Free Improvisation, Structure and Game

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Abstract

How can a free improvisation be engendered? How can it be shaped to make it ‘less free’? Through this project I have composed and developed materials to be used in group improvisations and influence the ways those improvisations proceed. I developed the material through an active and reflective process informed by my own musical development, existing improvisational and experimental compositional practice and the idea of ‘game’ or ‘play’. This study presents an idea of ‘game’ or ‘play’ as having a quality that can be harnessed to achieve the aim of exploring creative practice scenarios. The resulting compositions are contextualised within existing musical practice in free improvisation, free jazz and compositions making use of various forms of improvisation as well as literature on areas such as game and play, freedom, response and collaboration. The work is shaped and informed by contextual research, in particular the theory of games and play which led to an understanding of the short compositions as ‘atoms’ which could be sequenced together to form larger ‘structures’. The culmination of the compositional activity led to the development of two larger works which are holistic compositions, rather than several smaller works sequenced together. These compositions emerged through practical activity in tandem with contextual research. Documentation around the practical implementation and developmental processes culminate in an evaluation of the project.

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Compositions

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Albertine – *Albertine*

Grace Hillard - flute, Drew Webster- trumpet, penny whistle and akonting, Matt Giess - Piano, Ben Woolley – trumpet, Richard Nielsen – guitar.

	Duration
1. Text Score #7 3.12.15	2’54”
2. Starting Lines #1 (Take 1) 11.11.15	1’06”
3. Text Score #5 (Take 2) 30.10.15	3’38”
4. Text Score #5 (Take 1) 30.10.15	3’04”
5. Structure #5 (Take 2) 13.1.16	8’46”
6. Piece #2 (Take 1) 13.1.16	3’44”
7. Piece #2 (Take 1) 3.12.15	5’05”
8. Starting Lines #3 3.12.15	3’50”
9. Starting Lines #4 11.11.15	1’20”
10. Starting Lines #1 (Take 5) 11.11.15	1’06”
11. Piece #1 (Take 2) 11.11.15	3’36”
12. Piece #1 (Take 3) 11.11.15	4’04”
13. Text Score #4 30.10.15	4’44”

Disc 2: Additional Tracks – As above, except *multi-tracked solo performance (Richard Nielsen – guitar)

	Duration
1. Cube 28th September 2016	2’34”
2. Piece #1 19th October 2016	6’56”
3. Cube 29.11.15 (solo – Richard Nielsen)*	3’16”
4. Finishing Lines #1 (Take 3) 11.11.15	3’06”
5. Piece #2 (Take 3) 3.12.15	4’40”
6. Structure #1 28th September 2016	17’53”

Chapter 1: Introduction

Research Imperative

How can a free improvisation be influenced, or structured in some way to place constraints on the music created? Could harnessing some qualities of game or play be an appropriate or useful approach to achieve this aim?

These questions were the research imperative for this project. The premise that a structure could be engendered in a free improvisation using the idea of play and that this approach is a fitting choice because of the nature and qualities of the idea of play is built on my compositional and improvisational practice of the last fifteen years. It also develops some of the themes I have been working on previously, in particular 'grey areas' between composition and improvisation and developing methods of restriction or constraint to be used with free improvisations. This thesis interrogates these ideas in relation to the notion of free improvisation and how that might relate to pre-determined structures or how compositional intervention on free improvisation might be said to work. The method used to do this is the exploration of the relevant landscape of free improvisation, free jazz and compositions making use of various forms of improvisation. I also investigate related issues such as freedom, game and play and response and collaboration.

This project consists of a portfolio of compositions, a collection of recordings of the compositions and this thesis, which explores the compositions, their realisation and the surrounding context. In the portfolio, the compositions are presented in groupings of type such as *Text Scores, Starting Lines, Finishing Lines, Structures* and *Pieces,* as they have been discussed in subsequent chapters of the thesis. These groupings also more or less correspond with the chronological development of the project. The thesis contains the following areas of discussion:

In Chapter 2, *Text Scores*, the use of text scores and notable examples are examined, before the development and application of the composition *Response Path* is explored. The creation of the *Text Score* series of compositions is discussed and performances of them are reflected upon.

In Chapter 3, *Cube*, a different approach to steering improvisations is studied with the *Cube* score determining the notes to be played, leaving the other parameters open to the performers' discretion. The nature of the indeterminacies in this composition are compared and contrasted to some notable compositions making use of this technique.

In Chapter 4, *Lines*, the theme of using pitch cells is taken in a different direction, influenced by the use of improvisation games in theatre and television.

In Chapter 5, *Structures,* the development of the *Structure* compositions is explained as being informed by theories of games, leading me to view the pieces created up to this point as 'atoms' which I sequenced in different ways to create larger scale structures. The activities across each structure are analysed and reflected upon, as well as performances of the compositions.

In Chapter 6, *Pieces,* I reflect on the creation and development of two larger scale holistic compositions providing experiences which are asymmetrical described in terms of theory round game-play.

Finally, Chapter 7 concludes the thesis reflecting on the successes, implications and future direction of the project.

I examine the development of the compositions and the practical application of them, relating them to context germane to the area. These compositions do not contain conventional stave notation specifying pitches, rhythmic information, key signatures, time signatures and dynamics. Instead, I have investigated other methods such as text scores, pitch rows and, in the case of *Cube*, different technology to facilitate and encourage improvisation and indeterminacy.

Initially I trialed the material in recording sessions with transient groups I would assemble for one session. In 2015 I formed Albertine, a consistent quartet, to rehearse and record regularly. We released an album of recordings of the compositions in February 2016.

The approach to this research was to explore methods to engage in improvisation using materials which make it 'less free', whether this is through restricting the harmonic material, attempting to influence the form, responses between participants or the control the dynamics to some extent. Referring to the improvisations as 'free' could be seen as a contradiction as the use of the materials would result in improvisations which are no longer

free: they have certain constraints inbuilt. Whilst accepting that these are potential issues, I do not believe that they have a significant impact on the research. I used the term 'free improvisation' despite these considerations as I thought it was logical to try to make a free improvisation 'less free' to achieve the aims of the research, rather than a different form of improvisation 'more free'.

The term *engender* in this context is used to express the 'nudge' given to a free improvisation by the use of materials created to make it 'less free'. *Engender* also implies that this is 'being encouraged' within the free improvisation, that the use of the materials with the activity engineers a 'shaping' in some way of the outcome. This raises a number of interesting issues, as a middle ground between free improvisation and 'non-free improvisation' is created, and also a paradox. Surely the point of free improvisation, and an engagement with it, is to access the creative liberation it offers.

An example of this idea of 'shaping' an improvisation can be demonstrated in the recording *Cube (28th September 2016)* (for the recording refer to Track 1 of *Disc 2: Additional Tracks*. For the score see p.109 in the appendices). This will also give a sense of the work throughout the project. I will explain the key elements, the sound, the qualities and the results in this performance of the composition that could not have been achieved otherwise. This composition is based around a Rubik's Cube which has six faces, each containing nine tiles. The structure of the Rubik's Cube enables the tiles to be manipulated in a large number of permutations. I turned them into manipulable scores by writing a note on each tile. Each player should make four movements on the cube at the beginning the performance before rolling the cube and working through the pitches in their own time. The notes are fixed in that a player must play an A when instructed to on the cube, but which octave that A is played in is up to the individual, so a B followed by a C could be a minor second, a major 7th or a compound interval. Musical elements such as dynamics, tempo, or placement of the notes are left up to the performer. When they reach the end they can either repeat the face or roll it again. The piece continues until 'the end' (this composition is explained and explored further in Chapter 3: Cube).

This recording took place on 28th September 2016 with the group Albertine consisting of Grace Hillard on flute, Drew Webster on akonting, Ben Woolley on trumpet and Richard Nielsen on guitar. The akonting is a homemade version of a one stringed African instrument similar to a banjo. In this instance it was made with a chocolate tin for the body, a broom handle for the neck and strimmer wire for the string.

The recording begins with two descending notes on akonting with a faint low guitar note immediately followed by a swelled note on the guitar. The guitar plays a second swelled note at 0’06” as the akonting plays another descending two-note pattern simultaneously. Between 0’15” and 0’20” the intensity builds as instruments enter with the flute, trumpet and guitar all playing sustained notes. A tension builds from 0’40” as the akonting plays urgent rhythms which contrasting with the sustained and controlled trumpet sound. The flute adds to the atmosphere with light breathy held notes with some vibrato. A guitar note fades in at 0’53” after which there is quickly a change in mood. A very short silence is broken by the flute playing an A to C. The guitar plays an Eb below the flutes C which harmonises to create a major sixth interval. A texture of long notes is sustained with the akonting playing contrasting rhythms. The density builds before the flute plays harmonics at 1’10” providing a shift in the timbre of the soundscape, after which there is a period of silence which feels tense and ominous. The music enters again with a different dynamic and a lighter, more playful, sound with sliding notes from the akonting. The guitar imitates phrasing from the akonting at 1’34” before the flute and trumpet intersect at 1’37” creating a very satisfying, almost conversational phrase. The akonting slows down slightly at 2’10” as the trumpets note fades, a short gentle note comes from the guitar and the performance ends with silence.

This recording is a document of the performance as it happened on that occasion. The musicians determined all of the aspects of the music, apart from the notes to played, in real time during the performance and in response to the other players. I feel that the results are satisfying as the performance contains shifts in dynamics, mood and interaction between the participants and with the effective period of silence there is a sense of structure, or narrative to the recording. It is only through the indeterminate nature of the score and a reliance on the performers to realise the instructions through improvisation that this music could be created. The designated notes shape the outcome, limiting the pitches which could be produced through the performance. The fact that the designated notes can be placed anywhere at the performers’ discretion and that the players determine the octave the notes are played in as well as all of the other parameters whilst also interacting with the other musicians leads to an irreproducible music and a different type of creative liberation.

Motivations

I was drawn to develop and engage with this project from a number of different motivations; a development of my creative practice of the past fifteen years, a continuation of some different

themes I had been investigating before I began the project, an ongoing curiosity about methods to work 'between the cracks' of improvisation and composition and a desire to access unforeseeable results.

Over the last fifteen years my creative practice has involved improvisation of various types, from rock, blues and jazz to free improvisation, and also composition in notated, recorded and conceptual forms. At the time I began this project I had been experimenting with a number of areas which blurred the lines between improvisation and composition. I had written a number of compositions making use of pitch cells in which players would work through a score which was a list of notes which they should play 'in their own time'. I found these unsatisfactory as they lacked a 'substantial' quality; the participants finished the list of notes and the experience was over. I liked the ideas, but I needed to do more with them to develop the concept. I had also been interested in utilising the idea of games in compositions or improvisations. I was not satisfied with the ideas I came up with in this vein as they were too literal such as wiring up a chess board (which David Tudor had already done with Lowell Cross in *Reunion* (Nyman, 1999, pp.98-99)) and would only result in a mapping of the players' actions, which I felt would be arbitrary. From these experiments, however, I became interested in harnessing a simpler, smaller, form of game. The example I use later in the chapter is that of two children who are sitting down doing nothing and one, out of boredom, 'pokes' the other to elicit an unknown result.

Through the use of the compositional materials in group improvisations, music has been created which could not be achieved otherwise; through composition or free improvisation alone. There are comparisons between this activity and the traditional Belgian beer brewing process Lambic fermentation. Conventional beer brewing processes take place in sterile, closed environments to prevent contamination and to enable the fermentation to take place 'unmolested'. In contrast to this, Lambic brewing takes place in large, shallow, open fermentation vessels, often with the windows of the building open to encourage and foster the development of wild airborne yeasts and bacteria which react with the fermenting process to produce a beer which could never be replicated exactly. In the musical practice of this research, the use of the materials in a group improvisation setting can be seen in much the same way as the Lambic fermentation: just as a reproducible wort can be transformed into something unique through a purposeful exposure to unpredictable external elements, the use of these materials in improvisations encourage the unknown qualities to ignite music which could not be achieved otherwise. The desire to access these unforeseeable qualities in the music has been my primary motivation throughout the project.

Development of the Project

Chronology

The *Response Path* text score (explored in Chapter 2) was the first composition of the project, where I created a stimulus for group improvisations with the smallest possible 'poke', or impetus. I further developed this idea in a much wider context in the *Text Score* series of compositions (explored in Chapter 4). Alongside these activities I created the *Cube* piece which utilises pitch cells on Rubik's Cubes, for use in group improvisations, the *Lines* series consisting of *Starting Lines* which begin with a designated series pitches after which the players should continue improvising and *Finishing Lines* which reverse the structure, beginning with an improvisation and then moving onto a designated series of notes. I then created a series of *Structure* pieces after considering the compositions I had created so far as 'atoms' which could be sequenced together to for a larger, more varied experience. Finally, I created *Piece #1* and *Piece #2* to explore larger compositions using asymmetrical gameplay, enabling different players to carry out different activities at the same time, whilst also being an improvisational continuum, rather than a sequence of smaller compositions. Throughout the project I have performed the compositions with various ensembles, recorded performances and reflected on the experience, whilst situating the practical activities within relevant contexts.

Methodology

It was important at the outset of the project to establish a methodology for creating and developing compositions. There is a wide literature around practice-based research, much of it focused on the status of this discipline within Higher Education funding and research degrees which, although this is a PhD thesis, is beyond the scope of this project. There are, however, some interesting points within the literature which are illuminating for this project.

Winter explains the importance of experimentation in practice-based research across various creative disciplines and states that the methodology is cyclical:

> One of the characteristics of PbR [practice based research] is trial and error. The methodology is a cyclical process. When a work of art or other artifact is created, the artist is most likely trying to produce

> in the material world something that exists to this point only in her mental world. The clearer that vision is internally, the easier it is likely to be expressed as she wishes it. In a perfect world, perfect internal clarity might lead to perfect exterior creation. Alas, this is seldom likely. So the artist must perform a cyclical process. Exactly how that process might work depends on the chosen medium. With a painting it might simply involve painting over a section of the canvas. With music, it could be changing a few notes or a passage. With a metal sculpture, adding or removing a piece (with a marble sculpture, one might have to consider a changed but smaller sculpture). With dance, a different gesture, position or movement. With a novel, removing, adding or rewriting a paragraph or a chapter. With a software program, it could be re-coding the program or re-designing the user interface. This cyclical process is one of the things that make PbR unique. It is a living process. While other methodologies may include an iterative process, in that a protocol might be modified before being repeated in a different situation, the cyclical process in PbR is a feedback loop in which there is a continual back and forth exchange between the developing artifact and the researcher. The researcher is continually experimenting, changing, and coming up with new ideas. In most cases, there is little if any lag time between the recognition of the need for change and actually making the change. It is not only a living process, but frequently an immediate real-time process. (Winter & Brabazon, 2010, p.5)

I agree with some aspects of Winter and Brabazon's analysis and from my own experience I have found creative development to be a cyclical process involving experimentation and trial and error. I do not, however, agree with the suggestion that there is one universal methodology for practice based research, I think that different artists work in different ways depending on their discipline and particular processes and needs.

The educational model 'Kolb's Learning Cycle' theorises that competence-based learning can be explained as a four-part cyclical process comprising of active experimentation, concrete experience, reflective observation, and abstract conceptualisation (Figure 1). Kolb explains that "learning arises from the resolution of creative tension among these four learning modes" (Kolb, 2015, p.51). Concrete experience is usually the first stage in the cycle (although Kolb ascertains that the cycle can be started at any point) in which an activity is undertaken. It is not sufficient in this model for a participant to only observe or research theoretically, an activity must actually be undertaken by the individual. Reflective observation is the second stage, where the individual reflects and reviews the activity that has been undertaken. Abstract conceptualisation is the third stage of the cycle, in which the individual attempts to understand what has taken place and situate this new learning within previous experiences and knowledge. Active experimentation is the final stage in which the individual consolidates the experience by applying this new learning in a practical setting.

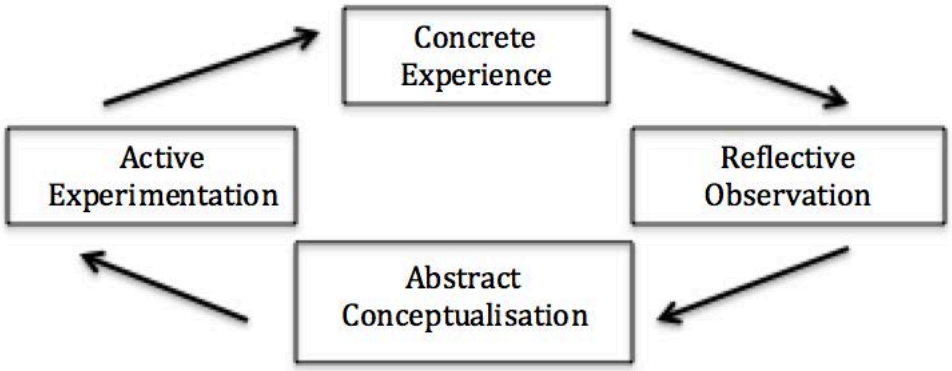


Figure 1: Kolb's Learning Cycle

Reflecting on Winter's analysis, Kolb's Learning Cycle and my own ambitions for the project, I developed the cyclical composition process below:

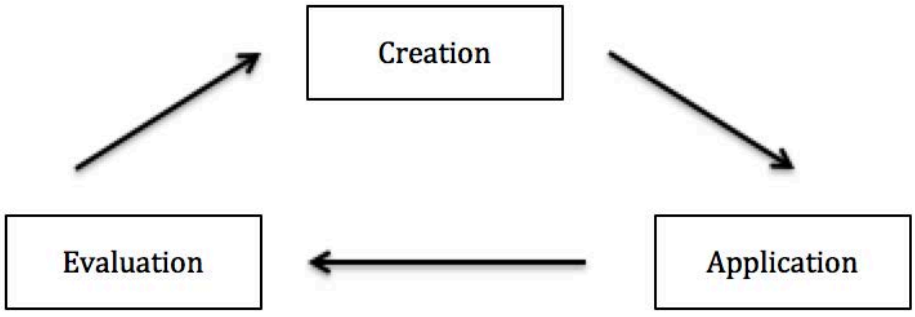


Figure 2: Cyclical Composition Process

This method corresponds with the general idea of Kolb's Learning Cycle, although only using three stages:

- **Creation-** Create material to be used in group improvisations informed by contextual research and previous experiences

- **Application-** Use these materials in a practical situation by improvising with them as part of an ensemble, documenting the experience through audio recordings

- **Evaluation-** Evaluate the materials reflecting on experience of performing the with the ensemble, recorded documents and contemporary discussions and comments from participants

In this cyclical composition process, the scope of experience is much broader than the competence-based learning of Kolb's Learning Cycle, encompassing affective aspects of learning, and rigorous self-criticism which then inform further progress. This methodology differs from Kolb's models in having only three stages, with reflective observation taking place through the evaluation process alongside abstract conceptualisation, which relates this new learning or experience to those previous gained, enabling the next Creation stage to take place being informed by the previous cycle.

Improvisation

What is Improvisation?

Improvisation is difficult to define in a concrete way, so perhaps it is better to get a sense of what it is, or could be, rather than put it within strict parameters. It is useful to examine the practice of free improvisation, the context of its development and some notable practitioners. I will look at free jazz in the same manner before investigating some existing examples of compositions making use of improvisation as well as finding a place for my project within the free improvisation narrative.

Grove Music Online defines improvisation as:

> The creation of a musical work, or the final form of a musical work, as it is being performed. It may involve the work's immediate composition by its performers, or the elaboration or adjustment of an existing framework, or anything in between…By its very nature – in that improvisation is essentially evanescent – it is one of the subjects least amenable to historical research. (Nettl et al., 2014)

This is a good starting point, as it is fairly encompassing and open, identifying two poles of an improvisational spectrum which can mark the space in between. The *New Harvard Dictionary of Music* (Nettl, 1986, p.362) defines improvisation as: "Music created in the course of performance". Nettl reflects in *In The Course of Performance* that 'the concept of improvisation is actually broader and encompasses more types of creative activity than the concept of composition, defined as an individual writing a score. Nevertheless, musicologists have tended to dismiss it as a single process which is not easily described.' (Nettl, 1998, p.4). As Berliner explains, the fact that many definitions of improvisation are thin, lends an air of mystique to the practice which leads to a fascination in its workings:

> Faced with authoritative definitions that, in effect, describe what it is *not*, rather than in terms of what it is, earnest young performers are amazed by the abilities of their idols. They ruminate over issues as fundamental as they are intriguing: Precisely what is the music that jazz groups perform, and where does it come from? (Berliner, 1994, p.2)

Elements of improvisation exist in many types of music, perhaps most clearly, or immediately, in varieties of blues, jazz and free improvisation. Improvisation in the blues will, conventionally, take place in solo section of a song over the chord progression which is often a version of the 12-bar-blues. Musicians will often use the blues and pentatonic scales to create melodies over the chord progression. In styles of jazz such as swing, the musicians will often play the 'head', a composed melody and chord progression, before improvising over the

structure, extemporising with the melody and spontaneously creating new lines which may be consonant with the underlying chords, or provide tension through a dissonant relationship. Bebop usually works in a similar manner, although with a faster tempo and often with a variation of the 'changes'. The 'changes' is a chord progression from *I Got Rhythm* which Charlie Parker incorporated into the vernacular with compositions such as *Anthropology* and *Moose the Mooche.* Improvisation in bebop is often fast-paced and based around arpeggio patterns selected to create different effects against the underlying 'changes'.

Free Jazz

Free jazz emerged in America in the late 1950s, after a period of popularity of bebop, cool jazz and hard bop (an evolutionary strand of bebop). Some jazz musicians experimented with loosening the constraints of bebop and hard bop to create new forms which were less focused on negotiating with rapid chord changes, such as Miles Davis's modal jazz, notably the album *Kind of Blue* (1959), and free jazz of Ornette Coleman and Cecil Taylor. Ekkehard Jost states that:

> There can be some agreement that the threshold from hard bop to free jazz was crossed earliest and with most determination by the groups of Ornette Coleman and Cecil Taylor. But we must also be aware that the multiple currents flowing in free jazz cannot be traced back just to the work of two outstanding musical personalities. The influences felt in the divergent personal styles of the sixties musicians like Sidney Bechet, Ben Webster, Thelonious Monk, and Lennie Tristano as well as Stravinsky, Schoenberg and Cage. (Jost, 1974, p.11)

Coleman, who released the notable albums *The Shape of Jazz to Come* (1959) and *Free Jazz: a Collective Improvisation* (1960), developed a system 'harmolodics' which he explains was based around a misunderstanding of music theory:

> There's a theory I have, that if you write a C, then if you put a different clef sign in front of it, it changes to four other notes, depending on whether it's a bass, tenor, alto, or treble clef. If you hear another note, you can substitute that one for the original, since the idea of the melody is already set. (Shipton, 2001, p.775)

The result of this system would be to transpose a melody in four different ways, maintaining the melodic shape but changing the notes, for example an A minor triad (A C E) written on the treble clef would transpose to the bass clef as a C major triad (C E G), the alto clef as a G major triad (G B D), and the tenor clef as a B diminished triad (B D F). Unless the initial melody is atonal or contains chromaticism, all of these transpositions will remain diatonic, as can be seen in this example the resulting notes form the A minor scale (A B C D E F G). Wilson explains this melodic aspect of Coleman's playing further:

> Coleman's solos are over long stretches diatonic to the point of simplicity, which is to say, unmistakably tonally centred. Only - and this distinguishes Coleman's playing from the principles of modal jazz - the tonic can shift in the course of the improvisation at the soloist's will. Around one tonal centre, which can usually be followed through an entire improvisation, secondary tonal centres may emerge. And these changes of harmony come about not as a result of pre-determined harmonic progressions, pre-calculated modulations or cadences, but as a consequence of a primarily *melodic* conception. (Wilson, 2000, p.38)

This approach is a clear contrast with the principles of bebop in which the harmony would, conventionally, be directed by the chord progressions within the 'head' (a chord chart showing the main melody) which would be followed throughout the improvisation. Coleman's compositions exist as heads, they have chord progressions and melodies which are reproduced, although these are very much 'starting points' with both aspects, harmonic and melodic, develop through the performance as Wilson explains: 'Charlie Haden described the process "Technically speaking, it was a constant modulation in the improvising that was taken from the direction of the composition, and from the direction inside the musician and from listening to each other."' (Wilson, 2000, p.38).

Cecil Taylor experimented in different directions with free jazz. Shipton explains that in the early 1960s 'Taylors playing - on record, at any rate – shed the last vestiges of single note melodic lines or fragments, and moved whole-heartedly into dense textural playing, with percussive note clusters and a completely atonal approach.' (Shipton, 2001, p.792). Other key figures include Albert Ayler, Don Cherry, Pharoah Saunders and John Coltrane in his later period, especially with *Ascension* (1966) which Jost states has an '…extraordinary emotionality. But this very intensity may obscure the fact that in this piece are thoroughly traditional elements, and where one might assume everyone is playing exactly what he pleases, there is in fact a definite musical organisation.' (Jost, 1974, p86).

Free Improvisation

Free improvisation is a practice in which participants create spontaneous music which, notionally, has no rules, constraints or boundaries such as that found in traditional notated music. Free improvisation emerged in the early 1960s in the UK with groups such as *Joseph Holbrooke, AMM, Spontaneous Music Ensemble* and *The Music Improvisation Company*.

Joseph Holbrooke consisted of the guitarist Derek Bailey, percussionist Tony Oxley and the bassist Gavin Bryers. *AMM* comprised Keith Rowe on guitar, Lou Gare on saxophone, Eddie Prévost on drums, for a time Cornelius Cardew on piano and cello, and later John Tilbury on piano. *Spontaneous Music Ensemble* was based around John Stevens and Trevor Watts but regularly included other musicians. *The Music Improvisation Company* which was made up of Evan Parker on saxophone, Hugh Davies on live electronics, Jamie Muir on percussion and Christine Jeffrey on vocals.

Bailey identifies a number of different names for the activity including 'total improvisation', 'open improvisation' and 'improvised music' before attempting a description:

'Diversity is its most consistent characteristic. It has no stylistic or idiomatic commitment. It has no prescribed idiomatic sound.' (Bailey, 1993, p.83).

Evan Parker, however, disputes this notion of 'non-idiomatic' improvisation: 'Certainly by the time a theoretical position is arrived at in which it is thought the term "non-idiomatic improvisation" is the best description of something as instantly recognisable as Derek's guitar playing we have reached what E.P.Thompson called in another context "the terminus of the absurd".' (Parker, 1992). Rather than being a form or genre, Borgo views improvised music as a collective exploratory space:

> Improvising music, it appears, is best envisioned as an artistic *forum* rather than an artistic *form*; a social and sonic space in which to explore various cooperative and conflicting strategies. It highlights process over product creativity, an engendered sense of uncertainty and discovery, the dialogical nature of real-time interaction, the sensual aspects of performance over abstract intellectual concerns, and a participatory aesthetic over passive reception. Its inherent transience and expressive immediacy even challenge the dominant modes of consumption that have arisen in modern, mass-market economies and the socio-political and spiritual efficacy of art in general. Yet improvising music may simply remind us that *all* music takes place within and through social relationships. (Borgo, 2006, p32)

Despite the nature of the music being unpredictable and unforeseeable, it can be possible to listen to a recording and identify it as, or suspect it is a document of, a free improvisation. Many individuals have idiosyncratic traits such as Evan Parker's circular breathing, or Derek Bailey's characteristic guitar playing. In the practice of free improvisation musicians often begin playing from silence (as John Stevens directs in many of his improvisation exercises in *Search and Reflect* (Stevens, 2007)) and improvise individually or collectively without restrictions such as tonality, time signatures or form. The practice of free improvisation has continued since the 1960s across Europe and the USA with many notable practitioners such as Fred Frith, Anthony Braxton, George Lewis, John Zorn, John Butcher and Rhodri Davis. Free improvisation is also surrounded by a body of literature now by

writers such as Prévost, Bailey, Borgo, the Critical Studies in Improvisation journal and the European Free Improvisation Pages website which provides information about improvisers and record labels. There is a culture of aficionados, performers and venues, whilst dedicated record labels operate around the area such as EMANEM which releases archive recordings going back to the 1960s, as well as contemporary recordings, and Psi which was set up by Evan Parker.

Despite the similarities between free improvisation and free jazz they are not the same, as Julie Dawn Smith explains: 'Although the simultaneous development of a congruent sonic aesthetic linked the practices of free jazz and free improvisation together, it has sometimes obscured the fact that the two were distinct (albeit interrelated) practices grounded in different traditions and communities' and that '…neither free jazz nor free improvisation existed in a vacuum; neither, however, were they completely interchangeable.' (Fischlin & Heble (ed.), 2004, p.228).

Improvisation in Composition

There are many examples of compositions which utilise elements of improvisation and similar mechanisms such as indeterminacy and aleatoric aspects to a greater or lesser degree. John Cage's work in the 1950s was very influential in this area with his use of indeterminacy in pieces such as *Music of Changes* in which Cage utilised the 'I-Ching' to make decisions about aspects of the composition as he was writing it. In the performance of the piece, however, the composition is fixed, the use of indeterminacy was only in the creation of the work. Terry Riley's *In C* makes use of indeterminacy by presenting the performers with a score made up of cells which are to be repeated until the individual performer wants to progress to the next one. As the piece develops different players will be at different stages of the score and this quality in the composition will ensure it is different each time. Louis Andriessen's *Workers Union* is a score for a group performance which specifies the rhythms to be performed but does not determine the pitches to be performed. This means that in any group performance of the piece the harmony which will be created is unforeseeable.
In his composition *Jeux Venitiens* Lutosławski developed 'aleatoric counterpoint' which enable a degree of indeterminacy in the synchronisation of parts in certain sections. Cornelius Cardew, a member of the free improvisation group AMM, created *Treatise* a one hundred and ninety three page graphic score which needs to be interpreted by the players on each performance ensuring each instance is unrepeatable.

Many artists such as Stockhausen, La Monte Young and Malcolm Goldstein have used text scores to provoke creative responses from musicians through their interpretations through improvisation. This area is explored in detail in Chapter 2: Text Scores.

Wadada Leo Smith has created methods for creating music with other performers at the same time, whilst avoiding responding to other players' actions. Borgo explains the notation system he uses to carry this out: 'Wadada Leo Smith has developed an open ended symbolic framework he now calls 'Ankhramation', the purpose of which is "to create and invent musical ideas simultaneously utilizing the fundamental laws of improvisation and composition.' (Borgo, 2006, p.24).

Anthony Braxton is a composer and improviser who developed a system of graphical notation which he uses in his compositions as well as standard notation. Elements of the notation represent 'language types', of which Braxton has identified over one hundred types such as; long sound, accented long sound, trills, staccato line formings, intervallic formings, multiphones, short attacks, angular attacks, legato formings and diatonic formings (Lock, 1988, p.28). Braxton's compositions rely on improvisation to realise the graphically notated elements of the works.

Christian Wolff is a composer who has worked with text scores, such as *Stones* (1968-71) which requires the performers to create various qualities of sound using stones, as well as scores which make use of a graphical notation system. Wolff explains the workings of his piece *Edges* (1968):

> The idea of the piece and its basic performing instructions are this: the notations on the score are not so much playing instructions as such as reference points, that is, you play around it, at varying distances from the state of being intricate, and you can, but only once in a performance, imply play "intricate". The general notion I had was of the score's something like a photographic negative the developed picture of which would be realized by the player; or, to use another analogy, the playing would be like movement, dancing say, in a space containing a number of variously shaped but transparent and invisible objects which the dancing generally avoids, but which as the dancing kept on would become evident, visible so to speak, because they are always being danced around. (Spiral Cage, 2008)

Nyman identified a group of composers who he termed 'experimental' and claimed that they were less concerned with creating a pre-determined 'time object' and more interested in 'outlining a situation in which sound might occur, a process of generating action (sounding or otherwise) a field delineated by certain compositional rules' (Nyman, 1999, p.4).

This definition certainly has strong similarities with the nature of the practice in this research, as both instances set up situations within a framework where a sonic event can occur. There are differences, however, with this research the focus is on creating a situation

where a free improvisation can occur within some kind of constraints and this is generated by, or harnesses, a game-like quality which is not necessarily (although it is possible that it may be) present in the 'experimental' compositions. Nyman's study focuses on a group of composers from within a specific historical context in the late 1950s to 1960s and breaks down the idea that experimental composers use process in order to discuss subsections (Nyman, 1999, pp.4-9):

1. Chance Determination Processes in which the compositional material is generated through the application of random systems such as Cage's use of I- Ching.
2. People Processes is the term Nyman gives to processes which allow performers to play the material in their own, self determined, time. Examples of compositions in this vein are Terry Riley's *In C*.
3. Contextual Processes are defined by Nyman as "concerned with actions dependent on unpredictable conditions and on variable which arise from within the musical conformity" (Nyman, 1999, p.6). An example of this would be a piece which requires performers to play random notes, and then imitate a note which someone else is playing.
4. Repetition Processes make use of extended repetition. Nyman states that the "unforeseen may arise through many different factors, even though the process may, from the point of view of structure, be totally foreseen".
5. Electronic Processes would today encompass such interactive music technologies as Max/MSP driven structural compositions, but at the time of writing, Nyman made reference to electronic resources of the day, such as light sensors and modulators.

The compositions in this project are somewhere in between improvisation and composition as are the other pieces mentioned. Bailey provides an effective illustration of the difference between improvisation and composition from a meeting between Frederic Rzewski and Steve Lacy, where Rzewski asked Lacy to explain in fifteen seconds the difference between composition and improvisation: 'He answered "In fifteen seconds, the difference between composition and improvisation is that in composition you have all the time you want to decide what to say in fifteen seconds, while in improvisation you have exactly fifteen seconds."' (Bailey, 1993, p.141).

George E. Lewis has been critical of musicological descriptions of 'experimental composition' claiming that this music as described by Nyman is afforded privileges as it is

what he describes as ‘Eurological’, derived from European classical art, as opposed to ‘Afrological’ which is derived from African-American art. Lewis explains that the importance of ‘Afrological’ influences have been underplayed through a masking of improvisation in other terms: ‘Both aleatory and indeterminism are words which have been coined…to bypass the word improvisation and as such the influence of non-white sensibility’ (Monson et al. (ed.), 2004, p.139).

This is a useful and illuminating way of dissecting the work in Nyman’s study and also of searching for insights in the compositions I have created through this project. My work is situated within the areas outlined previously and it has strong similarities with free improvisation although constraints are imposed through the compositions. It also has some similarities to free jazz, although perhaps less so, as stylistically I don’t tend to use traits commonly found in free jazz such as swing rhythms. The *Cube* score is certainly indeterminate, whilst the *Starting Lines* pieces have strong connections with aleatoric counterpoint and in the second sections performer are asked to carry out a free improvisation.

Freedom

A key element perceived to be part of free improvisation is the notion of freedom. This is a complex issue with a wide-ranging literature, much of which is beyond the scope of this project. It is important, however to explore this issue within the related field. At first glance it may seem that a musician engaging in a free improvisation enjoys complete freedom as they are able to play anything they wish in the performance. Jost shatters this illusion effectively with an anecdote about a free jazz improvisation:

> A saxophonist was asked to take part in a ‘free’ jazz session. When he turned up with his horn he was told to feel free to express himself, and to ‘do his own thing’. – Anyway, he must have been feeling a bit nautical because he played ‘I do like to be beside the seaside’ throughout the entire session. Apparently, his associates were extremely angry about this and told him not to bother to come again. (Jost, 1974, p.8)

This succinctly demonstrates the limitations to the freedom enjoyed by performers during improvisations in the discipline. Williams attempts a rationale which further illuminates this point: ‘Free improvisation is not an action resulting from freedom; it is an action *directed towards freedom.*’ (Williams, 1984, p.32).

These two examples highlight that free improvisation is not totally ‘free’, it is not a practice entirely without boundaries, taste or norms. As discussed earlier there is a network of venues, aficionados and record labels related to free improvisation, all of which leads to certain expectations about a performance of improvised music, not least that there will be a performance. An improviser is not free of the burden of expectation to actually carry out an improvisation.

When exploring forms of freedom, Peters quotes Isiah Berlin who explains a conflict between ‘positive’ freedom in which you have ‘freedom to’ do something and ‘negative’ freedom in which you have ‘freedom from’ something:

> The freedom which consists in being one’s own master [positive/freedom-to], and the freedom which consists of not being prevented from choosing as I do by other men [negative/freedom from], may on the face of it, seem concepts at no logical distance from each other – no more than negative and positive ways of saying the same thing. Yet the “positive” and “negative” notions of freedom developed in divergent directions until, in the end, they came into direct conflict with each other. (Peters, 2009, p.22)

Whilst Jost’s saxophone player was able to exercise a positive freedom in playing *‘I do like to be beside the seaside’* as he chose to, he was not free from the reactions of the other musicians. The rest of the group, presumably, regarded his actions as a destructive force on the improvisation. They did not have ‘freedom from’ this action. Williams stated that free improvisation is “directed towards freedom” and it seems the ideal of this situation is a positive and negative freedom: a ‘freedom from’ and a ‘freedom to’. Clearly this is not universally achievable as positive and negative freedoms are both subjective concepts to the individual and dependent on many external factors.

Other artists value the benefits of surrendering a degree of freedom and working within constraints. One such artist is Stravinsky, who in *Poetics of Music* gives a sense of his composition process and ideas about creativity and limitations:

> I shall go even further: my freedom will be so much the greater and more meaningful the more narrowly I limit my field of action and the more I surround myself with obstacles. Whatever diminishes constraint, diminishes strength. The more constraints one imposes, the more one frees one's self of the chains that shackle the spirit. (Stravinsky, 1970, p.65).

Another example from an improvisation perspective come from Evan Parker who explains how he uses repetition and fixed elements to access a degree of freedom:

> In some ways, in some situations, the freedom of the total music, if it has any sense of freedom, is only possible because some parts are very fixed. And by holding on to those fixed parts in a loop, putting them on hold for a while, then you can look for other regions where variation is possible. But then I might discover a new loop in that new region which immediately loosens up the loop or loops that I've put on

> hold elsewhere. That's what I'm trying to do: I'm shifting my attention from different parts of the total sound spectrum in terms of high, middle, low. (Corbett, 1994, p.204).

Borgo, however, provides an example of restrictions having a negative impact on an improvisation, with an account of John Stevens and Evan Parker playing *Click Piece*:

> …it quickly became an unproductive limitation. Simplifying the parameters for improvisation can be useful and even necessary for making large ensembles swarm effectively, but in the more intimate setting of a small group, arguably the preferred arrangement for the majority of free improve enthusiasts, a less restrictive framework is usually desired. (Borgo, 2006, p.145).

This reflection does not correspond with my experience throughout the project as I have mainly worked with small groups of between three to five participants performing scores which place constraints on free improvisations, but I have found this to be an effective way of working. Using the compositions, which I have created throughout this project, in small groups has resulted in rich, interesting performances.

Game and Play

A Minimal Form of Game

In order to harness its essence, the idea of game was reduced to its minimal level, of a small impetus which generates a response. An example of this would be a child poking another child just to see what would happen and get a response. The ‘poke’ is the impetus which is needed in the situation to elicit some kind of outcome, and the game is the unknown aspect of what will happen: what the other child’s reaction will be. My attention then turned to instances where this minimal form of game can be found in other art forms, in particular the work of Samuel Beckett. The novel *Company* (Beckett, 1979) features a protagonist who attempts to overcome his writers’ block by inventing an imaginary character to interact with and provide a stimulus, demonstrating this idea of a minimal form of game.

Further attention shall now be paid to the question of ‘what could be a game’. The idea of game has been reduced to a minimal form with the example of the ‘poke’, one child prodding another with the sole intention of provoking a reaction, it is necessary to reflect on this idea in order to explore what the essence of ‘game’ may be for this purpose. The analogy of the child’s ‘poke’ is especially pertinent in the case of free improvisation, as when a group is on stage about to perform in this situation they have no starting point, or shared collective impetus and reference such as a ‘Blues in Eb’, or the ‘Rhythm Changes’ for other musical

disciplines. At the beginning of the performance each performer is starting from nothing, and there is no music until one participant does something which acts as a ‘poke’, creating a stimulus for the rest of the group which they can respond to, developing an improvisation. It is this reduced essence of game that I attempted to harness for use in these compositions.

Connotations of Game

Having established that the use of game is a central component of this research, it is important to explore some of the connotations surrounding the concept. The idea of game has many aspects. This can be seen in the different types of structure of games which exist such as board games, card games, party games and computer games where a number of people are engaged in a competitive pursuit. Another different set of examples are sports games where groups of people, or two individuals, engage in more physical structures activities compared to the first group, where people may be carrying out less strenuous tasks such as rolling dice or sorting a deck of cards. These examples are complex structures with frameworks and rules which provide the context for the game to take place within. There are other examples, however, which do not rely on such developed structures, but still utilise an ‘essence’ of game. An example of this simple form of game would be a situation where two children were sitting around and one of them, out of boredom, poked the other to see what the reaction would be.

Previous engagement with games

Game playing is not just a matter of satisfying the constraints which are designated in the rules, the players’ actions are informed by their previous engagement with the game. Moves they have made in certain situations before, results this created, moves other players have made against them al contribute towards the individuals knowledge of the game and the strategies and methods they employ in subsequent games. This accumulation of knowledge is vital in the development of the players’ engagement with the game, and in a game such as chess, which enjoys a richly documented history, this history may also (bolstered by an active investigation into it) inform the players decision making process within the game.

Huizinga’s *Homo Ludens* (Huizinga, 1970) is a notable work on the anthropology of play. Huizinga makes an interesting point about the consensuality of play: ‘Play is a voluntary activity. Play to order is no longer play; it could at best be a forcible imitation of it…For the

adult and responsible human being play is a function which he could equally well leave alone. Play is superfluous.' (Huizinga, 1970, p.26).

This reminds us that play is not necessary for adults, but it is available to enter into willingly when desired. It also conjures up images of 'enforced fun' at awkward parties, and corporate training events.

The fragility and transience of the state of 'play' is explained by Huizinga:

> The play-mood is *labile* in its very nature. At any moment 'ordinary life' may reassert its rights either by an impact from without, which interrupts the game, or by an offence against the rules, or else from within, by a collapse of the play spirit, a sobering, a disenchantment. (Huizinga, 1970, p.40)

In the same way that a mobile phone ringing in the middle of a Shakespeare play may shatter the audience's immersion into a world which has been created by the actors and theatre, an unwelcome interference in play can be just as destructive. An example of this would be adults intervening in children's play in a manner which caused the activity to 'close down'. Bernard Suits makes a differentiation between classes of game he identifies as 'closed' and 'open' games, with the Grasshopper defining open games as "a system of reciprocally enabling moves whose purpose is the continued operation of the system" (Suits, 1978, p.135). These examples can be likened to the actions and responses within improvisation which can continue, develop and sustain ideas or shut them down. This corresponds with Keith Johnstone's concept of 'blocking and accepting' in which he explains that 'bad improvisers block action, often with a high degree of skill. Good improvisers develop action'. (Johnstone, 1989, p.95).

Caillois' *Man Play and Games* (Caillois, 1962) was critical of a number of aspects of Huizinga's work such as the exact area of his study, which Caillois claims is limited to 'an inquiry into the creative quality of the play principle in the domain of culture and more precisely, of the spirit that rules certain types of games – those which are competitive' (Caillois, 1962, p.4). Caillois criticizes this as being 'at the same time too broad and too narrow' (Caillois 1962, p.4), and for excluding games of chance from his study. When discussing unpredictable outcomes in games, Caillois explains that these are provided in games such as tennis or chess by players' responses to each others' actions, and states on the nature of this competitive form of game: 'The game consists of the need to find or continue at once a response *which is free within the limits set by the rules.*' (Caillois, 1962, p.8).

Wittgenstein (2001) explores the definition of a game to demonstrate the universal difficulties and complexities of defining and pinning down existing concepts and ideas. Through this exploration, a number of illuminating threads emerge which can be used to contribute to this definition such as 'What still counts as a game and what no longer does? Can you give the boundary? No… How should we explain to someone what a game is? I imagine that we should describe *games* to him and we might add: "This, *and similar things* are called 'games'".' (Wittgenstein, 2001, p.28c). Wittgenstein makes the point that a game is a slippery concept; one which has a collective understanding, in general, although one which may be difficult or problematic to articulate in detail. The proposed solution is to provide a general explanation of games which can then be reinforced with the proviso that *similar things* are also games. The addendum allows for flexibility in the definition and for the fact that one definition may not fully encompass all forms of game, such as: 'And is there not also the case where we play-and make up the rules as we go along? And there is even one where we alter them –as we go along.' (Wittgenstein 2001, p.33c).

Huizinga explains his own difficulties in describing play and its function:

> To describe the phenomena we have to use the term 'play' over and over again. What is more, the unity and indivisibility of belief and unbelief, the indissoluble connexion between sacred earnest and 'make-believe' or 'fun', are best understood in the concept of play itself."
> "The most we can say of the function that is operative in the process of image-making or imagination is that it is a poetic function and we define it best of all by calling it a function of play; – the *ludic* function, in fact. (Huizinga, 1970, pp. 43-44)

Caillois divides games into four rubrics; *agon* (competition), *alea* (chance), *mimicry* (simulation), and *illinx* (vertigo) (Caillois, 1962, p.12). *Agon* contains competitive games such as football, tennis, and chess. *Alea* contains games of chance such as lotteries or roulette. *Mimicry* contains role-play such as acting a role. *Illinx* contains activities such as spinning around to create a feeling of dizziness. As well as these divisions of types of games, Caillois also explains his concept of a continuum between a 'free' form of play, which he terms *Paedia*, and, on the other end, a rule-bound form of play which he calls *Ludus* (Caillois, 1962, p.13).

Suits (1978) explores the nature of game and attempts to develop a definition through a story of a grasshopper's discussions and debates with a second character Skeptus. Through these discussions a number of interesting issues around game and play are explored, critiquing both Huizinga and Caillois. An interesting concept is a 'lusory attitude' which Suits defines as "the attitude without which is not possible to play a game" (Suits, 1978, p.35). The Grasshopper's definition of games that he defends through the book is:

> To play a game is to attempt to achieve a specific state of affairs [prelusory goal], using only means permitted by rules [lusory means], where the rules prohibit use of more efficient in favour of less efficient means [constitutive rules], and where the rules are accepted just because they make possible such activity [lusory attitude]. I also offer the following simpler and, so to speak, more portable version of the above: playing a game is the voluntary attempt to overcome unnecessary obstacles. (Suits, 1978, p.41)

This definition resonates particularly with this project, as performing the compositions with a group meets the criteria set by Suits. The 'rules' of the performances are to follow the instructions on the scores, which may not be the 'most efficient' method of improvising so a 'lusory attitude' is required from the players.

Through the literature on games and play, I have noticed a recurring contrast between competitive and non-competitive forms of games and play. Depending on the type of game, there may be a winner and a loser, or there may be a conclusion to the activity. This can be seen clearly in oppositional forms of game such as card games (poker, especially when played for money would be a good example of this) and chess, but is less distinct in other activities such as charades where the purpose is not really competitive, to win or lose, but to interact, communicate, or solve a problem or puzzle. This is most akin to the situation within one team in a team game as they work together to achieve their objectives. This can also be seen in solo activities such as solitaire where the participant's aim is to complete the activity. It has been interesting to find how this division has manifested itself in different cultures: even penetrating a number of foreign languages, as discussed earlier. The non-competitive quality of game found in the Tangu children's game *Taketak* initially resonated as being the form of game which would be the ideal for this research: 'Taketak [a game played by Tangu children in Melanesia] expresses this idea of equivalence in game form, and therefore there can be no "winning side" and no "losing side". The idea that games must produce a disequilibrial outcome is a Western belief; it is not a Tangu one". (Schwartzmann, 1978, p.28).

Caillois' discussion of the unpredictable outcomes in games, however, explained how tennis and chess player, for example, respond to each other's actions and the uncertainty of what the opponent may do next provides excitement (Caillois, 1962, pp.7-8). This interaction and element of the unknown seems to contain some of the substance of games and play which is being looked for, although this is a competitive form.

Types of Interaction

These different structures of game create and require certain interactions between participants. In a team game, for example, individuals in each team will work together collectively to achieve a purpose such as scoring goals in football or tries in rugby, whilst simultaneously competing with the opposite team. In oppositional game structures where one person competes with another, such as chess or tennis, the interaction is combative as each player attempts to win. The interaction is slightly different in solo game such as solitaire, or certain one-player computer games as the only interaction is between the participant and the activity, as they attempt to win, or complete the task. Interaction and response are vital areas of improvisation and discussed later in the chapter.

A further justification for using the idea of game in this research stems from Derek Bailey's explanation of the benefits of free improvisation (or 'non-idiomatic improvisation' in his terms): 'What's unique about this area us the freedom to do what…you like. I've tried it in other areas of music, you can't do it.' (Watson, 2005, p.197). This resonates with a broad concept of 'game', which can be seen as a sphere which is disconnected from ruling strictures, thus a space in which you can do 'whatever you want', and thus ultimately the natural home of free improvisation.

Game Pieces

Existing Use of Game and Play

The concept of devising systems for use by free improvisation ensembles is not new, as there are historical examples, and instances of existing practice, some of which could be seen as either being games, or making use of a form of game. A prominent free improvisation practitioner, John Stevens, who developed a reputation as a group leader and educator, published a number of materials in *Search and Reflect* (Stevens, 2007). A number of the pieces in this collection could be seen as games, for example, *Click Piece* which allows performers to play the shortest click possible on their instrument when they wish, and *Sustain* which asks a group of performers to sing a note for the duration of one breath, but the pitch is decided by each individual for each note sung. With these pieces, Stevens places constraints on free improvisations which force the participants to concentrate on certain aspects of their playing. Two other examples of game pieces with *Search and Reflect* are variations on the *Sustain* idea. *Happy Birthday* subverts the well-known tune by drastically expanding each syllable for a whole breath, whilst *2 Albert (Ayler*) introduces fast 'scribbling' on the instrument for the duration of each exhaled breath. *Silence* is an interesting example in which participants are instructed to only play when there is a silence and to drop out if two people play at the same time.

The idea of 'game' has been used by a number of musicians in order to generate, and control (to a degree) an improvisation. John Zorn has created a number of 'game pieces' which use this concept, the best known of which, *Cobra*, uses a system of cards to give instructions to the improvising group. Zorn explained how *Cobra* worked and its origins when he was interviewed by Derek Bailey in 1992:

> I don't talk about [direct through *Cobra*] any sounds that anybody's making, I talk about the improvisers themselves. You can play with this person at this time if you want or with this person or an alternation with that person but what you play is totally up to you and who you decide to play with is totally up to you. (Bailey, 1992)

The Spontaneous Music Ensemble made extensive use of their drummer John Stevens' game pieces such as *Familie Sequence* (1968) which, as Martin Davidson explains in the sleeve notes to the release as part of *Frameworks* (EMANEM, 2006), was constructed from a sequence of *Click Piece* and *Sustain*. These examples make use of game in different ways. *Click Piece* imposes the restriction that participants must use the shortest sound possible. The aspect that makes this a game is that players must explore their instrument creatively and play in a different way than they would under usual circumstances, whilst at the same time

responding to the other musicians. *Sustain* makes use of game by designating the duration of the note to be sung (or played) as being the length of one breath. Each player will exhale for a different length of time and choose their own pitch which will create different textures and sounds each time and with each different group of people. This piece harnesses these aspects which are unpredictable with individuals, and places them in a group context, where the outcome is the relations and interactions between the individuals' actions. Stevens created these pieces for use in improvisation workshops and performances. These pieces act as a shared point of reference for an improvisation, as they focus on a specific aspect of improvisation and place constraints in order to isolate it and concentrate on it, with short notes for *Click Piece* and long notes in *Sustain* (and its variants). The aspects these pieces focus on are musical, and make requirements of the qualities in the sound of the outcome. The purpose of this may have been pedagogical when used in improvisation workshops, but can certainly be seen as aesthetic in their use as part of the structure of *Familie Sequence* which was designed to be performed by the Spontaneous Music Ensemble.

John Zorn's *Cobra* makes use of game in a significantly different way, by manipulating the combinations of individuals playing throughout the piece, rather than the material they play. This is more akin to the function of a conductor than a composer, as it delegates all responsibility for generating material to the active individuals. The input from Zorn during the performance is to use the cards to indicate to the performers who should play and who should not. Zorn puts together his ensembles very carefully, however, so he has a good awareness of the musicians' traits, and although he is not micro-managing the content, he is directing the interactions and permutations within the group. By creating an ensemble with different dynamics, instrumentation and personalities he is able to access different options, textures and effects through the framework of *Cobra* without dictating the exact outcomes.

Response

A key aspect of improvisation is how players respond to each other and ideas presented by other performers. Evan Parker explains that during an improvisation your actions contribute to the context for others (and vice-versa) and explains how he feels response operates within this context:

> The freedom is of course that since you and your response are part of the context for other people, and they have that function for you, it's very hard to unravel the knots of why anybody is doing what they so

> in a given context. I think it's pretty clear that you could sort of go with the flow or you could go against the flow."(Monastery, 2004).

Both of these options, 'going with the flow' or 'going against the flow' are open-ended and could facilitate the improvisation to go forward, either by complementing or contrasting the context. Keith Johnstone's concept of 'blocking and accepting', as discussed earlier, is pertinent here as a 'block' would prevent further ideas, whereas an 'acceptance' would also be a positive contribution to the music. Parker discusses further his experience of response in-group improvisations:

> However much you try, in a group situation what comes out is group music and some of what comes out was not your idea, but your response to someone else's idea…. The mechanism of what is provocation and what is response -the music is based on such fast interplay, such fast reactions that it is arbitrary to say, "Did you do that because I did that? Or did I do that because you did that?" And anyway, the whole thing seems to be operating at a level that involves... certainly intuition, and maybe faculties of a more paranormal nature. (Corbett, 1994, p.183)

I feel this corresponds with my experience of group improvisation, especially with four or more people, where several things are happening at once and you have to choose what aspects you focus on and interact with. I also agree that there is a degree of intuition, particularly, I find, with endings where the group collectively end an improvisation and it feels like the right thing to do. This corresponds with Parker's statements on beginnings and endings:

> Evan Parker on commented, "The starts of pieces are very good often because they are impossible to theorise about." …Endings too, can be one of the most challenging and satisfying moments of improvised performance, as the entire ensemble must collectively agrees on what will then become the final gesture (and the final mood) of a given performance. (Borgo, 2006, p.138)

It is vital during an improvisation to listen carefully to the context, other people's actions and your contributions to the music. Lewis relates these aspects to playing basketball:

> …it is striking to note how an African-American perspective on improvisation reflects a similarity with recent thinking in the game of basketball, an area in which African-American players have continually presented revolutionary possibilities. The situation with improvisation…is remarkably similar to basketball coach Phil Jackson's description of the triangle offense, in which 'there are no set plays and the defense can't predict what what's going to happen next.' As with improvisation, the ideal of the triangle system is for each player to be 'acutely aware, at any given moment, of what's happening on the floor… it is absolutely crucial that both basketballers and experience improvisers develop an intuitive feel for how their movements and those of everyone else on the floor are interconnected. (Lewis, 2000, pp.37-38)

The unpredictability which Lewis mentions is an important point: when an improvisation begins we don't know what the other musicians are going to do. Even if there is a long standing musical relationship with a rich history to draw on, the musicians may do something very different or radically out of character.

Tom Nunn explains how long-term musical relationships can affect improvisation:

> Free improvisation, by virtue of its open and incorporating nature, invites (indeed demands) the development of personal and group styles. As an improviser accumulates experience, a unique style develops naturally. Likewise, as a group develops rapport and players within a group become increasingly familiar with one another's musical tendencies (ie personal style traits), a general style peculiar to the group will usually develop. (Borgo, 2006, p.24)

I feel that this corresponds with my experience of performing the compositions with a long-term group. After developing the compositions and trialing them with a number of short-term groups, I formed Albertine in September 2015 as a regular group to perform and record the compositions on a regular basis. We have done this since, with permutations of Grace Hillard (flute), Drew Webster (trumpet/ penny whistle/ akonting), Matt Giess (piano), Ben Woolley (trumpet) and Richard Nielsen (guitar). Having worked closely with the materials and each other over a long period of time I feel that interactions within the group have been heightened, for instance occasions where unison notes are played are more frequent. I have often found myself trying to work towards another instrument's sound, rather than just interacting with phrases. One of the features of the group I find appealing and satisfying, in contrast to other ensembles I have previously played in before this project, is the generally low volume level we work at which enables close listening to the fine details of the sound.

Borgo explains his understanding of the conditions required for "delicate and exquisite dynamics' to emerge from complex systems of improvisation: 'Sync or Swam also refers to the delicate and exquisite dynamics that can emerge in complex systems, but only under certain conditions that require intense communication and cooperation and a shared history of interactions.' (Borgo, 2006, p.9).

This is particularly relevant to this project as a number of the compositions could be described as 'complex systems' and as discussed earlier, a shared history of interactions has been built up through a long period of rehearsing and recording with Albertine. Wadada Leo Smith has different ideas however and explains that his compositions do not rely on the responses between musicians:

> The concept that I employ in my music is to consider each performer as a complete unit with each having his or her own center from which each performs independently of any other, and with this respect of autonomy the independent center of the improvisation is continuously changing depending upon the force created by individual centers at any instance from any of the units. The idea is that each improviser creates as an element of the whole, only responding to that which he is creating within himself instead of responding to the total creative energy of the different units. This attitude is the sound-rhythm elements in an improvisation from being realized through dependent re-action. This is the fundamental principle underlining my music, in that it extends into all the source-areas of music-making, i.e. each single rhythm-sound, or a series of sound-rhythm is a complete improvisation. In other words, each element is autonomous in its relationship in the improvisation. (Smith, 1973)

This is a different approach, but not one that I feel would be beneficial for this project. Some of the most rich and rewarding experiences I have had through the project have been the results of interactions within the group during performances. This is an aspect I am keen to develop further, rather than remove from the practice.

Use of Recording in Improvisation

One area which raises problematic issues is the practice of recording improvisations. Some artists are vehemently against the idea, refusing to have any of their performances recorded, whilst others regularly release albums of improvised music. Many practitioners have questioned the practice of recording improvisations; Evan Parker (1992) attributes a quote to Vinko Globbakar that "to be true to their intention, records of free improvisation should only be listened to once", while Borgo provides a number of examples of artists critiquing the practice:

> These artists and authors seem to agree on two central points: (1) an audio recording, no matter its fidelity, necessarily reproduces only a limited spectrum of the performance experience and (2) the act of listening to improvised music away from its initial performance context and on several occasions forever alters its meaning and impact (Borgo, 2006, p.30).

Borgo also provides a quote from Cornelius Cardew explaining his thoughts on the issue:

> Documents such as tape recordings of improvisations are essentially empty, as they preserve chiefly the form that something took and give at best an indistinct hint as to the feeling and cannot convey any sense of time and place… What you hear on tape or disc is indeed the same playing but divorced from its natural context. (Borgo, 2006, p.30)

Conversely, some artists have actively commercialised their recorded improvisational work and developed different methods of working creatively with this material. That commercially available recordings of free improvisations exist (and sell) and record labels have been set up which specialise in this activity demonstrates that other artists find it less problematic, or at least put their qualms aside, to actively engage with it. Martin Davidson of Emanem Records explains his positive view of recording improvisations:

> Recordings and improvisations are entirely symbiotic, as if they were invented for each other…[T]he act of improvising is filling time (either a predetermined or an open-ended amount) with music - something that could be called real-time composition, and something that has more need and right to be recorded that anything else. (Borgo, 2006, p.30)

Frank Zappa released a number of albums of guitar solos such as *Guitar* (1985), and *Shut up and Play Your Guitar* (1995). This material is regarded as being a musical and commercial product in its own right, as besides being sold as a separate entity, away from the musical context it was originally created within, Gray notes that the titles of a number of these solos were changed from the original pieces they were played in:

> ...the item called '*Gee I Like Your Pants'* on *Shut Up*, is in fact the solo from '*Inca Roads'*; and the first thing on the second *Shut Up* album is called *'Variations on the Carlos Santana Secret Chord Progression*' but it is actually the solo from a live recording of '*City of Tiny Lights'* from the Dallas Civic Area in October 1980. (Gray, 1993, p.182)

Zappa also made use of recorded improvised solos through a creative technique he described as 'xenochrony'. Kostelanetz explains the process: 'The procedure involved taking a track off a master and combining it with something entirely different. In *"Friendly Little Finger"* the guitar solo is happening in a different time-zone from its backing.' (Kostelanetz, 1997, p.182). Delville and Norris provide a further example:

> The drummer was instructed to play along with this one particular thing in a certain time signature, eleven-four, and that drum set part was extracted...The bass part was designed to play along with another piece at another speed, another rate in another time signature, four-four, that was removed from the master tape... Then the two were sandwiched together... The musical result of two musicians who were never in the same room at the same time, playing at two different rates in two different modes for two different purposes, which blended together, yielding a third result which is musical and synchronizes in a strange way. That's xenochrony and I've done that on a number of tracks. (Delville & Norris, 2005, pp.3-4)

These examples demonstrate that the practice of recording improvisations is controversial, with some artists such as Cardew regarding them as 'essentially empty', missing something from the real-time performance, whereas others happily release and promote commercial recordings of their improvisations, with Zappa even developing innovative compositional techniques around the practice.

It is clear that the recordings lack something of the original experience, however I felt it was important to preserve the music which was created in some form. For this project I decided that it was essential to record improvised performances the compositions as documents for reflection. With the Albertine group we decided to release a selection of tracks as a physical album that was sold online and through an independent record shop. Other tracks were made available for people to listen to on Soundcloud. Despite the fact that these recordings were going to be listened to by other people outside the group, I resisted the urge to 'produce' the tracks too much. I tried to get a balanced sound in the studio before the sessions, but I didn't mix the tracks extensively afterwards or use processes such as compression as I felt it may further estrange, or alienate, the recordings from the initial performance.

Conclusion

To relate the topics discussed throughout this chapter, I will conclude with the exploration of the recording *Piece #1 19th October 2016* (for the recording refer to track 2 of *Disc 2: Additional Tracks*. For the score see pp.129-133 in the appendices). The composition *Piece #1* is explained and explored in depth in Chapter 7: Two Pieces, so I will avoid unnecessary duplication here. The composition is a text score with four parts, one for each performer, which are all different throughout the piece so the players are carrying out different activities at the same time.

The track begins with gentle guitar swells which are then joined by flute patterns then rattling noises from the akonting created by rolling a marble around the metal body. The flute phrases develop whilst the guitar alternates between harmonics and swells. Atmospheric piano notes enter as the akonting plays 'popping' rhythmic sounds which increase in intensity. The piano increases dynamics, joined by the akonting while the flute plays frantic phrases and the guitar plays long notes before breaking into 'scribbling' producing intense scratching sounds. There is a short period of silence then a gentle, floating, texture builds which is held for a time. The dynamics increase then fades away.

Piece #1 is a score with sequential text instructions and elements of graphical representation which the performers work through from left to right. The composition has four parts, one for each performer, all of which are different, so the activities the performers undertake are asymmetrical in terms of theory around game play. This is explored further in Chapter 6: *Structures* in relation to Elias et al. (2012).

This composition requires performers to carry out different types of tasks in a sequence; free improvisation, creative interpretation of text, performance of a line of notes, respond to set cues embedded in another player's score and changing dynamics at certain times. These elements can be found individually in many compositions from the late 1950s onwards, as discussed earlier.

In the performance of this composition each player has a framework they operate within determined by their score. This is a much more complex and prescribed structure than Stevens's *Click Piece*, for example, which imposes a simple restriction on an improvisation, that every sound made should be a click. In order to engage with the score during a performance, the players needs to adopt Suits' 'lusory attitude', particularly with some of the

requirements of the score that are not necessarily achievable, such as ‘attempting to create an ‘ee’ vowel sound.

Caillois’ explanation of the nature of play within a game strongly resonates with my experience of performing and reflecting on this composition:

> An outcome known in advance, with no possibility of error or surprise, clearly leading to an inescapable result, is incompatible with the nature of play. Constant and unpredictable definitions of the situation are necessary, such as are produced by each attack or counterattack in fencing or football, in each return of the tennis ball, or in chess, each time one of the players moves a piece. The game consists of the need to find or continue at once a response *which is free within the limits set by the rules.* This latitude of the player, this margin accorded to his action is essential to the game and partly explains the pleasure which it excites. (Caillois,1962, pp.7-8)

The musical outcome of the piece is unknown until a performance takes place, the interactions of other players are ‘free within the limits set by the rules’ which in this case is the score. This recording is one of the most satisfying of the project as there are clear shifts of mood, dynamics and texture throughout the performance with interplay between the participants.

Chapter 2: *Text Scores*

This chapter concerns the historical context surrounding text scores and will explain the creation of the *Response Path* composition (for the score see p.100 in the appendices) and the development of my series of text score pieces, followed with a reflection on their application.

A text score is a written instruction that should be followed to actualise an artistic intention. Lely and Saunders (2012) extend this definition through the use of the term 'verbal notation' to encompass similar practices which have been called (among other things) 'prose scores', 'event scores' and 'word scores'. I will use the term 'text score' throughout when discussing this practice as I feel it best sums up the concept and activity I have carried out. Text scores are interesting as the possibilities are vast; they can be open-ended or specific, a text score could be written for a music ensemble but the same instructions could be interpreted by dancers, actors, or visual artists. This medium is more inclusive than other methods of communicating artistic intent such as music notation which necessitates a previously gained level of understanding of, at least, rhythmic representation, where pitches are on the stave and how this relates to the appropriate instrument. Text scores do not necessarily have this inbuilt 'barrier to entry'. Notated music is a fixed instruction, whereas text scores have the ability to be looser, or more flexible, a stimulus for creativity relying on the interpretative skills of the performers to realise these ideas into music.

The use of text scores is an established practice with a long history across various disciplines. Goode (Lely and Saunders, 2012, p.198) states that Yoko Ono may have produced the first text scores in the mid 1950s, with La Monte Young creating a series of works in 1960. There are, however, similarities with this practice and earlier ideas from movements such as Dada. Erik Satie, a musician associated with Dada, developed performance indications in the 1920s, many of which were absurd (and would not be out place alongside some of the work of La Monte Young for example) such as "do not go out", "even whiter if possible", "looking at yourself from afar", and "stay (half a second) right in front of you". Yoko Ono produced scores for performance art and explained her motivation: "I liked the idea that Art work can become scores, just like music, so it can be 'played/performed' by others" (Lely and Saunders, 2012, p.303). Ono's work in this area includes the book *Grapefruit* (2000) which collects a series of text scores for conceptual art.

La Monte Young published a series of compositions in 1960 that were conceptual art text scores. A notable example is *Piano Piece for David Tudor #1* (1960) in which Young instructs the performer to take hay and water onto the stage to either feed to the piano or let it eat by itself.

Following Ono and Young, there were many notable examples through the 1960s and 1970s such as Stockhausen's *Aus den sieben Tagen*, Christian Wolff, Alvin Lucier, John Cage, Cornelius Cardew, Gavin Bryers and Fluxus artists such as George Brecht, Dick Higgins and Philip Corner. The use of this practice currently seems much less in vogue than it was in the 1960s, but there are more recent artists who have worked with text scores such as Seth Kim-Cohen, Malcolm Goldstein, Sol Lewitt, Manfred Werder, Bill Drummond and Ursel Schilcht.

The flexibility of text scores enables artists to harness this for their own practice and needs; musicians were able to move away from conventional notation, introduce indeterminate elements in to their work, or deal directly with the qualities of sounds they wanted to hear in performances. Fluxus artists were able to utilise chance procedures, or direct responses to events such as in Brecht's *Spanish Card Piece for Objects* (1959/60) where participants are dealt cards which they should interpret to create sounds with given objects according to rank and suit. Musicians such as Stockhausen and Wolff worked with this in different ways. Stockhausen's approaches in *Aus den sieben Tagen* (1968) range from open-ended but straightforward in the section *Richtige Daurnen* (Right Durations) where he instructs performers to "Play a sound, play it for so long until you feel you should stop". This is contrasted with the more ephemeral and poetic instructions "Play a vibration in the rhythm of the universe. Play a vibration in the rhythm of dreaming." from *Nachtmusik* (Night music).

Wolff, in the piece *Play* (1969), focuses on interrelations within the group as well as the sounds which individuals create with instructions such as "…as soon as you cannot hear yourself or another player stop directly".

Response Path

The composition *Response Path* grew out of a focus on an intersection of a number of different areas that arose from the research. The idea of response was immediately interesting to me, as interacting with other musicians is vital during a free improvisation (and indeed any group musical activity) but it is also an area with many possibilities that could be explored. I

took part in a number of free improvisations after which I reflected on the types of response and interaction, which it seemed to me, had taken place. As discussed in the Introduction, Parker stated that in terms of response you could either "go with the flow" or "go against the flow" (Parker, 2004). I wanted to expand on this idea, and taking this and the reflections on the improvisations into account I created a taxonomy of terms of response:

- Instigation
- Imitation
- Complement
- Contrast
- Destructive
- Contribution to texture/ environment

All of these terms can be seen as 'flavours' of either "going with the flow" or "going against the flow".

Going with the flow	Going against the flow
Imitation	Contrast
Complement	Destructive
Contribute	Instigate

Table 1: Showing terms of response in categories

Imitation, complement and *contribute* are all terms which could be said to 'go with the flow' in different ways. *Imitation* implies a replication or approximation of another player, whilst *Complement* suggests an improvisation steered towards enhancing the other players' ideas. *Contribute* however, gives the sense of a more positive, active approach towards 'going with the flow'. *Contrast, destructive* and *instigate,* however, are all terms which could be said to 'go against the flow'. *Contrast* suggests an improvisation with a definite difference, or opposition to the other players. *Destructive* gives the idea of an improvisation that is in conflict with the other players, perhaps shutting down interactions or interrupting phrases. *Instigate* implies a more positive manner of 'going against the flow', such as initiating new, different directions in an improvisation.

I wanted to create a composition harnessing the ‘minimal form of game’ discussed in the introduction, with a small ‘poke’ to influence the improvisation. I felt that an effective way to do this would be to create a text score making use of terms from the taxonomy to give a small amount of information to the performers, which would be enough to provide a stimulus.

Response Path **(Version One)**

A: 1 Instigate, 2 Complement, 3 Instigate, 4 Destructive

B: 1 Contradict, 2 Destructive, 3 Make environmental contribution, 4 Instigate

C: 1 Complement, 2 Destructive, 3 Contradiction, 4 Complement

Figure 3: ***Response Path*** **Score (Version One)**

Response Path **(Version Two)**

A: 1 Catalyst, 2 Complement, 3 Catalyst 4 Subversive

B: 1 Contradict, 2 Catalyst, 3 Make environmental contribution, 4 Catalyst

C: 1 Complement, 2 Subversive, 3 Contradiction, 4 Complement

Figure 4: ***Response Path*** **Score (Version Two)**

I trialled the composition in a trio with Drew Webster (trumpet) and Tom Simpson (saxophone). We performed the piece twice after which we decided that the terms *destructive* and *instigate* were problematic and I created a second version (see Figure 2) replacing the terms with *subversive* and *catalyst.* After the performance of Version Two we discussed our experiences, and it was agreed that ‘catalyst’ was a more effective term than instigate. There was a thought-provoking discussion around the use of the terms ‘subvert’ and ‘destroy’:

DW: I found it difficult trying to subvert without trying to destroy, which is interesting, because I wanted subvert instead of destroy…In some ways subvert is in between contradict and destroy.

TS: [They are] very fine modalities of attitude.

This discussion was interesting because the other participants had almost taken ownership of the terms used in the score and had begun to categorise them, dispelling one of my concerns around the piece: that one word alone might not be enough to provoke an engagement. We then swapped scores and played the 'Version Two' scores again and discussed our experiences. This time, the discussion yielded more interesting insights:

DW: Subversive was easier on that one.

TS: It's interesting how you get locked into little loops with people. It would make a great topological diagram of the relationships that happen.

DW: In some ways it cuts out the kind of… in ordinary freeform where just you get together and can play anything. You tend to find yourself getting drawn into the same motifs, playing what you are comfortable with, whereas with this you can't because you're constantly responding, aren't you. You get pulled off into like a little [mimics whirlwind] and then it goes back to somewhere else.

TS: It's quite odd. It's different.

RN: Would you say this is more challenging then?

TS: Aspects of it are.

DW: Yeah, aspects are...In some ways it's easier because it takes away you being able to stay in your comfort zone, but on the other hand it's harder because it takes you out of your comfort zone…Not having a time limit is quite interesting. If you had a light flash and you had to move down [to the next part of the score] it would be very different.

TS: You can't lose yourself in the same way as with free improvisation because there is always a bit of your mind thinking "what's next?" - it's free but not free, I suppose.

Response Path is a text score designed to steer three improvisers into responding in certain ways at sequential times of indeterminate length. Although the materials were basic they achieved the desired effect which was to engender a form of structure and influence the playing of the improvisers. It can be seen through transcribed contemporary discussion, detailed earlier, that the materials exerted an effect and created a different engagement with

the improvisational process than a ‘standard’ free improvisation, with one participant describing using the materials as “free but not free, I suppose”, which succinctly sums up the aims of this project.

I was inspired to experiment and investigate further into text scores when I discovered a score by Ursel Schlicht. Writing in Zorn (2009), Schlicht discusses one of her compositions *Tendrils* (2006), a text score in which she directs the players as to the overall sounds that should be achieved in the performance. This was the first time I had come across an approach like this, in which specific technical musical instructions were given and was intrigued by the possibilities of harnessing the concept for this research. Essentially any outcome would still be improvisation, although the instruction would serve to shape the musicians’ contributions. In *Tendrils* some instructions are precise musical demands, such as “both flute and piano play intense spiralling arpeggios in a high register” whereas other instructions are more open to creative interpretation, such as “piano and flute stay in this rapid, high pitched spiralling energy and then intuitively end the piece together”.

Response Path consisted of four parts, each of which had a number of instructions as a sequence, such as ‘make and environmental contribution’, contradict’ and ‘complement’ which were designed to be open ended stimuli and a very minimal ‘poke’ which would be open to a flexible interpretation. I was interested in how these ideas could be developed, or evolved from *Response Path* to a greater level of sophistication, although steering away from the specific instructions dealing with musical elements such as time signatures, arpeggios and octotonic scales found in *Tendrils*.

An immediate feature of *Tendrils* which I felt would be useful for experimentation was the use of a number of different sections to denote change (and therefore introduce structure) in a similar way, for example, to a change to a different movement in a classical symphony or a verse/chorus structure in a song. A challenge when trying to achieve this in a workable piece was to try to find suitable wording so that the musicians would end and start at the desired time. In earlier work, the phrases “starting from silence” and “on a signal” had been utilised effectively in the ‘starting and ending’ pieces, and so this seemed to be a suitable starting point as the performers would relate to the instructions if they had taken part in a performance of one of the previous pieces.

Taxonomies

During the process of creating *Response Path* I created a taxonomy of forms of response which could be utilised within the piece. I did this by analysing a selection of recordings of improvised music to try to get a sense of what interactions were happening or, at least, what seemed to be happening to me. To continue in the vein and create compositions building on this experience, I felt it was necessary to create a number of taxonomies in other areas: the qualities of the sound which would be produced, the texture created by the ensemble, the 'atmosphere' which should be created, and the dynamics. I created these taxonomies by reflecting on each area and looking for words and phrases that I felt would be evocative, performers could engage with and respond to. Reflecting on the language and terminology used by Schlicht in *Tendrils*, I felt this was more specific and technically precise than I felt was desirable for this project in order to maintain the aims outlined in the introduction
I decided to create four sets of terms in the areas of sound, texture, atmosphere and dynamics that could be used to control or influence the aspects.

Sound

- Consonant
- Dissonant
- Leaps
- Steps
- Buzzing
- Clusters
- Smooth
- Scraping
- Sharp
- Slapping
- Clicking

When I reflected on these terms, I realised that there were two strands; words describing the qualities of the sound (onomatopoeia) and words that describe the relation between sounds (relational descriptors).

Onomatopoeia	Relational Descriptors
Buzzing	Consonant
Smooth	Dissonant
Scraping	Leaps
Sharp	Steps
Slapping	Clusters
Clicking	

Table 2: Showing terms of sound in categories

Texture

- Dense
- Sparse
- Cascading
- Static
- Minimal
- Flocking
- Sounds attract
- Sounds repel

Reflecting on these terms, I realised that there were two strands; words with a motion implied and words which are more static, describing qualities of the texture rather than what the texture is doing, for example, flocking.

Static	Movement
Dense	Cascading
Sparse	Flocking
Static	Sounds attract
Minimal	Sounds repel

Table 3: Showing terms of texture in categories

Atmosphere

- Claustrophobic
- Ethereal
- Industrial
- Pastoral

The four terms I chose to influence the ‘atmosphere’ area are much more abstract than the others and present more of a challenge to performers. Terms relating to dynamics are much more straightforward, for example, loud and soft, or fast and slow are instructions which can be immediately related to a practical understanding of music. Loud, whilst not being as precise an instruction as *f* or *fff*, can be reasonably interpreted as having a velocity than the mid point of the instruments dynamic range. Claustrophobic, ethereal, industrial and pastoral, however, rely firstly on the individual performer’s interpretation of that particular word and secondly on their ability to apply this creatively in a musical context. These terms are more of a poetic stimulus to spark creativity.

Dynamics

- Loud
- Soft
- Fast
- Slow
- Thick
- Thin
- Sparse
- Dense

These terms are four pairs of binary opposites as can be seen in the table below:

Loud	Soft
Fast	Slow
Thick	Thin
Sparse	Dense

Table 4: Showing terms of dynamics in pairs of binary opposites

I created these taxonomies to be used in coordination with the response terms discussed previously:

Response

- Instigation
- Imitation
- Complement
- Contrast
- Destructive
- Contribution to texture/ environment

As an experiment to create a composition from the taxonomies, I picked a number of terms that I could link together into a narrative, starting and ending with silence. I kept this piece (*Text Score #1*) simple and straightforward so I could see how the idea would work in a group setting and then build on the experience.

Text Score #1

Starting from silence, soft scraping and clicking sounds slowly emerge to build a minimal sound-scape. A crescendo is reached after which all sounds die away.

Figure 5: ***Text Score #1***

My aim with this piece was to direct an event that would build, sustain for a time and then 'dissolve' away. Starting from silence felt like a useful tool for this purpose as the events are contained within periods of silence. The performers would be able to hear the first soft scraping and clicking sounds emerge, signalling the beginning of the 'active' part of the piece. The instructions then rely on the performers to build and develop these sounds to create a 'minimal soundscape'. This presents a number of challenges to the performers, as they must cooperate with synchronicity to create a 'minimal soundscape' (understood/ agreed by the group without real-time dialogue) and then build to a crescendo before all of the sounds die away. There are constraints on the qualities of the sound to be created in the piece as I specified 'soft scraping' and 'clicking sounds', although where they are placed is determined by the performers. I have not specified rhythms, tempi, or dynamics beyond the sounds emerging slowly, reaching a crescendo and then dying away.

I wrote *Text Score #2* as another short, simple experiment inspired by the terms 'flocking' and 'sounds attract' from the 'Texture' taxonomy, and tried to capture these ideas using the idea of game. I used the phrases 'flocking', 'sounds attract' and 'repel' in the taxonomy inspired by research I had undertaken into computer generated music and artificial intelligence. Whilst I felt this area was not suitable for this particular project, the idea of *'Boids'* (Reynolds, 1987) stayed with me as a visual representation, or image of sounds gathering together or dispersing.

Text Score #2

Starting from silence, long notes emerge slowly, moving together as if they are attracted. When the notes converge they should held until the sounds die away. When silence is heard repeat until the end of the piece.

Figure 6: ***Text Score #2***

This composition acts as a game. You play a note then move closer to another note you hear. With three or four sets of notes drawing together a game like quality is created.

I first tried these two pieces out with a group of three guitarists; Phil, George, and David, all of whom were students on a music foundation degree. The students all had experiences of improvising, although all of this previous experience was in Rock, Blues and Jazz idioms, so working in a 'free-er' situation was new to them. I felt that this situation was desirable for the project as it would test whether the score could communicate the instructions in a way that could be interpreted by musicians with no previous experience of free improvisation or using text scores. I explained the project, presented them with the first score and asked them to play while I recorded them (see recordings).

Text Score #1

The students were slightly daunted initially, as I gave them the score and asked them to read through the instructions before they began. They asked for ten minutes to prepare which I did not allow as wanted them to respond to each other's improvisation as well as the score and I felt that if they had time to discuss ideas this spontaneity would be lost. I was surprised by the music the students created from the score as they established a pulse and George (a singer-songwriter) approached the score by playing chords, and later on singing as well. This was not a musical outcome I had envisioned, which I found satisfying as it demonstrated that a group of musicians could improvise using the materials and satisfy the instructions whilst pursuing their own musical ideas.

In a discussion after the performance, both David and Phil explained that they had preconceived ideas of a musical result when reading the score, but these changed as they began to improvise:

DH: As soon as I read it I thought… I had in my head…. This is what it should sound like.

PA: I had an idea in my head of how I wanted it to sound but as soon as another instrument came in I found myself trying to harmonise or make it musical and lost the wild idea and tried to fit in with the group rather than expand on my own ideas.

When discussing how he had approached realising the score, George explained:

GC: I read minimalism and that stood out for me. I like minimalism and I like minimalist stuff…the bare bones of music. It's really nice to work with ambient textures…scratching the guitars and the subtlety of things I like a lot.

PA: I felt we took on a percussive role to support George… to fit in with George's playing. So, we sort of made percussive noises rather than actually playing any notes whatsoever, so it's almost like trying to keep the rhythm going, rather than taking individual leads.

TS1 (1) 2/9/15

MG: I'm not sure if we really fulfilled the brief though, did it? There was a couple of like almost crescendos and then it stopped. There should have been a more definite crescendo.

DW: More dying off!

MG: Yeah, proper decay.

RN: There was a definite crescendo compared to the starting point which was very minimal and quiet.

MG: I was imagining it reaching a peak and then coming down from that peak, but it kind of went…

DW: A number of peaks…

TS1 (2) 2/9/15

MG: Trying to find a shared crescendo is quite an interesting thing when your doing this kind of thing.

DW: In some ways its as much about stopping what you're doing than it is… It's like stopping the notes.

MG: It's like without words trying to come to some shared understanding of what each of these parts is, isn't it? Its almost like you've got to feed off each other.

DW: It's a relief when you're going into a crescendo and you can then let go [plays a series of loud notes].

MG: That's it, when it's understood. When you've understood you're at the crescendo.

TS1 (3) 2/9/15

MG: I think my favourite was the second one.

DW: It's weird because once you get to a point you kind of … the first one was everyone's ok, the second one everyone gets it and the third one you can quite quickly fall into a parody of it. It's hard to do something fresh without it being what you expect to do.

RN: I was really conscious I had the EBow in my hand and I was trying to use that rather than do what I was supposed to.

DW: In some ways you've almost got to forget the instrument don't you?

TS1 30/10/15

MG: In comparison to the other ones that was the most silent we have played for a long time, wasn't it? Extremely delicate

RN: It's really different from how I've played with other groups because they tend to play a lot louder… people trying to play loud and play over everyone else.

GH: That's always been my experience, lots of people fighting to be heard. I just didn't find it interesting.

DW: There's a lot of bands like that…

MG: There's enough of that in life generally.

RN: I thought it was interesting when we were playing that quietly… when someone is playing with their keys, is it the flute or the trumpet?

MG: Yeah, and there's loads of breath that you can hear. That's nice.

DW: It's actually hard to play the trumpet quietly… You have to put a lot of air in it to get clean notes.

Text Score #2

DH: The long notes…I would have done differently if I had have been on an electric [guitar] because I'm on acoustic I didn't have enough sustain to get what I would call a long note so I kept picking and moving up until I reached the other note.

PA: After reading the information it conjured up an idea in my head but the actual thing I played wasn't the idea in my head, because I was led by what the other musicians

were playing so the initial idea was scrapped and then I was just trying to embellish what was going on around me.

TS2 2/9/15

MG: I struggled to find my way in that one, but I liked the sound of it.

DW: It's almost having to find those long notes, isn't it, then sustain

Reflection

The outcome and evaluation of these two trial text scores demonstrate that this method could be successfully utilised. The next stage in the research was to design a series of short text scores building on this experience, apply them in a practical situation and reflect on their characteristics to enable subsequent evolution and development.

Having reflected on the success or effectiveness or the first two text scores, I proceeded to create a further six pieces in the series. These were designed in the same manner; selecting terms from the taxonomy and building them into a short framework. I aimed to build on the 'smallest instance of game' approach I had adopted with *Response Path*, developing this idea through either demanding evocative imagery, or playful instructions from the improvisers. Evocative imagery is used in *Text Scores #3, #4, #5* and *#6* with phrases such as 'static texture', 'dense with clicking sounds', 'ethereal atmosphere', 'cascading textures' and 'rain like effect'. These pieces rely on a game like quality to be realised as they are presented to the improvisers as part of a written instruction which is to be performed collectively with synchronicity. This is a complex and abstract task: without a ludic quality being present it could well be absurd. *Text Scores #7* and *#8* make use of playful instructions; 'contrasting smooth and scraping sounds', 'notes grow longer', 'build in density', 'notes emerge a small step away from the next', 'single notes emerge, each one a leap away from the next'. These phrases require certain sounds to be created by the performers as a synchronicitous body.

Text Score #3

Consonant sounds build to create a static texture which is maintained for a time before the texture become dense with clicking sounds which gradually fade away

Figure 7: ***Text Scores #3***

TS 3 30/10/15

Rattles, pops and clicks appear with quiet swells and scrapes from the guitar before the flute brings in long notes at 1’43” followed by the trumpet and piano. This texture lasts until 2’38” when it dies away suddenly to be replaced by clicking noises until the end of the piece.

MG: Nice beautiful sound and it all kicked off. It didn’t necessarily gradually fade away though, did it? It reached a peak and all of the sound dropped and we went into clicking but…that’s what happens.

This is interesting as it demonstrates that the other musicians have a desire to follow the score and have a critical response to whether or not they achieved the results.

Text Score #4

An ethereal atmosphere is created with contrasting smooth and scraping sounds building a dense texture.

Figure 8: ***Text Scores #4***

TS4 30/10/15 (for the recording refer to track 13 of the Albertine album)

Banging, tapping and clicking sounds combine to create a texture before low metallic sounds enter at about 1’00”. Flute stabbing notes are heard at 1’15” before the piano enters. An interesting texture builds at 2’00” with interplay between flute and penny whistle which contrasts with the piano. A crescendo is reached after 3’50” with fluttering sounds and high notes from the flute and whistle, sustained notes from the guitar and haunting textures from the piano.

MG: I had an urge to make a lot of noise then. I had to restrain myself.

This composition contains a creative challenge with the demand for an 'ethereal atmosphere'. The recording of this performance is satisfying, particularly because the results are unpredictable from this score, so it was a surprise for me.

Text Score #5

Starting from silence, smooth sounds emerge to develop cascading textures before the notes grow longer, eventually being held until the die away.

Figure 9: ***Text Score #5***

TS5-1 30/10/15 (for the recording refer to track 4 of the Albertine album)

The recording starts with breath, handling and rattling sounds before the piano enters and swelled guitar notes emerge. Notes develop from breath sounds on the flute. Close interplay between flute and trumpet from 3'04" contrasts with the piano and guitar in the background.

GH: It was a lot shorter than I expected.

RN: I found that one harder.

MG: I thought there was a crescendo which I thought was going to last longer but it was there then it was gone.

GH: Yeah.

MG: I had so much more to give.

DW: It's hard from a trumpet perspective to start from silence to smooth sounds. That's really challenging… You're committed when that note comes out the end. I mean…the next one [TS7] 'single sharp sounds', that is much easier.

RN: I found it tricky, I was thinking about cascading textures.

GH: I don't think we really got a big… I was imagining a big soup of cascading texture but I don't think we got there.

MG: It was more of a spoonful.

I found this interesting as I found these instructions more challenging than the rest of the group. I had ideas of the sounds of what the terms could be when I wrote the pieces, but it is very different when three other people are bringing ideas, this creates surprise and excitement. The discussions show that the performers had expectations around various aspects of the music such as the length, crescendo and textures.

Text Score #7

Starting from silence, single notes emerge, each one a small step away from the next. The notes become louder and longer before all notes are held until they overlap then die away.

Figure 10: ***Text Score #7***

TS7 3/12/15 (for the recording refer to track 1 of the Albertine album)

GH: I didn't like that one.

MG: I found it tricky too.

DW: It's the combination of louder and longer and overlapping.

GH: There's nothing to say that the single notes emerging can't be long.

DW: I found it difficult, that one, but I imagine when we listen back it might be quite good.

MG: It was all a bit unfathomable. You just really didn't know where it was going.

RN: I felt like I was in a box after the last one.

DW: It was like toothache.

We found this composition very challenging to perform. At the time it was mentally taxing to follow the instructions which require a keen awareness of what the other players are doing to be able to fit notes in ‘a small step away’ and collectively build the notes ‘louder and longer’ before they overlap. Interestingly, this was the recording from the session which we all enjoyed listening to the most.

Conclusion

The compositions I created in this series are effective pieces that ‘shape’ improvisations in different ways. By developing the five taxonomies of terms I was able to construct a series of text scores that influence different aspects of the improvisations from the qualities of the sounds which are created in *Text Score #5*, to the way that performers should react to the music they hear in *Text Score #2*, to more abstract creative instructions in *Text Score #4*.

Chapter 3: *Cube*

In this chapter I will discuss the origin and development of the composition *Cube* (for the score see p.109 in the appendices), and the related context around indeterminacy. I will then explore some performances of the composition.

The idea for this piece developed from the early experiments with note sets (as discussed in the Introduction). I had looked at this area through my initial experiments and developed a number of compositions in which participants would each be given a list of notes which they should play through in their own time making their own decisions about dynamics, note placement and the octave of the note they are playing. They would play from silence with the other participants, each of whom would have their own list of notes. I developed a number of these compositions and carried them out in group performances, some of which were recorded. I felt that the compositions were limited because the players would each work their way through their list of notes and when everyone had run out of notes it was the end of the piece. I felt the experiments generated some interesting sounds, and I was able to harness some modal outcomes which I had aimed for with those pieces, but I wanted to find a way of expanding the scope of these ideas.

Having reflected on the shortfalls of the previous pieces, and how it would be possible to expand the idea and make it more flexible, I came up with the idea of taking a Rubik's Cube and using it to create a 3D score which could be changed by twisting the rows to alter the pattern of the notes on each face. The faces could then be chosen by rolling the cube like a dice. Having many sides to the score would also offer solutions to the dissatisfaction I felt at the arbitrary ending of the previous pieces: the notes had run out, so the piece had to end. In this case, when the notes on a face had all been played, the performer could roll the cube to 'be given' the next set of notes. This solution, using a toy as a score, complemented ideas I had been experimenting with around the use of games and play, which at this stage had been attempting to map actions made during games to create sounds.

Having come up with the idea for the technological aspects of the piece, I had to think about how notes would be selected to be used, what order they should be used in, and their initial placement on the cube.

V1

			F	B	E						
			C	F	B						
			E	C	F						
G	C	A	C	F	B	E	C	F	A	D	G
D	G	C	E	C	F	B	E	C	C	A	D
A	D	G	B	E	C	F	B	E	G	C	A
			D	G	C						
			A	D	G						
			C	A	D						

			F	F	E						
			C	C	B						
			E	E	F						
G	C	A	C	G	B	E	C	F	A	B	G
D	G	C	E	D	F	B	E	C	C	F	D
A	D	G	B	A	C	F	B	E	G	C	A
			D	D	C						
			A	A	G						
			C	C	D						

Figure 11: Showing Version One of *Rubik's Cube*

The first version, shown above, was generated by using two note sets that I had developed for one of the initial experiments. I placed the same notes on three faces. I created different orders of the notes but they were all in fourths. The flaw in this was exposed as I made the first move: there were the same notes descending which were adjacent to each other. From this experience, I decided that note sets should be distributed in a more random formation, and that using five notes may give a larger 'spread' of notes. I then created a second version, as shown below, using the note set D E F B C distributed with a random function in Microsoft Excel:

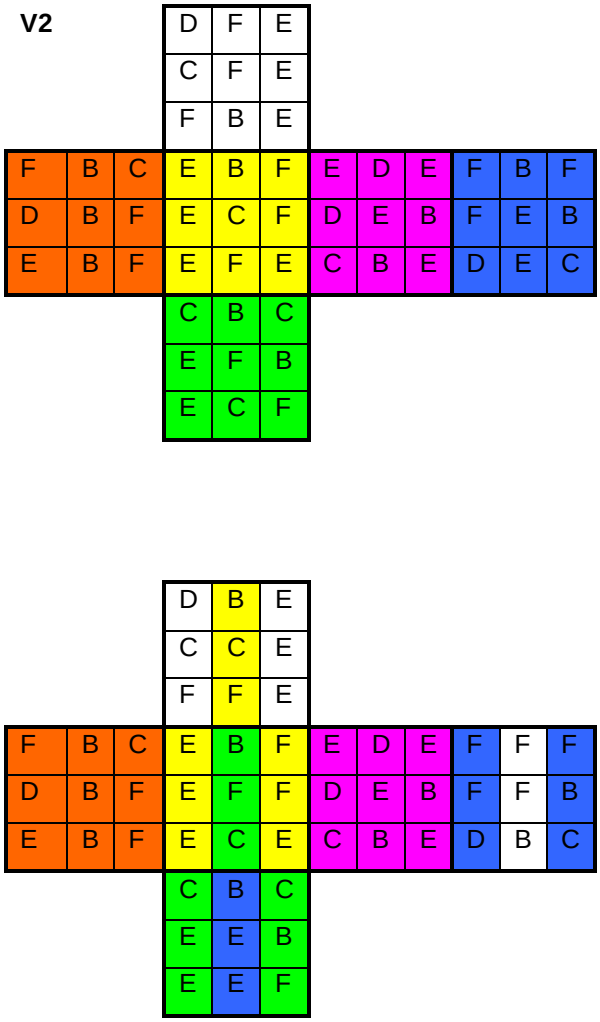


Figure 12: Showing Version Two of *Rubik's Cube*

This created a 'bunching' of notes, as can be seen in the far right hand face which has five Fs.

I created a third version, as I was dissatisfied with the previous versions; I found the previous note arrangements to be limiting and did not provide interest for me when manipulated. It was too easy to end up playing 'mainly Fs'. Reflecting on this dissatisfaction and the layout of the Rubik's cube, I experimented with nine note scales to provide a different note per square on the initial nine square face. I settled on the nine note augmented scale which contains the intervals R b2 2 3 4 b5 b6 6 b7 (assuming the root is the first of the three semitone run). This is a mode of limited transposition, so other interpretations of the intervallic structure are: R b2 b3 3 4 5 b6 6 7, and R 2 b3 3 b5 5 b6 b7 7. This selection of

notes enables rich harmonic possibilities when three or more performers play at once using a different cube each.

			A	Bb	B						
			Db	D	Eb						
			F	F#	G						
Bb	D	F#	B	Db	D	Db	D	Eb	F	F#	G
A	Db	F	Eb	F	F#	F	F#	G	A	Bb	B
G	B	Eb	G	A	Bb	A	Bb	B	Db	D	Eb
			B	G	Eb						
			Db	A	F						
			D	Bb	F#						

Figure 13: Showing the final version of *Rubik's Cube*

I was excited by this method, as I felt this layout would provide more harmonic interest and possibilities. I wrote performance instructions to clarify how the cubes should be used:

Rubik's Cube Score

- This piece is for a number of players, each of whom select a prepared cube. There must be enough cubes to enable players to have one each.
- Starting from silence, each player makes a maximum of four changes to the cube by twisting the faces, then rolls it.
- The performers must play the topmost face of the cube from left to right, one row at a time, from top to bottom. The note names are specified, but the pitches are not (for example, F F# G does not necessarily denote that these notes should be played in ascending order). The placement and duration of the notes are to be determined by each individual.
- When the player reaches the end of the notes on the face they can either repeat this face, or roll the cube again and play the next face.
- This is repeated until the end of the piece.

Figure 14: Showing Rubik's Cube Score

This score is a development on previous ideas as it is not only a static list of notes, there are different options for each player, through manipulating the cube at the beginning of the performance, and rolling the cube when they have finished the face or repeating the sequence of notes. An added dimension which provides additional interest is the possibility of manipulation of the score. The piece does not remain static, it evolves every time it is performed, and with each performance as each cube is manipulated, the player leaves a trace of their own actions on the cube, which will affect subsequent performances. All of these changes take place as part of the performance, and add extra dimensions, both as a visual spectacle, and a sound event; the cubes click as they are twisted, and rattle, bang, and clatter as they are rolled. The nature of this score is different to the conventional, hierarchical idea of a composition, where the composer is the autocrat issuing instructions which are fixed in the

score and usually constant from one performance to the next. This composition makes use of indeterminacy as all element of the performance with the exception of the notes to be played are decided by the performers. There are other examples of compositions that make use of indeterminacy in various ways. Cage explains how Stockhausen's *Klavierstück XI* operates:

> In the case of the *Klavierstück XI* all the characteristics of the material are determined, and so, too is the note-to-note procedure, the method. The division of the whole into parts, the structure, is determinate. The sequence of these parts, however, is indeterminate, bringing about the possibility of a unique form, which is to say, a unique morphology of the continuity, a unique expressive content for each performance. (Cage, 1971, p.35).

This composition's structure is often described as 'mobile', as the score is presented with cells of notation spread across the page, which the performer plays in any order.

Another example of an indeterminate composition is *Duo II for Pianists*, which is again explained by Cage:

> *Duo II for Pianists* by Christian Wolff is an example. In the case of *Duo II for Pianists*, structure, the division of the whole into parts, is indeterminate. (No provision is given by the composer for the ending the performance.) Method, the note-to-note procedure is also indeterminate. All the characteristics of the materials (frequency, amplitude, timbre, duration) are indeterminate within gamut limitations provided by the composer. The form, the morphology of the continuity is unpredictable. (Cage, 1971, p.38).

The notes played by the performers in this composition are indeterminate, but within a framework set by Wolff in the score and instructions. To facilitate the indeterminacy in the piece Wolff provides of a number cues which the two pianists should respond to, however, as Nyman explains there is a caveat that if both performers are waiting for a cue, rather than waiting in silence they should "work out a solution on the spot" (Nyman, 1999, p.67). *Cube* shares similarities with both of these pieces in terms of its indeterminate nature, although clear differences are also evident. Stockhausen's *Klavierstück XI* enables indeterminacy in its structure by allowing the performer to decide the order in which the cells of notation are performed, whereas in *Cube* the construction of the faces are changed with each performance as the player make four adjustments to the cube at the beginning of the piece. During the performance the indeterminacy in the structure comes from the performers' decision whether or not they repeat the face when they come to the end, which face the cube lands on when it rolled and how long the performers carry on before they feel it is the end of the piece. The notes to be played are fixed in *Cube*, unlike in *Duo II for Pianists*, however, the octave that the notes are played in are determined by the performers. The characteristics of the

performance in both compositions are indeterminate as they both rely on the performers to supply aspects such as dynamics, tempo, timbre and duration of the notes.

Application

This piece was first performed on 2/4/2011 by Richard Nielsen (guitar) and Jasper Smith (guitar). After making four moves, the layout of the cubes was as shown in Figure 15:

RN

			D	Db	A						
			F#	Bb	D						
			G	Bb	B						
Eb	Bb	D	Db	F	Eb	F	Bb	Bb	Eb	B	G
D	F#	F#	F	A	G	A	Db	A	B	D	Eb
F	F#	Eb	G	A	B	Db	D	Bb	G	F	F#
			B	G	F#						
			Db	F	Db						
			B	Eb	A						

JS

			F	Db	G						
			F#	Bb	A						
			G	Eb	B						
B	Bb	D	Db	D	Eb	F	B	Eb	D	D	F#
Eb	D	F#	F	F#	G	A	A	G	D	Db	F
Db	D	A	Bb	F	Eb	Bb	B	Eb	G	F#	B
			G	Bb	A						
			Bb	F	Db						
			F#	Db	B						

Figure 15: Showing participants' cubes after four movements

The improvisation was recorded using a condenser microphone in the centre of the room. Rasmus Nielsen (5 months) was also present at the recording, and can be heard contributing unintentional vocals and percussion (shouting, rocking in his chair, and rattling a toy).

This piece worked well in practice, as following the instructions and playing the notes on the score yielded a musical outcome which I found satisfying. As a duo performance, the result was fairly sparse and atmospheric. Listening back to the recording, we were unable to determine which of us was playing at times, which could be attributed to close listening. I was personally pleased about this as we usually have very different playing sounds. Different types of response can be heard between the two guitars through the improvisation, such as imitation, complementing, and contradiction, despite, in essence, the activity being two guitarists playing a series of lists of notes. The unintended percussion works well to fill the sound out and sounds in places like drum breaks and brushes drum patterns.

I also experimented with solo performances of this composition by recording a track and then recording a second interacting with the first. I built up to four tracks in the recording *Cube 29.11.15* (for the recording refer to track 3 of *Disc 2: Additional Tracks*) and created a different tone for each guitar part so there would be some contrast between sounds. Listening to the track some time after the recording took place, there seems to be a haunting quality reminiscent of church bells to the opening fifty seconds, after which some staccato sounds create a texture. There is a chord created by several parts entering at once at 2’12” which is followed up by a second at 2’17”. Another chance harmonization occurs at 2’38”. An atmosphere is maintained throughout the recording with contrast provided by the use of different techniques such as slides, sharp staccato notes and harmonics. This was a very different experience to improvising with other musicians because when I played the first track there was no other stimulus apart from the score and the notes I had just played. I found myself thinking about leaving space for future parts and what was going to happen, whereas with a group I would be focusing on what was happening at the time. When I recorded subsequent tracks I found it was surprising to hear the other notes and interact with them. I didn’t remember much of what I had played so there was not an option to plan events such as harmonisations. When these occurred by chance it was a satisfying surprise. This was an interesting experiment, but ultimately I prefer the immediacy of interacting with other musicians.

This piece met the aims of the project which were to create materials to use in improvisations which would shape or influence them in some way. This piece also acts as a

game in its construction and also its function. The construction of the piece as a sort of score designates the note sets which will be used by each improviser through the piece. This will change with each performance, as a number of moves must be made to the ‘score’ before the improvisation. Bearing in mind the number of permutations of note combinations on the score, and the fact the there are six faces on the cube, the chance of two people playing exactly the same combination of notes at once is remote. This set up for the piece acts as a game, with the participants being given the ‘scores’ as a ‘poke’, providing a stimulus and constraint for the improvisation, which they use at the same time that other people are using their materials, all the time responding to each other within the framework of the piece. The function acts as a game because the improvisers are given the ‘poke’ which is essentially a list of notes, but when they have played all of the notes they can either play the same face of the cube again, or roll the cube and play the face which lands. This enables the improvisation to end when the players feel it is the end, rather than just when everyone has run out of given notes.

Chapter 4: *Lines*

In this chapter I will introduce and explain the *Lines* series of compositions which I created in response to research I carried out into the use of games and play in the theatre by practitioners such as Keith Johnstone and Augsto Boal, and also as a development of the ideas I had used in the *Cube* piece. The *Lines* compositions are divided into two series; *Starting Lines* which present the participants with a list of notes which they should play in order, but can place where they wish before moving into a free improvisation, and *Fishing Lines* which begin with a free improvisation before moving into a given list of notes. I will also compare the use of sets of notes which performers play through in their own time in these compositions with Lutosławski's use of aleotoric counterpoint. I will then discuss some recorded performances of these compositions.

Over the course of this research, I investigated the use of improvisational games in acting, in particular through the writing of Augusto Boal and Keith Johnstone in the hope that I might discover areas of common ground, or ideas which could be harnessed for this project from a closely related area. Boal was a Brazilian director and writer who created games based around improvisation for use with his company the Theatre of the Oppressed. He used these materials to train actors and explore social and cultural issues through improvisation games. Two interesting examples come from his series of exercises *Rehearsal Exercises for Any Kind of Play* (Boal, 2002, pp.217-220). In *Improvisation* Boal requires a group of participants to spontaneously create a scene from a few given basic elements. The group should then accept and believe in any contributions which the other performers bring to the scene, without rejecting any interventions to allow the situation to evolve. The given elements are often facts from newspaper reports so contemporary issues can be explored through theatre.

The Dark Room is an imagination exercise, is which an actor is seated in a fairly dark room next to an audio recorder, when a fellow participant gives instructions to explain where they are, for example, on a particular street. This acts as a stimulus which the actor responds to by describing in detail their appearance, surroundings and others present. The actor then listens back to the recording and visualises the scene again.

Keith Johnstone, a practitioner of improvisational theatre and writer on the subject, provides an interesting example of how he created an exercise to overcome issues in getting actors to improvise naturalistic conversations where he would instruct participants to "Try to

get your status just a little above or below your partner's" and explained that following the exercise "Suddenly we understood that every inflection and movement implies a status, and that no action is due to chance or really motiveless" (Johnstone, 1989, p33). The minimal instruction in this exercise has parallels with some of the compositions in this project (as well as acting as a game) and could be seen as a text score!

The most useful example, however, was a comedy improvisation game used in *Whose Line is it Anyway?*, an improvisation- based television programme from the 1980s and 1990s. In this game each participant would be given a line of dialogue which they must weave into an improvised conversation. I was intrigued by the possibilities of a musical adaptation of this idea that could require each participant in musical improvisation to incorporate some designated material. I experimented with various approaches such as providing short pieces of notated composition, or appropriated material to be incorporated into the improvisation, but I felt this was too far removed from my initial premise for the project. I settled on a looser, less stringent format, using these pieces as an opportunity to develop some themes from earlier in the research, utilising a minimal form of game with a small stimulus (as in *Response Path* (see Chapter 2)) and using lists of notes to be played in the improvisers' own time (as in the *Rubik's Cube* score (see Chapter 3)). These lists of notes were inspired by the work of Lutosławski who made use of 'aleatoric counterpoint' in some of his compositions such as *Jeux Vénitiens* (Lutosławski, 1961) where sections of his scores would dispense with synchronised rhythms and timings across all of the parts whilst maintaining designated pitches forcing the performer to use their own creativity as to when they play the notes. Lutosławski explains this concept further in instructions to performers from the score of *Jeux Vénitiens:*

> The first flute part should be interpreted freely; the time divisions indicated by vertical lines need only be observed approximately. Rests in brackets are for the sake of orientation only. Rests without brackets, however, should be very accurately observed, the basic value being quarter-note with a duration of one second. The remaining instruments – with the exception of the strings – accompany the soloist; all that they need to observe is the sign of the conductor for the beginning of each section between the two vertical lines. Although the rhythmic values are only intended as a guide, the duration of the individual sections indicated by the conductor should never be exceeded. (Lutosławski, 1961, p18).

Although Lutosławski introduced a degree of freedom with his 'aleatoric counterpoint', it operates within clear boundaries. I was excited by this concept and interested in how it could be harnessed outside of a formal scored musical work.

In developing the idea of 'aleatoric counterpoint' used by Lutosławski, I designed a number of improvisational pieces as games to be performed by a group of musicians. Each

musician was given a ‘score’ which consisted of a list of notes which moved through the different note sets. The musicians should play the notes in the designated order, but the rhythms, timings, and specific octave in which the note is played should be determined by the individual. The idea was to create shifting ‘clouds’ of notes which would imply certain modalities and then as the musicians grew further apart the music would become detached from modality as the relations between pitches became blurred.

I decided to utilise this approach in the *Starting Lines* series of pieces where each participant would be given a score with a series of notes which should be played ‘from silence’ in their own time, deciding on the octave each not should be played in and the placement, dynamics and so on. When the players come to the end of the notes they should improvise until ‘the end of the piece’.

I had encountered the concept of ‘starting from silence’ from taking part in many free improvisations, and also performances of Johns Stevens’s compositions, such as *Sustain* (1968) and had found the method to be effective as a ‘free’ starting point and felt it would be appropriate for these pieces. The performer decides which octave the notes are played in so, for example, a D could be lower or higher than a preceding C. The *Starting Lines* were designed to generate different ‘clouds’ of harmony at the beginning of the pieces, with some aiming for a consonant effect, and others a dissonance before the performers improvise without restrictions. I used the phrase ‘improvise until the end of the piece’ so as not to restrict the duration of the improvisation and remove constraints after the specified notes.

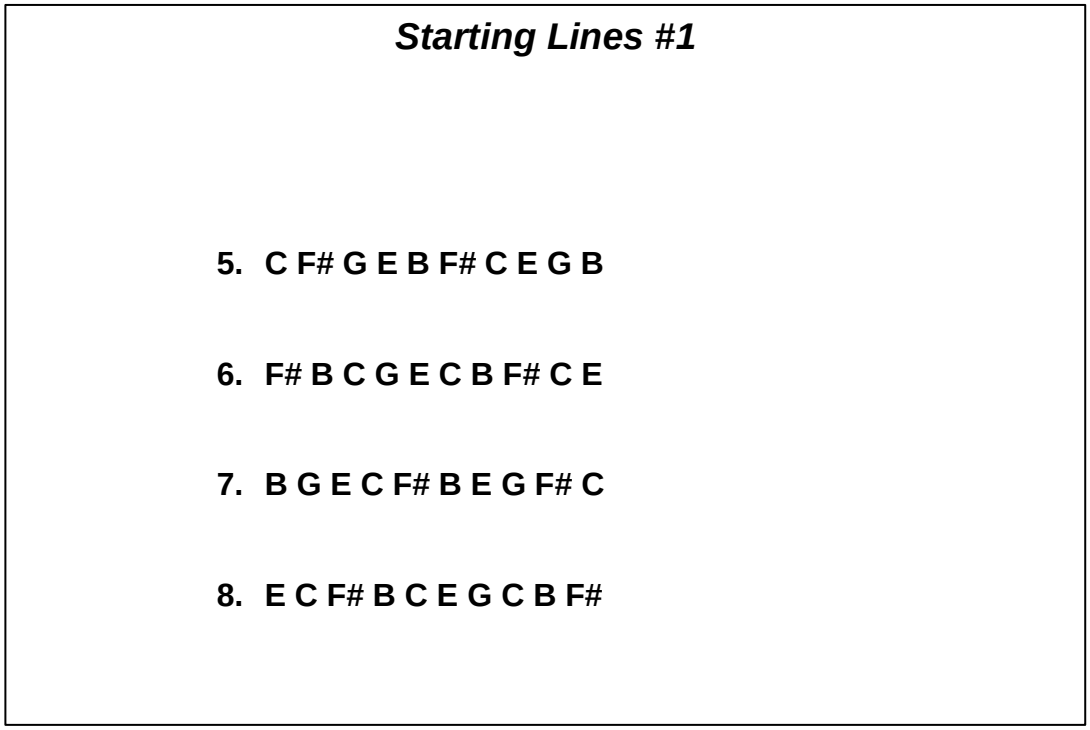


Figure 16: ***Starting Lines #1*** **score**

I experimented with these pieces with variations groups before I rehearsed and recorded with the Albertine band. These sessions produced strong interesting results and reflections from the participants.

Starting Lines #1 **recording #1 11/11/15** (for the recording refer to track 2 of the Albertine album)

This recording is a duo performance with flute and guitar. The notes gently fade in to complement each other as each player works through the notes before the piece ends. I really like the interaction, which is perhaps more pronounced because there are only two performers. At the very beginning it sounds almost like 'turn taking' until c.20s where the notes are bunched together more and overlap. The sound is consonant and gentle.

Starting Lines #1 **Recording #2 11/11/15**

The trumpet enters with the guitar following and the flute imitation the trumpets phrasing before moving onto contrasting patterns. The guitar alternates between swells and staccato stabs.

The discussion after the performance raised some interesting points around departing from the given material and transitioning to a free improvisation:

GH: Did anyone get any improvising?
RN: I did, two extra notes!
GH: It's hard to depart from the notes that you've got. You've got to sort of erase them, haven't you…or not. I don't know.
RN: It's up to you – you might want to contrast it…

This is revealing as it shows the performer wanted to clarify whether they should be departing from the given set of notes for the improvisation. The answer is that they could if they wished, but if they wanted to work within those notes, that would valid as well. It is their choice.

Starting Lines #1 **Recording #3 11/11/15**

The flute begins with a flurry of notes which are then complemented by the guitar before the penny whistle enters. A light texture is maintained as the piece evolves from the designated notes into free improvisation which keeps a similar feel.

The group responded well to the concept of the pieces and there were some interesting discussions around the transition between the given notes and the free improvisation

GH: That was a bit musical!
DW: It's hard in some ways having that…more restriction because you are drawn into following the notes a bit more. But I was finding that once I'd played the notes your fingers want to do other stuff, don't they? There's some mad discipline to it.

GH: I suppose your choice is whether you rush through them [the notes] and get on to do something different or you spread them out and relish the direction.

DW: That's it! It's a bit more ambiguous about where it ends…

The phrase 'musical' was a recurring theme from feedback in the sessions. The members of the group were often surprised when conventionally attractive resulted from the performances and seemed almost concerned that this was wrong, or undesirable, and the results should always be chaotic or atonal, which is not the case. The aim was to shape, or influence group improvisations with these materials, but a consonant outcome is as valid as one which is dissonant.

Starting Lines #1 **Recording #4 11/11/15**

Interesting beginning with notes from each instrument unintentionally acting as a descending pattern. There is space in the texture as the piece builds which creates a relaxed atmosphere. Satisfying ending with the flute playing intervals which the guitar responds to.

GH: I think that had a different feel to it, that one. I think sometimes it gives it a bit more of a drive, more of an impetus because you know what's coming next for the first bit. So where some of the others are a bit more ponderous, this one seems there's more somewhere to go.

RN: Did you go much past the list of notes?

GH: I felt more confident to go past it this time, rather than just do it.

Starting Lines #1 **Recording #5 11/11/15** (for the recording refer to track 10 of the Albertine album)

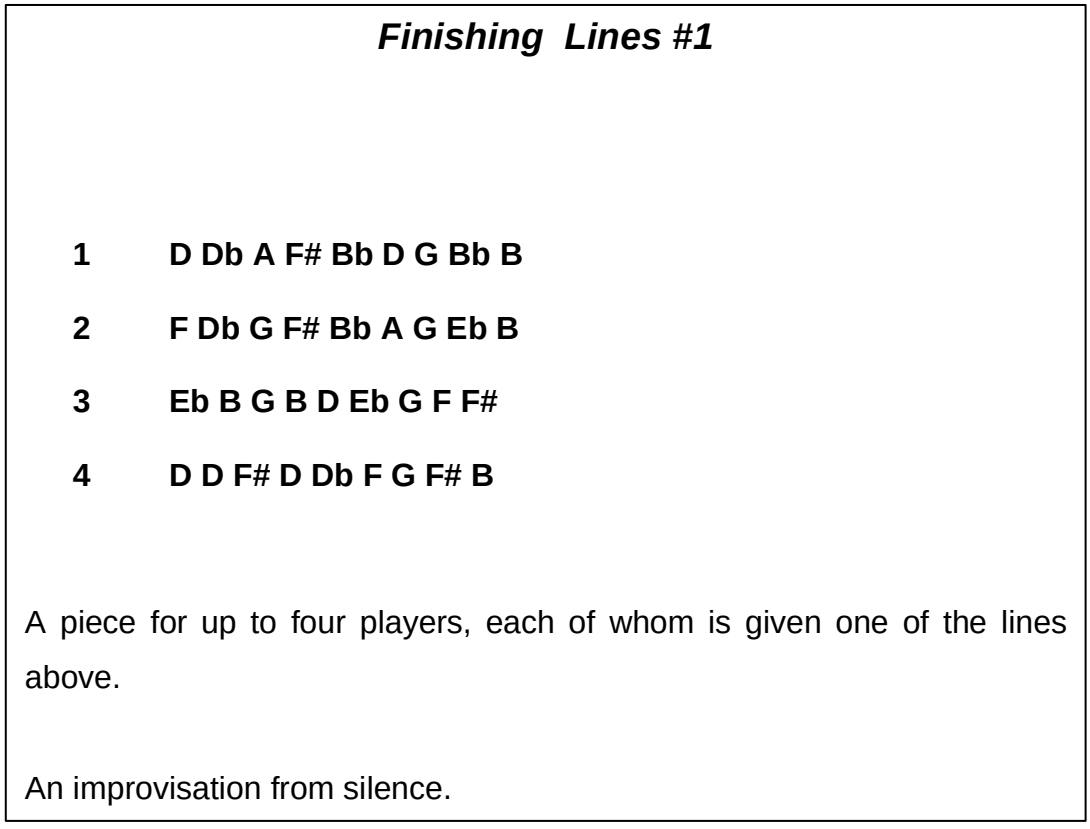
The piece builds with long trumpet notes, guitar harmonics and soft flute notes. There is a lot of interaction between the players and responses such as the guitar imitating the flutes phrasing (c.38s to c.44s). A stark texture is created at c.59s which dies away to form a satisfying ending.

Another recurring theme throughout the sessions was around the endings of the improvisation an agreement, although not discussed or signaled that the piece had ended.

DW: I liked the ending of that one.

GH: It's funny how you more or less know when it's the end. I don't know if it's a lack of balance without the piano this time.

The *Finishing Lines* pieces reverse the structure of *Starting Lines*, beginning with an improvisation 'from silence' and the performers conclude with the row of notes which are played 'on a signal'. It was this aspect, from all of the scores, which was found to be most challenging by the different groups who I used to trial these pieces. The challenge lay in how the group would organise the 'signal'. Would it be a spontaneous moment which the group should just 'feel' when the time was right? Should the group appoint someone to direct the shift, in which case the dynamic would be altered as there would be, in effect, a conductor? Another approach was to attempt to hear when the first person started their line and this would be the signal.



Finishing Lines #1

1 D Db A F# Bb D G Bb B

2 F Db G F# Bb A G Eb B

3 Eb B G B D Eb G F F#

4 D D F# D Db F G F# B

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

Figure 17: *Finishing Lines #1* score

Finishing Lines #1 **Recording #1 11/11/15**

A 'busy' texture is established with trumpet and guitar, which the flute contributes to before the sound suddenly stops. The texture builds and falls away several times before becoming lighter and more spread. The trumpet and flute die away as the guitar continues solo (to complete the lines).

After Richard continued on his own to play his remaining notes…

GH: I liked your solo!

RN: Thank you! I hadn't done the notes…

DW: You just had so many notes to finish!

RN: I hadn't started…

DW: For God's sake man, keep up!

RN: I was just listening. It was really nice.

GH: It was lovely, wasn't it! I really liked the bit you were doing.

RN: I can edit out the end [I didn't].

GH: Who's to know!

Finishing Lines #1 **Recording #2 11/11/15**

The flute begins with a long sustained note, which is complemented by the penny whistle and sustained notes on the guitar. The textures then stops and starts before some close interplay between the flute and penny whistle while the guitar alternates between swelled notes, scraping sounds and staccato stabs.

GH: I thought I was the one to get left behind that time.

RN: I was just watching for when you did it.

GH: Well how did you know I was doing it? Because I was looking?

RN: Yes.

GH: going to trick you next time! I'll look at it all the time!

DW: I like playing it in reverse better [as opposed to Starting Lines] .

GH: Yeah, I prefer it that way around. I didn't think I would… I think [the other way] feels more natural because you start from confinement and then breaking out of the

confinement is harder than going into it… It's like it's harder to get out of a comfy chair, isn't it. That's the area of safety isn't it?

DW: The nice thing about it is that it makes you think about what the other person's doing all the time isn't it. Which is a good exercise in listening. Especially when you play in bands, there's always someone who wants to play all the time and sometimes you think if you'd just stopped playing then it would have worked. It's about that learning to not play as much as it is about playing?

GH: And that's a hard lesson to learn. I've [improvised previously] with a load of barely grown up… mainly boys... men who just thought it was a free for all. They didn't ever listen to anything. It just really put me right off.

DW: It becomes like an arms race!

Finishing Lines #1 **Recording #3 11/11/15** (for the recording refer to track 4 of *Disc 2: Additional Tracks*)

RN: I was a bit premature!

GH: It sounded like a bit of an ending there, then you came back in. I wouldn't have wanted it to end there.

Having trialled these compositions with various ensembles and played them with the Albertine band, I feel they are effective pieces which have produced rich results. Although they emerged from research into improvisation in acting and Lutosławski's aleatoric counterpoint, I feel they have a distinct character in themselves. One composition I found which has some similarities was Eric Andersen's text score *Opus 88* (published in Lely and Saunders 2012, although I was unable to ascertain the date of composition) which consists of the chromatic scale from C to B, although what octave the notes are played in, note durations, or how long a participant should remain on one pitch is not specified. The instructions suggest that the piece could be performed exclusively with scales, with every possible octave of a note played simultaneously (eg all of the Cs, then Dbs), or any mathematical permutation to realise the instructions. This score has similarities to my *Rubik's Cube* and *Lines* scores, in the freedom to determine the placement, dynamics, and octave of notes. Andersen moves the piece through the chromatic scale, and explains that each pitch can be 'covered' in various

ways. In my scores I have specified that the notes are to be played in the order they appear in the score (although each individual note may be played in any octave), rather than something related to the note such as a scale or scalic permutation.

A possible further development of the idea behind these pieces could be to specify that a given line is incorporated ‘at some point’ during the course of an improvisation, which would give each individual the choice of where the line would be placed during the performance.

Chapter 5: *Structures*

In this chapter I introduce the *Structure* series of compositions, explore their qualities and explain how I developed them. I then reflect on performances of these pieces.

A book which had a significant impact on the project was *Characteristics of Games,* an investigation into games which discussed units of gameplay length (Elias, Garfield and Whitley, 2012, pp.13-15). This explanation of structures stated that computer games were often made from *atoms* and *games*, where an *atom* would the smallest complete unit of play, such as a level of a game (the example provided was a screen of the video game *Donkey Kong* (Nintendo, 1981), or two possessions of the ball in football) and a *game* would be a bout of play (for example until the lives run out). This resonated with me as having similarities with, and possibilities for, this research as the compositions I had created up to this point could be seen as atoms and then sequenced into 'game' structures. With a larger structure different experiences or contrasts for performers and audiences could be created. The effectiveness and activity within these structures could then be analysed to inform the creation and development of a number of larger scale pieces (this is discussed further in Chapter 7: *Two Pieces*). I created a table with the 'atoms' arranged by type; *Response Path* and *Cube*, *Text Scores*, *Starting Lines*, or *Finishing Lines*.

Atoms			
Cube	*Text Score #1*	*Starting Lines #1*	*Finishing Lines #1*
Response Path	*Text Score #2*	*Starting Lines #2*	*Finishing Lines #2*
	Text Score #3	*Starting Lines #3*	*Finishing Lines #3*
	Text Score #4	*Starting Lines #4*	*Finishing Lines #4*
	Text Score #5	*Starting Lines #5*	*Finishing Lines #5*
	Text Score #6		
	Text Score #7		
	Text Score #8		

Table 5: Showing compositions arranged as 'atoms' and grouped

I then developed a number of structures utilising between three and five atoms each. I aimed to create sequences of different activities within each structure, for example, with both *Structure #1* (for the score see pp.120-122 in the appendices) and *Structure #2* (for the score see pp.123-124 in the appendices) a *Starting Line* comprising of a list of notes and a Free Improvisation leads into a *Text Score* requiring creative interpretation of written instructions, then into the *Cube* where the improvisers have to make four changes to the cube, roll it and then play the score, providing their own rhythm, dynamics and so on, before interpreting another *Text Score* and finally a *Finishing Line* where the performers are asked to carry out a free improvisation before finally 'on a signal' playing through a closing series of notes in their own time. The idea was that the resulting experience of the structure for performers and audience would be very different from single pieces as separate entities.

Structures					
Structure #1	*Starting Lines #1*	*Text Score #2*	*Cube*	*Text Score #1*	*Finishing Lines #2*
Structure #2	*Starting Lines #4*	*Text Score #3*	*Cube*	*Text Score #4*	*Finishing Lines #4*
Structure #3	*Finishing Lines #3*	*Text Score #5*	*Starting Line #5*		
Structure #4	*Text Score #7*	*Text Score #3*	*Text Score #8*		
Structure #5	*Text Score #6*	*Response Path*	*Text Score #6*		

Table 6: Showing *Structures #1 to #5* and the sequenced 'atoms' they contain

I will now look further in depth at the activities taking place across each structure.

1	*Starting Lines #1* – designated pitch
2	*Starting Lines #1* – free improvisation
3	*Text Score #2* – creative interpretative instructions
4	
5	*Cube* – designated pitch
6	
7	*Text Score #1* – creative interpretative instructions
8	
9	*Finishing Lines #2* – free improvisation
10	*Finishing Lines #2* – designated pitch

Table 7: Showing the activity within each atom across *Structure #1*

The table above represents the activities within *Structure #1*. It demonstrates that *Starting Lines #1* consists of two distinct activities; improvising with a designated set of pitches and a free improvisation. Firstly the performers play the notes 'in their own time' determining the octave each note is play in as well as the placement of the note and qualities of the note such as dynamics whilst also listening to the other performers and responding to them. At the end of the given note set, the performers continue improvising without the constraint on note choice, as a free improvisation 'until the end of the piece. When 'silence is heard' the performers can move onto *Text Score #2* which starts from silence. This score relies on the performers to creatively interpret the written instructions, spontaneously improvising music whilst responding to the other musicians. The *Cube* score again provides a constraint by designating the notes to be played after which the initial 'face' of the cube may be repeated, or the cube could be rolled again. This is repeated 'until the end of the piece'. *Text Score #1* again relies on the performers to creatively interpret the written instructions before players move onto their note sets to end the piece.

1	*Starting Lines #4* – designated pitch
2	*Starting Lines #4* – free improvisation
3	*Text Score #3* – creative interpretative instructions
4	
5	*Rubik's Cube* – designated pitch
6	
7	*Text Score #4* – creative interpretative instructions
8	
9	*Finishing Lines #4* – free improvisation
10	*Finishing Lines #4* – designated pitch

Table 8: Showing the activity within each atom across *Structure #2*

As can be seen on Table 8, *Structure #2* shares a formal/structural quality with *Structure #1,* as it is constructed from a *Starting Line,* a *Text Score,* the *Cube,* a *Text Score,* and a *Finishing Line.* Although these are all different versions, apart from *Cube,* with different notes, different instructions on the *Text Scores,* and different musical results will be generated, the activities across the timeline are the same.

1	*Finishing Lines #4* – free improvisation
2	*Finishing Lines #4* – designated pitch
3	*Text Score #5* – creative interpretative instructions
4	
5	*Starting Lines #5* – designated pitch
6	*Starting Lines #5* – free improvisation

Table 9: Showing the activity within each atom in *Structure #3*

As can be seen in Table 9, *Structure #3* (for the score see pp.124-125 in the appendices) uses *Finishing Lines #4* first and *Starting Lines #5* at the end, with the results that the piece is 'bookended' by free improvisations. The first moves into designated pitches before *Text Score #5* starts from silence, the *Starting Lines #5* begins with designated pitches.

1 2	*Text Score #7* - creative interpretative instructions
3 4	*Text Score #3* - creative interpretative instructions
5 6	*Text Score #8* - creative interpretative instructions

Table 10: Showing the activity within each atom in *Structure #4*

Structure #4 (for the score see p.126 in the appendices) contains fewer distinctly different activities as it is a sequence of three *Text Scores*, although each of these scores sets different challenges. *Text Score #7* influences the relationship between notes played, by requiring single notes to emerge 'each one a small step away from the next'. *Text Score #3* demands the performers to create a 'static texture' which then becomes 'dense with clicking sounds'. Finally, *Text Score #8* also influences the relationship between the notes played, this time asking for single notes to 'emerge, each one a leap away from the next'.

1 2	*Text Score #6* - creative interpretative instructions
3 4	*Response Path* - creative interpretative instructions
5 6	*Text Score #6* - creative interpretative instructions

Table 11: Showing activity in each atom across *Structure #5*

Structure #5 (for the score see pp.127-128 in the appendices) appears again, to contain less different activities, although the nature of *Response Path* leads to a different experience in terms of 'asymmetry', with each performer is carrying out different activity.

I performed and recorded *Structure #4* and *Structure #3* on 28th May 2014 with Will Edmondes, Jamie Stockbridge and Rebecca Jennings and captured discussions around these performances. My impressions at the time of experiencing the performances 'from the inside' were that they had been realised successfully. I lost a sense of where I was up to during

Structure #3 as I was hoping to determine when the other performers were playing the note rows so I would have a 'landmark', but I couldn't tell when this happened so carried on in my own time (which is fine and a valid approach). Interesting discussions arose after the performances, extracts of which are explained below.

Structure #4 – 28th May 2014

After the group played through *Structure #4* there was some discussion around individual and group interpretation of the piece:

WE: Did we go beyond our brief? There was a bit when I felt it was just… it was the piece…that's partly what you're after, right? It became the thing, right?

JS: I struggled to kind of differentiate between subversive and contradiction, I think. They both became kind of belligerently other from what someone else was doing.

WE: Mmm yeah…did we fail in that respect?

RN: No, because it's your interpretation. I think subversive is basically the same as contradiction, just a bit cheekier.

WE: Damn!

I found this an interesting example, as it demonstrates a diligence amongst the group that, having been presented with the materials for the piece and asked to play through it with no preparation and having done this effectively and creatively they looked for feedback around the fine details and nuances of interpretation.

Listening to the recording after a period of time provided a very different experience from being part of the group and listening, responding, following the score and improvising at the same time. Gentle, sustained notes entered at 0'20". I found it difficult to tell which notes were played by saxophone or guitar. The notes grew closer as instructed by the score until a 'pulsing sound' was heard as the notes were slightly out of tune, which added a different quality to the sound. The texture built up around a definite central note at around 2'15". Grumbling vocals came to the fore before a silence. At 3'35 the vocals and saxophones seemed to merge into one sound, almost like bagpipes. Clicking sounds became more intense until fading away by 6'10". An important moment happened between 6'10" and 7'10" where the sounds collided to create a shimmering texture which could not have been created by any other means, before a spontaneous swell emerge with all participants increasing volume with synchronicity.

Structure #3

Another interesting discussion arose around the challenges of creatively interpreting the score whilst attempting to be aware of where everyone else is in the piece and also interpreting the instructions individually and personally.

WE: I lost the plot.

RN: I did!

JS: There was a bit of silence and I thought…we hadn't really dug in with the *Starting Lines #5* moment yet and I thought I want to know what that sounds like.

WE: Well, you see, I'd gone through that and thought well, I've got nothing left. But it felt like people needed things to say, so…I like the silence with the way it was broken…it was tense!

RN: I think I was trying to work out when people were playing their lines. I think this is where having perfect pitch would help.

WE: I lost my C and my A#...

JS: You had a hard job pitching in the middle of this.

WE: Well it's true. I found it hard when it cam to it not to [sings scale]. I was aware people were being adventurous with their pitch.

On evaluating the piece from the recording, some time after the performance, I noted that a spiky texture develops and increases in intensity before dropping away to a period of silence. Sustained guitar notes enter to complement the saxophone. Vocals and saxophone play interweaving lines creating a sharp angular texture punctuated by metallic sounding guitar crashes. Clicking sounds complement vocal creaks and guttural ranting. Dynamics ebb and flow throughout the piece. At around 7'45" there is a tight stop – start interactions develop which demonstrate attentive listening in the group.

Structure #2, Structure #4 and Structure #5 30th October 2014

I recorded an ensemble performing *Structure #2, Structure #4 and Structure #5* on October 30th 2014 in the Newcastle University music recording studio. The ensemble comprised Emily King (saxophone), Daniel Morgan (guitar), Jamie Cook (Piano), Elaine Cheng (Vocals) and Sean Cotterill (guitar). For this recording I was interested in the results which could be

gained by presenting the materials to a group for immediate performance whilst not being an active participant. This was the first time I had experimented with this approach but felt it would be valuable so I could objectively evaluate recordings of some of the *structures* without having been part of the performance. The group were not forthcoming with comments which would be useful in evaluation for the purposes of this study, but they raised were that they very much enjoyed the *Rubik's Cube* segment of *Structure #2* and they found the *Finishing Line* section challenging as they had not organised a pre-determined signal as a cue to begin the closing note row.

***Structure #2* 30th October 2014**

There are definite dynamic shifts during the recording in silences, interactions, and textures. Participants are clearly responding to and interacting with each other through and within the score. Bass notes sustain and rumble contrasting with breath sounds from the vocalist and string scraping. Long breathy notes on the saxophone combine at around 12'00" with the piano to create an almost Pink Floyd sound. At 12'50" lingering harmonics, vocal creaks and scrapes create a dense, claustrophobic texture. Hysterical vocals bring a crescendo before the sounds fade and end with a creak. The structure can be identified by listening to the piece; *Starting Lines #4* fades away at 4'30", clicking sounds from the second half of *Text Score #3* emerge at 5'45", *Rubik's Cube* enters at 6'45", and ethereal contrasting sounds from *Text Score #*4 are heard at 10'10".

***Structure #4,* 30th October 2014**

During the first minute, the performers play single notes as instructed in the score that create rhythms which could not, or would not, be created by other means. As the notes increase in volume the vocals come to the foreground making the other instruments seem as though they are a kind of unenvisaged accompaniment.

As the *Text Score #3* section enters, there is a spread of dynamics across the ensemble with scraping, squeaking guitars and dissonant piano contrasting with a confident vocal performance. At the beginning of the *Text Score #8* section long vocal notes contrast with guitar 'swells'.

***Structure #5*, 30th October 2014**

Single sharp stabs emerge, as the score requires, before the density builds to create rhythms which 'dissolve'. A marked shift in feeling from the tension which had built up comes with *Response Path*. The ensemble sounds looser and more playful, with a more confident sound fro the guitars. At 5'10" rhythms emerge and develop which build tension as they develop before fading away. The second *Text Score #6* is much more aggressive with effective rhythmic percussion sounds from the acoustic guitar which work well with the other performers' contributions.

Conclusion

After performing, recording and evaluating the *Structures* I feel they are successful and effective materials. I set out to create a number of *Structures* by sequencing small pieces, or 'atoms' together. I had hoped that by creating pieces in this way different experiences could be created for performers and audiences. It is clear from the recordings that the scores have had a significant impact upon the improvisations as it was possible for me to identify which structure was used in each case. In some instances there are drastic changes in the sound as the ensemble moves to a different section in the structure. This is particularly clear in *Structure #5* (30/10/2014), as the first section, *Text Score #6,* fades to silence before the second section begins with a very different atmosphere. A demonstration of the successful impact of the scores on the performances is that I was able to identify which score was used by listening to the recording.

Other artists have created compositions by sequencing smaller compositions before, with a notable example in this area being *Familie Piece* (1969) written by John Stevens and performed by the Spontaneous Music Ensemble. Davidson explains the operations of this piece:

> The first nine minutes comprise the loose theme which was heavily inspired by Gagaku (Japanese court music). This leads to a group improvisation which is interrupted at one point by a short section in which everyone plays glissandi together. Then come short Sustained and Click Pieces which in turn lead to another free improvisation which is capped off by looser versions of Sustained and Click. The overall sequence is unlike any other on record, although there are sections similar to other SME performances. (Davidson, 2006)

After reflecting on this series of compositions and the activities within each structure I realised that viewed as games, the 'play' within every structure except for *Response Path* in *Structure* is symmetrical because as each player works through the structure they are carrying out the same activity simultaneously with the same options. Elias et al (2012, pp. 92-94)

explain that games without asymmetries are rare, but give examples such as rock-paper-scissors, or bicycle time trials. *Response Path* is different as each performer is given a different score requiring them to act in different ways at any one time, for example the piece begins with player A as ‘catalyst’, while player B ‘contradicts’ and player C ‘complements’. This asymmetry could be likened to football, where the goalkeeper and striker are performing different tasks within the game, to enable the gameplay to operate. The process of constructing and reflecting on the *Structure* pieces left me wanting to create larger, more holistic, compositions rather than sequences of ‘atoms’, making further use of asymmetrical play.

Chapter 6: *Pieces*

In this chapter I will explain the development of *Piece #1* and *Piece #2* (for the scores see pp.129-133 (*Piece #*1) and pp.134-138 (*Piece #*2) in the appendices) as a culmination of the research and in response to the *Structure* series of compositions.
Having reflected on the creation, performance and evaluation of the five *Structure* pieces, I decided to use the experiences of the research so far to design two larger compositions with greater complexity than in previous work and with a more holistic ethos. With the structure series of compositions all participants are given the same tasks to carry out in blocks: one 'atom' after another until the end. These pieces were effective as can be seen in the recordings and reflections, but I felt that I could push the project further and add a greater degree of sophistication in the design of the materials. I realised through the analyses of the *Structure* pieces that *Response Path* contained asymmetry as the performers all carry out different activities throughout the composition. I decided I would create the two pieces in four parts with sequenced activities which would be asymmetrical across the performers so, for example, two people may be creating 'rattling' sounds whilst the other two are making 'chiming' sounds.

I decided to continue the emergent theme of minimal composition titles in this research by naming these works *Piece #1* and *Piece #2* to group them together as being part of this stage of the project.

Piece #1

I designed *Piece #1* to partner different combinations of players in the same activities then disperse them into different activities before joining together again for the final activities. This composition is presented as written instructions with graphics representing dynamic changes.

Piece #2

Piece #2 consists of four parts, one for each player, each of which is constructed of a sequence of tasks which the performers work through from left to right. The tasks each player performs at any one time are usually different, providing an asymmetry.

These pieces were first recorded by a three-piece group on February 4th 2015 in the Newcastle University music recording studio with Ben Woolley (French Horn), Michael Bridgewater (Portuguese mandolin through effects processor) and Richard Nielsen (electric guitar). *Piece #1* has four parts but works with only three as long as one performer plays part four which contains an instruction within the score which acts as a cue which the other scores are reliant upon. *Piece #2* has four parts which are not dependent on cues from other performers so any three parts can be chosen. On this occasion I chose parts one, two and three to be performed.

Piece #1 (Performance 1)

Part 1 - BW, Part 2 - MB, Part - 4 RN

When I evaluated this recording some time after the event, I noted that interesting sounds and textures were created at the beginning of the track with contrasts between clicking noises, cascading notes and muted gestures on the horn. The dynamics of the track shift from airy open space soundscapes to a dense frantic feel. At around 7'00" a close interplay develops between the horn and guitar which is contrasted by a scratching sounds from the mandolin.

Piece #1 (Performance 2)

Part 1 - RN, Part 2 - BW, Part 4 - MB

Some interesting points were discussed in a conversation immediately after the recording around the challenges of interpreting some of the instruction on the score.

MB: I liked that one. You know, just interpreting some of the lines on here, you know, so you've got the piano forte there but it's kind of the right angle made me think we could make it really stark, but I suppose it's what's appropriate for the timbre. It's a challenge.

BW: I don't know how I can make an 'e' vowel sound. I'll work on that one. Maybe something I can take away with me.

RN: It's a challenge though…

BW: Well that's it, isn't it.

RN: It's what comes out when you're trying to do it.

BW: Yeah.

When I listened to the recording to reflect on it, I noted that scratching, scraping and metallic clanging sounds give way to emergent notes from the horn which are complemented by the guitar. The notes from the guitar and horn grow close and interweave. Frantic sounds evolve into interesting textures at around 6'20. A silence is heard at 7'20 before the instruments slowly re-enter.

***Piece #1* 1 11/11/15**

This performance and those following were recorded by Albertine. Some interesting discussions followed this performance around cues and the qualities of sounds produced:

G: Not as awful as I feared! Not as bad as I thought it would be. I suppose it depends on my interpretation of scribbling. I think I was too early for when I thought the scribbling was.

R: I had the scribbling.

G: I knew that, but then I thought 'should I know that' because I should just be listening.

D: I enjoyed that one.

R: There were some lovely sounds with the flute and penny whistle.

G: I think the contrast to last week [30.10.15] was quite static, more of a textural thing, whereas this was week with this kind of instruction you get more kind of rhythmic… and I feel empowered to go to the higher register whereas last time I was sticking quite low.

R: I think this feels quite safe for me [plays gentle swelled note] whereas this feels too loud [plays sharp stabbing sounds] but if it's an F [forte], it's an F!

***Piece #1* 2 11/11/15** (for the recording refer to track 11 of the Albertine album)

G: That was proper Jazz like!

D: About half way through I really enjoyed it. I struggled at the beginning I think. After the scribbling bit I started to get into it. I found the hardest bit where you're just told to improvise.

G: I think when you have those volume restraints you can put something a bit more unexpected in than if you're making the 'lush' or 'end of the world' music.

There are some interesting points around constraint with Drew's comments echoing Stravinsky's statement "whatever diminishes constraint diminishes strength" as discussed earlier (Stravinsky, 1970).

***Piece #1* 3 11/11/15** (for the recording refer to track 12 of the Albertine album)

Another discussion followed this performance about the vowel sound instruction and the challenge it presents:

G: I haven't got my 'e' vowel sound yet.

D: I struggled with my vowel on the whistle. I'm still striving for it!

***Piece #2 (Performance 1)* 4th February 2015**

Part 1 - BW, Part 2 - RN, Part 3 - MB

After the recording there was a discussion around approaches to some of the more abstract terms in the score:

MB: It was fun, the repel and attract dichotomy, you know. I was thinking about repel and attract in terms of frequency at times and also in terms of space from other people's notes.

BW: Pastoral's a bit hard. I gave it a go!

RN: I was complementing for quite a while- that was my last bit…

Haunting whistling sounds from the mandolin and high-pitched swirls from the guitar enter, which are complemented by quiet low sustained notes on the horn. The texture changes at around 3’20 with contrasting thumping and scrabbling sounds from the horn and mandolin and dissonance from the guitar. After 6’00 the mandolin sound becomes more processed which the guitar complements with gentle high slide notes. Close interplay between all three instruments is heard from 9’00 and again at 14’10 until the end of the piece.

Piece #2 (Performance 2)
Part 1 - RN, Part 2 - MB, Part 3 - BW

After the final recording there were some interesting thoughts about how flexible the scores should be.

BW: I don’t know if I was quite at the end there, but it seemed to come to a natural halt.
MB: Yeah it did. With this particular page I felt the onus on me to do something a little more relevant. I think there are two quite loaded terms… With a three piece we’ve been quite quiet so far, so it doesn’t always feel intuitive to do that, so you’ve got to wrestle with what you think would sound best with ascertaining how hard and fast the instructions should be I suppose.

A very quiet rattling texture builds before sustained notes emerge from the horn. The texture builds with chiming stabs from the mandolin and occasional sliding bursts from the guitar. The intensity grows as the texture develops. At 6’00 an interesting sound is created as the mandolin plays a frantic scraping rhythms which contrasts with interplay from the guitar and horn which sounds almost conversational from 8’00”.

***Piece #2* 3 3/12/15** (for the recording refer to track 7 of the Albertine album)

MG: I got all of my notes in!
GH: That was a bit like the Sound of Music.

DW: That was the nearest we've got to a piece of music!

RN: That's what you say every week!

A recurring theme in discussions was a surprise from members of the group that the results should sound like music. The frequency of this increased as rehearsals progressed.

Conclusion

These two compositions have produced successful and effective performances and recordings. I approached creating the two pieces in different ways, with *Piece #1* I devised four parts with activities sequenced across them to provide asymmetrical tasks across the performers at times and pairings at others, where duos carry out the same activity before they are mixed up. Both of these approaches have drawn on my previous experiences through this project and continue different paths and ideas which have emerged. A theme which emerged from discussions with the other performers was the challenge that some of the instructions presented such as make 'ee' vowel sounds, or evocative terms such as 'pastoral'. This challenge has an impact of forcing the performers to be creative to attempt to fulfill the demands of the score, resulting in material that would not be created in any other way. As discussed earlier, in order to take up the challenge of tasks such as these, the performers must adopt a 'lusory attitude'.

Chapter 7: Conclusion

This concluding chapter will explore some similar qualities that I feel are present in the two *Pieces* and Anthony Braxton's *Composition No. 116.* I will then reflect on the process I went through during the project, which resulted in the development of the portfolio of compositions. Finally, I will explain how this experience has influenced my approach to composition and suggest some directions I feel my work will move towards in the future.

Piece #1 and *Piece #2* (for the scores see pp.129-133 (*Piece #*1) and pp.134-138 (*Piece #*2) in the appendices) are the culmination of this project, developing on aspects of the other compositions within larger holistic works. One composition that has similarities with these pieces, is Anthony Braxton's *Composition No. 116* (1984) which is constructed of four parts, one for each performer. Braxton explains that the structure of the piece facilitates a complexity in activity: 'There are always several events taking place at once in this structure because *Composition No. 116* serves as a kind of structural material blanket that covers the composite space of the music.' (Braxton, 1988, p.423). Some of the material presented in Braxton's score is notated, at times it has designated rhythms but no pitches and in places it makes use of 'extended notation' a system of symbols which Braxton developed in order to convey musical instructions to be interpreted by the performers. In other places the players are instructed to improvise. *Composition No. 116* makes use of 'pulse tracks', a tool which Braxton has developed throughout many of his works. Braxton explains the workings of pulse tracks:

> Pulse track structures are structures that have notated music on target time spaces, improvisation and the more notated music, and so on. Unlike bebop, where you play "How High the Moon", the bass player plays the chord changes and the drummer plays the time, but the pulse track structures, you have with material open improvisation, with material open improvisation, and, on top of that another notated piece and then someone detect a solo or play a notated solo, mutable logic. Three different energies happening at the same time. (Terziolgu, 1995)

Three of the parts in the composition are pulse tracks, while the other is largely improvised. The result of this is a complex relation of interactions between the participants which Braxton explains: 'By the term operational I am referring to the interaction nature that is established when two or more instrumentalists are functioning from one pulse track. The nature of this directive establishes a unique participation forum for extended improvisation and event forming decisions.' (Braxton, 1988, pp.441).

An interesting element of Braxton's explanation of this composition is a clarification that the instructions and score should not take priority over the needs of the performance:

> All of the structures in this category seek to remain open to the challenge of the moment so that the invention and 'spiritual meaning' of a given participation takes precedence over any one existentially imposed criteria of 'correct'. What this means is that the notated material of *Composition No. 116* can be shaped according to the particulars of its interpreters – don't worry about me please! (Braxton, 1988, pp.443)

This practical statement is reminiscent of Wolff's clause in *Duo II for Pianists* that if both players are waiting for cues at the same time they should work out a solution.

There are clear differences between Braxton's *Composition No. 116* and the two *Pieces*; Braxton makes use of conventional and extended notation so certain parts of his composition are repeatable, whereas the two *Pieces* are based around text instructions, note lists and graphs representing dynamics, none of which are repeatable from one performance to the next. There are areas that are similar, however, all three of these compositions have sections of their structure designated for an undirected improvisation to take place. All three as well are constructed with four unique parts, one for each performer, with different activities taking place 'vertically' across the parts. In the *Pieces* the asymmetry occurs with different text instructions being carried out at the same time by different players. In the case of *Piece #1* performers are 'paired up' with the same instructions for a time before the combinations are shifted. Cues are built into some parts, whereas in others responses are specified on hearing the result of the cue. In *Composition No. 116* there is also an asymmetry as Braxton identifies there are "always several events taking place at once" with some parts playing 'pulse tracks' and others playing extended notation or improvising. It is interesting to see that despite the many differences, these compositions share some qualities in their structure.

The process I went through in developing the compositions has led to the creation of the two *Pieces*. Initially I was experimenting with note cells and, separately, ideas to do with games and play. *Response Path* emerged from this second area through experiments to affect or influence a free improvisation to rigorously carry out the research imperative at the beginning of the project. Alongside this I was experimenting with note cells and combined the idea with a literal manifestation of game in the use of the Rubik's Cube in *Cube.* I then developed some of the themes from *Response Path* further to create the *Text Scores* and some ideas around note cells along with concepts from theatre games to create the *Lines* series of pieces. When I viewed the pieces I had created at that stage as 'atoms' in light of the literature (Elias et al., 2012) I was able to create *Structures*, encompassing both strands of the work in a series of compositions. I was conscious of the limitations of this, however, as they were very much a sequence of shorter pieces, often highlighted in performances by periods of silence

between each section (an example of this is the recording *Structure #1 28th September 2016*). Analysing the activity across each structure was illuminating as it highlighted the symmetry (from a game perspective) across each structure with the exception of *Response Path*. These issues informed the development of the two *Pieces* where I created larger more holistic compositions, rather than the sequenced 'atoms' in the *Structures*) making use of asymmetrical activity across the players. Reflecting on *Piece #1* and *Piece #2*, I do not think I could, or would, have created them without having gone through the chronology of the project, experimenting with the different themes alongside research into salient areas such as play and game.

A further aspect that I feel was important to the project was forming Albertine as a group to regularly rehearse and record these compositions. I feel that working with the same group of people over an extended period of time has enabled a close performing relationship with each other and has also led to the rest of the band having a good understanding of the scores and instructions within them. Some of the *Text Scores,* and the two *Pieces* in particular, are challenging to perform and an extended period of rehearsal and recording has helped to engage fully with the scores and create, in my opinion, very satisfying performances of rich and interesting music. This corresponds with Nunn's statement on the performance of complex improvisation structures:

> When improvisation plans are complicated- no matter how clear or well explained they might be – the attention of the improviser is constantly divided between the plan and the musical moment, having to remember, or look at the score, a graphic, or even a conductor. What often happens is that both the plan and the music suffer from this divided attention. When plans, methods or scores are complicated, they are less immediate, requiring practice individually and rehearsal collectively. As long as there is sufficient time under the circumstances, such devices may work well. (Borgo, 2006, p.189).

Whilst I agree that using scores in improvisations inevitably leads to a degree of divided attention, I feel that the creative possibilities that this approach opens up outweighs the downsides. I also agree that sustained rehearsal can lead to successful performances of this type of material. As Bailey explains, John Zorn also relies on rehearsal for preparing performers to improvise with his compositions such as *Cobra*:

> But rehearsal, I found, is crucial for Zorn's piece and, echoing something noted by Cornelius Cardew, rehearsal is a kind of training. There's nothing specific, nobody is told what they should play, but there's a training in how to incorporate the instructions into their playing and an investigation of the possibilities opened up to them. (Bailey, 1992, p.76)

Some of my compositions, however, such as the *Starting Lines* and *Finishing Lines* pieces have been more immediately accessible for performers. These pieces rely on a simple concept that players can engage with easily. In the case of *Starting Lines*, they just need to play through the list of notes in their own time and then improvise 'until the end of the piece'. Thinking back to the idea of a minimal form of play, this is a small 'poke' to an improvisation that has a significant effect.

The experience of carrying out this project has heavily influenced my approach to composition. I have been intrigued by the different approaches to indeterminacy and the use of elements of improvisation within composition in existing works that I have uncovered during the research. This has inspired me to experiment further in these areas to develop systems that will facilitate unforeseeable and surprising results.

The two *Piece* compositions are the culmination of this project and have resulted in rich, complex performances. I think there is huge potential for developing the ideas in these pieces and the use of asymmetry. I am particularly interested in creating a larger scale work, providing more material to encourage longer experiences. I am also interested in the possibilities of developing the *Cube* concept in other directions. I feel that the idea has the potential to be developed further as a tool for indeterminacy, perhaps using simple cells of notation on each square instead of just having a note. With four cubes, this would give millions of permutations. The idea that each performance physically alters the score is appealing as well. Two performances can never be the same because of the ever-changing score as well, of course, as the elements that the players bring to the performances.

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Compositions

Response Path

A composition for three performers, each of whom is allocated part A, B or C.

Starting from silence, the players work their way through the given instructions, approaching their improvisation from that perspective until they move to the next instruction.

Part A	Catalyst	Complement	Instigate	Subversive
Part B	Contradict	Catalyst	Make Environmental Contribution	Catalyst
Part C	Complement	Subversive	Contradiction	Complement

Text Score #1

Starting from silence, soft scraping and clicking sounds
slowly emerge to build a minimal sound-scape.
A crescendo is reached after which all sounds die away.

Text Score #2

Starting from silence, long notes emerge slowly,
moving together as if they are attracted.
When the notes converge they should be held until the sounds die away
When silence is heard repeat until the end of the piece

Text Score #3

Consonant sounds build to create a static texture
which is maintained for a time before the texture becomes
dense with clicking sounds which gradually fade away

Text Score #4

An ethereal atmosphere is created
with contrasting smooth and scraping sounds
building a dense texture.

Text Score #5

Starting from silence, smooth sounds emerge
to develop cascading textures before the notes grow longer
eventually being held until they die away.

Text Score #6

Starting from silence, single sharp sounds emerge
building in density to create a ‘rain-like’ effect
which is sustained for a time before dying away

Text Score #7

Starting from silence, single notes emerge,

each one a small step away from the next.

The notes become louder and longer before

all notes are held until they overlap then die away

Text Score #8

Starting from silence, single notes emerge,

each one a leap away from the next.

The notes become louder and longer before

all notes are held until they overlap then die away

Cube

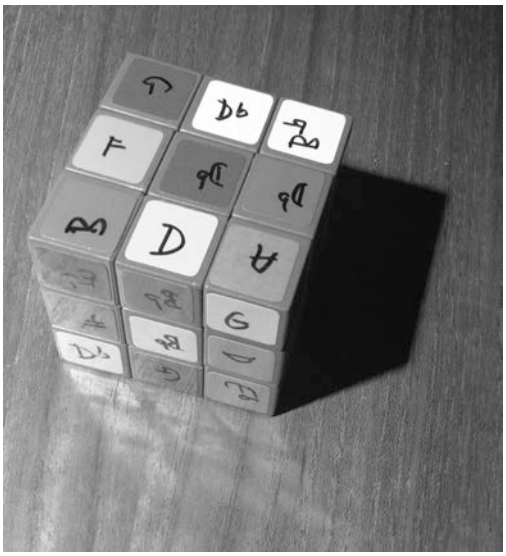
This piece is for a number of players, each of whom select a prepared cube. There must be enough cubes to enable players to have one each.

Starting from silence, each player makes a maximum of four changes to the cube by twisting the faces and then rolls it.

The performers must play the topmost face of the cube from left to right, one row at a time, from top to bottom. The note names are specified, but the pitches are not (for example, F F# G does not necessarily denote that these notes should be played in ascending order). The placement and duration of the notes are to be determined by each individual.

When the player reaches the end of the notes on the face they can either repeat this face, or roll the cube again and play the next face.

This is repeated until the end of the piece.



Starting Lines #1

A piece for up to four players, each of whom is assigned one of the lines above.

Starting from silence the performers play their line in their own time before improvising until the end of the piece.

1. **C F# G E B F# C E G B**
2. **F# B C G E C B F# C E**
3. **B G E C F# B E G F# C**
4. **E C F# B C E G C B F#**

Starting Lines #2

A piece for up to four players, each of whom is assigned one of the lines above.

Starting from silence the performers play their line in their own time before improvising until the end of the piece.

1. **A C Eb Gb C A Gb Eb Gb A**

2. **C A Gb C Eb A Eb Gb C Eb**

3. **A Gb Eb Gb A C Gb Eb C A**

4. **Eb C Gb Eb A Eb C Gb A C**

Starting Lines #3

A piece for up to four players, each of whom is assigned one of the lines above.

Starting from silence the performers play their line in their own time before improvising until the end of the piece.

1. **A D# C# G F D# A B C# F**
2. **D# B A F D# C# G B F G**
3. **G F B G C# D# F A B D#**
4. **F C# B A D# F G C# D# A**

Starting Lines #4

A piece for up to four players, each of whom is assigned one of the lines above.

Starting from silence the performers play their line in their own time before improvising until the end of the piece.

1. **C D# C A# C# A# D C D A**
2. **E D C B C# A A# D C# B**
3. **C# C D# A C# E C B C# D#**
4. **D# C D# A# E A# C D E D**

Starting Lines #5

A piece for up to four players, each of whom is assigned one of the lines above.

Starting from silence the performers play their line in their own time before improvising until the end of the piece.

1. **E A B A# E D B F# B C**
2. **D# C F# B C A# A B F G#**
3. **A# F# D A C D# C# E C# C**
4. **B F A F G F# F C A A#**

Finishing Lines #1

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

On a signal the participants should conclude the piece by playing their line in their own time.

1 D Db A F# Bb D G Bb B

2 F Db G F# Bb A G Eb B

3 Eb B G B D Eb G F F#

4 D D F# D Db F G F# B

Finishing Lines #2

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

On a signal the participants should conclude the piece by playing their line in their own time.

1 C F# B G C F# E G B E

2 F# E G C E F# B G C B

3 E B G E F# C G B F# C

4 B C G B F# E C G E F#

Finishing Lines #3

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

On a signal the participants should conclude the piece by playing their line in their own time.

1 C Eb Gb A Eb C A Gb C Eb

2 Eb A C Eb Gb C A Gb A C

3 Eb C Gb A C Eb A Gb Eb C

4 C A Gb A C Gb Eb C A Eb

Finishing Lines #4

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

On a signal the participants should conclude the piece by playing their line in their own time.

1 E C A C G E A G A G

2 A E G C E A C G E C

3 G A G A E G C A C E

4 C E G C A E C G E A

Finishing Lines #5

A piece for up to four players, each of whom is given one of the lines above.

An improvisation from silence.

On a signal the participants should conclude the piece by playing their line in their own time.

1 C B E F B E C F E B

2 F E B F C E C B F E

3 B E F C E B F E B C

4 E F B C E C F B E F

Structure #1

Instructions

Structure #1 is a composition for up to four players.

Each player is allocated a part number.

Starting Lines #1	Cube	Finishing Lines #1
A piece for up to four players, each of whom is assigned a line in their part. Starting from silence the performers play their line in their own time before improvising until the end of the piece.	Starting from silence, each player makes a maximum of four changes to the cube by twisting the faces and then rolls it. The performers must play the topmost face of the cube from left to right, one row at a time, from top to bottom. The note names are specified, but the pitches are not (for example, F F# G does not necessarily denote that these notes should be played in ascending order). The placement and duration of the notes are to be determined by each individual. When the player reaches the end of the notes on the face they can either repeat this face, or roll the cube again and play the next face. This is repeated until the end of the piece.	Each player is allocated a line of notes in their part. An improvisation from silence. On a signal the participants should conclude the piece by playing their line in their own time.

Structure #1

The players perform the score carrying out each section from left to right.

	Starting Lines #1	**Text Score #2**	**Cube**	**Text Score #1**	**Finishing Lines #2**
1	C F# G E B F# C E G B	Starting from silence, long notes emerge slowly, moving together as if they are attracted. When the notes converge they should held until the sounds die away. When silence is heard repeat until the end of the movement.	See instructions	Starting from silence, soft scraping and clicking sounds slowly emerge to build a minimal sound-scape. A crescendo is reached after which all sounds die away.	C F# B G C F# E G B E
2	F# B C G E C B F# C E				F# E G C E F# B G C B
3	B G E C F# B E G F# C				E B G E F# C G B F# C
4	E C F# B C E G C B F#				B C G B F# E C G E F#

Structure #2

Instructions

Structure #2 is a composition for up to four players.

Each player is allocated a part number.

The players perform the score carrying out each section from left to right.

Starting Lines #4	Cube	Finishing Lines #4
A piece for up to four players, each of whom is assigned a line in their part. Starting from silence the performers play their line in their own time before improvising until the end of the piece.	Starting from silence, each player makes a maximum of four changes to the cube by twisting the faces and then rolls it. The performers must play the topmost face of the cube from left to right, one row at a time, from top to bottom. The note names are specified, but the pitches are not (for example, F F# G does not necessarily denote that these notes should be played in ascending order). The placement and duration of the notes are to be determined by each individual. When the player reaches the end of the notes on the face they can either repeat this face, or roll the cube again and play the next face. This is repeated until the end of the piece.	Each player is allocated a line of notes in their part. An improvisation from silence. On a signal the participants should conclude the piece by playing their line in their own time.

Structure #2

	Starting Lines #4	Text Score #3	Cube	Text Score #4	Finishing Lines #4
1	C D# C A# C# A# D C D A	Consonant sounds build to create a static texture which is maintained for a time before the texture become dense with clicking sounds which gradually fade away.	See instructions	An ethereal atmosphere is created with contrasting smooth and scraping sounds building a dense texture.	E C A C G E A G A G
2	E D C B C# A A# D C# B				A E G C E A C G E C
3	C# C D# A C# E C B C# D#				G A G A E G C A C E
4	D# C D# A# E A# C D E D				C E G C A E C G E A

Structure #3

Instructions

Structure #3 is a composition for up to four players.

Each player is allocated a part number.

The players perform the score carrying out each section from left to right.

Finishing Lines #3	**Starting Lines #5**
Each player is allocated a line of notes in their part. An improvisation from silence. On a signal the participants should conclude the piece by playing their line in their own time.	A piece for up to four players, each of whom is assigned a line in their part. Starting from silence the performers play their line in their own time before improvising until the end of the piece.

Structure #3

	Finishing Lines #3	Text Score #5	Starting Lines #5
1	C Eb Gb A Eb C A Gb C Eb	Starting from silence, smooth sounds emerge to develop cascading textures before the notes grow longer, eventually being held until the die away.	E A B A# E D B F# B C
2	Eb A C Eb Gb C A Gb A C		D# C F# B C A# A B F G#
3	Eb C Gb A C Eb A Gb Eb C		A# F# D A C D# C# E C# C
4	C A Gb A C Gb Eb C A Eb		B F A F G F# F C A A#

Structure #4

Instructions

Structure #4 is a composition for up to four players.

The players perform the score carrying out each section from left to right.

Text Score #7	**Text Score #3**	**Starting Lines #8**
Starting from silence, single notes emerge, each one a small step away from the next. The notes become louder and longer before all notes are held until they overlap then die away.	Consonant sounds build to create a static texture which is maintained for a time before the texture become dense with clicking sounds which gradually fade away.	Starting from silence, single notes emerge, each one a leap away from the next. The notes become louder and longer before all notes are held until they overlap then die away.

Structure #5

Instructions

Structure #5 is a composition for three players.

Each player is allocated a part, A, B or C.

The players perform the score carrying out each section from top to bottom.

Response Path

Starting from silence, the players work their way through the given instructions, approaching their improvisation from that perspective until they move to the next instruction.

Structure #5

Text Score #6				
Starting from silence, single sharp sounds emerge building in density to create a 'rain-like' effect which is sustained for a time before dying away.				
Response Path				
Part A	Catalyst	Complement	Instigate	Subversive
Part B	Contradict	Catalyst	Make Environmental Contribution	Catalyst
Part C	Complement	Subversive	Contradiction	Complement
Text Score #6				
Starting from silence, single sharp sounds emerge building in density to create a 'rain-like' effect which is sustained for a time before dying away.				

Piece #1

Piece #1 is a composition for four players, each of whom is allocated a part.

The players should perform the composition working through the sections from left to right.

Piece #1

Player 1

SILENCE	Gentle Rattling Sounds Emerge	Occasional stabs – short, sharp	IMPROVISE	p	mf	When scribbling is heard - silence	When silence is heard build texture creating sounds aiming for an 'ee' vowel sound	Build intensity then FADE AWAY

Piece #1

Player 2

SILENCE	Gentle Rattling Sounds Emerge	Sustained notes	IMPROVISE	*p*	Becoming subversive	When scribbling is heard - silence	When silence is heard build texture creating sounds aiming for an 'ee' vowel sound	Build intensity then FADE AWAY

Piece #1

Player 3

SILENCE	Chiming sounds emerge and build in intensity	When stabs are heard respond	IMPROVISE	*p*	Create environmental contribution	When scribbling is heard - silence	When silence is heard build texture creating sounds aiming for an 'ee' vowel sound	Build intensity then FADE AWAY

Piece #1

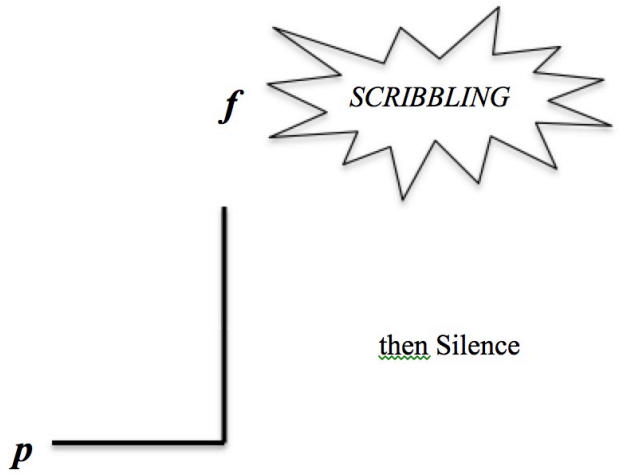
Player 4

SILENCE

Chiming sounds emerge and build in intensity

Sustained notes

IMPROVISE



When silence is heard build texture creating sounds aiming for an 'ee' vowel sound

then Silence

Build intensity then

FADE AWAY

Piece #2

Piece #2 is a composition for four players, each of whom is allocated a part.

The players should perform the composition working through the sections from left to right.

Piece #2

Player 1

	Gradually long notes emerge							
SILENCE	G E Ab D Eb B	Industrial	Ab D Eb B G E	Improvise	Clicking sounds slowly emerge	Pastoral	Subversive	Improvise until the end of the piece

Piece #2

Player 2

SILENCE	Gradually long notes emerge reacting to other performances	Subversive	Sounds attract -Try to move notes towards others being played	Pastoral	Catalyst	G E Ab D Eb B	Subversive	Complement

Piece #2

Player 3

SILENCE	Gradually long notes emerge attempting to complement the other performers	Industrial	Sounds repel – try to move notes away from others being played	Scraping sounds slowly emerge	G Ab Eb E♮ D B	Contradiction	Improvise	Sounds attract – try to move notes towards others being played

Piece #2

Player 4

SILENCE	Create rhythmic textures to complement environment	Sounds attract – try to move notes towards others being played	D Ab E G B Eb	Improvise	Pastoral	Complement	Sounds repel –try to move notes away from others being played	B Eb D Ab E G Then improvise until the end of the piece