip-smacking used to enhance the attack portion of the gestures

enhance and embellish the bass gestures. At this point we worked separately to process and manipulate the sounds that would later either be rejected or added to the piece depending on how we perceived the sound to fit with the theme. There were occasions where we both had to accept that a particular sound that we had spent time working on did not fit with the feel of the piece.

As the construction of the piece progressed it became clear that the bass guitar needed to be embedded in the piece rather than continuing to be a causal element. At approximately 2:30 the bass gestures are interspersed with and joined by other elements that either enhance or supersede the role of the bass. These sounds include trunk horns, passing vehicles, vocal clicks and ticks as well as processed sounds generated from the core sounds. To keep a sense of homogeneity, we decided that the sources for the processed sounds would be limited to the sound palette that we had used up to this point.

Over time the piece was embellished and shaped to be less like a set of call and responses, but rather to mirror a set of complex and interwoven relationships. This idea evolved organically as we worked on the structure of the piece as it became apparent that the gestural elements were almost too formal. By loosening and subverting the cause and effect relationship we were able to make a much more interesting and dramatic piece of music that has a sense of being anchored as well as being unsettling and obtuse.

06 Accordion with EarNest

(by Adrian Baker and Jesse Lyons)

Year of Composition: 2017

Format: 8-Channel

Duration: 9:54

Acousmatic

Synopsis

This piece is a study of the sounds taken from a broken, vintage accordion which was used in a previous piece (*Artifice*). The sounds were later embellished with improvised vocalisations that were processed to create a broader set of sounds. The piece was composed during 2016/17 and was made at the same time as *Are You There?,* both of which were performed at the 2017 BEAST FEAST[18] concert.

Materials, Sound Creation and Composition

We initially recorded samples from the accordion that included the damaged cloth and cardboard bellows creaking as they were moved back and forth without depressing the keys or buttons. This produced a sound akin to human wheezing so we set out to create samples, using human vocalisations that mimicked the sound of the bellows. Wishart (2012) in *Red Bird* and other works used the human voice to mimic other sounds and we were inspired to explore this method.

The interaction between the voice and other sounds is interesting as listeners tend to be able to distinguish the human voice even when it is masked by other sounds.

[18] BEAST FEAST 2017 concerts http://www.beast.bham.ac.uk/beast-feast-2017/concerts-2017/

Heidegger (2001. p.207), suggests that the removal of meaning or intelligibility from the voice does not prevent the listener from recognising the source. He states: “Even in cases where the speech is indistinct or in a foreign language, what we proximally hear is unintelligible words, and not a multiplicity of tone-data.”.

Heidegger (2001. p.211) goes on to suggest that the removal of a recognisable discourse changes the listeners relationship with the voice from one of being present and engaged with the meaning, to one of disengagement from the “idle talk” or “noise”. Therefore, while we can distinguish the sound of a voice from other sounds, our engagement with it depends on whether we can follow the meaning or not. By using the voice as a method for mimicking other sounds, we were able to use its lack of intelligible language-based meaning as well as its inherent attraction as a sound source to which the human ear seems sensitive.

While examining the accordion, we found that there were some fundamental issues with the integrity of the instrument. Unlike a conventional, fully-functioning accordion, the results were not generating controlled pitches or corresponding to the notes on the keyboard. This was something that we were able to use to our advantage in that we were generating pitched sounds, but the pitches were dictated by damage done to the key mechanisms and the soundboard, rather than being chosen by the conventional process of playing keys and buttons to create melody and harmony.

The instrument produced unusual overtones and harmonics, as well as the more conventional tones and pitches associated with an accordion. The processing of these sounds generated random frequencies based on the inconsistencies in the overtones and harmonics present in the original recordings. The idiosyncrasies of

the instrument were further exaggerated by using pitch shifting and micro-shifting as part of the audio processing stage. In this sense, it was the context of the pitch information that was as relevant as the measurable, objective frequencies.

The sounds were manipulated using a combination of *BEASTtools* and other pitch/time/grain based plug-ins such as *Density*[19]. Using these types of audio manipulation tools on pitched material generated interesting results that we later divided into broad sections. The decision to divide the sounds into categories based on their perceived properties was made with reference to attributes such as attack and decay, timbre, tone and spatial properties which were used to generate the descriptive categories in the table (Figure 9). Jesse's vocal responses to the sounds emulated some of the characteristics displayed by the original recordings of the accordion. This made it possible to divide the sounds by the broad categories described (Blackburn, 2009). We both then separately processed the sounds and brought what we had back to the project.

Creaky	Breathy	Melodic	Drone	Percussive	Other FX
Big sewing machine Big sewing machine 2 1Acc creak 1 creaks comp 1 creaks comp2 6 acc creaks Acc creaks 1 Acc creaks 2 Scrape8 Scrape8 gran Intro final	1.4 breath 5.6 breath acc 5.6 breath acc2 5.6 breath acc3 Acc sigh 8.2 Acc sigh 8.3 Acc splatter Acc splatter2 Acc sigh high Acc sigh mid Acc sigh low Acc whoosh Acc whining Movement 8ch Movement 8ch 02	Acc 03 Acc 04 Acc 06 Acc 08 Acc 10 Acc 11 Acc 12 Acc 15 Acc 21 Acc note push Acc up 01 Acc up 02 Acc up 03 Acc up 04 Acc down 01	3.4 long 100 flt2 Acc 04 Acc 05 Acc 06 Acc 08 Acc Ab Acc Ab2 Acc Ab3 Acc Ab5 Acc Ab14 AB8 Breath 3.4 long ABpopdrone	98 - slow A blips Vfx clips01 Vfx clips02 Vfx clips03 Vfx clips04 Vfx clips05 AB long fx Bell bounce Bell bounce2 Clicks mechanism Clicks Clicks and whines	1 accept 2 accept 3 accept 4 accept 7 accept 9 accept 11 accept 13 accept Lorry 01 Lorry start Squash Low crash

[19] See Density credits Appendix F

JESSE97 JESSE99 Small sewing mach Winding Winding contraption Scraping 01 Scraping 02 Scraping 8 Scraping 8.1 Scraping sliding 8	Windy acc Whine Vslow2	Acc down 02 Acc short down Acc short up Acc long Acc long 01 Acc long 02 Acc Flt1 Acc Flt03 Acc Flt07 Acc Flt09 Fast run01 Fast run 04 Fast run comp Fast run comp2 Mbox 3.2 Rrr 01 Rrr 02 Rrr 03 Rrr 04	Ringmod drone Spinner 1 Longer8 Longer8 flt Longer8 ref Density morph bells Jess reflect Jess reflect 01 Jess reflect 03 Voice gran Voice gran2 8 blur end	Clicks 1 Clicks 2 Clocker Downfilter7 Thudfall Knife scrape Loop diversion Tik Tok slow/fast Ticky Tok Tok Tingles	

Figure 9

The composition work occurred at home where we would both negotiate decisions about the sounds and their place in the piece.

Choosing a suitable sound-space for the sounds to exist in was difficult for this piece. The sounds were often made using close-mic techniques and this can produce sounds that are intimate due to the proximity effect[20]. The choice of microphone technique, and the resulting sounds, had an impact on the composition process in that the intimate character of the sounds contributed to the overall tone of the piece. By mimicking the sounds of the accordion with the voice we were able to play with the distinctions between source and emulation. This was a key feature of the music in the portfolio more generally.

[20] https://www.neumann.com/homestudio/en/what-is-the-proximity-effect

07 Are You There?

Year of Composition: 2017

Format: 8-Channel* tape and live performer

Duration: 9:37

Acousmatic - Soundscape

Synopsis

The inspiration for *Are You There?* came from the previous collaborative work where the human voice was used to create both meaning from the chosen text and as an instrument used to emulate sounds. What began as a fixed-tape composition transformed into a mixed piece which included a performer with a megaphone who appeared in the concert hall, after previously being part of the sound emanating from the loudspeakers.

Composition

We conducted a variety of experiments with a megaphone - we wanted to test the extent to which this would be an unflattering medium for sounds made by a human voice. Some experiments involved recording vocal/megaphone sounds from a distance in an open environment. The idea behind this was that the closer environmental sounds[21] would be prominent in the recordings and the voice would be distant and *blurred* as an effect.

[21] Environmental sounds included birds, wind through trees and distant vehicles.

After completing some initial recordings, experimenting with the technique described, we realised that the voice did not sound as *blurred* as we had hoped, despite trying various locations, recording techniques and performers. The early idea behind the piece had to be revised. We decided to use the megaphone as an instrument recorded in close proximity and set this in an imagined environment.

One of the key characteristics of a megaphone is the mid-range frequency distortion that is produced by the cone. This fitted in with my aim to incorporate sounds that displayed sonic attributes, such as distortion, into the composition. The soundfield was constructed to suggest an environment that was familiar, yet disconcerting. This involved using the recordings of the ambience from our garden and layering this with artificially created[22] sounds that complemented the recordings. We spent two weeks writing and refining the text alongside gathering ambient recordings and recreating bird songs.

Creating the faux environmental sounds meant recording some of the sources available from the garden. This included using a close microphone next to a rabbit's food bowl to capture the rabbit crunching on their food. Another source was a group of flies buzzing in the garden. Both of these sets of sounds were later manipulated and enhanced using various processing techniques.

Generating bird song involved layering several instruments and shifting the pitches on some of the layers to suggest the often piercing bird calls. The idea was to offer the audience a sense that the setting was both realistic and imagined. The resulting

[22] This included faux bird song and insect sounds.

sound environment was occasionally punctured by hearing a voice calling through a megaphone (Appendix D).

The use of soundscape has been described by Truax (2008. p. 105) as the meeting place between music and non-music. He stated: “Artists coming from the electroacoustic music community join with those coming from other acoustic-based backgrounds, such as field recordists, sound artists, and those involved with acoustic design in a variety of contexts.” This seemed relevant to our situation, where Jesse’s background was audio-visual whereas my experience was in the field of popular music. We felt that the creation of an environment like this would offer the perfect canvas, which could accommodate the narrative of the piece and the spatialised sounds.

Stollery (2013. p.289) when discussing the use of soundscape in his piece *ABZ/A,* states: “What is important for me here is the idea of multiple levels of association. It is not important that the listener ‘goes’ to the exact place of the recording, but that he/she ‘goes’ to *a* place.”

The reveal of the performer, who was not given exact timings or audio cues, hints at a lack of causality. The eight-channel piece used as the fixed part of the performance had an extended final section that went on for several minutes after the anticipated conclusion of the performer. Therefore, the duration of the piece was in many ways determined by the performer's interpretation and their movement through the space; how long they decided to linger in one place or how quickly they decided to move to the next line and location.

The piece ended with the performer leaving the auditorium and the fixed tape being cut short to coincide with the slamming of the closing door by manually pulling down the master fader. This extension also allows for potential future performances in different sized venues and allows the performer the freedom to explore and interact with the given room or concert hall.

Context

The piece of music attempts to work playfully with the pedagogy that Pierre Schaeffer borrowed from Pythagoras. Schaeffer took this approach and applied it to sound, that is, divorcing the source (sounding object), from the outcome (sound object) behind the “veil” of the loudspeaker (Kane, 2014).

This idea gives rise to some interesting discussions about what Chion (1990) describes as the *acousmêtre* used to portray an unseen force that operates outside of the setting. Chion suggests that the *acousmêtre* is neither visible as a protagonist, nor are they in the wings as a narrator might be. The *acousmêtre* is an omnipotent force based on the protagonist's absence and in some sense they are powerful and all seeing; they seem to know what is yet to unfold before us. When the performer appears with a megaphone at 7:00 minutes they are no longer part of the loudspeaker presentation, which changes their previous status. Figure 10 traces the performer's route around the auditorium.

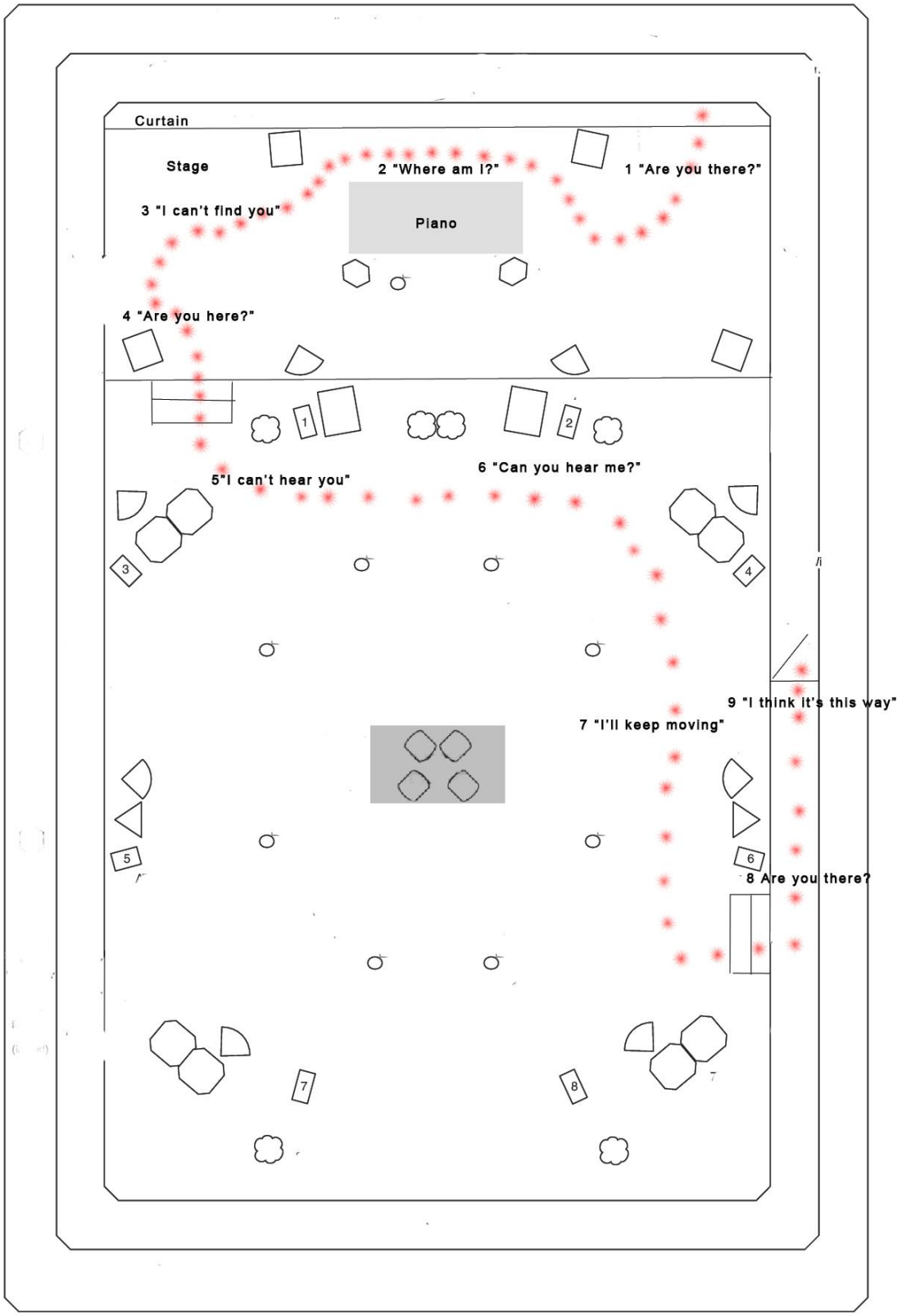

Curtain
Stage
2 "Where am I?"
1 "Are you there?"
3 "I can't find you"
Piano
4 "Are you here?"
1
2
5"I can't hear you"
6 "Can you hear me?"
3
4
9 "I think it's this way"
7 "I'll keep moving"
5
6
8 Are you there?
7
8

Figure 10

Clearly, this is the same person, using the same piece of equipment and calling in the same manner. However, the sound is no longer an artifact or a representation, but is grounded by the reveal of the performer in what Chion might describe as ‘De-acousmatization’. Chion (1990. p. 131) states: “De-acousmatization consists of an unveiling process that is unfailingly dramatic.”

Further, the unveiling of the performer can be seen not only as a reveal, but also as some kind of demotion into the constraints of the physical world. Chion (1990. p. 131) when discussing this suggests: “Pascal Bonitzer has noted that the de-acousmatization of a character generally goes hand in hand with his descent into a human, ordinary, and vulnerable fate. As long as we can't see him we attribute all-seeing power to the voice; but once inscribed in the visual field he loses his aura.”

Both the drama of the reveal of the performer, and their fall from a position of unseen power, to one of vulnerability and relative helplessness resonates with Bonitzer’s analysis. Within this piece, our performer goes from being lost on the other side (of a loudspeaker), to being rooted in the auditorium, a physical manifestation of the sound that was once trapped inside the other space.

08 To be Forgotten

Year of Composition: 2015

Format: 8-Channel

Duration: 6:47

Acousmatic

Synopsis

The idea for this piece was to create something that would be dramatic in a concert setting using found sound, detritus and noise. At the time I had been listening to Parmegiani and was inspired by the movement and drama that he managed to create in some of his pieces. In his piece *De Natura Sonorum* 1975 Parmegiani (1998. para. 15) explores the nature of sound through the combination of unprocessed or “natural sounds" with processed “artificial sounds”. Parmagiani said in an interview with The Wire magazine that he had set himself “many more constraints” than when composing previous pieces. This suggests that some form of defining parameters, far from being a restriction, can encourage the composer to work harder within the chosen medium.

Sound Creation

The first sound that I recorded was the creaky shed door. From there, I decided that restricting the source objects to only those found in the shed were useful constraints to work with. Limiting the sources resulted in a set of sounds whose characteristics were dictated by the found objects and my ability to coax sound from them.

To complement and counterpoint the recordings of the found objects I also used processing techniques that added digital noise and glitch, mainly via the circuit bent hardware samplers. The samples were then processed again using computer based filters and effects. Further, some of the extraneous sounds made during the recording process, such as accidentally tapping the microphone stand and other unintended sound events, were also used and incorporated into the final piece.

Structure

The piece opens with a heavily processed metallic sound followed by a bucket hit layered by a metallic clang. The sounds then combine, in a variety of forms, to establish the mood and sound stage for the piece. Eventually, this section comes to rest at around 1:22 with an iteration of the bucket and metal hit that introduced the piece. The latter part of this gesture was formed by layering processed samples of the metallic sound used in the opening section, with the bucket sample that has had the attack portion of the envelope extended to soften the impact.

The second section is introduced by the extended sound discussed above and is characterised by falling pitches and some blurring of the initial sounds. Some of the sounds in this section, and in the rest of the piece were processed using a circuit bent[23] Akai S-20 16 bit stereo phrase sampler.

The use of glitch and circuit bending is something that has caused some difficulties for acousmatic composers as to how these types of sound fit with *Schaeffer's* early aesthetic. While it could be suggested that these sounds are more akin to sonic art,

[23] The act of hacking hardware e.g. Reed Ghazala

others, such as Wishart (1996) have suggested that this typology is a redundant approach. Green (2006. pp. 3-4) goes on to suggest that the use of glitch and lo-fi not only relates to the “flavour of the sonic result” as much as it is a “militant message about our relationship to commercial music technology”.

Cascone (2010) in a video of a lecture at the Share Festival in Torino has gone on to say that much of the militant intent of early sound hacking has been lost. Cascone (2000) suggested that software/hardware hacking and making deliberate system failures was in some way democratising. However, Cascone (2010) has gone on to say that this aesthetic has been monetised since film studios, sound designers and music producers have shown an appetite for glitch sounds. The creation of commercial libraries of glitch material and glitch generating plug-ins has nullified the subversive quality that this process once had.

Using glitch sounds becomes more prominent at 4:13 and some of the samples have noise, random pops and clicks, and other artifacts and additions to the sound. However, these nuances could be considered part of the aesthetic appeal. Emmerson (2000. p. 195) suggests that the use of degraded sounds in compositions challenges the notion that technology would lead to what the followers of the French tradition of *musique concrète* might consider to be a “technical Nirvana”. Again, while these approaches can be seen to be challenging the traditional notions of desirable sound qualities, others such as Adkins, Scott and Tremblay (2016. p. 113) suggest that the growing use of such sounds and techniques are in many ways, “post-acousmatic”. When discussing the work of Jo Thomas they argue “these elements are re-appropriated and given new meaning. Noise is no longer

transgressive, the glitch no longer signifies technological failure.” Therefore, the incorporation of glitch and noise in acousmatic music signifies a shift in the composer's relationships with these sound types.

The final section of the piece begins with blurred and slowed down sounds that have appeared previously. Some of the sounds move gently around the space and at 5:38 there are iterations of the bucket drop sound that have similar qualities to a tom drum on a conventional drum kit. The sound has been used in a similar way to a tom roll might be used in popular music, but with less metronomic accuracy and less definition in the attack and decay aspects of the sound. The drum-roll effect came from processing the sounds through the *BEASTtools* software (Figure 11).

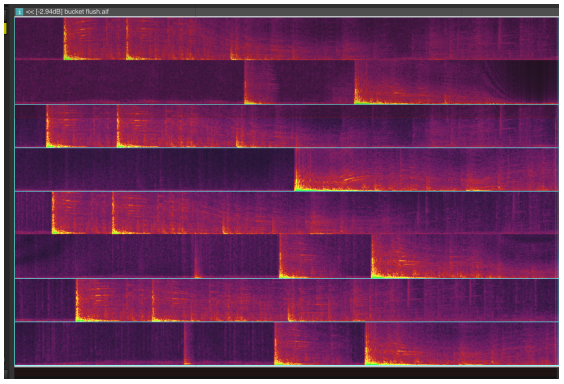


Figure 11 - Spectrograph of bucket roll.

The coda consists of a gesture composed of various sounds that made up the introduction of the piece. The gesture itself is slightly stilted and awkward in order to disrupt the sense of conclusion. The use of the awkward gesture is a compromise between the abrupt stop and a sonic cadence. The fade mitigates this to a certain degree but the sense that the final section has been cut mid-flow ties in with the title of the piece; this is all to be forgotten.

09 Ascent

Year of Composition: 2018

Format: 8-Channel

Duration: 10:59

Acousmatic

Synopsis

Ascent is an 8 Channel piece made using layers of processed electric guitar and EBow. The piece was inspired by *I'm not in Love*, by 10cc[24] which used layers of multi-tracked, harmonised vocals that were kept across the mix as a wash of sound. My idea was to create something similar using an electric guitar and an EBow.

Context

I'm not in Love, by 10cc was recorded at Strawberry Studios in Stockport [25]and was released as a single in 1975. Making the song involved the band experimenting by recording layers of vocal harmonies across 16 tracks of a tape machine. They also slowed down some of the tapes to change the characteristics of the pitched down vocals so that they had a string-like quality. In *Ascent* I used similar techniques in a DAW using layers of recorded guitars.

Using the guitar to create the sounds was not without its theoretical issues. The sound of the guitar as an instrument is well established and, therefore, easily identifiable as such. Emmerson (2000. p.29) when discussing the work *Guitar Solos: Alienated Industrial Seagulls* by Frith 1993 which uses guitar sounds that are an

[24] Sound on Sound magazine: Published June 2005, CLASSIC TRACKS: 10cc "I'm not in Love" https://www.soundonsound.com/techniques/classic-tracks-10cc-not-love
[25] Strawberry Studios, Stockport. http://www.strawberrynorth.co.uk

abstraction from the expected sounds made by the instrument, states: “We hear rattles, scrapes, bangs, and very few sounds which clearly specify either the playing styles with which we are familiar (blues, jazz, rock) or the instrument itself.”

The idea of using the sonic qualities not necessarily associated with the guitar was something that I explored in both of the pieces of music in which I used guitars. While in *Un-romance for Guitar,* the abstraction was a direct attempt to veil the source of the sounds, in *Ascent*, the emphasis was more on the evolving qualities of the sounds rather than any definite attempt to mask the source. Even so, it can be argued that the piece does not necessarily suggest that a guitar is producing some of the droning sounds.

Composition and Structure

Initially the EBow guitar parts were played chromatically from the low E across two octaves. Each note was given its own dynamic arc and comes to the foreground and then recedes into the background at given points. This technique offers the listener a sense of both development and continuity. However, there were many issues with the execution of the 23 layers of guitars and the outcome sounded far from the sonorous piece that I had imagined. The close relationships between the notes and the harmonics generated an overall sound that lacked clarity. Using software controllers to fade the notes to create chords seemed too melodic for the aesthetic that I had in mind.

As a consequence of the initial ideas not working I sifted through the recordings and kept whole sections of some files, edited sections of others and deleted the rest. This process of categorising and sorting is a method favoured by many composers and is

something both Wishart (2012) and Blackburn (2011) mention as being an integral part of their compositional process. This involved listening to each individual recording and making judgements about their qualities.

Having removed some of the less effective sections of the recordings, I was left with fragments of the original idea. These edited pieces remained in their respective places on the timeline and were not moved. The sounds were, however, processed at a later stage and this involved, in some cases, changing the pitch and playback speed of the original files.

The outline that remained had sections of silence where all of the recorded audio had been removed. I then improvised more layers across the piece by using the same instrument and set-up as when recording the first set of layers. Later, when editing the piece, I moved some of the sections of audio to suit the new arc of the piece.

The parts that remained from the first iteration had their own inherent arcs that had been determined using markers in the DAW. With sections removed or abated the remaining shell left room for other possibilities. During this phase of recording I began to feel myself warming-up, and the improvisations started to take on forms that I would record as they were realised. The techniques used with the EBow were expanded from creating simple dynamic drones, to include shorter phrases of notes as heard in the introduction. At this stage I also started to experiment with the ‘rasping’ sound that the EBow can create when placed on a slight angle to the string (sound clip 04). This had a quality closer to the sound of a cello when the pitch was shifted down and some recording passes were made in this way.

The use of improvisation in electroacoustic music has been discussed in detail by many writers and composers including Cummings (2019). He suggests that the new synthesiser technology of the 1970's was being used by people such as Brian Eno, Hans-Joachim Roedelius and Dieter Moebius to create what he described as "improvisational soundscapes" (Cummings 2019, p.95). This idea resonates with what I had been doing with this piece in that the soundfield for the piece was, in many ways, being dictated by how the technology was being used.

The opening motif consists of a chromatically descending pattern of nine notes made to suggest some sort of gentle manoeuvre. The pattern is repeated at the end of the piece, but the notes are slightly different and the pattern resolves to a higher pitch. Both patterns were played independently and the pitch information was generated by the EBow scraping or dragging across the strings. Therefore the pitch information does not necessarily conform to the equal temperament tuning system. The motif continues through the introduction but loses momentum and fades into the distance.

The initial motif appears again towards the end of the piece but again takes on slightly different forms. At 9:13 the sound and the motif reappears but while at the start of the piece, the notes were shifting towards a lower register, the later notes search upwards as they struggle to the summit. There is a deliberate sense of tension and expectation being built here, designed to suggest that the piece is frustratingly close to a satisfying sonic conclusion. However, the conclusion is deliberately underwhelming and dissipates rather than reaching the dramatic finale that the lead up implies.

In *Ascent,* there was an attempt to introduce some different sonic flavours, by bringing some of the noise and performance errors to the front of the composition. Further, by using these types of sounds as sonic cues to suggest a conclusion, and then not delivering what is implied, disrupts the compositional process and plays with the form.

10 1125 S&H

Year of Composition: 2015

Format: 8-Channel

Duration: 8:49

Acousmatic

Synopsis

One of the main influences for this piece was Steven Stapleton's[26] *Nurse With Wound* project. At this stage, I had been listening to a lot of his work and the influence is subtle, but present in the piece *1125 S&H,* in which I used a Minimoog Model D[27], with a Moog 1125[28] Sample and Hold unit, with percussion and found sounds.

I used the synthesiser to create bursts of sound that, while containing pitch information, did not come from a particular scale. Further, due to the unpredictable and unstable condition of the old synthesiser units, the pitches and other parameters of the sounds were drifting as the instrument warmed up to a suitable operating temperature. This provided often random results that I could then record, edit and curate to use in the piece.

Composition and Structure

1125 S&H has three parts or voices, these being: Moog and Korg synths, sounds from the Ice House in Hanbury Hall[29] and percussion and drum sounds.

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[26] Stapleton's work spans many styles and incorporates numerous influences

[27] Vintage Synth Explorer - Moog - Minimoog Model D http://www.vintagesynth.com/moog/moog.php

[28] Moog Accessories Service Manual http://www.synthfool.com/docs/Moog/moog_accessories_service.pdf

[29] Hanbury Hall and Gardens, School Road, Hanbury, Droitwich Spa, Worcestershire WR9 7EA https://www.nationaltrust.org.uk/hanbury-hall-and-gardens/trails/hanbury-hall-historic-walk and Ice house information here: https://ancientmonuments.uk/117701-icehouse-and-ponds-at-hanbury-hall-hanbury#.X5mXpi2cZE4

One of the purposes of the piece was to create something with more movement than my previous pieces. I found that when I worked in a more organic way and let the sounds dictate the direction, I would tend to follow a loose, unconscious, pattern. This became apparent after doing an appraisal of the pieces that I had made up to that point. Therefore, I decided that a radical departure would be to use percussion parts that I recorded at my place of work and trigger them with some sample and hold sounds made using the Minimoog and the 1125 unit.

Some of the sounds were processed using the Akai S20 circuit bent sampler. One of the qualities of the sampler is a ‘stutter’ effect that seems to dissect the original sample and replay the small sections in a random order. Further to this, some of the small sections of sound are either distorted, pitched, slowed down or replaced with an electrical hum. These iterations of the recordings of the Moog and the percussion sounds were also part of the final composition. While the sounds are present in the composition, the fast tempo of the piece means that often the sounds are masked or embedded in such a way as to not to be obvious or obtrusive. This approach was used in most of the pieces in the portfolio where the relatively distorted sounds are assimilated into the pieces

Using both the moog and the circuit bent sampler had some implications relating to electronic music making and the processes involved. Cascone (2000) suggests that hacking technology is an art-form that requires a similar level of understanding and dedication as any other form of music. He states: “Composers of glitch music have gained their technical knowledge through self-study, countless hours deciphering

software manuals, and probing Internet newsgroups for needed information" (Cascone, 2000. p. 17). The process, for Cascone, seems to be as important as the medium that is being used. This is emphasised by his move away from digital recording processes and laptop music to using "simpler technologies" that require more human input. He goes on to state: "In laptop music the point-of-origin was the circuitry and code working in tandem to generate musical sound. With traditional instruments the point-of-origin was bone, flesh, breath, and physical vibration working in tandem" (Cascone, 2020. p. 568). By working with various pieces of hardware on this piece of music I felt a strong connection with the processes. Spending time with the idiosyncrasies of the hardware, which would often yield unrepeatable results, creating a connection between myself and the sounds that were sculpted.

The third sound source used for the piece was a set of recordings made at the Ice House at Hanbury Hall. I stumbled across the space during a visit and happened to have my portable recorder to hand[30]. This space had an interesting reverberance that I recorded by stamping my feet, whistling and rolling gravel towards the entrance. I also recorded some ambience from the tunnel leading up to the Ice House including the sound of people passing and "chatting". As such, the small amount of spoken word that can be heard is a form of unintelligible mutterings and is part of the background rather than being part of a legible foreground discourse.

The final eight-channel version of the piece has a vintage sound quality that was chosen to complement and highlight the sound of the Minimoog. The method of

[30] "Listen to everything all the time and remind yourself when you are not listening" Oliveros, P. 2010 p.76 (67)

working for this piece felt similar to how I worked in studios where tape was used to record sounds. This approach often means responding to, and shaping the sounds inside the studio, rather than using software on a computer to achieve the desired sound. I selected the computer software with which to process the recorded sounds to highlight the analogue nature of the sounds. Some of the sounds were also processed through the Minimoog's filters and other external processors to add some analogue characteristics to them.

Summary

The use of sounds and techniques that have a specific sonic quality is a key component of this piece. Stapleton is a fine artist as well as a musician. His artwork is inspired by the playfulness of Dada and Surrealism. In 1125 S&H, I wanted to create a sense that the sounds were "playing" and "dancing" through the soundfield.

In 1125 S&H the sound choice could have been problematic in that the Minimoog was developed in the 1970's and it can be argued that it has a particular and notable sound. Working with these inherent qualities, rather than trying to mask them, informed the overall aesthetic of the piece. Further, the use of glitch and circuit bent sounds was also not without implications and considerations. Attempting to tie these different sources together in one piece of music might have created issues with coherence and consistency. However, by processing the moog and percussion parts through the circuit bent sampler I found that I was able to keep an authenticity of both mood and tone.

11 Wit and Wisdom

Sine waves - for Terry Hudson

Year of Composition: 2018

Format: 8-Channel

Duration: 8:36

Acousmatic

Synopsis

This piece was written in memorium for a deceased friend Terry Hudson. Terry was obsessed with sound creation, synthesisers and sounds generally. He had an encyclopaedic knowledge of synthesisers and a unique approach to making music. Working with Terry for over 10 years encouraged me to delve further into sound creation and manipulation and ultimately, he inspired my interest in electroacoustic music.

Wit and Wisdom is part of a yet unfinished quartet of pieces dedicated to the memory of people I have worked with musically and who have had a formative influence on my own development as a musician and as a person. The other three pieces remain work in progress and are due to be completed at a later date.

Composition

Wit and Wisdom references Terry's piece, *The Wit and Wisdom of George W. Bush* 2003[31] that consisted of one droning sine wave lasting 1:20 minutes. I sampled the sine wave used in his piece and used it as the foundation for this piece. Using this sine wave offered a sense of authenticity and a link to his work. I also used his recordings of the sound of the sea and waves crashing on the shore to reference his

[31] Hudson, T. 2003, *The Wit and Wisdom of George W. Bush.* Track 3 from the limited release *EP Kelpie.* Self-published.

later years when he moved to Aberystwyth in Wales. This sound became a metaphor for his declining mental health that resulted in him taking his own life in 2013 aged 49[32].

The piece develops slowly where sine waves are layered and given their own envelopes and trajectories: thoughts and ideas taking shape. Some meander and embed themselves in the fabric of the piece, while others run their course and disappear into the distance. Each sine wave represents a new phase or influence in Terry's life, a new interest or direction, some remain, some dissipate, some return.

The approach of encouraging the sense that the piece is developing in this way is summed up by Toop (2001. p. xi) who, when discussing ambient music, suggests that: "Structure emerges slowly, minimally or apparently not at all, encouraging states of reverie and receptivity in the listener that suggest (on the good side of boredom) a very positive rootlessness."

As the piece progresses there are signs that something is changing. The introduction of the sound of the sea has the contradiction of being both comforting and menacing at the same time. The concept of the sea as both a valuable natural resource and as a powerfully destructive force is a recurring theme in many cultures. When discussing the Vedas, an ancient set of religious texts originating in India, Jung (2002. p. 245) states: "Born from the springs, rivers, seas, at death man arrives at the waters of the Styx, in order to enter upon the "night-journey on the sea". The wish

[32] BBC website. Man's body found in Aberystwyth, say Dyfed-Powys Police https://www.bbc.co.uk/news/uk-wales-mid-wales-21497610

is that the black water of death, with its cold embrace, might be the mother's womb, just as the sea devours the sun, but brings it forth again out of the maternal womb."

In the context of the piece, the sea can be seen as both a source of menace and death but can also signify rebirth and regeneration. The sea, in this instance, is both literal, denoting Terry's time in Aberystwyth, and metaphorical, in that it refers to his on-going struggles with mental health. He once described feeling paralysed by his mental health issues as if he had been engulfed by a large powerful wave.

The synthesier sounds that appear towards the end of the piece were samples that Terry had sent for me to work on in 2013. The samples remained in a folder untouched so when looking for suitable sounds that he had created, these seemed to be the best option. The sounds that he made were created using a *Sequential Circuits, Prophet 5*[33] synthesiser and they were processed before he sent them to me. I tried to use them in a way that sounded faithful to his original files, with some effects and equalisation used so that the sounds would sit in the soundspace. There are three versions of the sounds that are panned; side left (3,5) side right (2,4) and rear (7,8) (Figure 12). Placing files in these speakers results in the stereophonic effect being lost due to the angle of the listener in relation to the speakers. However, the result is a sense that the sounds are panned hard left, hard right and rear middle despite the stereo image being lost.

[33] Vintage Synth Explorer. Prophet 5. http://www.vintagesynth.com/sci/p5.php

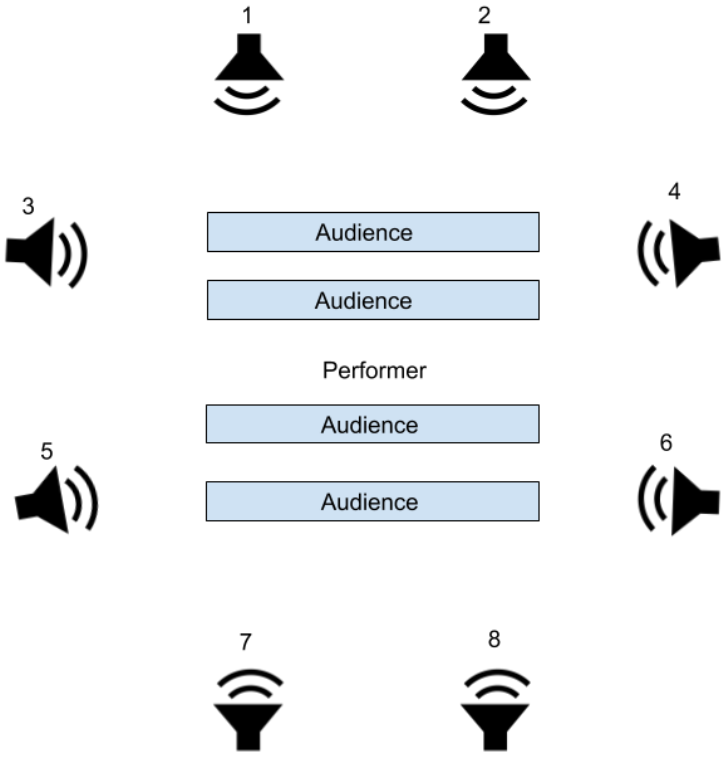


Figure 12

The other sound used in the piece was a recording of a storm recorded from the backdoor of my home which included, inevitably, parrot sounds. I had to painstakingly remove the sections that included the bird sounds, although this was not always possible. Once again, the signature sound of the parrots had appeared in my work.

Structure

The structure of the piece was designed to mirror key events in Terry's life. The music was organised to introduce elements that represented these moments as sonic events. The outline consisted of:

Birth signified by the solo sine wave

Teenage interest in music signified by pitched bell like sounds

Beginning of mental health issues signified by enveloping waves

Interest in synths and sound creation signified by the synth like sounds at the end of the crashing waves

Moving to Wales The sea and bird sounds signifying hope with a hint of menace as an undercurrent

Recurrence of mental health issues signified by synthesiser sounds and the low frequency hum that emerges

Demise meandering alone

Summary

Using the sine wave taken from Terry's piece provided a link to him in some way, as if he were directly contributing to the piece. The sounds of the waves and the synthesiser sounds were all made by him and sent to me on various occasions and while I had many other resources that I could have used for the piece, it felt appropriate to use as much of his material as possible. The only added sounds come from the rainstorm and thunder claps recorded at my home. Using mostly sounds that he created felt like a final collaboration between us and I hope that he would have appreciated the final piece of music.

12 I've Got a Bike Syd

Year of Composition: 2019

Format: 8-Channel

Duration: 11:44

Acousmatic

Synopsis

This piece was constructed using recordings of an old bicycle. The main influence was Syd Barrett's song *Bike* from the 1967 Pink Floyd album *The Piper at the Gates of Dawn*[34].

Context

The intention was to create a playful parody of the original that highlighted the influence that popular music has had on my work. The album version of the song had approximately 1:30 of clocks and various sounds followed by a series of duck calls at the end. The clocks are cited in the last verse of the song:

"I know a room full of musical tunes.
Some rhyme, some ching, most of them are clockwork.
Let's go into the other room and make them work". (Appendix F)

Many popular musicians of this period experimented with different sound sources and approaches to making music. One example is Frank Zappa's TV performance on *The New Steve Allen Show* in 1963[35] where he made sounds using a bicycle.

[34] Pink Floyd 1967, *The Piper at the Gates of Dawn* https://www.discogs.com/Pink-Floyd-The-Piper-At-The-Gates-Of-Dawn/master/19546
[35] The New Steve Allen Show. Recorded March 14th (aired on the 27th), 1963 Networks - CBS, American Broadcasting Company, NBC. https://www.imdb.com/title/tt0874687/fullcredits/?ref_=tt_ov_st_sm

According to Jones (2016. para. 4) Zappa's performance was "not the bicycle as a musical instrument, but the physical act of playing and conducting, using precise movements and sequences to elicit specific effects."

Zappa's work was often humorous and it is unclear whether his bicycle performance was meant to be taken seriously. However, he did include the bicycle as part of an ensemble of traditional instruments on the TV show to make music that was similar to experimental Jazz.

Technical details

On a technical level, the piece was an opportunity to try out some mono-microphone techniques. I found from experimenting with various configurations that four microphones placed front centre, middle wide left, middle wide right and rear, produced the best results. This was possibly related to the relative success that I had distributing the mono files across the eight-channel speaker array in *Wit and Wisdom.*

To record with this configuration I used two matched pairs of microphones[36] configured as: front cardioid, wide left and right omni, rear cardioid for recording the space in front of the sounds (Figure 13). To capture the detail in the quieter sounds made by the bicycle, I placed the microphones in a similar pattern around the bicycle setting them all to cardioid (Figure 14).

[36] SE 4400a matched pairs of microphones used.

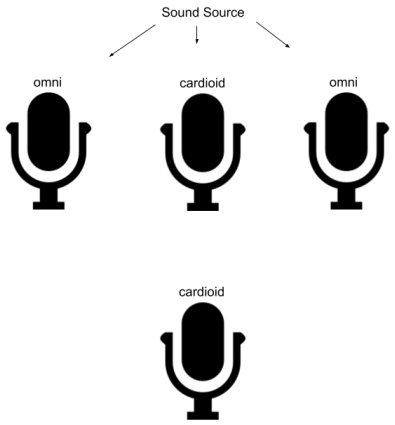


Figure 13 - Microphone placement 1

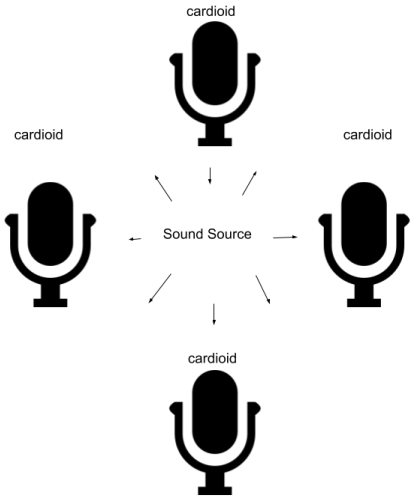


Figure 14 - Microphone placement 2

The mono files were then translated to the 8 channel array as seen in the figures below. I added a short delay[37] to the left, right and rear sound images (Figure 15 and Figure 16). This was done to compensate for the speaker placement and to keep the image predominantly at the front of the array. Whether adding delay to the signals is accurately imaged at a concert largely depends on the size of the venue.

[37] A few milliseconds of delay (6-40 ms), increasing from side to rear

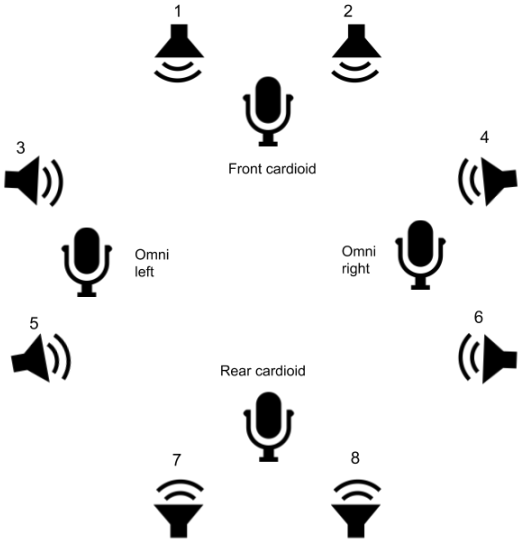


Figure 15 - Loudspeaker distribution 1

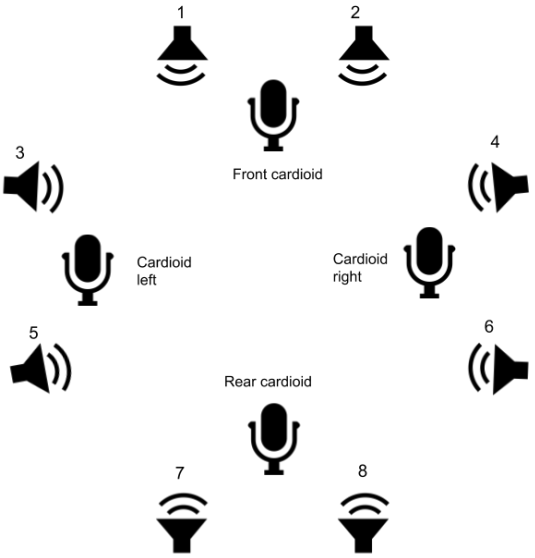


Figure 16 - Loudspeaker distribution 2

The microphone settings that produced the best results were taken from several experiments to try and achieve a recording that could be translated into eight loudspeakers. The sounds were then distributed to the speakers using a multichannel sound spatialisation plug-in[38].

[38] Octogris https://sourceforge.net/projects/octogris/

Composition and Structure

To create a definite link to the song I started the piece by using four descending notes pitched down chromatically from C which refers to the original Pink Floyd melody in a playful way. I chose the four notes as they were a recognisable motif and starting with this rather than using it as a later reveal was a deliberate compositional move. The sound used for the melody was a sample of a bicycle bell that was taken from a vintage bike and appears as a similar motif later in the piece.

The piece continues with a percussive riff played on the bicycle with drum sticks. This pattern appears again later, sometimes as manipulations of the original or as iterations using different sounds. Again, this provides a sense of repetition, as in a popular music song, but also subverts the form in that the repetitions are contextually and sonically different.

The piece also includes iterations of the recordings made of the bicycle wheel spinning with various objects held against the spokes to create a rhythmic sound. These loops were low-pass filtered in a way that is reminiscent of techniques used in modern electronic dance music, where percussive loops are often treated in this way.

The introduction of the bell sounds in the middle section of the piece bring a sense of contemplation to what has previously been a busy soundfield. The clock sounds, merged with the duck calls, are a reference to the original song and in this sense, the relationship that the piece has with popular music is clearer. As the piece moves towards the final section, some of the sounds reappear. The piece ends with the four note motif that begins the piece with the sound of a piano string being plucked. The

coda of the piece includes the elements of parody and pastiche in what is an homage to Syd Barrett.

Summary

One of the differences between this piece and the others in the portfolio is the absence of glitch and circuit bending. Further, some of the sounds were treated to remove the unwanted aspects of the recordings such as background noise and ground hum. This was a departure from pieces such as *To be Forgotten and 1125 S&H,* where those aspects of the sounds were enhanced. This piece also uses monophonic recordings and samples and this decision came from the issues associated with transferring stereo files to a multichannel arrangement. Using four microphones resulted in a more sonically satisfying and easy to distribute set of recordings and this technique is something that I would like to explore further in the future.

PORTFOLIO SUMMARY

Many of the discussed theoretical approaches were explored in my portfolio of music. This included using sounds that have elements of noise or that have been distorted and crushed from circuit bending. Some of the compositions in the portfolio use these types of sounds combined with sounds that culturally represent ‘nature’[39]. Other areas of interest have been reappraising musical instruments that I have used in a certain way for many years and exploring their potential. At the same time as continually listening to and being influenced by a wide variety of music styles.

Combining glitch, noise and detritus with sounds that do not share these qualities gave rise to many interesting and unforeseen outcomes. The most interesting part was that the glitch and noise elements were not necessarily prominent in the final pieces. While the sounds were key elements in the compositions, their qualities were often masked by the other sounds.

Many of the pieces in the portfolio were driven by the materials being used and the ideas that underpinned the compositions were often developed over time. Spending time with instruments, hardware and software and allowing the exploration to unfold and meander was perhaps the most important part of the process. Connecting with the sources of the sounds and working the materials to generate sounds allowed the music to develop in tandem with my own personal development. In some respects, this process was as valuable as the final piece of music produced.

[39] Birds, trees rustling, rural outdoor spaces

This cross-pollination of approaches and techniques used to create the portfolio, from noise and glitch, to sound theatre, hints at what Adkins, Smith and Tremblay (2016. p. 115) suggest as being the “polyphony of potential yet artificial ‘canons’ that are the descendants of acousmatic thinking and practice”. Acousmatic music can incorporate the rich and diverse sources of music in a way that reflects the diversity of the era in which we live. ’Post-acousmatic’ thinking suggests that acousmatic music can be fluid and inclusive and in a state of flux. Exploring with different types of sounds and drawing from a wide range of influences has been part of this process.

It was the aim of this portfolio to explore some of these themes and ideas, and while the work contributes towards the wider canon of knowledge, there are still many other aspects to explore. While this portfolio successfully integrated noise, glitch and detritus, my future work could build on the work with glitch, noise and detritus alongside the exploration of the theatrical and performance aspects of music presentation. This could include collaborating with other musicians as well as performers and visual artists.

Being able to draw on influences not only from the field of music, but also from other art forms and broader disciplines is integral to the development of my music. I have found that being able to borrow, deconstruct, manipulate, integrate, and assimilate different forms and disciplines in a playful way can provide interesting and unexpected outcomes, or can lead to nothing in particular. Often, it is the exploration and searching that is the interesting part of the process rather than the outcome itself. It was in this spirit that I created the portfolio, and it is how I will continue to make music in the future.

APPENDICES

Appendix A - PhD Proposal 2013

Adrian Baker

PhD Proposal 2013

While studying on the part-time MPhil Music under Dr. Scott Wilson I have been developing and exploring various techniques relating to composing Electroacoustic music. This has involved listening to a wide range of music while trying out various approaches to composing my own pieces.

In the first couple of pieces I experimented with parody using spoken word samples appropriated from various audio sources on the subject of composing tips relating to classical music. I followed this by creating an eight voice spoken word piece analysing the first piece. *Composing Tips Part I* was made using very low-resolution samples. In *Composing Tips Part II* I have parodied *Composing Tips Part I* and discussed and criticised my previous work. Mark Applebaum's Pre-Composition influenced this second piece. The piece turned out to be a very useful exercise, particularly regarding structure and proved to be a pivotal point in my studies.

In addition to the parody pieces I have composed, *Discarded Noises*, made using the unwanted sounds that I found while archiving old cassette recordings of live rehearsals from various bands that I was involved with during the 1990's. While archiving the tapes I could not decide whether to clean up the old recordings by removing unwanted noises from between the pieces. I then decided to write a piece solely using these unwanted sounds.

In the later pieces I have tried to refine the work and create a different sound. In the last two pieces I have explored rhythm and techniques associated with some types of popular music (IDM, Industrial, Electronic, Avante Garde). This has involved using meta-rhythms where parts do not necessarily conform to an equal meter. This effect is not quite Steve Reich's phasing, and not quite IDM broken beats. Instead, the rhythm is present and obvious but it is not regular enough to have a fixed meter. Furthermore, the rhythmic elements are drawn from the source material rather than being in some way manufactured or sequenced.

With my most recent piece, *Un-Romance for Guitar*, I reached a milestone in my understanding and development. As a guitarist I have a 35-year association with the instrument and I felt comfortable exploring the Acousmatic qualities the guitar has to offer. This, allied to the fact that the composition is based on a well-known classical piece (*Romance for Guitar*), enabled me to work with structure and balance and my supervisor remarked on this clearer sense of direction at my last tutorial.

Over the past two academic years I have been reading articles from the *Organised Sound* journal accessed through the University. This, along with various books such as Trevor Wishart's *Sound Composition*, and R. Murray Schafer's *The Soundscape,* has helped to shape my understanding of the issues currently under scrutiny in Electroacoustic music and this has informed the direction and approach of my work.

I would like to continue on to the PhD as an upgrade, continuing to build on the work I have made so far. I would like to study the way space is used in popular music and how this can inform the composition of Electroacoustic music. In classical music there is a suggestion that the recording should closely represent the live experience. However, this is not the case with contemporary popular music where the studio, and the use of un-natural or surreal spaces, can be created without the necessity to recreate that as a live event. Moreover, the use of digital technology as a live tool has meant that the surreal can be demonstrated and exaggerated through the use of multi-speaker diffusion.

In the Organised Sound article, *The Naturalised and the Surreal: changes in the perception of popular music sound* by Ragnhild Brøvig-Hanssen and Anne Danielsen, popular music is analysed in terms of how the surreal environments created in studio recordings are quickly assimilated and accepted by the listener.

I would like my research to explore what popular music can offer contemporary Electroacoustic music. With the boundaries of music becoming increasingly blurred, there is an exciting opportunity to analyse the techniques used in a variety of styles of music and relate them to Electroacoustic music. The use of surreal and abstract spaces is common in many forms of popular music and this could be explored further by combining these “fake” spaces with “real” spaces using speaker diffusion in an auditorium. Artists such as *Richard D James* and *Nurse with Wound* are often trying new techniques that could be described as “sound art”. I would like to work with these techniques in my music composition.

The outcome of this research, listening and experimenting will result in the composing of several pieces of music lasting approximately 80-90 minutes. In this music I intend to work with the popular music techniques utilising a wide range of musical and non-musical sources. This will mean drawing down influences from both the Acousmatic and Popular music genres as well as examining space, acoustic and artificially created, in original compositions. The work will form part of a portfolio exploring music and the ambiguity of musical boundaries.

I would also like to start working with other audio output formats such as 8.1 for diffusion on the BEAST loudspeaker system.

I try to listen to a wide range of music and more recently this has predominantly been from the electroacoustic music genre.

I also listen to music from a wide range of other styles and genres as part of my job as a music teacher at an FE college.

Appendix B - Profile

Adrian Baker -

My experience in music is broad and wide ranging. I am a self taught guitarist and spent many years working as a semi-professional and professional musician in a variety of roles.

I learned to play the guitar aged 14 and went on to form and play in a number of bands in the early 1980's. During this period I also worked with lighting and PA systems as well as completing many sessions as a guitarist in both studio and live settings.

In the early 1990's I became more interested in music technology and started to work with a synthesiser expert from whom I inherited a love for synthesisers and samplers and the possibilities that they could engender. I also continued working as a session musician, recording engineer and performer during this time.

In the late 1990's I set up a recording and rehearsal studio in Hockley, Birmingham and this ran for 3.5 years until 2002 when I moved into teaching music.

I have been involved in many interdisciplinary collaborations including: providing music and sounds for art exhibitions, creating audio for site specific video installations, writing music and sound for short films, creating content for a website for a virtual band of puppets, alongside playing and writing music for pleasure.

As part of the PhD I have tried to collate all of the varied experiences that I have had and to draw on those experiences when composing my electroacoustic music. At the Masters stage my main area of interest was appropriating the guitar as a sound source. However, during the transition from Masters to PhD, I became interested in the possibilities available working with multi-loudspeaker compositions and the BEAST system. This became the focus of my work for the remainder of the course and I became more interested in spatialisation of sound in an environment. I also collaborated with Jesse Lyons who worked with the voice as a sound source for three pieces of music that make up my portfolio.

Appendix C - Sound sources by piece

01 Un-romance for Guitar: Acoustic Guitar - Homemade cigar box guitar - Rainmaker - SE2200 microphone - SE 4400a matched microphone pair - Logic Pro 9 DAW - Waves plug-ins: Michael Norris plug-ins - Density standalone software

02 Artifice - Toy bird cage - Toy clocks - Pet parrot calls - Broken accordion - SE2200 microphone - SE 4400a matched microphone pair - Logic Pro 9 DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software

03 Vapourise: Fizzy drinks in cans and bottles - Breathing sounds - Smashing bottles - Thunder tube - Electronic vapouriser - Zoom Hn4 - SE 4400a matched microphone pair - SM57 microphone - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - BEASTtools

04 Home to Roost: Chickens - Parrots - trombone - Zoom Hn4 - Sound Devices 744 - SE 4400a matched microphone pair - SM57 microphone - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - BEASTtools - GRM plug-ins -

05 Motostasis: 5 string fretless bass - vocalisations - traffic sounds - recordings from the Cirencester vintage steam rally using Zoom Hn4 - Sound Devices 744 - SE 4400a matched microphone pair - SM57 microphone - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - BEASTtools - GRM plug-ins

06 Accordion with EarNest: Broken Hess German Accordion - Vocalisations - traffic sounds - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - BEASTtools - GRM plug-ins

07 Are You There?: Megaphone - spoken word - garden ambience - bird sounds - bird imitaions - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - BEASTtools - GRM plug-ins

08 To be Forgotten: - Plastic bucket with concrete debris - various pieces of metal - plastic dustbin - metal bed frame and springs - Contact microphone - SE 4400a matched microphone pair - Akai S20 circuit bent sampler - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - BEASTtools - GRM tools

09 1125 S&H: Minimoog Model D - Moog 1152 Sample and Hold unit - drums and percussion instruments - Hanbury Hall Ice House - SE 4400a matched microphone pair - Korg MS20 - Akai S20 circuit bent sampler - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - Density standalone software - GRM plug-ins

10 Ascent: Electric guitar - e-bow - guitar effects unit - fretless bass - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - GRM plug-ins

11 Wit and Wisdom: Sampled sine wave - sounds of the sea shore - synth samples (salvaged from old studio recordings) - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins

12 I’ve Got a Bike Syd: Vintage style bicycle - various bicycle bells - bicycle passing - Reaper FM DAW - Waves plug-ins - Michael Norris plug-ins - GRM plug-ins

Appendix D - Text for *Are You There?*

Recorded text	Live text (from approximately 7:00)
Are you there? Where are you? I can’t find you. I’m on the other side. I think it’s this way. Look for the signs. Over here. Over here. Over here. Come on follow my voice, follow me. I can’t see you. (Are you there, are you there?) I think it's this way Which way up are you? I’m losing you.	Are you there? Where am I? I can’t find you. Are you here? I can't hear you. Can you hear me? I’ll keep moving. Are you there? I think it’s this way.

Appendix E - *Bike,* by Pink Floyd lyrics

I've got a bike, you can ride it if you like.
It's got a basket, a bell that rings
And things to make it look good.
I'd give it to you if I could, but I borrowed it.

You're the kind of girl that fits in with my world.
I'll give you anything, everything if you want things.

I've got a cloak it's a bit of a joke.
There's a tear up the front. It's red and black.
I've had it for months.
If you think it could look good, then I guess it should.

You're the kind of girl that fits in with my world.
I'll give you anything, everything if you want things.

I know a mouse, and he hasn't got a house.
I don't know why I call him Gerald.
He's getting rather old, but he's a good mouse.

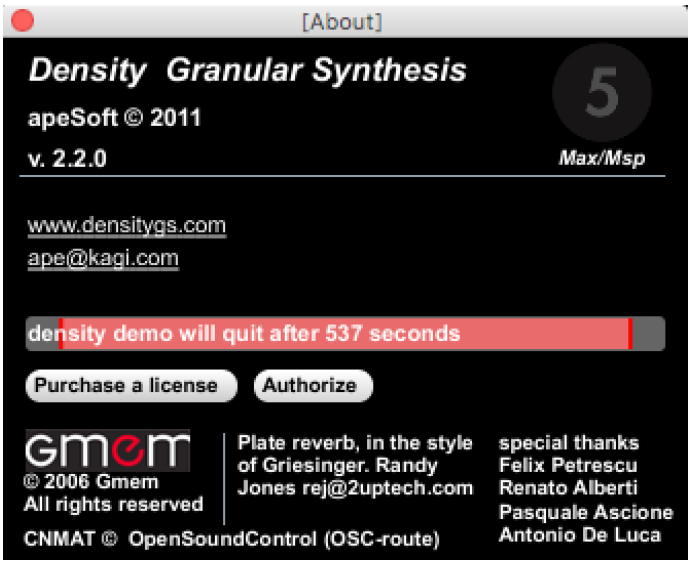
You're the kind of girl that fits in with my world.
I'll give you anything, everything if you want things.

I've got a clan of gingerbread men.
Here a man, there a man, lots of gingerbread men.
Take a couple if you wish. They're on the dish.

You're the kind of girl that fits in with my world.
I'll give you anything, everything if you want things.

I know a room full of musical tunes.
Some rhyme, some ching, most of them are clockwork.
Let's go into the other room and make them work.

Appendix F - Density credits



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