

**The Intersection of Improvisation and Composition:
A Music Practice in Flux**

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ABSTRACT

This exegesis traces the development and recording of a series of works for solo trumpet/laptop electronics, and medium sized ensemble integrating improvisation and live electronic processing. Through a reflective and intersubjective account of the creative process it develops a cultural context for this activity based on my experience as a trumpeter/composer living and working in Australia while also taking account of broad movements in contemporary music particularly in improvised forms. In addition, it 'zooms in' on my personal biography focussing on my development as a musician through experiences in brass bands and school orchestras to my discovery of jazz and the emergence of my desire to move beyond the idiom. This sheds light on specific aspects of Australian music culture and practice and offers a rich backdrop for listening to the music created during the course of this research.

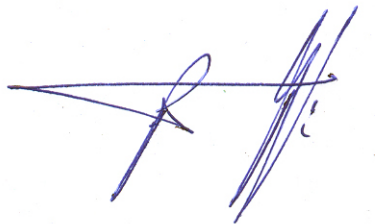
Following a practice-based research model, this exegesis documents a series of workshop sessions in mainly solo and duo formats with a focus on improvisation and experimentation. From these sessions the raw materials for the composition phases of my projects are drawn and through this development process, along with the reflection detailed herein, I investigate how composition and improvisation intersect in my practice as composer and improvising trumpeter.

I also describe and reflect upon the use of electronic processing, sampling, and layering in my improvisational and compositional language as I outline the broadening of my practice through the integration of this media. The study and practice of extended techniques for the trumpet and the incorporation of these techniques in solo and group settings are also a significant component of the work documented here. This will be of specific interest to trumpeters, laptop artists and other musicians working in contemporary music, as my areas of enquiry are relevant to current practice particularly in relation to improvised music and music integrating live electronic processing. In addition, this work will offer broad insights into contemporary music practice for the non-specialised reader/listener.

STATEMENT OF AUTHENTICITY

The work contained in this exegesis is that of Peter Knight and has not previously been submitted for an award at any other higher education institution. To the best of my knowledge and belief, no material previously published or written by another person has been included except where due reference is made.

Selected material drawn from this exegesis that is the original work of the author has been previously published during the course of completing this work.

A handwritten signature in blue ink, consisting of a stylized 'P' followed by a series of overlapping loops and a final flourish.

Peter Knight, December 2010

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CHAPTER 1: OVERVIEW

My aim as an artist is to create music wherein it is impossible to discern where composition ends and improvisation begins: music that unfolds with the inevitability and inner-logic of composed music but with the energy, immediacy, and spontaneous complexity of improvised music. (PK Journal Entry 21/10/08).

This exegesis traces the process of workshopping, composing, recording and post-producing new material for two settings. These settings explore the relationship between composition and improvisation in the context of my practice as trumpeter/composer/improviser, and of my aims as an artist outlined in the journal entry above. The first setting is solo trumpet with laptop electronics for which I developed a series of digital environments and open form structures as starting points for improvisations. The second is an improvising sextet consisting of trumpet with laptop electronics, contra bass clarinet, prepared piano, double bass, percussion, and drums plus analogue electronic devices. It is important to keep in mind that the recorded material created during the course of this work is the central component of the overall research output and as such, the best way to understand this exegesis is to listen to the recordings of the finished works provided prior to reading (Appendices 1A & 1B).

RESEARCH QUESTIONS

These musical works along with this exegesis address the following series of research questions: How do composition and improvisation intersect in my practice as composer and improvising trumpeter? How can laptop electronics broaden my music practice and how can I further integrate them into my approach? How can extended trumpet techniques and trumpet preparations broaden my practice? How do my cultural context and personal biography influence my practice? What does my cultural context reveal about my music? What does my music reveal about my cultural

context? Each of these questions is examined in greater detail in chapters to come, however, this exegesis does not seek to provide reductive answers. Instead, I approach each question as a line of enquiry pursued in the form of music (which as I have mentioned forms the central component of this research) as well as in the discussions that follow in this exegesis.

RESEARCH BASIS

The two music projects I have mentioned produced twelve recorded pieces that are impossible to define in terms of commonly adopted definitions of composition and improvisation. They would not exist without preconceived frameworks and equally would not exist without the spontaneous gesture. As such, they directly engage with the focus of this research: 'the intersection of improvisation and composition.' They also connect with the work of many other artists whose practices focus on this area either in the context of research or solely in the context of music making.

In terms of positioning the research basis of my work, Australian composer/researcher Michael Hannan is particularly relevant as, like me, his focus is on the relationship between improvisation and composition in his practice, which he describes employing the term, "comprovisation" (2006, p. 1). He defines this as, "the practice of making new compositions from recordings of improvised material." Although there are obvious distinctions between the experimental methods he describes and my modes of practice his work shares with mine an approach that combines intuition with highly technical skills and refined methods of preparation and conceptualisation.

Hannan discusses the similarities and differences between notated composition and 'comprovisation' underlining the strongly intuitive and, "trial and error" (2006, p.3), nature of the latter. He also notes that the process of free improvisation in the context of his work is perhaps the most innovative aspect of his practice and makes a strong case for 'comprovisation' as research, stating, "it is likely to produce new knowledge

through its strongly experimental approach, and the fact that it is grounded in the tacit knowledge of professional compositional craft" (2006, p.1).

At the same time he acknowledges difficulties in articulating the research basis for practice that embodies improvisatory approaches: "there are many aspects of it that are *not obviously* (original emphasis) based on any systematic research strategies" (2006, p, 3). I deal in detail with similar issues during the course of this exegesis as intuitive, improvisatory processes are similarly integral to my approach in all aspects of my music making (including composition).

RESEARCH DESIGN OVERVIEW

I noted that my work connects with that of many other artists whose practices integrate improvisation and composition. In the next chapter I discuss the work of a range of these relevant artists in an attempt to locate my approach as improviser/composer within the field of contemporary practice, and also to outline how my music contributes to this field.

Subsequently, Chapter Three details current discourse around practice-based research and argues for the research model utilised in my work, focussing on some of the issues raised by Hannan. Chapter Four then broadens the scope of my research developing a cultural and biographical context using an approach drawn from autoethnographic models. This chapter employs unconventional narrative techniques to explore my musical and cultural backgrounds and the connections these have with my present practice.

Chapters five and six focus on the practice-based component of my work and trace the development of the two music projects that form the central component of this research. The first project, entitled *Allotrope*, is detailed in Chapter Five and, as mentioned, involved the creation of new works for solo trumpet/laptop. It included a development phase during which I documented of a number of digital environments

and extended trumpet techniques, followed by performance, recording, and finally post-production.

Chapter Six documents my second music project, *Fish Boast of Fishing*, tracing the creation of new works for improvising sextet. The initial phase of this project involved a series of workshop rehearsal sessions in mainly duo format with each of the musicians who would eventually comprise the sextet. The purpose of these sessions was to learn more about the musical language of each improviser so that it might inform compositional process and enable me to create structures that would allow these individual voices to 'breathe.' This process is discussed in detail along with the subsequent phases for this project: composition, ensemble rehearsal, and recording.

The final chapter (Chapter Seven) of this exegesis returns to the autoethnographic approach employed in Chapter Four to summarise and reflect on the findings of my research and the discoveries I made during its course, both artistic and personal.

DOCUMENTATION

Along with the recordings mentioned above, and relevant scores (Appendix 2), my research output includes two CD recordings documenting various stages of the development of the works (Appendices 1C & 1D) as well as recorded demonstrations of extended techniques and other aspects of my practice referred to in the course of this exegesis. I also include a DVD recording of a live concert performance of the solo trumpet/laptop project as well as some other short videos of rehearsal developments (Appendix 3).

This material elucidates process and, along with the written reflections contained herein, broadens and enriches the context for listening to the finished works. Indeed, one of the central aims of this project is to facilitate an experience and understanding of my music that is not usually available in everyday contact with musical expression. It aims to enable the listener to consider the musical works created against a

backdrop of biography and culture – to understand where the music comes from and what inspired its creation. This exegesis also aims to enable the listener to focus on specific elements of technique and creative approach in order to develop some insight into how the music was made.

CHAPTER 2: SITUATING MY RESEARCH

IMPROVISATION AND COMPOSITION

As previously noted, my research explores the relationship between improvisation and composition in my practice. Implicit in this, and therefore central to my research, is the question: when does improvisation *become* composition? This suggests a phenomenological paradigm, as it requires us to examine our assumptions about the definitions of these modes of music making. There is, arguably, no such thing as ‘free’ improvisation: we bring our assumptions, our personal histories and importantly, a vocabulary of learned material to the act of ‘improvising,’ and so in a sense even in seemingly spontaneous music there are elements of composition (Bailey, 1980). Equally too, the process of composition is sometimes described as long-form improvisation; already it is obvious that arriving at stable definitions can be difficult when trying to describe musical processes and phenomena using words.

This chapter discusses the work of significant improvisers and improviser/composers and aims to develop a context for my research in terms of contemporary practice. Each of these artists challenges traditional notions of form and requires us to examine our habits of thinking about improvisation, about composition, and about the relationship between the two. My intention in the discussion that follows is to open a space for the consideration of these issues rather than to arrive at answers or argue for specific definitions.

FORM AND SPONTANEITY

John Zorn has developed unique approaches to the integration of improvisation and composition, which form a useful reference and ‘pose questions’ about these modalities (2004). Some famous examples include the ‘game’ compositions developed during the 70s and 80s, for which he created sets of rules for improvising using

parameters drawn from various sports. Although the creative and aesthetic vision he was aiming for in these pieces is very different from that which I am working towards, Zorn's motivation to find a way to incorporate improvised language into compositional form without interfering with the energy and spontaneity of the improvised material closely aligns with the aims for my projects:

I wanted to find something to harness the personal languages that the improvisers had developed on their own, languages that were so idiosyncratic as to be almost unnotateable (to write it down would be to ruin it). The answer for me was to deal with *form*, not with *content*, with *relationships*, not with *sound*. (Zorn, 2004, p. 199 original emphasis)

Interestingly in this quote, Zorn specifies that his approach to integrating improvisation and composition, by dealing only with form, was a solution that worked for *him*. There is an implicit acknowledgement here that this is not the only approach and that it would not necessarily work for everyone. In the context of my practice, I concur with Zorn on the primary importance of working with form, but I am additionally interested in shaping content through developing a deeper knowledge of the specifics and potentials of each improviser's individual musical language and using this as a starting point in the development of thematic and rhythmic material.

SOLO TRUMPET AND ELECTRONICS

As an improviser/composer it was important for me to examine and develop my own musical language within the research framework. I did this partly through the creation of a series of solo works for trumpet and laptop, which aim to expand my approach to the instrument through extended techniques and the integration of live laptop processing. This research also included an intensive listening period during which I accessed as many relevant recordings as I could find.

This listening did not reveal a great number of significant instances of improvised solo trumpet performance integrating electronics. Indeed, it seems to be an area that is somewhat underexplored by contemporary improvising trumpeters although it is worth noting that in general, the solo setting (with or without electronics) is an uncommon choice for improvising trumpeters. There are, however, some notable exceptions including American trumpeter, Jon Hassell, who is a key figure in both the development of electronic music, and in the extension of the language of the trumpet through the use of electronics.

Hassell has a background in improvised music having studied both jazz and Indian classical music. He also studied for an extended period with Karlheinz Stockhausen and collaborated with a huge range of influential musicians including Brian Eno, Terry Riley and La Monte Young. The richness of this background and diversity of influences is particularly evident on recordings such as *Aka-Darbari-Java / Magic Realism* (1983) on which he manages to create a sound world that was unprecedented at the time through the use of harmonisers, tape loops, and other electronic means, processing the sound of the trumpet while also retaining its integrity. When I listen to Hassell it is clear that trumpet is central to his work; that he could not have created his oeuvre without the instrument even though he radically alters its tone to the point where, at times, it is almost unrecognisable.

Like Hassell, my aim is to use the sounds, phrasing and articulation unique to the trumpet and enhance them, and also to make the usually inaudible breath sounds and clicking of valves a part of the range of textural possibilities at my disposal. In terms of these effects a number of other trumpeters also come to mind, in particular Cuong Vu, with his trio album, *Pure* (2000), Franz Hautzinger (2002) and Axel Dorner (2004).

Norwegian trumpeter Arve Henriksen investigates similar terrain to Hassell, whose influence on the younger musician is evident. Like Hassell, Henriksen integrates trumpet, electronics, and other acoustic instruments in an innovative and effective

manner but he also extends Hassell's deployment of space and minimal gesture, sharing an emotional detachment that Hassell describes as the "temperature" of his work (Prendergast M. J. 1991). On *Sakuteiki* (2001), Henriksen uses Japanese shakuhachi as his inspiration, which also connects with Hassell's integration of eastern and western influences in a concept that preceded the now popular 'world music' construct and which Hassell calls "Fourth World" (1980).

Jon Hassell spent a significant amount of time learning Indian raga on the trumpet and developed techniques using partly depressed valves and embouchure manipulation to enable the articulation of subtle micro-tonal inflections that are integral to Indian classical music. Henriksen also makes use of extended trumpet techniques on *Sakuteiki* but deploys them to reproduce elements of shakuhachi performance. In particular, at times he plays the instrument without a mouthpiece creating a fragile intimate tone that is hard to locate. These techniques and approaches developed by Hassell and Henriksen have influenced my practice especially in the context of this research project.

Japanese trumpeter Toshinori Kondo also seems to be influenced by Jon Hassell in his later work, in which he integrates electronics in a solo setting. Kondo is not much younger than Hassell (born 1948) but his early career was characterised by straight-ahead jazz and avant-garde improvisation including collaborations with hugely important figures such as John Zorn, Derek Bailey, Steve Lacy, and Pete Brotzmann. Kondo's playing in this part of his career is characterised by explosive gestures and pointillist abstraction particularly evident on, *The New York Tapes* (Centazzo, Andrea, 1978). His later solo releases including *Fukyo* (2005) and *Silent Melodies* (2007) contrast greatly and develop a much more ambient sound world.

Australian trumpeter Scott Tinkler has also exerted a significant influence on my practice in a broad sense and on this research specifically. Tinkler has developed a completely different aesthetic and 'temperature' from Hassell, Henriksen, and Kondo,

and he does not employ any electronic processing. Nevertheless, he shares their drive towards discovering new ways of playing the instrument. His solo album, *Backwards* (2007), showcases Tinkler's extraordinary use of virtuosic extended techniques in conjunction with devices such as drums (which he resonates using the note of the trumpet) and buckets of water (which he blows into). In my journal I made some notes in response to listening to *Backwards* for the first time:

In improvised music I enjoy it when players ask questions: 'Is this jazz?' is the challenge Tinkler seems to throw up. In contrast, I get instantly bored when what I'm getting is statements like, 'This is Jazz!' This is independent of virtuosity, though in Tinkler's case I also enjoy the virtuosity... the 'skin' of the idea.

(PK Journal Entry 15/06/09)

Tinkler has been an important figure on the Australian contemporary jazz scene since I began my involvement and his output has had a noticeable impact on trumpet practice and on approaches to improvised music in general, particularly in my home town of Melbourne. His approach is virtuosic, physical, and visceral, drawing heavily on late jazz influences including Freddie Hubbard (particularly on albums such as Eric Dolphy's *Out To Lunch* (1964) and Oliver Nelson's *The Blues and the Abstract Truth* (1961)), through to late John Coltrane and then Anthony Braxton. This is a thread that intertwines with European modernist influences from twentieth-century classical music and 'new music' and runs through the New York 'downtown' scene, which has set the global agenda for many improvising musicians since the 1980s.

Peter Evans is a young New York trumpet player from the downtown scene who recorded a solo album, *More is More* (2006), on which he displays his astonishing virtuosity and imagination. Like Tinkler, Evans does not use any electronic processing and has a large array of highly refined extended techniques with which he develops unique sound worlds. Unusually, Evans plays piccolo trumpet on *More Is More*

spanning a huge register and dynamic range exploring texture, density, and rhythm. The techniques he employs include extreme pedal notes¹ played much louder than is usually possible, extreme high register playing, breath fluttering, double and triple tonguing, multiphonics², and tone distortion created by forcing air through the instrument at extreme velocity.

Evans has had a huge impact on contemporary trumpet playing with his solo work and is also a regular member of Evan Parker's influential Electro-Acoustic Ensemble. He is one of a generation of young New York players forging highly individual voices including Forbes Graham and Nate Wooley who are two other trumpeters from the downtown scene about the same age as Evans. While neither has quite the same profile as Evans they both nonetheless make significant contributions to current trumpet practice and are also relevant to my research as they both integrate electronics in solo recordings. Wooley is known for his minimal approach as an improviser and this also extends to his use of electronics, which are stripped back to a guitar amplifier, microphone and volume pedal on *Trumpet/Amplifier* (2010). He uses this equipment to develop a distinctive and focussed language creating percussive breath effects and visceral controlled feedback that constantly surprises with its formal rigour and complexity.

Forbes Graham's solo work on *I Won't Stop* (2008) is, to my ear much less satisfying. While Graham is an accomplished trumpeter, the material presented seems inconsistent. There are moments of brilliance, but the album seems to suffer from the exploration of too many possibilities – a temptation in electronic music and one that ends up often producing a kind of blandness. The contrast between Wooley and Graham is for me illustrative and instructive: where Graham seems to be intent on

¹ Pedal notes are notes below the usual range of the trumpet, they have a harsh 'flatulent' quality and are hard to control.

² Multiphonics refers to the production of two notes simultaneously created by embouchure manipulation

using as much of the potential of the laptop as he can wring from it, and on playing the trumpet with as much virtuosity as he can muster, Wooley appears to be content to allow the music to develop from a much more distilled point.

Wadada Leo Smith is an influential contemporary trumpeter whose practice is representative of a different strand of improvised music. Smith developed his unique sensibility through a long involvement with the Chicago based AACM (Association for the Advancement of Creative Musicians) which was formed by influential African American improvisers including Lester Bowie and Muhal Richard Abrams. His approach to solo playing is melodic and expressive, embodying and refracting the blues, gospel, New Orleans, and other influences integral to African American jazz and improvised music. On the solo album *Red Sulphur Sky* (2001) Smith employs mainly natural or muted trumpet with no processing and little recourse to extended techniques. *Red Sulphur Sky* contrasts from much of the other material in this review of solo recordings in that it comes directly out of the jazz or African American tradition. In the development of my solo project, idiomatic jazz is not the most discernable influence, however, Smith's work is relevant as jazz is an important part of my musical background and has certainly informed my approach to music making.

Like Wadada Leo Smith, French trumpeter Jacques Coursil works with expressive melodic forms contrasting greatly from the solo output of Evans and Tinkler et al. His solo album, *Minimal Brass* (2005), develops a fragile, elegiac sensibility through layered trumpet loops. Coursil does not communicate through virtuosic technique; instead he relies on a richly individual tone and melodic sensibility that strongly resonates with me. His engagement with processing the trumpet through looping and layering are also very relevant to my solo project as I used looping and layering in the development of some of the material.

In my solo project I attempt to create a personal approach that explores contemporary trumpet practice and the integration of laptop electronics. Each of the

artists described above are relevant to this research as each is similarly engaged in the development of a contemporary and personal mode of expression. However, while each of these artists has inspired my practice, the modality I developed during the course of my research differs significantly from any of these precedents especially in terms of my approach to the real time processing of the instrument. This is discussed in greater detail in Chapter Five.

DUO COLLABORATION

The first phase of my second project (*Fish Boast of Fishing*) consisted of a series of duo workshop sessions. In preparation, I embarked on a program of listening to different approaches to the duo format in improvised music. There are many precedents for the duo setting especially in the more progressive streams of improvised music practice. I became especially interested in the work of the Amsterdam based, Instant Composers' Pool, and especially the influential duo of pianist, Misha Mengelberg, and drummer, Han Bennink, which I heard play live on several occasions in Amsterdam in 2002. For this project I investigated several of their recordings including a live CD, *Midwoud 77* (1977) that seems to me to exemplify the duo. On it their energy, iconoclasm, and commitment to the spontaneous gesture are all compelling even if, in this listener's view, some pieces succeed better than others.

Interesting too is their ensemble approach, which often upturns the fundamental notion upon which much jazz improvisation rests: that the players *listen* to one another and respond to that which they hear. Instead, Mengelberg and Bennink appear to play simultaneously (as distinct from together) following their own independent musical narratives, occasionally 'bumping into' one another. At other times they seem to deliberately subvert one another like two children playing in a sandpit.

While Bennink and Mengelberg interrogate many of the parameters applicable in the

creation of improvised music they do draw on the jazz idiom at least as a starting point. And in my view, their output represents a great example of music that draws on idiom without being bound by it. However, while they are not bound by idiom, one consistent feature of their music connects them very strongly to the jazz tradition and distinguishes them from some of the other artists to which I refer: their emotional engagement and expressive approach to improvisation.

In very general terms, there are two streams of improvised music relevant to my research: that which has grown out of the jazz tradition to which Bennink and Mengelberg belong, and that which evolved from western art-music. George Lewis proposes the terms, 'Afrological' and 'Eurological' to describe these streams, stating they, "refer metaphorically to musical belief systems and behaviour which... exemplify particular kinds of musical 'logic'" (2004). As mentioned previously, the former is also often characterised by emotional engagement – it is 'feeling' music. In contrast, the latter (again in very general terms) can be characterised partly by emotional detachment.

Improvising pianist, Cecil Taylor, in A. B. Spellman's *Four Lives in the Bebop Business* takes up this theme:

David Tudor is supposed to be the great pianist of the modern Western music because he's so detached. You're damned right he's detached. He's so detached he ain't even there. Like, he would never get emotionally involved in it; an dig, that's the word, they don't *want* to get emotionally involved with music. It's a theory, it's a mental exercise in which the body is there as an attribute to complement that exercise. The body is in no way supposed to get involved in it. (1966, p. 36)

While Cecil Taylor's statement is illustrative, it sets up an 'either/or' binary that does not stand up to close scrutiny. And in my work I am drawn to both the detachment often associated with 'conceptual' music *and* the engagement with the Dionysian elements of jazz. This is not uncommon in contemporary improvisers and certainly, in

my view, some of the most interesting contemporary improvising musicians work across the Afrological and Eurological 'musical belief systems' that Lewis describes.

One such example is saxophonist, Anthony Braxton, who refers numerous times to his dual fascinations with the jazz tradition and 20th-century European composers such as Schoenberg, Webern and Stockhausen in *Forces in Motion* (Lock, 1988), and musically embodies them in recordings in solo, duo and larger ensemble formats. One of Braxton's outstanding duo recordings also features influential saxophonist and improvising musician, Evan Parker (Braxton & Parker, 1993). Parker, like Braxton, is impossible to categorise and has had a huge influence on a wide sphere of improvised music practice and saxophone performance through the development of a highly personal and refined sound world using a range of conventional and unconventional approaches to his instrument. The meeting between the two, documented on this recording, produces music with expressive and conversational elements that have something in common with jazz but that also display entirely unprecedented approaches to the saxophone. While embracing elements of tradition they find ways of making sounds with the saxophone that have nothing to do with tradition – that seem rather to attempt a 'phenomenology' of the instrument. Rejecting assumptions about how it should be played and pushing the boundaries of how we have come to expect the saxophone to sound, their conception here reminds me somewhat of John Cage's unprecedented interpretation of the piano in, *Sonatas and Interludes for Prepared Piano* (1960).

Another of Anthony Braxton's duo settings is with English guitarist Derek Bailey (1974) who pioneered preparations for the guitar. Bailey was an influential exponent of contemporary improvised music forming the seminal, Music Improvisation Company (which also featured Evan Parker), in the 1970s. Like Parker and Braxton, Bailey was greatly influenced by European modernism, citing Anton Webern as important in the development of his distinctive approach. And, like Parker and Braxton, Bailey remapped the possibilities of his instrument, developing an

idiosyncratic vocabulary of sounds that forms the perfect foil for Parker's abstract musical syntax.

Contemporary European improvising trumpeters Axel Dorner and Franz Hautzinger are two younger musicians clearly influenced by Parker, Bailey, and Braxton, and who with their austere minimal settings, integration of electronic processing, and emphasis on texture and density, are relevant to my field of research. They have both released excellent recordings in the duo format: Hautzinger with Derek Bailey (2002), and Dorner with Australian drummer, Tony Buck. On *Durch und Durch* (2004) Dorner and Buck explore abstract textures focussed on the sounds produced by the trumpet by simply blowing air through the instrument. Dorner uses a trumpet modified with integrated contact microphones and processes the sounds created through various electronic means. As with Hassell, the sounds he produces bear little resemblance to conventional trumpet tone. In fact, Dorner challenges our notions of what trumpet playing can be, developing an auralty that has more in common with an industrial soundscape than conventional trumpet playing, and which brings to mind Russolo's futurist music manifesto, *L'arte dei Rumori* [*The Art of Noises*] (1916) in which Russolo envisions 'noise music' replacing traditional melodic music. Nonetheless, 'noisy' as it may be, Dorner's sound world (like Hassell's) could not be produced *without* the trumpet and his explorations at the outer limits of instrumental and performance practice have exerted a discernable influence on my working process.

CONTEMPORARY IMPROVISING ENSEMBLES

In duo settings such as Dorner and Buck, and others I discussed in the paragraphs above, pure sound is often the primary focus of engagement. Form is minimal and follows texture, density, space and timbre. In contrast, in many of the larger groups I studied, there is a greater emphasis on form, orchestration (even in freely improvised material), rhythm and other structural variables.

I chose to look at a number of ensembles of varying size that are engaged in the integration of improvisation and composition. I was particularly interested in how these groups employ form and structure to facilitate individual improvised expression within the context of a range of approaches to composition.

Earle Brown, in an interview with Derek Bailey compares his use of improvisation in his 'open form' compositions with artist Alexander Calder's mobiles, "you look at a mobile you see a configuration that's moving very subtly. You walk in the same building the next day and it's a different configuration, yet it's the same piece, the same work by Calder" (Bailey, 1980, p. 60). This metaphor resonates strongly with what I am trying to achieve in my practice and is applicable to a number of the settings I studied.

American trumpeter/composer from New York's downtown scene, Dave Douglas, maintains open forms and distinctive compositional intent as he synthesises African American jazz influences with modernist concepts and innovative approaches to the integration of electronic media. His 2001 release, *Witness*, documents Douglas at the height of his powers as composer, improviser, trumpeter and conceptualist. The ensemble includes trumpet, saxophone, clarinet, trombone, violin, cello, bass, drums and electronics, with Douglas stating in the liner notes that it is, "[my] largest ensemble recording to date, but this is truly small ensemble music, mainly because there is no conductor. Everyone has to understand the overall arc of the piece, the relative time dimensions of the form, and the larger reason for each of the notes they play" (2001).

Douglas composes brilliantly and specifically for particular players developing spaces for improvised voices to emerge. His writing also uses improvisation effectively as a means of creating compositional forward motion. In this respect I am reminded of Duke Ellington who pioneered the idea (in jazz) on albums including, *Such Sweet Thunder* (1957), that improvisation could be employed as a compositional tool as

distinct from the usual jazz modality of solos being played over a repeated chord progression established by a melodic statement (head) and concluded by its recapitulation. Ellington also wrote with specific players in mind and created compositions to highlight individual improvisatory approaches. On *Such Sweet Thunder*, Ellington uses these individual approaches to 'represent' characters in Shakespeare plays including the alto sax of Johnny Hodges for the story of Romeo and Juliet in *The Star-Crossed Lovers*, and trumpeter, Clark Terry, with his plunger mute to depict the character of Puck from *A Midsummer Night's Dream* in, *Up and Down, Up and Down*.

Like Ellington on *Such Sweet Thunder*, Dave Douglas also seems to be interested in the possibilities of programmatic representation on *Witness*, with politically charged titles like, *Kidnapping Kissenger* and *Sozaboy* (written for executed Nigerian activist, Ken Saro Wiwa). My approach to the pieces for my ensemble project is not programmatic but it does aim to achieve the integration between improvisation and composition that Douglas and Ellington achieve on the albums mentioned (notwithstanding differences in style and aesthetic). During the development of *Fish Boast of Fishing* I attempted a detailed understanding of each musician's individual improvisation practice and used this knowledge to employ improvisation as a compositional element with defined outcomes in terms of the overall structure of each piece.

The integration of improvisation and composition is achieved in a very different manner on a recent European recording: Trio x 3 – *New Jazz Meeting Baden Baden* (2002), which features free improvisations by three separate trios that have been remixed using layering and electronic processing to develop a number of variations on the original unprocessed pieces. In addition to the interest created by these formal elements I am particularly attracted to this recording because what emerges is a music that is at once familiar and yet completely unclassifiable. It certainly relates on some level to the jazz tradition and yet this tradition is refracted through a prism of contemporary influences including modernism, minimalism and electronica, and

addresses the notion of 'post-genre' music. In the liner notes to the album Reinhard Kager writes, "Moving frontiers and shifting definitions: what has become a common everyday experience to us is also reflected in today's music. Not only is the artificial borderline separating 'serious' and 'entertainment' music being atomised, but within the meticulously defined genres the boundaries are becoming blurred as well" (2002).

It is worth noting the instrumentation and personnel on *New Jazz Meeting* as it reveals something of the cross-disciplinary approach embodied in the music presented on the CD. Steve Lacy, who is an enormously influential musician on the European free jazz scene plays soprano saxophone, with Peter Herbert (double bass) and Wolfgang Reisinger (drums), who share a similar free jazz background. Marcus Weiss who plays tenor and soprano sax is best known as an interpreter of 20th century and contemporary repertoire, as is flautist Philippe Racine. In contrast, Paulo Alvares (piano) has a background in Brazilian music, (having grown up in Brazil), while well-known Austrian electronic musician Bernhard Lang has built a reputation based on technological experimentation. Fellow Austrian experimentalist, Christof Kurzmann, also features on electronics, and avant-garde composer and electronic musician Philip Jeck plays turntables, completing a lineup that develops the most fascinating crosscurrents of style, aesthetic and approach – crosscurrents that are very much in evidence in the output documented on this disc.

The approach taken on this album to electronic processing by Lang, Kurzmann and Jeck is of special interest to me in terms of my research as the processes employed are unusually transparent. We hear the original improvisation followed by a number of remixed versions that enable us to discern clearly where and how electronic intervention has occurred. This was valuable as I began to develop my ideas for ensemble compositions because I wanted to use live real time processing and post production processing in the development of my recordings. On *New Jazz Meeting* both are deployed and because of the way the material is presented on the CD it is also

possible to differentiate between the two. This offers valuable insights into the artists' practices and methods.

In Australia there are a number of ensembles that attempt the integration of a range of diverse elements similar to those found on *New Jazz Meeting* and *Witness*. One notable example is Twitch, a quintet that includes some of the leading improvisers on the Australian contemporary music scene and which recently made an interesting recording entitled, *Fragments, Splinters and Shards* (2005). Twitch is led by composer/pianist Anthony Pateras, whose practice spans contemporary composition and improvisation, playing prepared piano. It also features Robin Fox, who specialises in laptop electronics and live processing, Vanessa Tomlinson (one of the collaborators on my research) percussion, Erkki Veltheim, viola, and James Wilkinson, trombone.

In addition to surveying this group's recorded output I had the chance to hear Twitch perform several times. This provided insights particularly with regard to the approach taken to the prepared piano as well as the relationships developed between the often spiky textures of Robin Fox's computer generated material and the acoustic instruments. To my ear this integration was not always successful, as the computer generated sounds developed such a contrasting sound palette in terms of volume and texture that it was hard at times for me to hear connections between Fox's gestures and those of the other instruments.

This perceived lack of interactivity could perhaps have worked (I noted something similar in earlier paragraphs with regards Mengelberg and Bennink (1977)) but there was an expectation of interactivity set up by the acoustic instruments that made the laptop generated material seem at odds with this expectation. My first thought was that this might have implications for my work, given the similarities in instrumentation between Twitch and the ensemble created for *Fish Boast of Fishing*, but in fact the issues I eventually faced in regard to the integration of electronic media were very different. This was mostly because I use the laptop to process and sample

material rather than as a sound generator. This is an important distinction because it means that all the electronically mediated sounds are connected to the sound world being created by the acoustic instruments.

SUPERSILENT AND THE NECKS: MINIMALIST AND ROCK INFLUENCES IN IMPROVISED MUSIC

European free improvising quartet, Supersilent, integrate electronic and acoustic sound worlds bringing together live electronics, synthesisers, trumpet, and drum kit, and make it sound natural and inevitable. Part of this success is due to processing of the acoustic instruments, which are amplified and treated to differing degrees. At times the processing is very minimal and consists merely of simple reverbs or similar tools but this does still have the effect of taking the acoustic timbres and placing them in the same sonic 'image' as the electronically generated sounds.

Supersilent is based in Norway and features the trumpeter Arve Henriksen, who was mentioned in my review of solo trumpet recordings. The band has released nine albums featuring material ranging from abrasive to soothing and ethereal. On *Supersilent 8* (2008), which is in my view the band's strongest offering, Henriksen features on wordless vocals (in addition to playing trumpet and electronics) singing in a floating counter tenor style that seems to tap into Scandinavian folksong roots, as well as referencing contemporary European electro pop, and most obviously the Icelandic band, Sigur Ros (2008). This ethereality is juxtaposed hard against heavy rock influences along with avant-garde electronica and jazz modalities.

The band embraces melody in its use of voice and trumpet in a manner that differentiates its recordings from many of those discussed in previous paragraphs. On *Supersilent 8* the music traverses incredibly diverse aesthetic terrain, from the sensually melodic to the abstract and noisy, and it moves from one to another without, to my ear at least, sounding forced or contrived. Where Dave Douglas, Twitch and Trio x 3 draw heavily on modernist atonality for their harmonic foundation, Supersilent

looks much more to precedents in rock music and minimalism. This makes sense in terms of the connection I discussed earlier between Henriksen and Hassell and the latter trumpet player's direct links with Brian Eno and Terry Riley.

Australian trio, The Necks, also draw on minimalism and rock to create a distinctive aesthetic. Each of the players in The Necks has a background in jazz, and the trio is a classic jazz formation: piano, double bass, and drums. However, The Necks use this formation to create an unprecedented sound that bears little relationship to idiomatic jazz with the players sharing a refined minimalist improvisatory language that is immediately recognisable and which has earned the group widespread acclaim both in Australia and abroad.

The Necks, like Supersilent and Jon Hassell, owe little to modernist influences and while their music could not be described as melodic it is most often harmonically consonant, minimal, slowly unfolding, and repetitious, as on *Mosquito* (2004). This is music that is at once challenging *and* easy to listen to. It expresses conceptual rigour and engages with contemporary concepts but, in addition, communicates to wide audiences from jazz, rock and contemporary music worlds. The Necks' sound also draws on elements of the aesthetic of electronic music including 'trance' even though the band confines the use of electronics to the recording studio and the post-production process, usually preferring a simple 'amplified acoustic' set-up for live performances.

A CONTEXT FOR MY MUSIC

The influence of The Necks and the other artists mentioned that draw on minimalism and rock are particularly important to my research partly because I am interested in the directness with which minimalist music and rock music communicate. The Necks and Supersilent are very different sounding ensembles drawing on a diverse range of influences but they share this directness. Most idiomatic jazz music is also very direct,

relying on strong melodic statements and repetition – a 'singable' quality. However, much contemporary improvised music (including that which has evolved out of the jazz tradition) does not share this quality and often assiduously avoids any semblance of functional harmony or 'singable' melody. This is true of a lot of the music I have reviewed in this chapter and while, as stated, I find these artists and groups fascinating, I also find much contemporary improvised music is constricted in emotional range. It seems many contemporary improvising musicians hold fast, not just to modernist atonality, but also to a modernist notion that contemporary music must be 'hard.' In a fascinating discourse about the legacy of modernism on the state of contemporary composition, Alex Ross quotes composer Helmut Lachmann: "My music has been concerned with rigidly constructed denial, with the exclusion of what appears to me as listening expectations preformed by society (2007, p. 526)."

Lachmann's statement is extreme but is illustrative of the classic avant-garde stance of the 'artist against society' adopted by many contemporary composers and improvisers. Of course, as I write, I am also aware of the pitfalls of making these kinds of generalisations and do so merely to make the point that while I am drawn as a listener to Derek Bailey, Evan Parker, Axel Dorner, Anthony Braxton et al, as a practitioner I know that I want to do something different with my music. Similarly, while I am attracted to the lushness of Jon Hassell and the austere shimmer of The Necks, and while these influences are perhaps more in evidence in my music, I remain aware that they do not offer a complete 'solution' to me any more than Bailey, Parker or Braxton. Rather, my intent is to move my practice forward by drawing on elements of each of these approaches to music making.

CHAPTER 3: METHODOLOGY AND RESEARCH PARAMETERS

Knowledge can articulate itself outside of discursive practices, outside spoken and written language, and... this kind of knowledge cannot be generated otherwise than in or through the production of art. (Cobussen, 2007, p. 19)

APPROACHING PRACTICE-BASED RESEARCH

As I developed a structure for my research, which places musical process and output at its centre, I encountered issues that concern the nature of practice-based research itself. Research in the arts is one of the most contested areas in current academic discourse (Borgdorff, 2007) and the nature of my area of study places my work right at the centre of these discussions. It is a fascinating and stimulating area to be investigating but not without difficulties because the questions that arise are concerned not so much with which path to take in my research but how to actually define a path and justify it in the academic realm.

I noted in Chapter One that Hannan frames the research basis for his 'comprovisation' practice in terms of traditional academic models within which his work seems to sit somewhat uncomfortably. He does, however, also manage to demonstrate that his practice fulfils the criteria associated with these models, which he identifies as exhibiting the following features:

- 1) A clear intent of purpose.
 - 2) A thorough consideration of the literature.
 - 3) A specific methodology and research design
 - 4) Systematic and extensive collection of research data
 - 5) Logical analysis of the data
 - 6) Public presentation providing the potential for further evaluation (reproducibility).
- (2006, p.2)

As I read Hannan's justification of his research in these terms it seems obvious that I could make an argument for the research basis of my work according to this model, though I am simultaneously struck by a sense that it would miss the point on some fundamental level – that it would be a bit like putting a 'square peg in a round hole.'

During early consideration of these issues in the beginning stages of my research I found myself returning to a notion mentioned in a paper by Barry Bignell (2005) of 'music as a way of knowing.' Music itself as an epistemological tool, not as something separate from intellectual enquiry as per the traditional academic science-based research model, but as a means of enquiry and as something that can contribute to knowledge. To quote music theorist and composer, Jurrien Sligter, "Research and knowledge are too often viewed in light of the verifiable knowledge sought after by the exact sciences. Other forms of knowledge are underappreciated" (2007, p. 42).

This notion of music being a medium for the expression of knowledge – or a 'way of knowing' – brings with it problems in the academic context, not least of which is the question of how one assesses or 'logically analyses' research documented in the abstract form of music. However, Sligter also notes that subjective experiences (such as listening to music) "can give rise to intersubjectivity and as such may be acceptable as a source of scientific knowledge" (2007, p. 42). While the nature of intersubjectivity is a topic of debate in the field of cognitive science (Gallese, 1998) a common usage of the term refers to a consensus reached within a group of people in the interpretation of social and cultural phenomena (Scheff, 2006). Given this definition, the point Sligter makes seems sensible particularly in the field of music research, a context in which, most would accept, complete objectivity is impossible.

Whether intersubjectivity actually constitutes 'science' is, I believe, a moot point in terms of my research though it is worth noting that while Sligter's proposition is inconsistent with a more traditional view of science such as that expressed in the work of authors like Nicholas Cook (1990), conceptions of *science itself* are changing.

Cook claims that science and music are inimical because the former involves a reductionist approach antithetical to the nature of music, which is internal to culture. Science, in contrast to music according to Cook's argument, seeks to achieve validity independent of any given culture. Other authors disagree: Kuhn (1970) places science within the realm of culture, and Cross (1998) argues that science (like music) is, "available for cultural exegesis" (1998, p. 211).

Either way, the issues Sligter deals with concerning traditional reductive approaches to research in music, are particularly pertinent to the work of an improviser or someone like me who both composes and improvises, and whose music/research output cannot be entirely assessed by the analysis of scores: whose work must be *listened to!* This is what Bignell refers to when he mentions 'music as a way of knowing,' and it is worth remembering that, with the traditional emphasis on the score in musicology, this is still a relatively recent proposition. The situation that persists in some institutions where a composer may submit a score for assessment in a research context, but where the work of an improviser (which, as I mentioned must be listened to) is not acceptable as research may now seem a little anachronistic, nonetheless it appears no consensus has yet been reached for how to deal with improvised music practices in the academic context. Perhaps the work of researchers such as Sligter and Bignell do signal a way forward.

MUSIC AS A 'WAY OF KNOWING'

The root of the problem that we encounter as we argue our way towards this broader notion of what constitutes research, and towards 'music as a way of knowing,' is the impossible task of trying to define what music means – exactly what a composer or improviser intends to communicate in a musical gesture. I am not denying for a moment that 'musical meaning' is a problem when trying to come to conclusions about music in the context of research, nor am I about to propose a solution. What I do argue though is that musical meaning is just as problematic in traditional academic

models that attempt to describe, appraise and or analyse music, based on extra musical means stemming from the reliance on the score or, more precisely, from the illusion that the score *is* music.

Christopher Small takes up this theme in *Musicking*:

Music is not a thing at all but an activity, something that people do. The apparent thing 'music' is a figment, an abstraction, whose reality vanishes as soon as we examine it at all closely. This habit of thinking in abstractions, of taking from an action what appears to be its essence, is probably as old as language itself but it has its dangers. It is very easy to think, for example, of the abstraction as more real than the reality it represents. (1998, p. 4)

Small writes that the emphasis that came to be placed on the score in western music during the classical period arose partly as a result of the increasing professionalisation and specialisation that developed in music performance in the 18th and 19th centuries and also from the concurrent development of musicology, which needed to be able to 'freeze' music in time, to strip it of its ephemeral nature, to make a 'thing' of it in order to study it. During this time, musicologists such as Friedrich Chrysander and Guido Adler (1885) were working to align their discipline with the sciences to establish it as a 'serious,' rigorous endeavour, and this positivistic preoccupation with 'measuring' music and explaining it in terms of cause and effect remained fundamental to historical musicological approaches, dominating until the last quarter of the twentieth century. Indeed, these approaches to musicology still exist and still remain very strong in some places.

Bignell (2005) comments on the culture of executory perfectionism and of the privileging of performance outcomes over process and experience, which arose in Western music with the development of musicology and the codification of music education. He observes, "[Music] came to reflect product orientation at the expense of other, primarily epistemological possibilities. In short, music became less a way of knowing the world than a 'thing' to hear or produce" (2005, p. 2). My research project

proposes a context for creating music and reflecting on the process of creation and performance that aims to develop the epistemological possibilities to which Bignell refers.

KNOWLEDGE AS ‘CONSTRUCTED CAPABILITY IN ACTION’

David Borgo (2007), alludes to similar issues in a paper about free improvisation and music pedagogy and refers to Eric Clarke’s (2005) notion of an ‘ecological’ approach to music performance (Borgo, 2007, p. 78). Although Borgo is mostly concerned with how we learn music, his paper is, I believe, very relevant to my research in that it describes a movement in how knowledge is viewed in the context of music education and performance:

A small revolution is currently well underway in several different academic circles, involving a conceptual shift from knowledge as stored artifact to knowledge as constructed capability-in-action. From this perspective, what people perceive, how they conceive of their activity, and what they physically do all develop together. Learning, in other words, cannot be conceived of simply as transmitting or receiving factual knowledge, rather it must be viewed as a process that involves becoming a different person with respect to possibilities for interacting with other people and the environment. Ultimately, learning is not a matter of what one knows, but who one becomes. And improvisation... plays a defining role in this new paradigm. (2007, p. 62)

Although knowledge as ‘stored artifact’ is a characteristic of learning systems in many traditions, it is heavily emphasised in traditional conservatorium approaches to music pedagogy and consequently impacts on the approach brought to the stage by many performers of western concert music. It seems particularly applicable to contemporary orchestral performance and programming (Lebrecht, 1996) wherein the audience passively ‘receives’ the interpretation of a score, argued over by ‘experts’ in terms of ‘authenticity’ and ‘purity,’ and conveyed through the ‘medium’ of the musicians in the orchestra each of whom, according to Stravinsky, should not

interpret but rather, “obey the law imposed on him by the work he is performing” (1942, p. 127).

In this context the idea of knowledge as ‘constructed capability-in-action’ seems earth shaking, but in fact it is the way musical knowledge is stored and conveyed in many other musical traditions. Indeed, writes Lydia Goehr (2002), it was embodied in approaches to western concert music until the beginning of the 19th century prior to which, “performance practice was conditioned by the expectation that musicians would bring to fruition a fully shaped composition *through performance*” (2002, p. 139 original emphasis).

The ‘ecological’ approach to which Goehr alludes, also describes what I have tried to achieve during the projects described in this exegesis: to develop music that is personal and spontaneous, where the composed elements and the idiosyncratic improvisatory languages of the performers are integrated. Music that could only happen with a specific group of performers and that is ‘shaped through performance.’ It is worth however, stating an obvious point: that improvisation in music does not *necessarily* lead to an ecological way of performing. Equally, neither is that possibility precluded in the performance of pre-composed music. An ecological approach is less about the music itself and more about the engagement of the performers (and audience) in the human dimension of music performance and in the possibility of transformation in that moment. The noted composer and saxophonist, John Zorn, appears to be advocating something similar to Clarke and Borgo’s notion of an ‘ecology’ of performance in a recent essay in which he states, “I want to excite the performer and have that excitement passed onto the listener” (2004, p. 199). For Zorn too it seems making music is all about transformation for the performers and listeners – about ‘who one becomes.’

RESEARCH IN MUSIC

I wanted my research to honour this process of transformation and for the music produced to reflect it; I wanted my research to be ‘research *in* music’ as distinct from research *into* or *of* music. These are distinctions articulated succinctly by Christopher Frayling (1993) who differentiates between ‘research into art’, ‘research for art’ and ‘research through art’ and who notes that the latter is the most controversial of the three. In an earlier passage during my discussion about the intertwined nature of process and outcome in music improvisation, I included a short quote from a recent paper by Borgdorff (2007). Here is the paragraph from which it was drawn, in which he sketches the debate about practice-based research in Europe in a manner relevant here. He writes of ‘research in the arts’:

It concerns research that does not assume the separation of subject and object, and does not observe a distance between the researcher and the practice of art. Instead, the artistic practice itself is an essential component of both the research process and the research results. This approach is based on the understanding that no fundamental separation exists between theory and practice in the arts. (2007, p. 42)

This quote appears to be written with the research approach I have chosen in mind. In the context I have created there is no separation between researcher and practitioner, and the distinction between creative practice and research outcomes is blurred. My work here seeks to illuminate my process as a composer and improviser, and also the relationships from which the music that is created springs – relationships that are in turn expressed through that music.

Embodied accounts of process

In chapters five and six I document the specifics of this process and these relationships through detailed descriptions of the development of two composition projects previously mentioned: solo works for trumpet and laptop, and works for

improvising sextet. In these chapters I describe the techniques used in the conception, composition, and recording phases of each project from a practical and experiential perspective. During the course of my research I kept a journal of daily activities in which I recorded observations relevant to the work. These journal entries are an important component of chapters five and six as I include excerpts that provide embodied accounts of day-to-day activities involved in the creation of the music and offer insights into technical issues as well as broader related concerns.

I also include embodied accounts in the next chapter, Chapter Four, in which I seek to establish a broad cultural and biographical context for my music practice in the manner pioneered in the social sciences by autoethnographers such as Carolyn Ellis (2004) Norman Denzin (2006) and Deborah Reed-Danahay (1997). I employ a 'fractured' narrative approach that jumps back and forth chronologically through childhood memories and stories from my early experiences in music to reflections on my current practice.

In *Autoethnography, Personal Narrative, Reflexivity*, Ellis and Bochner observe that, "Autoethnography is an autobiographical genre of writing and research that displays multiple layers of consciousness, connecting the personal to the cultural" (cited in Denzin & Lincoln, 2000, p. 739). Autoethnography also creates personal connections to the research through the use of stories and accounts of process; these characteristics are reflected in Chapter Four as well as in the chapters that come after it.

CHAPTER 4: CREATIVITY AND IMPROVISATION – A JOURNEY INTO MUSIC

After all, there are no art practices that are not saturated with experiences, histories and beliefs; and conversely there is no theoretical access to, or interpretation of, art practice that does not partially shape that practice into what it is. (Borgdorff, 2007, p. 42)

My intention in applying an autoethnographic approach in this chapter (and in chapters that follow) is to examine the experiences, histories, and beliefs that 'saturate' my practice in order to understand it better. In doing so I hope my 'saturated' experiences, in turn, reveal something about the contexts I am working in. The unconventional approach to narrative and chronology that I have employed in communicating my experiences and insights, originated during the course of my journal writing in which memories appeared in narrative 'flashes' alongside thoughts on a variety of current concerns. There was no 'method' being applied here but my guess is that this experience of journal writing is not uncommon and that for many people their journals tend to resist being organised into neat ordered patterns. Rather, journals appear to reflect our natural associative thought processes as we jump from subject at hand to memory, to something random and seemingly unrelated. It seemed to make sense to me to carry this emergent writing style into my exegesis, to extend it and use it as a means not just of reflection but also of communication. The precedents created in autoethnographic writing by researchers such as Stacey Holman Jones (2002) and some of the others already mentioned lend validity to this approach.

'MUSICKING'

One of the themes that kept appearing in my journal concerned my basic drive to play and write music. What was I *really* trying to do? What did I actually want to communicate? Of course I found no easy answers, but I did keep coming back to the notion that fundamentally, I am more interested in creating music that is 'personal' than I am in creating music that is 'new' or 'groundbreaking;' that I want my music to

be in dialogue with time and place and culture rather than to just reflect the current fashions in thinking about contemporary composition.

A note on Babbitt's argument in *Who Cares if You Listen* (1958): Music is not physics just as architecture is not mathematics (or not just mathematics).

People inhabit buildings and they 'inhabit' music too. (PK Journal Entry 29/5/2009)

At the same time, I am certainly interested in progressive forms in all areas of art, including music; it's just that being 'cutting edge' is not what primarily drives me in my music practice. And here it is again that words fail us when we try to describe what we are driven to express in music – it is almost impossible to do without chasing yourself around in circles – suffice to say that what I am trying to achieve is that difficult to define quality of 'authenticity'. And I use the term 'authentic' knowing that in some sense it doesn't mean very much or that its meaning is not, as Schippers points out, "as clear, stable and value free" (2006, p. 333) as it may appear. What is authenticity? Authentic to whom? And so on. But it is a useful word in describing my practice in the context of this exegesis because it points to the fact that I am more concerned with creating music that 'feels' right to me and that communicates something of my truth (whatever that is). Schippers reminds us of Mautner's *Dictionary of Philosophy* definition of authenticity: "The quality of being genuine, being true to oneself" (Mautner, 1995, p. 39).

I am also interested in how my music is heard by listeners. In fact, I can't compose music without thinking of how it will be heard and what it will communicate to a listener. This is not a conscious choice, it just happens to be how I approach music: for me music is about people. Indeed one of the driving motivations for me in becoming a musician and continuing to be involved in music is that music is often 'made' with others and shared in the 'moment' with an audience. In *Musicking* (1998, p. 9), Christopher Small puts forward the argument that the audience members at a music

performance are all part of the act of 'musicking,' which is the verb he posits we need to describe the activity of making music.

Small's ideas resonate with me and I am fascinated with the fundamental premise upon which he bases *Musicking*: that when musicians perform (and for that matter compose) they often do so without questioning the relationships and rituals that are taken for granted in the context(s) of music performance. He begins the book by asking, "*What's really going on here?*" (1989, p.17 original emphasis) Given the priorities I describe above it seems to make sense to attempt a deeper understanding of my place in the culture and time in which I live and make music: that I ask of myself, 'What's going on here?' To that end this chapter reflects on creative process and the biographical and cultural contexts in which my practice takes place. Autoethnography provides the approach for this personal reflection:

Back and forth autoethnographers gaze: First they look through an ethnographic wide angle lens, focusing outward on social and cultural aspects of their personal experiences; then, they look inward, exposing a vulnerable self that is moved by and may move through, refract, and resist cultural interpretations. As they zoom backward and forward, inward and outward, distinctions between the personal and cultural become blurred, sometimes beyond distinct recognition. (Ellis, 2004, p. 38)

The section that follows attempts this process beginning by 'zooming' back to a childhood 'memory flash' of listening to music.

WHAT'S GOING ON HERE?

There I am sitting in the corner of our living room in the armchair, headphones on, with Skyhooks blasting into my ears whisking me away into some other reality. I have that sensation of movement, of motion, which music can bring. I watch as if from a great distance as my mother comes into the room and silently mouths something at me, smiles, then walks away.

* * *

I'm forty-three years old now and I have made a career for myself in music. It sometimes seems incredible to me to think that I did that. Not because it's so remarkable in and of itself, but because it seems amazing, given the relationship I had with music throughout my school years, that I made that choice and that the choice I made stuck.

I loved music when I was young, I loved to listen and I loved to play. I used to sit and practice the cornet for hours playing from 'A Tune a Day' until my lips were sore. However, like lots of children, I was not really urged to take music seriously or to consider a career in music. Instead, I was encouraged to play the trumpet as a hobby and to study the sciences and mathematics because that way you, 'keep your options open.' I wanted to do what I perceived was the 'right thing' and so I chose those subjects even though I was consistently better at humanities. As a teenager I spent a lot of time thinking about what career I might follow. I went through phases of wanting to be a pilot, then a geologist, and then a journalist. I kept playing the trumpet right through this time, having lessons, playing in the school orchestra, but year-by-year my enthusiasm for the instrument waned. I still *liked* playing but the *drive* to play that I'd experienced as a young boy gradually vanished.

I enrolled in an arts/science degree at Melbourne University the year after I finished school. It was the first of three courses that I dropped out of in as many years.

* * *

There I am sitting in the band, enveloped by sound. The tenor horns, the cornets, the tuba, the euphonium – in front of me, behind me, beside me. I remember the smell of stale uniforms along with that indescribable odour which emanates from brass instruments left too long in their cases. The valves of my cornet sluggish under my fingers, the notes on the page – D, one and three – A, one and two but higher than E – C, under the stave with a little line through it – no fingers down...

* * *

Music did not open up for me until I was in my twenties. I had pretty much given up the trumpet upon leaving school, though it wasn't so much that I 'gave up,' more like I just didn't get around to playing. However, my relationship with the instrument and my feeling for music changed when I was introduced to the idea of improvisation. I can remember the moment: it was in the University of Melbourne cafeteria. I was in my second year of an arts degree, which I approached without much awareness of what I was doing or where it was leading me. I ran into a guy called Steph who played trumpet with me in our high school orchestra. We started talking about the trumpet, about orchestra, about our teacher, Bob. Steph mentioned that he had started improvising on the trumpet and I asked him how he did that. He told me that you simply take the notes of the scale in a key and start making up your own melodies. I think he actually began describing his discovery with something along the lines of, "Did you know you can...?" Or, "I found out that you can..." Emphasis here was on the notion of *permission*. And I think this is maybe why I remember this conversation – because I recall thinking that I had never considered this possibility and wondering why.

When Steph and I played 2nd and 3rd trumpets in the school orchestra the idea of improvisation was literally never mentioned and jazz was not taught at all. I enjoyed

playing trumpet but I never connected this with my genuine love of music. The trumpet for me was an interesting technical challenge and the orchestra a fun social opportunity. It was all totally separate from my interest in bands like Midnight Oil, Pink Floyd, and the Sex Pistols. The only time the two came close to meeting was when I discovered the album, *Feels So Good*, by trumpeter/flugal hornist, Chuck Mangione. I remember being amazed by his approach; by the melodies, the feeling of freedom, the grooves and, most importantly, the *sound* of the instrument so far removed from the limited conception of the trumpet expressed in the orchestral repertoire I had come into contact with. I took the tape into my next lesson with Bob and put it on. He didn't look impressed and merely said, "Chuck Mangione used to play better when he was in the army." I couldn't imagine how he knew that, but unfortunately I respected him enough to take that as the last word on the matter until my conversation with Steph five years later in the Melbourne Uni cafeteria.

* * *

I'm looking at my reflection in the bell of my new trumpet. My forehead is huge, my mouth sucked into a tiny pointed chin. I can make all kinds of sounds with the slide, my eye huge now in reflection as I listen to the air suck through the valves before it releases with a pop.

* * *

Although my music practice now incorporates a large range of influences I studied jazz for years and spent much of my twenties soaking up the sounds of New Orleans, New York and all the other geographic and cultural focal points important in the development of the music. Like most young Australian jazz musicians, much of my listening went on in my bedroom (for me in Albert Park in Melbourne) and in a sense that listening was quite disconnected from my upbringing and from the culture through which I moved on a daily basis. I didn't, however, spend a lot of time thinking

about this disconnect during those years and I think in some vague sense I actually enjoyed it. I relished the exoticness of jazz and of those far off places – so far from where I had grown up in country Victoria.

* * *

From the time of my conversation in the Melbourne University cafeteria with Steph I was led deeper into music by a series of random accidents. There was no shining light of inspiration, no sense of inevitability. In fact, I am almost certain that I would have never again picked up the trumpet, never again had anything to do with music, if any one of a number of unconnected events had not happened. And I don't think this would have necessarily been a bad thing. I love music and I'm glad – grateful – for the way my life has turned out, but I'm sure there are many other lives I could have happily lived. I do though have a sense that I was driven towards some sort of creative expression. The discovery of improvisation in music was the key to my realisation that *music* could be an outlet for that expression.

* * *

Still. Quiet and still – fingers going like little pistons. A slight pressure on my spine as I lean back. The drummer is pushing the beat up behind me. Thermal puffs of bass – little updraughts to hang notes on, notes like kites...

* * *

One day, not long after my conversation with Steph about improvisation, I was speaking to another university friend studying law. She told me she was involved in organising the band for the annual Law Review. She remembered that I played trumpet and said they were looking for a trumpet player for the band. I volunteered, and it was a great experience for me at that time. I enjoyed everything about it, but the

thing I loved most was that at every performance I got to play an improvised solo on *Summertime*. I had no idea of what I was doing, but the musical director was encouraging and constructively critical. And I *felt* like I had something when I was ‘making it up.’ I was able to find a space within myself that I hadn’t hitherto known. I’m sure it sounded amateurish, however the important thing was that I experienced an opening of possibility.

* * *

I often wonder whether music is, for me, an escape from the search for meaning or a way of searching for meaning.

* * *

Jazz music seized my imagination as a young man because improvisation is integral to its form. I was also drawn to it both as a listener and player because it features the trumpet. Most important to me though is that the process of creation is in evidence in the performance of jazz. Even when we listen to jazz on a CD we can hear the musicians responding to one another, witness surprise and delight or frustration at the unexpected and feel the excitement when the music is really working. In improvised music success or failure depends entirely on the relationships between the performers; without these relationships, there is no music. This is not to say that relationships must be ‘good’ or friendly for the music to succeed – in fact they could be antagonistic – but there must be a level of engagement. In improvised music process and outcome are inextricable.

Contrastingly, in pre-composed music there is, by definition, a greater emphasis on a pre-determined musical outcome. That outcome can be (and often is) sublime, but as Small observes in *Musicking* (1989), there is, in pre-composed music, also a greater tendency for performers to rely on the music to do the ‘work’ for them. Small’s

perspective certainly resonates with my early experiences of music and even though I didn't think about these issues in this manner when I was fifteen I nonetheless believe my *feeling* about music has not changed much since that time. After years of stultifying boredom rehearsing the repertoires of brass bands and school orchestras, the discovery of improvisation and of jazz all of a sudden re-connected my love for the sound of the trumpet with the natural love of music I had experienced when I was a child.

* * *

I first came into contact with the cornet when I was about seven or eight years old. My discovery of the instrument was a revelation. I went to my friend's house one day after school and his dad had one, I got my hands on it and was completely besotted with its shininess and its mechanical workings. I made up my mind there and then that I must play it and nagged my parents to let me join the Orbost Municipal Brass Band (we lived, at the time, in the small country town of Orbost). Eventually I got a musty old cornet in a beaten up case with tattered but sumptuous deep green felt lining. I loved playing in the band at first; I especially loved the uniform with its shiny buttons and epaulettes. I did my first gig in the main street of Orbost on Christmas Eve in about 1976. I remember the uniform smelled of mothballs. It was too big and was scratchy on my skin. And I remember that I couldn't really play, I just kind of mimed along on 4th cornet occasionally managing to get out a few notes while looking intently at the page on my lyre and enjoying that sensation of being *inside* music.

I loved the sound of the cornet and I loved the feeling of being enveloped by music. Though now, when I look back on my first musical experiences in the Orbost Municipal Brass Band, I can see how those experiences helped to set in train both positive and negative aspects of my relationship with music. It's clear to me today that the bandmaster was a limited and insensitive man who cared little for the young people under his charge, and, although I have developed a narrative about spontaneity

and free spiritedness and improvisation, my inclination towards improvisation could also partly be a response to a fear of performing notes written on a page, which I developed in these formative experiences.

* * *

There I am in the Orbost Municipal Brass Band at rehearsal. A big boy with a grown-up cornet just like the men – I'm in the band with all that sound around me, lifting my cornet, imagining that I am playing the most beautiful music ever created. Eyes closed. Making it up because I can't read my part. Suddenly, the band stops – the sound stops – except for a few braying notes from my cornet sustaining awfully over the instantly yawning chasm of silence. I open my eyes and the bandmaster is glaring at me red faced – 'That sounds terrible, what do you think you doing?'

* * *

Many young people expect that a vocation will reveal itself as epiphany; that their destiny will arrive in a flash of inspiration. I expected that to happen to me but it didn't. I had never been encouraged even to consider a creative path as it didn't really count as a legitimate choice and two years into a dry university degree I was bored and doing not much of anything except drink and hang around with my friends going out to hear indie rock bands in St Kilda. The stint with the Law Review playing trumpet in the band really was a highlight of 1984 but I had no way of imagining how that might become anything longer term and though I missed it when it finished I fell quickly back into my uninspired loop. That year I failed all my subjects, argued with my parents, and became skinny and unhealthy.

It wasn't until early in the following year that things really started to change for me when one day, for no immediate reason, I decided to become a musician – to make a career for myself in music. I remember riding on a tram through the city. I remember

the very moment with clarity. The tram was clanking across Swanson St Bridge, it was late on a gloomy winter afternoon and I was heading home to Albert Park after a few hours smoking cigarettes and drinking coffee in the Melbourne University Cafeteria. I was thinking about what I should do with my life and at that moment I just decided I would be a musician. There was no great moment of inspiration or of feeling 'called' to music, I just couldn't think of anything else to do that I really liked and I was desperate for a direction in life.

For some reason that decision stuck. I started to practise the trumpet every day. I kept it simple: *play every day*. I didn't play for long and I wasn't very organised in how I went about things, and I wasn't very good, but I played every day. For some reason I could do that when I hadn't been able to manage even the most modest discipline for the study of chemistry or commercial law. I practised differently from the way I had when I was at school: instead of endlessly banging away at etudes and exercises from *Arban and Clarke*, I improvised. And I liked it. I would put on this old blues record I had found in a second hand shop, or anything else I had that had a trumpet in it and just play along. I had little clue about the workings of harmony but it was fun to just play along and make it up.

* * *

I don't really believe in fate but I do think we make our own luck and that for some reason, when we make clear decisions, and direct energy in a focussed way that things happen – so it was for me. I was hitch-hiking one night from Albert Park to St Kilda to hear a band. I was with my flatmate Meagan. We were walking along Danks St with our fingers out when a car pulled over and offered us a lift. I opened the car door and was greeted by a familiar voice – Margaret – I knew her from university. She was with two guys a bit older than Meagan and me. We got in the car and started talking and Margaret asked me what I had been up to, I began to tell her about the Law Review and playing in the band when one of the guys in the front asked me what instrument I

played. I told him and he immediately said – “I’ve got a band and we’re looking for a horn section, do you want to come along for a rehearsal?”

It was the heyday of Hunters and Collectors, The Saints' *Eternally Yours* was still on high rotation in most student houses, and horn sections in rock bands were the flavour of the month. I hadn’t really thought about all of this too much but I jumped at the opportunity to play with other people again. Two weeks later I was in Sydney for the first time and I was ‘on tour.’

* * *

Sinking. Releasing all the air from my lungs in great silvery bubbles and sliding to the bottom of the pool. Save a little in puffed out cheeks so I can lie there for a few blissful seconds looking at all the bendy legs and splashing from far, far away. A lifetime in a breath of air – in a moment. Then I’m lying on my belly on the hot cement at the edge of the pool, with my head on my hands, watching diamonds of water on my tanned arms slowly shrink.

* * *

I played in rock bands at night for years playing the same riffs over and over, but by day I listened to jazz incessantly. I listened to nothing else; I was desperate to unlock its mysteries. I listened and played along and after a while started to learn trumpet solos taking them apart note by note. I was driven to understand the music, to learn the language, the syntax, and the style. Something in jazz music resonated with me deeply. Importantly too, as I have mentioned, the exoticness of jazz was incredibly attractive; the sense that this music had travelled from a long way away (culturally and geographically). I heard the fierce refusal to conform in the music of Miles Davis, John Coltrane, and Thelonious Monk and I loved it. And I think in some small way I related it to the outsider sensation which I felt as an over exuberant young boy

growing up in country town that expected conformity. Perhaps for the same reason I also loved (and still love), the rebelliousness of rock, but jazz for me was like rock and roll without the pervasive nihilism that seems to drive much of that music. And I *burned* to play jazz.

* * *

George E. Lewis writes about jazz improvisation and notes that its differentiating characteristics include, “its welcoming of agency, social necessity, personality and difference, as well as its strong relationship to popular and folk cultures” (2004, p. 150). His words resonate with my experience of being drawn to jazz and also to my more recent experience of feeling a need to move away from it (at least in the sense of style). He goes on to say, “the development of the improviser in improvised music is regarded as encompassing not only the formation of individual music personality but the harmonisation of one’s musical personality with social environments” (2004, p. 150).

In this sense a musician’s development as an improviser in the jazz tradition (or as Lewis would say, from an ‘Afrological’ starting point) is about gradually allowing one’s personality and culture to speak through music. The comparison between jazz improvisation and autoethnography is too obvious not to be touched upon here though I am not be the first to draw such a parallel. Stacy Holman Jones (2002) describes torch singing as a form of autoethnography and Deborah Reed Danahay writes that autoethnography and torch singing both enact a life story within larger cultural and social contexts and histories (1997, p. 9). Instrumental jazz, too, enacts life stories within social contexts and histories, or should, if we follow Lewis’s thinking. I am also reminded of my own development as an improviser and my experience of cultural dislocation when Reed-Danahay, notes:

The most cogent aspect to the study of autoethnography is that of the cultural displacement or situation of exile characteristic of the themes expressed by autoethnographers... whether the autoethnographer is the anthropologist studying his or her own kind, the native telling his or her life story, or the native anthropologist, this figure is not completely 'at home.' (1997, p. 4)

She might have added to this list: the Australian musician struggling to find authentic expression in the context of idioms and forms imported from America and Europe. As I developed as a musician this feeling of not being 'completely at home' became more acute and I have spent the last ten years working towards developing my own language as an improviser and my own forms as a composer. I think of myself now as an 'improvising' musician (and a composer) rather than a 'jazz' musician because I have consciously moved away from the sounds of idiomatic American jazz. At a certain point in my development I could not ignore the question of what American jazz music has to do with a boy who grew up in country Victoria and Melbourne listening to Sherbet and Gary Glitter and Skyhooks, and whose background in music performance consisted of brass band and school orchestra? To paraphrase Whiteoak (1999) I began to wonder what I was doing playing music that developed in a completely different physical, spiritual and social environment to that in which we live? Interestingly though, my journey follows the paradigm of Afrological improvisation that Lewis describes (and which he distinguishes from 'Eurological'). In fact I am probably closer to his notion of 'jazz' now than I was when I was 're-creating' the sounds of jazz in terms of musical style.

* * *

One day around the time of my conversations with Steph about improvisation, and the rekindling of my relationship with the trumpet during the Law Review, I met this slightly older guy called Gavin who played the trumpet. We were talking and he casually said something about 'Miles'... "Miles who?" I asked. He looked at me in utter disbelief. And I can't believe now that I managed to play trumpet all through school –

the best part of ten years – without anybody mentioning Miles Davis to me. Gavin was gracious enough not to patronise me, instead he made me a tape of *Sketches of Spain*.

* * *

It's late at night. I'm travelling to Orbost with my girlfriend to visit my parents. We're driving along a flat straight stretch of road between Traralgon and Sale and there's a flat mist hanging low on the road. It feels like we're flying. Other than the mist it's a clear night and there are no other cars on the road. The clatter of castanets in the opening of Concierto de Aranjuez quietens our conversation. "Wow what's this?" my girlfriend asks me. "Some tape this guy called Gavin made me," I reply as the orchestra enters and states the melody. A moment later against the hum of the road I hear the sound of Miles Davis' trumpet for the first time...

* * *

Lewis describes the process of learning to improvise in the jazz context as, "commencing with the emulation of other improvisers" (2004, p. 156). It occurs to me that the process of developing as an improviser is one of moving closer to the source of your inspiration. Removing obstacles, psychological and technical so you can speak through music with your own voice, and so that your culture and social environment can also find a way of speaking through your music. Lewis argues that the, "notion of the importance of personal narrative" (2004, p. 156), is one of the central aspects of Afrological improvisation. He seems to imply that it transcends 'style' and idiom, and when one tries to make sense of the range of musical utterance described as 'jazz' – from New Orleans traditional to avant-garde downtown New York – it is this perspective that helps thread these superficially disparate musical phenomena together. It also helps me to make sense of my path as an improviser from jazz and rock through cross-cultural music to abstract electro-acoustic collaboration.

* * *

I'm looking at my reflection in the screen of my laptop listening to the sound of the air suck through the valves of my trumpet before it releases with a pop. I sample the sound and reverse it – thump – wheeze – then process and texturise the sound and listen as it layers up over previously sampled clicks and exhalations...

* * *

One of my primary motivations as a musician today is to find ways of making my music relevant to the time and place in which I live. Creating music that draws on my background in jazz without being bound by the idiom, music that embodies the personal – that has a quality of ‘authenticity.’

David Borgo's (2007) notion of an ‘ecological’ approach to music performance is again relevant here especially given the context of my musical development, in which improvisation has been key. Borgo's ideas resonate with what I am trying to achieve in my music practice: the creation of music that embodies spontaneity, music in which the composed elements and the idiosyncratic improvisatory languages of the performers are integrated, music that is shaped through performance and which privileges process over outcomes. Remember Borgo's words: “Ultimately, learning is not a matter of what one knows, but who one becomes” (2007, p. 62).

CHAPTER 5: *ALLOTROPE* – NEW WORKS FOR SOLO TRUMPET AND LAPTOP

Allotrope: Any of two or more physical forms in which an element can exist - diamond and graphite are allotropes of carbon. (Macquarie Dictionary, 1991, p. 46)

The solo project creates the possibility for opening, expanding, and focussing technique, free from aspects of ensemble playing that can be constricting. It is also a setting wherein the comfort zones offered by ensemble playing are stripped away. It is a difficult, vulnerable, but rewarding place. (PK Journal entry 2/4/08)

My solo project, *Allotrope*, undertaken in the course of this research, involved the development and refinement of a language of sounds created using the trumpet and real time laptop processing. In this chapter I detail my approach to the work and describe the process of recording, mixing and editing the material presented in CD form as a major component of this research output (Appendix 1A).

This project led me to examine my practice in new ways, to learn new skills, and new approaches to performance. In it I bring together contemporary approaches to the trumpet and technology to develop an idiosyncratic and highly personal sound world focussed on texture and timbre. Minimal and abstract, it also incorporates melodic material. Rhythmic elements are often obscured – pulse or 'beat' gives way to breath and gesture.

FREEDOM THROUGH LIMITATION

Early in the development of this work I decided to limit myself to using only sounds generated by the trumpet as the raw material for digital processing. This removes an array of possibilities offered in the digital realm such as synthesised sounds and samples from other sources. This limitation was an important step for me as it gave the project focus and enabled me to move forward – in a sense it gave me freedom.

Stravinsky talks about the apparent contradiction of freedom created through self-imposed constraint in *The Poetics of Music* (1942). He describes “a kind of terror” at the “abyss of freedom” that confronts him in the moment of setting to work on a composition. He writes: “Let me have something finite, definite matter that can lend itself to my operation only insofar as it is commensurate with my possibilities” (1942, p. 64). Perhaps the range of possibilities one confronts with digital media is even more terrifying than that which Stravinsky describes because literally anything is possible without even the limitations of technique, as material from any source can be ‘flown in’ at the mere push of a button. This ‘democratisation’ of music making, which has accompanied sampling and processing of sound using computers has in a sense made musicality even more of a premium – while, with a laptop and the appropriate software anyone can put sounds together to create an ambience or a ‘soundscape,’ fewer can use the same materials to delve deeper into the craft of composition to explore structure and other formal elements.

I hasten to add that, for the purposes of this discussion, my definition of ‘soundscape’ relates to the creation of ambient sound works rather than to the usage of the word pioneered by Murray Schafer (1994) and others in the 1970s, which relates more generally to the acoustic environment and environmental sound. The definition of words such as ‘soundscape’ as well as ‘composition’ are slippery (as mentioned at the beginning of Chapter 2) so for this discussion I define music composition as the creation of a piece of music that requires a complete listening to be properly ‘read.’ In my view, this is distinct from ‘soundscape,’ which I define as a piece of music or a sound work that can be listened to at any point in its duration for any length of time and be understood. In addition it is worth noting that the creation of soundscape is an entirely valid form of creative expression, but I would argue it is a different form of expression from that of music composition.

From the outset my aim has been to create compositions rather than soundscapes. And for me it doesn’t really matter whether you are writing a pop song, a symphony, creating musique concrète, or indeed a spontaneous composition (improvisation), what we do

when we compose music is balance *consistency* and *variation* to create interest, and to create a sense of ‘unfolding in time.’ This is something one of my teachers, Mark Pollard, impressed upon me and it is one of the most valuable lessons I have had. It makes sense of the various strands of my diverse practice, connecting what I do when I play jazz to what I do when I create in more abstract settings such in the context of this project. I use different means and materials and express different qualities of emotion and aesthetic but these same basic principles apply: when music works, when a composition draws us on and makes us want to keep listening, it does so because consistency and variation are in balance.

All this is a way of saying that one of the critical processes in the development of this project lay in the limiting of materials as mentioned earlier. Identifying a small number of processing techniques and sound sources and using them in a focussed way. It seems, as I write, contradictory given that this is a project that embodies improvisation and experimentation – but here, as in many other traditions, the notions of improvisation and exploration do not equate to ‘anything goes’: I define the artistic terrain and explore it.

THE DIGITAL ENVIRONMENT

I am spending an inordinate amount of time on the technology – problem solving, learning about the parameters of plug-ins, finding more efficient approaches to familiar tasks. And it seems like each time I discover something new about how the software can be used it recontextualises the creative work. In this way the boundaries of my project appear to keep shifting. (PK Journal entry 2/4/08)

I have worked for some time on refining digital environments within which I can improvise, and identifying plug-ins that produce processing effects fitting the aesthetic I want to produce. I have been using Pro-Tools for recording and editing and have some experience with Max MSP but the primary software I have employed for this project is Ableton Live. This program has some incredible features and some specific limitations too.

It is difficult, in an improvised setting, to use the computer in an intuitive, sensory, manner to create textural variation. It is particularly difficult in a 'real time' performance environment. This is a problem musicians and technicians have been grappling with since people started making music on computers. There are some interesting solutions available for the Ableton Live interface that consist of sophisticated hand operated midi-controllers, but these work best when the musician is not also using their hands to hold a wind instrument. There are wind players like Jim Denley (saxophone) and Natasha Anderson (bass recorder) who have countered this by using custom key triggers and midi-enabled sensors to manipulate the processing environment, creating 'meta-instruments.' However, this is not the way I decided to proceed because I am also interested in the time-based (rhythmic) processing of sampled material that is possible in Ableton, and to work using these parameters one needs to be 'inside the screen.' The solution I have developed involves using a midi-foot pedal¹ unit and a basic USB midi-controller² (Appendix 3. Episode 1). These allow me to change the processing parameters using the expression foot pedals and 'play' the computer in tandem with the trumpet in a gestural manner that augments my approach to the trumpet. When I choose to I can also delve into other possibilities using the screen and touchpad.

MODES OF SOLO PERFORMANCE

The different creative modes to which I allude here were noted by my supervisor, Erik Griswold, who responded to one of my live solo performances identifying distinct and discreet relationships at play in my practice: the relationship between me and the trumpet, the relationship between me and the laptop, and the relationship between the trumpet and the laptop. He observed a tendency in me to try to attend to each of these relationships simultaneously and thought it was important that I become more conscious of the interplay between them, and that signalling clear shifts or transitions was important

¹ Behringer FCB 1010 which can be programmed to trigger any parameters in the software.

² USB controllers plug into USB port and can be programmed similarly to FCB 1010

in terms of the 'readability' of the performance.

These observations were helpful in the development of my practice and this project. In thinking about the issues Erik raised it became clear that this work is not just an extension of my practice as a trumpeter/improviser (even though that's what I thought it was going to be). Rather, it is, in essence, multidisciplinary or cross-modal performance because it involves modes that are fundamentally different from one another and which involve different kinds of relationships. Therefore, the technical and artistic challenges were not simple. If I were aiming to just extend my trumpet palette then the path to take may have been clearer, but what I realised I was actually doing here was developing a new practice in the digital realm and hybridising that with my instrumental practice. It's perhaps a subtle distinction but one which seems relevant to this discussion of this project.

PLUG-INS AND PROCESSING

Crucial to this development was the Ableton Live platform. Ableton is designed for improvisation in performance and is commonly used by dance DJs and other electronic artists in popular beat-based music. Although my practice does not resemble dance music, the Ableton platform suits my purposes well as it is flexible, intuitive, and reasonably easy to use. I mention this specifically because I did not want to devote a great deal of time to learning how to program software or write patches such as in the program Max MSP.³ I am primarily an instrumentalist and composer so when I began to work in digital media I was looking for something I could use quickly and easily. Ableton suits this purpose although in the beginning I certainly underestimated the challenges inherent in learning to use the program in a fluent and focussed manner.

Ableton is a platform on which you can run any number of plug-ins, which are discrete programs that process sound in various ways from within the Ableton environment. I spent a great deal of time experimenting with a wide range of these plug-ins narrowing

³ MAX MSP is one of the most popular sound processing programs currently in use and is favoured by many electronic musicians.

down a selection that suited my purposes. Some of these are part of the Ableton Live 'bundle' (they come with the program). These include Autofilter, which enables a squashing or expansion of the sound envelope and Erosion, which distorts the sound and gives it a 'low-fi' finish. Like most Ableton plug-ins they can be midi-mapped allowing the parameters of the plug-in to be controlled via my foot pedals or USB controller.

Ping Pong Delay creates a delay and bounces it from one side of the stereo pan to the other in the manner suggested by its name. This plug-in is effective in creating an immersive aural environment disguising the attacks of shorter sounds and swirling longer sounds across the stereo image. I used this plug-in to process long breath sounds to enhance the sense of the movement of the breath in space.

When working with breath sounds I also, at times, employed the Resonator plug-in, which alters the timbre of a sound and gives it a tone or pitch even if the original signal is unpitched. I used this plug-in with the pre-set⁴ *Berlin* often to create a drone often in conjunction with a reverb pre-set called *Frozen Build Up* (Appendix 1C. Track 4). This reverb has an extremely long decay and a shimmering sound quite unlike that of conventional reverbs that attempt to mimic the sound of a room. At times *Frozen Build Up* can sound almost like feedback, leaving notes reverberating for many seconds allowing an opportunity for further processing of the sound or the creation of dissonant or consonant harmony through the layering of other notes.

The plug-ins mentioned above process the sound in a 'linear' manner, which means, in simple terms, they 'filter' the sound. There is another type of processing called granular synthesis, which Opie describes as "a method by which sounds are broken into tiny grains which are then redistributed and reorganised to form other sounds" (2009). Granular synthesis has a rich history in contemporary music since it was first pioneered by Gabor in the forties and later used by Xenakis and other composers who created the effects by cutting up tapes. There are a range of plug-ins I used during this project that process the

⁴ A pre-set is a set of pre-programmed parameters that can be chosen when using a plug-in.

sound via granular synthesis including Transverb and Scrubby, which are both made by a company called Destroy FX.

The Hipno suite of plug-ins, made by Cycling 74 the creators of MAX MSP, also employs granular synthesis as a primary mode of processing. I focussed on one of these plug-ins called Drunken Sailor throughout the course of this project. Drunken Sailor is particularly interesting and effective because of the way its 'buffer' works. It samples a small amount of material and then processes it using numerous parameters, which change depending on where the puck is located in the coloured circle (see Figure 1).

The position of the puck can be controlled using the expression pedals on my foot pedal board enabling a very intuitive approach to the processing parameters. This can be observed in the concert footage recorded at La Mama Music in which I use Drunken Sailor as the primary processing tool in the beginning of the first piece (Appendix 3. Episode 1).

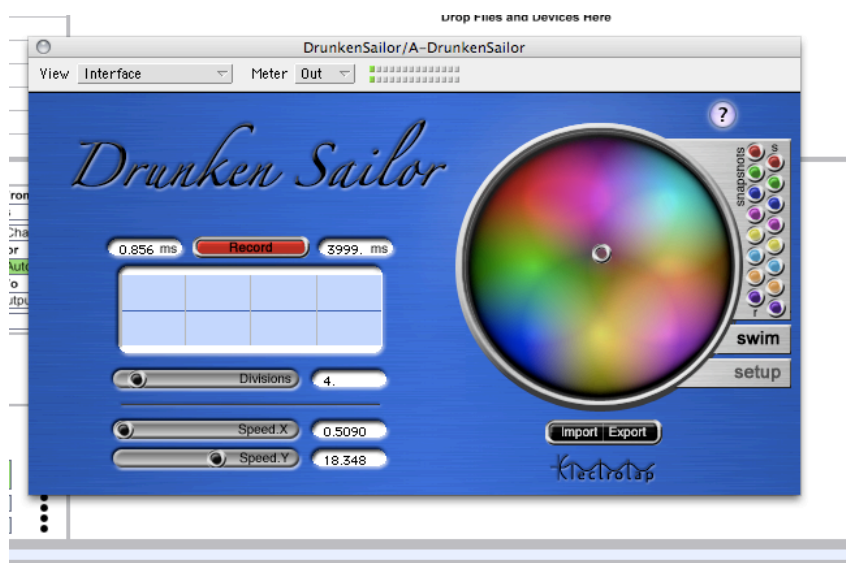


Figure 1: Ableton Live screenshot of 'Drunken Sailor' plug-in

Drunken Sailor can be a hard instrument to control or predict but I enjoy the randomness and have stumbled across sounds I would never otherwise have found. (PK Journal entry 06/05/2009)

EXTENDED TRUMPET TECHNIQUES

In addition to the time spent developing my digital processing environment during the

course of this project, I also focussed on extending my range of acoustic extended trumpet techniques. These form much of the raw material that I use for the electro-acoustic manipulations carried out in Ableton. As mentioned in my introductory paragraphs, one of the limitations I placed on this project is to only use sounds I can produce with the trumpet. Limiting my sound palette in this manner has helped bring focus and consistency in terms of how I work with the computer and it has also helped to push me into interesting realms of trumpet playing.

The world of extended techniques in trumpet playing continues to be explored by a number of significant players. This is evidenced in my survey of solo trumpet recordings, which reveals a range of idiosyncratic extended techniques in addition to the large number of techniques that have become standard in contemporary trumpet playing. These standard techniques include: 'flutter tonguing,' where the trumpeter flutters the tip of the tongue during the production of a note as if rolling an 'R' in the Spanish language; 'growling' in the back of the throat to partially obstruct the air thus preventing it from flowing evenly creating a rough 'growling' timbral variation in the sound of the trumpet; double and triple tonguing, which employ the syllables 'ta-ka ta-ka ta-ka' or 'ta-ta-ka ta-ta-ka ta-ta-ka' respectively (Appendix 1A. Track 1); and 'doodle' tonguing where the player double-tongues so lightly that the articulation is barely discernable. Glissando is also common in contemporary music, where trumpeters slide between notes by depressing the valves halfway and changing the lip tension. So too is vibrato, which is often regulated in contemporary repertoire through specific notation and employed idiosyncratically in improvisation.

In my playing I employ all of these standard techniques, and during the course of this research also developed my own personal approaches and preparations. As I outline in paragraphs to follow some of these were influenced by the languages of other players who I have worked with, others come from players I have heard live and on recordings, and some I have 'discovered' myself. With these techniques I am able to create sound worlds that are abstract yet specific to the trumpet. They include:

- **Glottal stop:** This creates a deep percussive sound that functions very effectively as raw material for processing with any of the plug-ins I have mentioned (Appendix 1C. Track 1). I learnt this technique from my colleague, the Australian bass trombonist Adrian Sherriff, who uses it extensively.
- **Un-pitched breath sound:** One of the fundamental timbral and textural effects of this work. As mentioned elsewhere, I have been influenced in the use of these sounds by the German trumpeter, Axel Dorner (2004), who has developed a unique aesthetic using the breath blown through the trumpet almost exclusively. This can sound 'peaceful' or 'violent' and is infinitely variable. I tend to process it using resonators, which add pitch and thus disguise the sound source completely. 'Destructive' effects like 'Transverb' also disguise the sound source and the variation in texture that can be achieved with breath sounds stimulates interesting permutations in these plug-ins (Appendix 1C. Tracks 3 & 4).
- **Slide removal preparation:** By taking out the first or second valve slide out (see Figure 2.) I can create radically different timbres depending on which combinations of valves I push down. If I remove the middle slide and play with the middle valve out then the air and sound escapes from the slide opening instead of through the bell. This not only changes the timbre but also the tuning creating a detuned effect when played against the regular timbre and tuning of notes played without the middle valve depressed (Appendix 1C. Track 5). The Australian trumpeter, Scott Tinkler, who is mentioned in Chapter 2, makes striking use of this preparation on various albums. I have certainly been influenced by him in this regard but have also attempted to develop my own approach.
- **Valve popping:** This is a technique I discovered for myself as a boy pulling my trumpet apart. When the first



Figure 2: Trumpet with middle slide removed

or third valve slide is pulled, pressure builds up. It can be released by popping the slide all the way off or by depressing the valve corresponding to the slide being pulled. When the valve is depressed, the air pressure is released creating a popping sound (Appendix 1C. Track 6). I am aware that other trumpeters employ these sounds but my use of them was not inspired by any other examples.

- **Harmon mute overtones:** This is another technique I discovered for myself one day while playing quietly in a reverberant stairwell. I have not heard any other examples of this particular approach. With the metal Harmon mute in the trumpet I place my fingers across the opening of the mute to create very subtle harmonic overtones that change as I move my fingers. This effect works well when the microphone is placed close and when the setting is minimal (Appendix 1C. Track 7).
- **Clarinet mouthpiece flugel horn preparation:** There are many examples of musicians using reed mouthpieces on trumpets including notably Rashaan Roland Kirk, and French trumpeter, Christian Pruvost, who has influenced me and who uses a soprano saxophone mouthpiece on a trumpet. I use a conventional clarinet mouthpiece placed over the leadpipe of my flugel horn. I then blow it with a clarinet embouchure and use the valves to alter the notes producing low drone sounds. I also use my teeth on the reed to create high pitched, chaotic squealing (Appendix 1C. Track 8). In addition, I can change the harmonic series and thus the pitches produced by opening and closing water keys on the horn, which has the effect of altering the harmonic series of the relevant section of tubing in a similar manner to the keys on a saxophone. I have not come across anyone who uses a clarinet mouthpiece on a flugel horn and while this is not innovative in and of itself I do believe that the sound palette I have developed is unlike any other examples I have discovered.
- **Valve clicks:** I loosen the valve caps to create a clicking percussive sound, which creates an interesting effect when the microphone is placed close to the bell as the clicking resonates through the instrument (Appendix 1C. Track 9). This is another technique I developed as a boy taking my trumpet apart and putting it back together again.

- **Mouthpiece removal preparation:** (See Figure 3.) This produces an ethereal flute-like sound (Appendix 1C. Track 10). It is hard to control and has required the development of a different embouchure but has also added a completely different timbre to my range of available sounds. The sound is also incredibly intimate and occupies a very different acoustic space than does the natural sound of the trumpet (Appendix 1C. Track 10). This approach is used, as mentioned, by the Norwegian trumpeter, Arve Henriksen, who has had a significant influence on my practice.



Figure 3: Playing trumpet prepared by removing the mouthpiece

PREPARATION FOR RECORDING

My approach to this project was to develop a number of 'areas of investigation' as starting points for improvisations with the aim of covering various extended techniques and approaches to processing. I conceived of these 'areas of investigation' as open form compositions: they set the parameters of the work, the digital environment, and they broadly defined the outcomes desired for each piece.

Post-production was also envisaged as having an important role in developing the ideas set in motion through the process of improvisation, facilitating a fluid relationship between the modalities of pre-composition, improvisation and post-composition.

Along with the engineer for the project, Myles Mumford, I made a plan for recording based on these 'areas of investigation' and developed a two-day schedule for recording five pieces with which to work in the post-production process:

1. **Looping:** Generally in my solo practice, when I use looping I try to obscure the repetition by triggering various similar sounding loops with enough variation to distract the ear from the process that is creating the music. However, for this project I wanted to create a kind of a 'process piece'⁵ using looping in an improvised additive fashion where the looping becomes the central feature of the work.
2. **Clarinet mouthpiece preparation:** I also planned to record several improvisations playing flugel horn prepared with clarinet mouthpiece and processing this live with Transverb and Scrubby. I had been working with this combination for quite a while and had developed some distinctive techniques and sounds.
3. **Beat marking:** One of the foci of my solo work for this research was live sampling of the trumpet and the manipulation of these samples using the beat marking function of Ableton. This function makes it possible to stretch or squash sampled sound events to manipulate rhythmic outcomes. This is an interesting area of investigation and one that embodies something of the rhythmic aspect of electronic music. I wanted to base one of my pieces on this technique.
4. **Impulse:** I aimed to make a piece using the Ableton Impulse drum machine, which is a powerful MIDI⁶ instrument. My plan was to create a palette of sounds on the trumpet to be used in the sampler to develop rhythmic loops. I pre-recorded sounds including, slide popping, glottal stops, squeaks, valve clicks and hand pops on the mouthpiece. I then edited the material and cropped it into short percussive samples and loaded it into the sampler in preparation for improvising several passes using this material as the basis for laptop improvisation and composition.
5. **Panning sound sources:** Unconventional approaches to microphone placement were also an area of interest for me in this project. In particular I wanted to explore the effects that can be created by taking the middle slide out of the trumpet and fixing a small microphone close to the opening, then using that in combination with a

⁵ 'Process music' is a term often associated with minimalism, and in particular with Steve Reich, that refers to a mode of composition in which the process used to create the piece is made audible. A famous example is György Ligeti's *Poème Symphonique* (1962), in which a hundred metronomes are set to different tempos and allowed to run down.

⁶ MIDI stands for Musical Instrument Digital Interface and is a system digital messages about pitch and intensity that allow computer based musical instruments to trigger sounds.

regular microphone placed close to the bell of the instrument. In this way, when the middle valve is depressed and the sound is emitted from this place, it is clearly differentiated from the sound that comes from the bell (when any combination of valves that doesn't include the middle valve is used). This enables these differentiated sounds to be processed in contrasting ways or simply panned in the stereo image creating an interesting side-to-side movement as different combinations of valves are deployed.

THE RECORDING PROCESS

I work well when I have a clear goal and I can imagine the steps I need to take to achieve that goal. In my instrumental practice and in my 'conventional' composition practice I am familiar with 'the way things work.' I can predict the problems that I may encounter when creating a piece of music and I have clearly defined tools to deal with these problems. With electronic music making I am not at all sure of the territory, which keeps growing and morphing each time I enter it. Ableton Live alone is a huge program that I learn something new about each time I sit down to work with it. (PK Journal entry 2/4/08)

The process of recording went roughly according to plan despite the misgivings expressed in the journal entry above. We covered most of the areas outlined in our 'map' of the project with the exception of area three (live sampling and beat marking manipulation). This was not entirely unexpected or unwelcome as once we started recording, certain approaches seemed to offer so much promise that we ended up putting more time into them. I was very keen to maintain an open approach to the work as much as possible and so followed the direction that was inspiring me at any given moment even if it meant veering from the plan, as I explain in the following journal entry from the time:

The best moments in the recording process were unexpected and arose spontaneously. At times I would sit down to do work on some particular kind

of sound or approach, if nothing was 'happening' I would then try something completely different, these were often the moments when the music really went somewhere exciting. (PK Journal entry 3/3/2008)

We set up the recording up in a large ambient room at the place where I live (which is an old factory). We tested a number of microphones in the space to choose something appropriate to use as close microphones. We recorded examples using four: an AKG C414 condenser, a Fathead ribbon microphone, a Beyerdynamic M88, and a copy of an AKG C12 condenser. This enabled us to hear them side-by-side. It was clear straight away that the best of the lot was the C12, which has brightness and detail but also a very warm mid-range (Appendix 1C. Track 11). I was also attracted to it because it has less of a 'tone' than the other microphones. It seems to capture a 'truer' sound.

We proceeded using two C12s and recorded everything I played using these as close microphones with each one being spilt into two feeds one of which went to my laptop via Mbox⁷ to be processed in Ableton Live, and the other into Myles' laptop recorded dry through a high quality RME Fireface⁸ soundcard onto Digital Performer⁹. There were also two room microphones recording the trumpet and the ambience of the room going straight into Myles' laptop. This

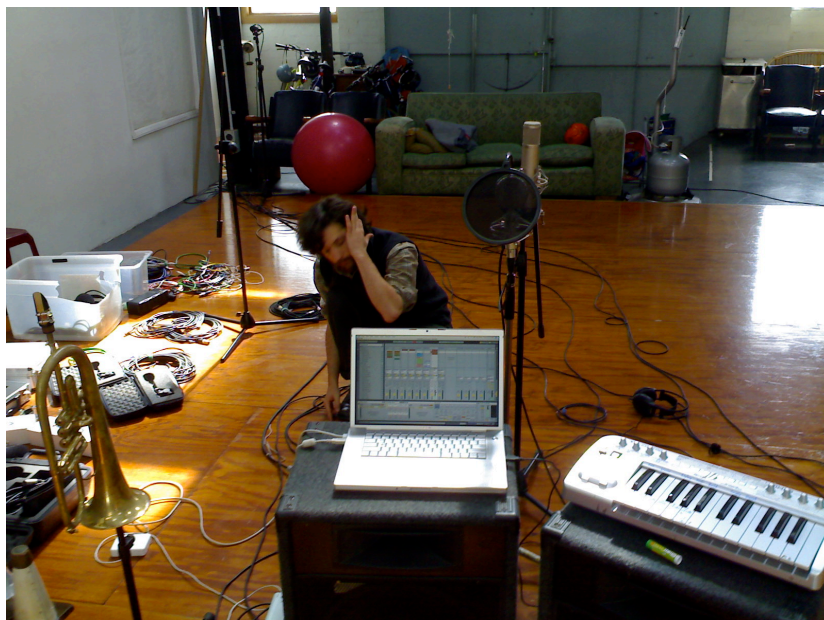


Figure 4: Studio set-up for solo recording

⁷ Pre-amp and audio interface

⁸ High quality pre-amp and audio interface

⁹ Audio recording and editing program

allowed us maximum flexibility in the post-production process and the highest quality we could afford in the recording process. We then flew the material recorded by Myles into Ableton on my computer after recording to make it easy to access in the post-production process.

The one unexpected issue that we encountered was ambient noise caused by the wind. Because we were recording in a factory space, as distinct from an acoustically treated studio, it was not soundproof. This would not normally be a problem except that the week that we were recording was extremely windy. The sound could be heard clearly in the room microphones, (less so in the close microphones). We decided to proceed anyway knowing that we had the option not to use the recorded sound captured with the room microphones if it did not suit the final choices to be made. During the editing process, however, I discovered that in certain places the wind captured in the room microphones gives a strange atmosphere to the recording so I faded them in and out at different times such as in the beginning of the first piece on my CD of finished works (Appendix 1A. Track 1).

POST-PRODUCTION

I was satisfied with the material we recorded and although I did edit some pieces quite heavily I did not really change the overall sound or structure of the material to the extent that I had planned. Most of the editing undertaken was done to create focus on aspects of the music that seemed important to me rather than to change it in more fundamental ways. I had intended to employ 'post-composition' processes wherein I would develop the works sonically and thematically by restructuring improvised material, but after listening to the recordings we made I felt that the pieces that 'worked' for me had an energy that I did not want to interfere with.

The mixing and mastering of the material, as appropriate for a solo project, was fairly basic and really involved little more than making fine adjustments to balances and levels, and applying some simple compression across the tracks to bring out as much detail as

possible.

TRUMPET AND GUITAR AMPLIFIER

An additional line of enquiry that I developed after the recording sessions described above involved the use of a guitar amplifier. I was inspired by the recording, mentioned in Chapter Two, by Nate Wooley, *Trumpet/Amplifier* (2010), in which he uses an amplifier with the trumpet to create a range of effects including through the use of feedback. I created my own set-up using a small microphone taped to the bell of my instrument. I then ran this microphone into a volume pedal, then through a RAT distortion pedal then into the amplifier. I had another microphone (C12) set up as well that went straight to the computer to capture the natural trumpet sound. I then also put a microphone (SM58) on the amplifier and ran that to my computer.

This set-up enabled me to generate and control feedback from the amplifier through the use of the volume pedal. I could set the feedback off using the clicking of valves or with breath blown through the trumpet and also then process the sound of the feedback. I used these sounds in juxtaposition with the sounds of the 'clean' trumpet to create a dialogue between the two (Appendix 1A. Track 3).

THE FINISHED WORKS

On completion of the editing, mixing and mastering I chose five pieces from a larger number of recordings made employing the parameters of the plan I set up at the beginning of the recording. I identified these as the strongest examples of the material recorded, but I also looked for pieces that would go together well to create a unified whole – an album of works.

Piece 1: *Instant Composition 1*

This piece focusses on the layering of looped trumpet samples, which are recorded and

processed in real time. The playing technique I used to achieve the effect heard in the loops that begin the piece is 'double tonguing' as described in earlier paragraphs (ta ka ta ka ta ka). Also audible in the initial moments of the work is the sound of the wind blowing across the roof of the recording space. The trumpet loops are mostly unprocessed and gradually accrete before being turned off one by one. At the very end of the piece one of the loops is reversed and subtly processed using the Transverb plug-in.

The recording, included in my folio (Appendix 1A. Track 1), was only altered subtly in the editing and mixing process. I neatenened some of the loops, adjusted the volume balance between the parts, and subtly edited the overall piece for length, but the work retains the shape and gestures of the original improvisation. Once I had made these adjustments I also panned the parts to give a greater sense of acoustic space then applied EQ and compression to enhance tone and detail. This final process was also applied in each of the following pieces described.

The success of this first improvisation lies as much in the process as the product, especially in terms of my research framework: the relationship between composition and improvisation is fluid and each process is indispensable in the creation of the piece. The spontaneous musical gestures develop from a pre-conceived structure and digital processing environment.

There is no score, however the live set¹⁰ is an effective visual record of the structure of the piece (see Figure 5).

¹⁰ Improvisation in the Ableton platform can be 'recorded' into a 'live set'. The live set saves all the data necessary to play the set back including sound files, basic automation (volume, panning etc) and detail automation parameters in plugins.

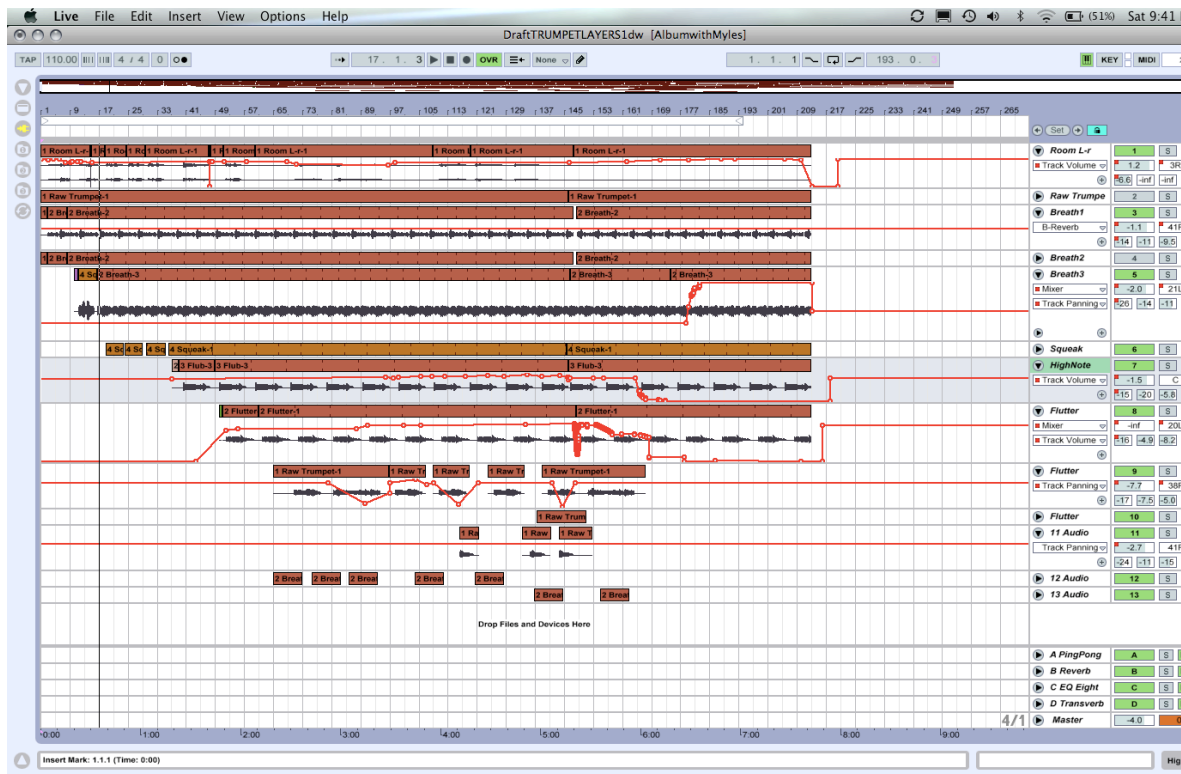


Figure 5: Ableton Live screen shot of Instant Composition 1 the 'layered' trumpet piece. This forms a score of sorts.

Piece 2: Instant Composition 2

The starting point for this piece was similarly framed around a specific digital environment (the Scrubby and Transverb plug-ins) processing the flugel horn played with a clarinet mouthpiece. However, the improvisation that we recorded developed in a very different direction from that which I expected. I recorded a short improvisation in a manner I had planned and was about to finish when I noticed a small looped melodic fragment that kept repeating. The fragment I was hearing was a sample captured in the Transverb buffer¹¹. There is a pause in the recording (Appendix 1A. Track 2. 3'00") where there is nothing else audible on the track.

Instead of finishing, I began to play the trumpet with Harmon mute using my fingers to

¹¹ The buffer is a sampler that is a component of the granular synthesis plug-in in which the 'grains' of sound are stored.

create overtones as described in my list of extended techniques detailed earlier in this chapter. Responding to the looped fragment, I improvised variations on a short melodic figure and enjoyed the 'shadowing' pitch-shifted delay on my trumpet that is audible on the finished recording though I had no idea what was creating it. This is something that happens occasionally when using multiple processing platforms: I forget exactly what it is that is open on a particular track or what the setting is on the plug-in being triggered. And I like the feeling of not being in control, of just reacting to what I am hearing. In this case I just kept playing, did not look at the computer, did not try to trace the source of the delay.

The resulting piece is in two distinct halves contrasting in tone, rhythm, and texture. I left it almost untouched in the mixing and editing process as the quality and energy of the piece seems to embody a logic that I did not want to disturb. It's interesting to me because I know that I would never conceive a work like this and perhaps that is one of the aspects of improvising that has held my interest for so long – the process leads you to unexpected places. This is also one of the fascinating things about the digital processing environment: it is never totally predictable and can also facilitate the unexpected.

Piece 3: *Trumpet, Amplifier and Laptop*

This improvisation is based on the sound worlds created by the trumpet processed through the laptop (in particular with the *Frozen Build-up* reverb pre-set) and the trumpet played through a distortion pedal and guitar amplifier. I mentioned earlier that I had drawn inspiration for this piece from Nate Wooley's experiments with the trumpet and guitar amplifier and I deliberately referenced the title of his album in the title for my work.

The addition of the laptop adds an extra dimension to this formation and I used the potential it creates to extend the feedback sounds by employing the Scrubby plug-in to process them. This develops quite a harsh jagged sound, which I contrasted with the floating ethereality of trumpet played without the mouthpiece and attempted to create a sense of dialogue between these sound worlds so the piece might resemble a duet. I had this idea very clearly in mind when I began working with the amplifier in this

manner and the approach I took seemed to be strongly suggested by the contrasts available. I had no other particular preconceived structure though, and I recorded many versions of the piece before I managed to capture the one I have included here (Appendix 1A. Track 3). This is largely because it took quite a lot of practice before I was able to get the balance right between the two elements and the trumpet was often swamped by feedback in early versions. The amplifier is quite hard to control because the tone created is dependant not just on the input from the trumpet but also on the proximity of the trumpet to the amplifier as well as the strength of the signal attenuated using the volume pedal. In addition, the response of Scrubby varies greatly depending on the attenuation of each of the two expression pedals on my FCB 1010 controller and the combination that arises, so it is impossible to know exactly what is going to be produced.

As with *Instant Composition 2*, my music here seems to thrive on the chance elements that I describe. I am an improviser, at least in part, because I like to respond to what I hear and because I enjoy hearing the unpremeditated responses of others. Perhaps the unpredictability of the electronic environments I have created in this project somehow mimic an ensemble setting in a way with the computer and the amplifier in this case becoming other 'players.'

Piece 4: *Music for Trumpet and Laptop*

This piece contrasts greatly from the others included in this solo project most obviously because it is pulse based (Appendix 1A. Track 4). It also represents a mode of creation closer to conventional composition than that of the improvisations I have been discussing even though there is no notation involved.

As previously outlined, the sonic palette was created employing a range of sampled sounds made using the trumpet in unconventional ways, which were loaded into the Ableton Impulse drum machine. I then used these samples in conjunction with plug-ins including Grain Bandit and Drunken Sailor to develop the piece by improvising several passes followed by overdubbing and editing. I played the parts by triggering Impulse with the

keyboard of the computer played with my fingers, and once I had created a basic structure that I was satisfied with, I began the editing process. MIDI language is very flexible to work with as a studio composing and improvising tool because the range of parameters that can be easily altered is much greater than is possible for audio files. With any given part, the sound triggered by Impulse can be easily changed, as can velocity, intensity, pitch, duration and myriad other variables.

This flexibility enables completely different ways of engaging with the materials at hand. Importantly, one of the things that I was interested in when I created *Music for Trumpet and Laptop*, was referencing other forms of electronic music, thinking in particular of groups such as Autechre, which combines elements of dance, pop, experimental and art music on albums including *Quaristice* (2008). Using the technology in the way that I developed in this piece facilitated this engagement, in which I imagined a sound world that would emanate from the trumpet and be recognisable as emanating from the trumpet but that would not really sound anything like one expects the trumpet to sound. Vitally though, and as I stated in Chapter Two, I wanted to create an auralty that could not exist *without* the trumpet.

Piece 5: *Breath and Fingers*

I conceived of this piece as being literally about my breath and my fingers and the sounds they make in and on the trumpet. These are some of the sounds that are traditionally considered 'impurities' to be avoided in the production of 'tone.' *Breath and Fingers* emphasises these undesirable sounds: the hissing of air, the clunking of valves and the squeak of a 'misplayed' note. An essay by Henry Cowell, entitled 'The Joys of Noise' is relevant in which he states, "Since the 'disease' of noise permeates all music, the only hopeful course is to consider the noise-germ, like the bacteria of cheese, is a good microbe, which may provide hidden delights to the listener, instead of producing musical oblivion" (In Cox & Warner, 2007, p. 22).

To explore this 'noise-germ' the piece employs the microphone placement techniques already described in which I take out the second slide and affix a small microphone as well use a regular microphone on the bell. In the opening of *Breath and Fingers* there is no processing other than a stereo pan between the two microphones and we hear the breath and valve clunks dancing from side to side before a high pitched whistle that I make in the mouthpiece joins the movement. There is a distinct shift that occurs at about one minute where I begin to live process these sounds using Drunken Sailor and Scrubby, the processing intensifies yet the core of the sound remains discernable throughout the piece.

LIVE PERFORMANCES

In addition to the recording sessions undertaken at my studio I recorded two live performances during the course of this project. One of these was done at a concert in Brisbane as part of the contemporary music series, Disembraining Machine, on 26th May 2010 (Appendix 1D. Track 7). I have included it as this one performance coalesces much of what I worked on in during the course of *Allotrope*. Unlike the studio recorded material it is unedited and considerably longer than the tracks included in my CD of finished works. It traverses three sound worlds: breath sounds processed through Drunken Sailor and Scrubby, trumpet played without the mouthpiece and processed through the same environment with the addition of Grain Bandit, and valve clacks created by loosening the hardware on the trumpet so that it makes a harsher clicking sound.

I have also included video documentation of two pieces from a performance in Melbourne at La Mama Musica on 22nd June 2009. These are good examples of the practice I have developed. The first is focussed on breath sounds processed through a plug-in environment including Drunken Sailor, Transverb, and Scrubby (Appendix 3. Episode 1). The second develops a drone by processing looped breath sounds using the Resonator plug-in; this drone becomes the bed for a conventionally played trumpet improvisation (Appendix 3. Episode 2).

REFLECTIONS

In this project, as in my music practice in general, it was important for me to somehow create a balance between the conceptual and the direct. In my discussion in Chapter Two I outlined this distinction by highlighting the differences between the approaches of trumpeters such as Axel Dorner and Arve Henriksen, and towards the end of the chapter, between The Necks and Derek Bailey. I wanted this project to occupy a space somewhere between these contrasting conceptions: to invite melody as well as abstraction, to be conceptually interesting and also sensual, to balance the Apollonian and the Dionysian.

Whether I succeeded in these artistic aims it is hard for me to say and in truth it is difficult to evaluate one's own work. Certainly though, in the course of this project I challenged my own conception of the trumpet and succeeded in terms of the research parameters I created for myself. I found new ways to broaden my practice using extended trumpet techniques, trumpet preparations and laptop electronics while also connecting with my own history with the instrument: a learning based in jazz, rooted in melodic expression and a mode of improvising coming from, to use Lewis's term, an "Afrological" (2004) paradigm. In this way most of all I feel satisfied with *Allotrope*: it brings together, somehow, my musical history with my biography and my sense of now. I am engaging with contemporary conceptions of the instrument, with ideas about what jazz can be, with my culture as I find it today.

CHAPTER 6: *FISH BOAST OF FISHING* – DEVELOPMENT OF NEW WORKS FOR IMPROVISING SEXTET

I like to make music that is odd and perhaps challenging but that also draws the ear – that is inviting. When we think of our physical responses to things we see for the first time we notice that some unfamiliar objects make us naturally recoil in surprise or shock. Other unfamiliar objects make us want to move closer to look and to satisfy our curiosity. This is the kind of response I want to create with my music – Barry Bignell describes it as 'hearkening'. (PK Journal entry 25/7/2009)

In this chapter I detail the development of my project for improvising sextet, *Fish Boast of Fishing*. The process involved three phases: development, composition, and rehearsal/recording. The development phase involved a series of duo workshops, as well as trio and quartet performances with the musicians who would eventually form the sextet. From these sessions I drew ideas for the composition phase that followed. On completion of the compositions the ensemble convened for four days of rehearsal and recording. The finished works are presented in CD form as a major component of this research output (Appendix 1B) and scores (Appendix 2). In addition, audio documentation of the first two phases of the project is included (Appendix 1C & 1D).

Many of the understandings gleaned from *Allotrope* were carried into *Fish Boast of Fishing*, although, given the two projects overlapped chronologically, perhaps it is more accurate to say that there was a cross-fertilisation of ideas between the two. The notion of open form structures facilitating improvisation directed towards a pre-conceived end is shared between the projects, though the nature of these structures is completely different. In *Fish Boast of Fishing*, as I detail in paragraphs to come, notation was an important component in the development of form, whereas in *Allotrope* the structures were created through the development of digital environments. The digital environments themselves, refined in *Allotrope*, were used for live processing of the trumpet in *Fish Boast of Fishing*. The results created using

these environments can be discerned in each of the *Fish Boast of Fishing* audio tracks (Appendix 1B).

THE PROJECT

The initial motivation for *Fish Boast of Fishing* developed out of a desire to compose a suite of works integrating the improvisatory syntax of the players comprising the ensemble:

- Peter Knight, trumpet and laptop
- Adam Simmons, contra bass clarinet
- Frank Di Sario, double bass
- Erik Griswold, prepared piano
- Vanessa Tomlinson, percussion
- Joe Talia, drum kit

My broad aims for this work were to develop and employ a mode of expression that draws on genre and idiom without being defined by either, and compositional structures that create possibilities for improvised content within larger pre-defined fields. The research focussed on improvisation around specific ideas and structures that emerged from considerations of instrumentation and individual approaches to improvisation specific to each formation. The goal of these collaborations was to explore combinations of trumpet (both natural and processed) and the other instruments making up the larger ensemble, as well as to develop a deeper understanding of the improvisational processes employed by each individual musician involved in the project.

The development and composition phases of this project involved refining notation that refers to player specific techniques and vocabulary. Each of the performers involved in this project, as well as being an accomplished ensemble player, has a highly refined 'personal voice' and an evolved array of idiosyncratic techniques. These

techniques variously engage with elements including rhythm, dynamics, timbre, extended techniques, density, and combinations of these. I created simple approaches to notation and discussed with each player the clearest way to produce the effects explored. As mentioned previously my aim was to create compositional frameworks and notational systems that allow these individual voices to 'breathe' whilst simultaneously developing an overarching compositional form. In short, I wanted to allow improvisational process to inform my composition practice and for my compositional structures to shape improvised content.

PHASE ONE: DEVELOPMENT

As outlined above, the development phase of this project involved a series of duo format collaborative workshop sessions with the musicians involved in the project, as well as two trio performances, and a quartet performance. In the paragraphs that follow I briefly describe these sessions, outline some of the instrumental techniques explored, and discuss the outcomes achieved. It is hoped this detail will enhance the listener's experience of the final recordings in my folio by contextualising this listening experience in terms of the creative process employed in the development of the music.



Duo development with Erik Griswold

Figure 6: Erik Griswold 'preparing' the piano at Allan Eaton Studios

Erik Griswold and I undertook numerous development sessions together with most of

this time spent working with different preparations¹ for the piano in an improvised context. Erik uses several approaches to preparing the instrument each with important implications for the creation of my compositions. One of his characteristic preparations is heard on the solo album, *Other Planes* (2000), where the piano is prepared in 'planes' so that it produces several different tuning sets and sound worlds depending on which key it is being played in. For instance, F major scale might have a particular sound that contrasts with that of F# major and so on. The tuning of each plane is altered depending on the placement of rubber stoppers and screws which affect the harmonics of the strings between which they are placed.

Erik also prepares the piano in segments based on the low, mid and high registers, which are treated differently to produce different textures and harmonic effects. For instance, he may leave the top register untreated but prepare the mid register to produce an altered tuning with gong-like sounds. The bass register could then be treated to produce contrasting buzzing sounds.

The third preparation we experimented with leaves the tempered tuning of the instrument largely intact. The interventions act on the timbre and texture of the notes and these variations are spread across the registers. During our workshop sessions, this preparation consistently led to improvisations (Appendix 1C Track 13) with a high degree of interaction, timbral variation and thematic development. This surprised me at first but, on reflection, the fact that I could play and respond to sounds produced by the piano without having to adapt my improvisatory process to an altered tuning system probably helped me to develop a sense of 'flow,' which Csikszentmihalyi (1990 p. xi) associates with a sense of undistracted absorption in a task. The textural variations present in this piano preparation, spread across the whole register of the instrument, also seemed to stimulate my creativity and perhaps

¹ The term 'prepared piano' refers to modifications (usually temporary) applied to the piano including objects placed on and between the strings. These 'preparations' usually involve the use of screws, washers, rubber stoppers and pieces of paper, which can change the sound and tuning of the piano quite markedly. John Cage is associated with prepared piano and was one of several composers who pioneered these techniques. His most famous works for prepared piano are *Sonatas and Interludes for Prepared Piano* (1960).

led to this high level of interactivity.

It is interesting having a quick listen to the material we recorded – it felt pretty ordinary when I was actually playing... like I had no ideas and I couldn't land my lines in interesting places. However, towards the end of the second recording I started to get a bit of a flow with Erik and recorded about four minutes of really good stuff. (PK journal entry 4/8/07)

Having reviewed the recordings we made and discussed them with Erik, I decided to use this preparation for the whole project as it facilitated the composition process by enabling me to treat the piano as I would normally in terms of harmonic systems. In addition, I knew that it would also make the recording process more efficient as changing preparations between recording separate pieces would be time consuming and I felt it could interrupt the energy of our recording sessions.

Duo development with Vanessa Tomlinson

My sessions with Vanessa focussed mainly on her current practice utilising plates, bowls, saucers and other household items. I have heard Vanessa perform in a wide variety of settings on a range of percussion instruments (tuned and untuned) and I had several ideas about what I wanted to hear. However, I decided to leave it to her to focus on the sound world(s) she was most interested in.



Figure 7: A version of Vanessa Tomlinson's percussion kit

The sessions revolved around Vanessa's detailed micro-gestures produced on these 'found' instruments played with light sticks, and concentrated on texture and density over rhythm (Appendix 1C. Track 14). During the first session I processed my trumpet and investigated a percussive, abstract approach; in the second session I worked on the natural trumpet and focussed on interaction employing extended trumpet techniques such as slide removal and embouchure distortion as well as more conventional approaches.

It was particularly exciting to me that my processed trumpet worked with Vanessa's sounds so well. Many of the textures I produce by processing the trumpet through Ableton plug-ins are very percussive and there seemed to be an immediate connection there with Vanessa's vocabulary and approach to improvising. There is also an intimacy that she can and often does produce, which I relate to strongly. She has the tendency to draw the listener into her world creating a sense of 'hearkening,' which I mentioned in the journal entry quoted at the beginning of this section.

Duo development with Frank Di Sario

I have a long history of working with Frank in many different situations from straight-ahead jazz to avant-garde improvisation. I know his playing extremely well and yet we had never really spoken in detail about his specific techniques and approaches to improvisation until this project. Our duo development sessions were mainly concerned with identifying and discussing various techniques I have seen him employ and the physical limitations inherent in each. I wanted to be sure that if I incorporated specific textures that they would be physically possible in terms of duration and context. We also spoke about the best ways to notate these techniques.

One of the most physically demanding techniques Frank employs involves the vigorous strumming of chords, which produces a rumbling or 'thrumming' sound depending on the register (Appendix 1C. Track 15). This sound can be notated without recourse to strict rhythmic subdivision in a manner similar to the notation of a snare

roll. However, the effect (unlike a snare roll) has a limit in terms of duration; Frank describes it as, "instant blister material" and so it must be used sparingly. This technique can also be augmented by threading a train ticket (or similar piece of card) between the strings near the top bridge of the bass creating a buzz texture. Frank also employs this 'train-ticket preparation' to great effect in ostinato figures. The buzz texture, when introduced in conjunction both with strummed chords and ostinato lines, blends very well with the buzzing textures in the bass of the prepared piano.

In addition to these techniques, Frank and I also catalogued and recorded many of the natural and artificial harmonics² that can be produced on double bass and the limitations in terms of physical movement required to produce different combinations and sequences of these harmonics (Appendix 1C. Track 16). These harmonics are often produced using pizzicato attack but can also be produced with the bow (arco), for instance by 'feathering' across all four strings while at the same time lightly touching the strings above the finger board. Using this technique Frank produces extreme high register pianissimo tones that jump across intervals. He also employs the bow to produce a series of other abstract textures including a sustained vibrato, a faint breathy tone created by turning the bow over and drawing the wood across the strings (*col legno tratto*), fast staccato notes created by tapping the bow on the strings, and an unpitched breathy sound produced by drawing the bow across the body of the instrument.

Frank is an incredibly generous musician. We have played so much together that I feel totally at home with him. In a sense the work for this project with Frank has been done over the last ten years. (PK Journal entry 2/3/2009)

Duo development with Adam Simmons

² Bass harmonics (also called 'flageolet tones') are played by lightly touching the string on a nodal point above the fingerboard and plucking or bowing it at the same time creating a ringing tone that is considerably quieter than a conventional arco or pizzicato note.

As with Frank Di Sario, I have an ongoing association with Adam Simmons that began around ten years ago. I have not played with Adam as often as Frank, but I do know Adam's playing quite well. I wanted to work with him on this project because of the wide range of his practice both in terms of approach and instrumentation. Adam plays a large array of reed instruments including all the clarinets and saxophones as well as flutes and shakuhachi. In my original concept I was open to working out exactly what he would play depending on what suited the pieces as they developed. However, during the time we spent together in our sessions we decided together that it would be better to focus on one instrument and explore its possibilities thoroughly. Adam feels more comfortable doing this and as we worked together it became clear that the contra bass clarinet could do everything I needed. It has an enormous range both in terms of pitch, timbre and expressive possibilities. It retains the 'character' of the clarinet but can also create sounds that one would not expect a clarinet to produce. During our sessions we worked through a range of effects and textures and tested them with the trumpet. As this is an instrument I was not very familiar with before these meetings there were a number of straightforward 'craft' issues to cover concerning range, dynamics, notation and so on.

We also improvised together investigating the textures and techniques Adam identified as integral to his personal approach to the instrument. One of the first textures we worked with employed barely audible sub-tone low register notes that shift from a tone to an unpitched breath sound and back again creating a subtle and just perceptible transition (Appendix 1C. Track 17). This is a strange effect: it's almost as if you don't hear the note until it stops playing and then you notice its absence. This is an effect that is not reproducible on any other instrument and that seemed to immediately offer great potential for this project.

While slap tonguing³ is not unique to contra bass clarinet, it sounds particularly resonant as the pop travels down the instrument's considerable length (Appendix 1C.

³ The term 'slap tonguing' refers to a musician playing a single-reed instrument such as a clarinet or a saxophone employing a technique to produce a popping sound along with the note.

Track 17 1'27"). Adam produces a slap of impressive percussive force followed by a clear but pianissimo tone that sounds like a very long reverberation. He also uses key pops to great percussive effect. These are subtler and quieter than the slap tonguing and are created by simply tapping the keys firmly down and letting them up quickly without playing a note. This creates a small pop that corresponds to the note being fingered. Again this effect can be created on other reed instruments but it sounds particularly resonant on the contra-bass clarinet due to its size and form.

In addition to these textures, Adam has a vocabulary of high register squeaks, squawks and squalls which are characteristic of his improvisatory language across all of his instruments (Appendix 1C. Track 18 0'31"). He is a dynamic player who traverses a wide range of expression from raucous avant-garde abstraction to subtle lyricism and this range is expressed well on the contra-bass clarinet.

Duo development with Joe Talia

Joe plays a conventional drum kit augmented by a range of devices and other instruments played in unconventional ways. He also employs laptop and other electronic media in his practice, which is very broad, spanning mainstream jazz through to sound art.

In our first couple of sessions we experimented with a wide range of instruments and discussed possible approaches but he, like Adam, wanted to limit his instrumental options for this project to facilitate focus both in terms of the sound world as well as his mental approach. Our discussions reminded me somewhat of my feelings about my solo project: that limitations actually create space in which creative decisions can be made and that too much choice can be paralysing. Subsequent to these discussions and our early experiments we decided to work with conventional drum kit augmented by a small number of objects including small electric engine coolers, which have fins and make tinkling sounds when scraped, a range of electronic beaters, some assorted percussion, and a reverb spring taken from a guitar amp which Joe plays with a small

stick.

We performed and recorded a number of improvisations and I noticed some consistent motivic material emerging in my playing in response to the sounds Joe was producing (Appendix 1C Track 19). The material heard in this example in which Joe is playing the reverb spring features a sparse chromatic melodic movement played on the trumpet that is processed through a pitch shifter tuned to a fourth interval. I noticed during our sessions that this melodic movement emerged several times.

Joe's playing has a very particular feel and sense of space that I respond to each time we play together. He brings out ideas in me and seems to know how to follow my improvisations, how to keep pushing them further. I notice that I play long improvisations with Joe... longer than normal. I think this is a good sign, a sign of creative rapport. (PK Journal 28/7/08)

Trio performances with Frank Di Sario and Joe Talia

During the course of the development sessions described above I set up a number of performances using two configurations of some of the musicians involved in the research. One of the configurations was a trio consisting of me with Joe Talia and Frank Di Sario. We performed twice at Melbourne venues: Bennetts Lane on 1st June 2008 and Lebowskis (at Bar 303 in Northcote) on 8th December 2008. We approached each concert without recourse to pre-composed material and with no discussion about what we would play or even how we would approach the performances. I wanted to keep the music as spontaneous as possible and to see what would happen after the improvisations and discussions that had taken place in the duo sessions.

Even though the format was spontaneous, a consistency of language soon developed and sound-worlds explored in duo sessions emerged again in this setting. There was a definite sense for me of a shared musical syntax formed out of the collectivisation of our separate practices. This was exciting, as it seemed to point to exactly what I had

been hoping to achieve with this project. I could hear thematic material developing and structural potential coalescing from our collective improvisations. I was left with a distinct sense that aspects of the sound we were making (Appendix 1C. Track 20) I would not have invented but that there was also the possibility for further compositional development. A field of enquiry was emerging and its exact boundaries could not have been pre-determined or anticipated.

Quartet performance with Erik Griswold, Frank Di Sario and Joe Talia

On the 22nd July 2009 I performed a concert with Frank, Joe, and Erik Griswold at Bennetts Lane. For this appearance I attempted to codify some of the improvisations – the 'field of enquiry' – that I mentioned had developed in our trio performances. I listened to recordings I had made of the trio and transcribed some of the material creating very open forms, which I hoped would act as effective starting points for improvisations. Figure 8 shows a fragment of a composition that I scored from the chromatic melody that emerged in my development session with Joe Talia (Appendix 1C Track 19) and again during one of our trio concerts. I scored a version of it for Erik playing melodica with his right hand and piano with his left.

Figure 8: Fragment from score for piece created for quartet performance at Bennetts Lane

Unfortunately, this piece did not succeed as I had hoped (Appendix 1D Track 8). In fact, in some respects I was unsatisfied with the entire concert, which, despite containing passages of inspired music making, did not work in the manner I had

expected it would. However, this was a very important learning experience for me and fundamentally changed my approach to the development of this project as I reflected in my journal at the time:

The gig at Bennetts was not the greatest experience... The compositions I presented to the band didn't really fly (with one exception). Erik said they were just not detailed enough. He suggested that fragmentary compositions are fine but they still have to be detailed. The disappointing thing for me was that the moment that the band members had music in front of them much of the spontaneity that I have enjoyed in the trio disappeared... but there was not enough in the compositions to replace it. (PK Journal entry 23/7/2009)

This performance brought me 'back to earth' somewhat and reminded me that creating the 'right' intervention in a context like this is not so easy (Appendix 1C. Track 21). I had presumed that because playing freely with the trio was working so naturally I could use minimal compositional elements to develop, focus, and extend the shared improvisatory language that we shared. However, with the written music in front of us we all struggled to retain the spontaneous energy we had been previously enjoying. The following journal entry reflects my attempts to make sense of this experience and use it to move the project forward:

How do I create structure whilst not inhibiting freedom? Some of the best things come when we are free to improvise. But I want more control – need more control with larger ensemble. (PK Journal entry 26/7/2009)

The nub of the difficulty for me, on reflection, is that there just wasn't enough focus or conceptual clarity to allow the music to develop. In my experience as an improviser I often find it easier (and more fun) to freely respond to the moment without the distraction of compositional structure or instructions/preconceptions regarding the direction of the piece. I also enjoy interpreting other artists' pre-composed music, but the 'in-between' can be difficult if the composer's intent is not clear. The music I

created in this instance, I believe, fell into this 'in-between' zone and so instead of creating effective starting points for improvisation it inhibited improvisation.

I should add though, that while I had misgivings about the concert, there were plenty of compelling passages, which mostly occurred when the band improvised freely such as in Example 22 (Appendix 1C. Track 22). This reinforced for me my perception that it was the approach to composition that had failed (it wasn't that the band was having a 'bad night') and while this was frustrating, it was not entirely negative. I felt very positive about the mode of expression that was developing in the group and positive about the overall direction of the work. And it seemed like the problem with the compositions was a technical issue that I could solve.

PHASE TWO: COMPOSITION

I began Phase Two of this project in a positive frame of mind despite the frustrations described in the last section. If anything, in fact, the quartet performance and the difficulties I experienced had re-focussed my intent and clarified the direction in which I needed to go. In the sections that follow I describe how I used the recordings and other material gathered during Phase One to develop my compositions.

The first two pieces I composed (*Fish Boast of Fishing* and *And Men are Caught by Worms*) were conceived together and were originally intended as being two halves of one piece. This changed as the works developed, and in the final CD submission (Appendix 1B) they are separated: *Fish Boast of Fishing* is the first piece on the CD and *And Men Are Caught By Worms* the fourth. There is another pair of compositions called *Unknownness 1* and *Unknownness 2*, they were also conceived together and are structurally similar (I will discuss this in more detail in paragraphs to come). Lastly there is a set of three short improvised pieces (*Short 1*, *Short 2*, and *Short 3*).

The ordering of the works on the CD is important as it sets up a dialogue between the different approaches embodied. Themes and structures fold back on one another: contrasting, juxtaposing, highlighting.

1. *Fish Boast of Fishing*
2. *Unknownness 1*
3. *Short 1*
4. *And Men Are Caught By Worms*
5. *Short 2*
6. *Unknownness 2*
7. *Short 3*

Composition set one: *Fish Boast of Fishing* and *And Men Are Caught By Worms*

I embarked on *Fish Boast of Fishing* and *And Men are Caught By Worms*⁴ very soon after the quartet performance (described in earlier paragraphs) with a fresh sense of

⁴ The titles of the pieces are significant as they relate on an abstruse level to structure, aesthetic, and inspiration. Each title with the exception of the *Short* pieces is taken from an e. e. cummings poem:

love's function is to fabricate unknownness
 (known being wishless;but love,all of wishing)
 though life's lived wrongsideout,sameness chokes oneness
 truth is confused with fact,fish boast of fishing
 (Cummings, 1960, p. 34)

In my practice I often select titles drawn from poetry as musical provocation and I chose the line, 'Fish Boast of Fishing,' as the name of this project long before I began work on the music. I like to try to find something that relates somehow to that which I want to achieve in the music; however, it is very hard to describe exactly what that relationship is or how it works. I can say that I am drawn to Cummings, because the best of his work seems to exemplify T. S. Eliot's notion that poetry communicates before it is understood (1932). For Eliot, poetry is a matter of words that appear to make up language communicating something, which we actually experience at a completely different level. This 'completely different level' fascinates me where words, like musical notes, placed together can create unexpected resonances – where explicit meaning is abstracted but where profound communication takes place nonetheless.

perspective on my commitment to develop work that is detailed and structured and yet which creates space for the individual performers' voices. A journal entry from this time outlines my conceptual starting points:

WHAT IS THIS PIECE ABOUT??

1. Instrumental textures
2. Timbral combinations
3. Space
4. The individual musicians' syntax
5. Repetition and slow unfolding (like Morton Feldman)
6. Blocks of sound – sudden changes in texture
7. e e cummings, disjuncture, unknowness, simultaneous feeling of disorientation and being 'held'... 'known being wishless;but love,all of wishing.' (PK Journal entry 20/7/2009)

Beginning work on *Fish Boast of Fishing* I edited the material I had recorded in the development sessions and catalogued it so I could access it easily. I made notes, sketches and transcriptions and some promising material began to emerge based on a minimal 'tolling' figure and an all-interval chord comprised of the following notes: F, A, C#, Gb, Bb, C, Eb. I played this chord over and over on my studio upright piano then made a rudimentary preparation of the instrument using masking tape just to give myself some idea of how it might sound on prepared piano. Then I recorded this tolling figure played on my 'prepared' piano using Ableton and layered a trumpet note over it – an F (played without mouthpiece). I recorded another note (a Gb) but this time I played it on clarinet, and I dropped the note down an octave using a pitch-shifting function on Ableton so that it might sound a little more like bass clarinet. Then I took samples from sessions recorded in the duo workshops and placed them within the studio recordings and recorded more trumpet, and so on, and in this way I began to get an idea of how these sounds and textures might work together.

I experimented further by bringing in snippets of the material I recorded during the

Bennetts Lane performances and I downloaded samples of crotales from a website and gradually developed an 'ensemble sound' in Ableton (Appendix 1C. Track 23). My method emerged in a fairly haphazard manner but as I experimented I began to find it more and more fascinating as well as fruitful. I formalised it somewhat:

I am setting up a situation whereby I can improvise the composition on Ableton. It's not that dissimilar in a sense to trying out ideas on the piano except that I have a much great range of possibilities at my fingertips... It's kind of a crazy idea but I like it. (PK Journal entry 30/7/2010)

This is quite an interesting way to compose in that it loops the improvising process back on itself: I am taking improvised material, cueing it up then improvising with that material kind of like a conductor with an improvising ensemble. It is hard to get the neat shifts without spending much more time editing the material but I am noticing some really nice combinations of instruments that grab my ear each time they come together. (PK Journal entry 31/7/2010)

The procedure I describe was laborious and quite idiosyncratic, but as I had not had the chance to get the whole ensemble together (some members live in Melbourne and some in Brisbane) it helped give me some sense of what the group might sound like. I think also, more generally, for me the development of music is as much a physical process as a cerebral one and this method created the possibility of playing with these sounds in an intuitive, 'physical' manner. Musical ideas come to me from *doing* as well as from thinking, and my musical imagination seems to be triggered by the physical act of playing music (I play two chords on the piano and am drawn to respond with a third). And perhaps it is no accident that I was drawn to improvising in music; it seems to suit my way of thinking and my general approach to things. I became interested in composing later but even now when I compose music I still like to use this natural inclination to improvise to develop my compositions.

I do, however, also feel a need to create conceptual frameworks for my compositions. I am interested in finding ways to engage with extra-musical ideas, or, as mentioned in my discussion of E. E. Cummings in earlier footnotes, in drawing inspiration from outside sources. And in a very real sense this feels quite separate from the making of the actual music. When I composed *Fish Boast of Fishing* and *And Men Are Caught By Worms*, I developed a conceptual framework and made decisions about what I wanted the music to 'do' – about the quality of the gestures I wanted to create – then I generated musical ideas to attempt to communicate these concepts, in this case using Ableton in the manner I have described. This is a subtle distinction and I am aware that this separation is not clear-cut – that conceptual shifts also take place when I am 'playing' with musical ideas. Nonetheless, I believe it is worth considering, as it is central to my process as a maker of music – a composer and improviser.

In his discussion of poiesis and praxis in the context of art making, Derek Whitehead (2003) acknowledges the subtlety of the distinction between these two forms of action, which bear a relationship to the separation between conceiving and making that I identify in my practice. Poiesis he writes, tracing the origins of the word back to the ancient Greeks, had to do with, "'unveiling'... a making known which produces or leads things into presence." Of praxis he states, quoting Agamben, that, "art's point of entry into the aesthetic domain is only possible because 'art itself has already left the sphere of production, of *poiesis*, to enter that of *praxis*'." Whitehead is not referring to any particular artistic medium here, though in the Western classical music tradition the distinction he identifies between poiesis and praxis seems fairly clear: the process of composition brings the musical work into 'being' (poiesis) and the performance of the work brings it into the aesthetic domain (praxis). In my work this distinction, though evident, is not so easily made.

Indeed, reading this paper had me thinking about improvisation and about the relationship of poiesis and praxis in the context of improvisation in which it seems they are indistinguishable. In which the moment of 'production' and the moment of entry into the aesthetic domain are instantaneous. This is how the improviser trains

himself or herself – to respond in the moment, to conceive and act simultaneously. Kanellopoulos quotes Sarath in a fascinating discourse on free improvisation: "This attitude [of the improviser] delineates a conception of structure radically different from the one employed in the compositional mode of musical creation, understood as a 'discontinuous process of creation and iteration (usually through notation) of musical ideas' (Sarath, 1996, p. 2)" (2007, p. 109). He continues:

Working in compositional mode entails the creation of patterns with the prospect of forming larger structural wholes, and of course these patterns are subject to revisions informed by the wholeness of the piece as it gradually develops. Sarath (1996) argues that the composer experiences an, "expanding" temporality, 'where temporal projections may be conceived from any moment in a work to past and future coordinates'. To work in this way means to search for sounds with the aim of developing a 'piece'; it means to operate within the realm of experience... In improvisation, however, time is experienced 'in an inner-directed "vertical" manner, where the present is heightened and the past and future are perceptually subordinated' (Sarath, 1996, p. 1). Thus, the way the 'musical past' informs the 'musical future' is very different from the conscious search for multilayered structural relationships which characterizes composition.' (2007, p. 109)

Kanellopoulos' and Sarath's observations here resonate with my experience as improviser and composer especially with regard to the manner in which Sarath describes the contrasting experiences of time for the improviser and composer. In my practice I feel like I am constantly popping between the two – improvising with a heightened sense of the present then zooming back to search for the 'structural relationships' Sarath identifies as being important to the modality of composition. Sometimes I think of this process as being a bit like 'fishing' (no connection with the title of the work intended). I improvise on an idea without thinking too consciously about what I'm playing, instead just trying to respond moment by moment, I record these improvisations then I listen through them with my composer's sense of temporality to see what I have 'netted.' Musical ideas reveal themselves and logic emerges, partly through preconceived structural and aesthetic considerations and partly through applying intuition to trial and error processes.

The working methods I described at the beginning of this discussion, in which I used Ableton Live as a sketching tool, were developed to facilitate this process in order to solve issues of long form structure and balance particularly in *Fish Boast of Fishing*. I worked this way for a period of time sketching an overall structure as shown in part in Figure 9, over the page. The tolling piano chords eventually give way to a faster ad lib iteration of the chord inversions with an improvised trumpet line (played without mouthpiece) based on a very specific pre-composed 'shape.' The trumpet then gives way to solo percussion before entering again this time taking up a melodic line, which is echoed by the clarinet and underpinned by 'tolling' piano chords. This interweaved texture continues as the piano chords fade and both percussionists slowly crinkle plastic bags.

Figure 9: Composition sketch from journal July 2009

And Men Are Caught By Worms, functions in sharp dynamic contrast to *Fish Boast of Fishing* yet is conceptually linked by the 'tolling' motive, which returns as blocks of intense sound interspersed with contra bass clarinet breath sounds, clicks, sub-tone notes, and laptop processed samples (Appendix 1B. Track 2). The piece provides a space for different facets of the instrumentation to be explored, with the prepared piano playing staccato and contra bass clarinet also employing a frenetic approach in sections. I call this gesture 'squalling' and it is notated for the piano as follows:

The image shows a musical score excerpt for two instruments: Piano (P. PNO.) and Double Bass (DB.).

The Piano part is written on a grand staff (treble and bass clefs). It features a section labeled "AD LIB 'SQUALL'" with a dynamic marking of *f*. The notation consists of dense, diagonal, slanted lines across the staves, indicating rapid, intense playing. Above the second measure of this section, there is a note: "RPT UNTIL CUE (APPROX 20 SEC) FINISH ABRUPTLY ALL TOGE".

The Double Bass part is written on a single staff with a bass clef. It is labeled "PREPARED BASS (TRAM TICKET UNDER STRINGS)" with a dynamic marking of *f piz.*. The notation shows a series of chords and single notes, some with stems. Above the second measure, there is a note: "RPT UNTIL CUE (APPROX 20 SEC) FINISH ABRUPTLY ALL TOGE".

Figure 10: Excerpt from score, *And Men are Caught by Worms*

Joe Talia's reverb spring device is also employed in the squalling sections completing a texture which emerged several times during our development sessions (Appendix 1B. Track 4 1'20"). The squalling texture erupts suddenly and dissolves equally quickly giving way to a series of textural contrasts. Structurally, *And Men Are Caught by Worms* takes the musical materials established in *Fish Boast of Fishing* and turns them – to use an E. E. Cummings word – 'wrongsideout,' and in my mind links with the last line of his poem: "while the world moves;every part stands still" (1960, p. 34).

The contrasting textural 'blocks' eventually become more chaotic and eventually give way to a section held together by a repeated minor second in the piano over which the trumpet and contra bass clarinet play a melodic line that refracts and recontextualises a similar melodic gesture in *Fish Boast of Fishing*. The chaotic underpinning of the melodic line gradually dissolves into the tolling chords from *Fish*

Boast of Fishing and the bass also tolls a single note but in a different tempo. The trumpet and contra bass clarinet line rests on a repeated minor second and the piece gradually dies away. I wrote about the composition of this section in my journal:

I'm in the nice part of the writing process now... re-writing, editing, extending. This is the stage when things really start to flow for me. The pressure is off somewhat; I have something now and in the process of 'fiddling' things reveal themselves. I had a really nice little moment yesterday: I was rewriting the melody that the clarinet and trumpet play over the piano chords and at the end of the passage I changed what I had previously written to a repeated motive. It seemed to work and then I realised it worked in terms of a larger compositional structure and related to the initial gesture of the piece. I then realised that in fact the notes are the same two notes that I gave the clarinet and trumpet in the opening gesture so it really helps create compositional integrity. My initial intention here had been just to write a passage that worked for the clarinet and trumpet and I didn't really have structural issues so much in mind, but I do find at this stage of composing that things do reveal themselves in this way and that the logic of the composition has a way of working through you. I enjoy these little moments, I enjoy the feeling that I actually have very little conscious control over them. (PK Journal entry 3/9/2009)

As this journal entry suggests, the structure that emerged during the process described in this section did so spontaneously, at least in part. It was the result of the merging of improvisatory and composerly processes and a blurring of poiesis and praxis. This blurring is something I carried through the whole of this project although the methods I employed in each of the composition sets differ.

Composition set two: *Unknownness 1* and *Unknownness 2*

Fish Boast of Fishing and *And Men Are Caught By Worms* are the most detailed compositions in the works recorded by the sextet. The pair of compositions I discuss in this section were developed from fragments of melody, rhythm, and texture and are structured in a far more open manner. As they were conceived of as a pair many of the observations I make about *Unknownness 1* also apply to *Unknownness 2* and again, even though they are separated in the order that they appear on the CD recording, I consider them in this discussion consecutively.

Figure 11 (below) shows the complete score for *Unknownness 1* photocopied from my journal (see p. 91). Each player was given the appropriate part along with the arrangement at the bottom of the figure. The instructions for the performance of the piece were verbal and minimal. Drums and percussion both worked from the percussion cell and were asked to play the rhythm on whichever instruments (from their respective kits) they wanted, and to play the figure evenly but not in time with one another. I wanted their rhythms to phase and to sound 'in time' and 'out of time' simultaneously.

The bass part functions to anchor the music with a repetitive ostinato that rocks back and forth but again which phases freely against the other rhythmic figures. Similarly the trumpet and contrabass clarinet floats over the bed, the two instruments marking an even pulse that slides over the other textures. The prepared piano in this composition is the 'free agent' given only a pitch set and instructions to ad lib.

What was fascinating about the process of recording this piece is that even though the score is very minimal and even though I left a lot up to the performers as to how they would interpret my instructions it achieves exactly what I wanted, developing an off kilter coherence despite the presence of several independent pulses in motion simultaneously. The musical materials are minimal yet there is a sense of development and forward motion, and crucially, the piece embodies a distinctive

sound world that recontextualises familiar elements while also being reflective of each of the individual voices making up the ensemble. Importantly for me, it succeeds where most of the pieces I created for the Bennetts Lane quartet performance failed – it is a minimal fragmentary composition with a clear focus, enough to lead to a focussed outcome (Appendix 1B. Track 3).

In a real sense too it succeeds *because* of the failures I experienced during the Bennetts Lane concert. I used the lessons learnt from that performance in that I delineated the terrain for improvisation and interpretation more explicitly for the performers. And it occurs to me that regardless of genre or form this is a key factor in any composition. As I mentioned it is the 'middle ground' that can be problematic for improvisers, in which it is not quite clear how much interpretation of what is written on the page is intended.

TRUMPET IN B \flat + CB CL
(transposed) SKETCH

FREELY OUT OF TIME

Sketch (Bass)

Sketch (pno)

Pitch Set

Sketch (Perc)

Freely out of time (under by 100 BPM)

Arr.

- ① Ensemble tpt/cl melody
- ② Perc x 2 / prep pno
- ③ prep pno / cl
- ④ Bass / perc / pno / tpt
- ⑤ Melody

Figure 11: Score for Unknownness 1

Unknownness 2 was the one piece that I wrote for the quartet concert at Bennetts Lane that I retained for the final recording. It is quite similar in structure to *Unknownness 1* in that it features a floating melody over a fairly static texture and there is a great deal of room for improvisation and interpretation of the scored instructions. However, the

comparison between the recording of the first performance, made as part of the Bennetts Lane concert (Appendix 1D. Track 3) and the final studio recorded version (Appendix 1B. Track 6) is interesting. It reflects not just the expanded instrumentation (adding percussion and contra bass clarinet), which changes the sound of the work considerably as one would expect, but also a much more resolved approach to the material and the group interplay.

Importantly too, there have been minor alterations made to the parts scored, in particular to the bass part, which was changed to develop a more hypnotic pedal role. It is a small shift but it has quite a marked effect on the piece as it removes a major ambiguity from the original score (see Figure 12 below). In this version the bass can be played arco *or* strummed – a significant textural variation. In addition, I have written the part as a series of semibreves and it seems obvious (especially with the advantage of hindsight) that semibreves repeated ad infinitum are not likely to produce a particularly interesting result. I think what I was trying to communicate with this ambiguity was in fact 'openness,' but this is not a clear way to achieve the result I was looking for.

Figure 12: Score excerpt from original version of Unknownness 2

What I take from this, at the risk of repeating myself, is that if you are going to write a part, be specific about what you want the player to do; if you are going to leave it open, be specific about that too. The final version of *Unknownness 2* benefits greatly from the clarity of a properly resolved bass part and the studio recording of the piece

is quite different from the live version recorded at Bennetts Lane.

It is also obvious from listening to the final recording that the extra trumpet I have added introduces a major variation. This trumpet was recorded as a post-production overdub and is played without mouthpiece, adding to the 'floating' quality I wanted to achieve with both the *Unknownness* pieces. The part wasn't conceived in advance, it was something I impulsively recorded in my home studio while I was working on the mixes after the recording sessions had finished. I didn't really think about what I was playing I simply responded to what I heard, armed the microphone and pushed 'record.' Nonetheless the part seems to me to work on all sorts of levels: the timbre of the trumpet played without the mouthpiece connects this piece to *Fish Boast of Fishing* and reinforces the structure of the album, the interplay with the contra bass clarinet develops motifs that Adam introduces, and it also adds dynamic range to the piece that enhances the overall shape of the work. This is another example of structural development in my work facilitated through improvisatory processes. And it is worth noting that during the course of this research and the process of reflection documented herein I have increasingly noticed that accepting spontaneous changes of direction or 'leaving room for the unexpected' is generally a part of my process.

Composition set three: *Short 1, Short 2, Short 3*

Only at the point of making the first sound is the meta-musician free to determine the direction of a music. Once rolling, the only course is to give the performance coherence and develop a sharpened perspective on the nature of the ensuing work. (Prévost, 1995, p. 109)

The three *Short* pieces are improvisations without any scores or specific instructions. I did, however, ask the players to approach each improvisation with the context of the material we had already recorded and the musical vocabulary employed in the composed material I had presented to the group in mind. In particular, I highlighted the 'tolling' motif that appears in *Fish Boast of Fishing* and *And Men Are Caught By Worms*. So while the music is improvised there was a very specific context created for

the improvisations, and in some sense then the direction of the music was pre-determined. This is an approach to music making that interests me very much and relates to open form composition as much it does to improvisation. Indeed it is a profound shift to intervene before, to use Prévost's words again, "the point of making the first sound" (1995, p. 109).

Nonetheless, at the same time it is difficult to trace the precise effect that my instructions had on the improvisations we recorded. The musicians who participated in this project did not interpret literally what I said and nor would I have expected them to. So there is no 'tolling.' And it is, of course, impossible to so say what they would've played had I offered no instructions or specific context. What I do conclude though is that there is a coherence of musical language, which runs from the detailed compositions recorded for this project, right through to the improvised pieces. This is what I aimed to achieve and, though I can't 'prove' my assertion, I believe that creating a focussed context for the improvisations we documented, helped in achieving this result.

We recorded six improvised pieces in total, from which I chose the three that are presented as part of my research output (Appendix 1B. Tracks 3, 5, 7). Two of those are edited to focus on the pithiest parts of the material recorded. This process is a type of post-composition: a composer responding to an improvisation 'frozen' in time through the process of recording then altering it from the perspective of the 'expanding temporality' that Sarath (1996, p. 110) mentions as distinguishing the experience of the composer from that of the improviser. In making the choices I made – both in the selection of the pieces as well as in the editing – I was considering not only the form of each individual piece but also the overall form of the recorded document which is conceived as a suite of works to be listened to as a whole in the order presented. Each of the improvisations included captures an aspect of the work the group did together throughout the duo sessions, rehearsals, and studio sessions that is not expressed in the other pieces we recorded.

Short 1 (Appendix 1B. Tracks 3) focusses on the double bass, which leads with a melodic motif supported by processed trumpet, bowed cymbal (played by Vanessa Tomlinson) and drum kit offering very subtle interventions barely discernable from the processed trumpet. *Short 2* (Appendix 1B. Track 5) is a duet featuring percussion and processed trumpet and is the final three minutes and twenty seconds of a much longer improvisation, which seems to 'feel' its way to this towards the moment captured in these last few minutes. *Short 3* (Appendix 1B. Track 7) is also an edited version of a longer improvisation but this time the instrumentation includes the entire group with the contra bass clarinet and the prepared piano leading.

I thought a lot about what it means to edit improvisations in this manner. To present only one part of an improvisation as a recorded 'product.' What does an improvised piece become after editing? When we hear only three minutes or so of a ten-minute improvisation then surely what we are experiencing is not really that improvisation, as the edited section has been separated from the context of its development. As mentioned, *Short 2* meanders towards the very focussed moment I have included in my research output, but isn't this meandering just as valuable in terms of the process it reveals? The answer to this last question that I arrived at is, 'yes,' but with the qualification that it is 'yes' in the context of the work as an *improvisation*. The moment I intervene with my editing tool applying the perspective of 'expanded temporality,' then the improvised piece becomes something else. What it becomes is perhaps something of an ontological puzzle (Scruton, 1997, p.100), not exactly a composed 'work', perhaps, but something that's closer to composition than improvisation.

In truth, perhaps, the moment that this change occurs is when the improvisation is recorded, 'frozen' in time, to be included on CD (or other format) in the context of other pieces (improvised or not). In this instance choices are made about this context that are far removed from the instant of creation – choices that are really about composition. Cornelius Cardew notes in conversation with Derek Bailey:

What recording produces is a separate phenomenon, something really much stranger than the playing itself, since what you hear on tape or disc is indeed the same playing but divorced from its natural context. What is the importance of the natural context? The natural context provides a score, which the players are unconsciously interpreting – a score that coexists inseparably with the music, standing side by side with it and sustaining it. (Bailey, 1980, p. 103)

Since I had to present my research output in CD form (in the context of this DMA program live performance is not assessable) I decided to approach the documentation of this project as a studio recording, as distinct from a 'de-contextualised' live performance recording and this exigency drove many of the decisions about editing and presentation described above.

PHASE THREE: REHEARSAL/RECORDING

My discussions about improvisation and recording have taken us forward in terms of the chronology of my project. In this section I track back to examine the rehearsal process before returning to flesh out the details of the studio process.

Rehearsal process

The first time the ensemble came together we spent two days in September 2009 rehearsing and developing my compositions at Adam Simmons' studio. This period culminated in a performance of the pieces for a small invited audience. For the most part the process went as expected though as a result of the rehearsal period some changes to the scores were made.

The part composed for crotales in *Fish Boast of Fishing* was altered considerably. I had not written for crotales before so I accessed some recordings, which I used as described in my Ableton sketches, and also relied on my memory to score the parts. Unfortunately my attempts were not entirely successful as the instruments were not as present in the context of the ensemble as I had expected and the audible sustain

was shorter than I thought it would be. As these parts are quite prominent in the opening of the piece the initial results were disappointing. I communicated this to Vanessa and we decided we would use my written part as a guide from which she could develop something that better realised my intention for the part.

The resulting effect is much closer to my original purpose than its translation in the original written part (see score excerpt Figure 13). Vanessa bows the crotales at times to create longer and louder sustains and also introduces different notes and rhythms, performing a role that blurs the boundaries between interpreter and improviser. It is interesting to me, especially in terms of my research paradigm in which the composed material is influenced by the improvisatory language of the players, that Vanessa was so quickly able to discern what I wished to achieve with this part and develop something that matched and extended my intent.

Figure 13: Score excerpt from opening bars of Fish Boast of Fishing as originally written. Note the difference between this score and the final version in audio example (Appendix 1B. Track 1)

The other players also interpreted and added to the material I presented in the rehearsal as I had hoped they would. In *Fish Boast of Fishing* I changed little between the version recorded in these rehearsals (Appendix 1D. Track 4) and the final recorded version (Appendix 1A. Track 1). The two versions do sound very different but this has more to do with the differences in the recording technology and the individual interpretation of open parts than the score itself. Obviously with such an

open form piece no two versions will be alike (remember Calder's mobiles!) but the basic structural dynamic underpinnings should be consistent as is the case in these versions.

The structure and content of *And Men Are Caught By Worms* changed much more. When I listened to the rehearsal recording (Appendix 1D. Track 5) I felt that the balance between the elements was not working entirely and that although the overall structure and dynamic was successful, the individual elements needed adjusting. Thus at 1'31" instead of having the trumpet playing with the clarinet I leave it just up to the clarinet alone to fill the space; in the next space I remove the bass 'thrum' altogether in the final version and fill the gap with a sample of the processed 'knitting needles on snare' texture from *Fish Boast of Fishing*. This sample features throughout the final recorded version of *And Men Are Caught By Worms* and links to the spaces between the chords in *Fish Boast of Fishing*.

In addition to the through-composed works detailed above, during the rehearsal process we discussed and practised approaches to the open compositions and to free improvisation. The ensemble had a remarkable empathy almost straight away and a huge musical range as demonstrated in the recording included (Appendix 1D. Track 6).

Studio process

As mentioned above, I decided to approach the documentation of this project as a sound recording, as distinct from recording a live performance because live performance and sound recording are such different mediums. My aim was to set up an environment in which to record that would facilitate the 'performance' of the music and also enable a high quality recording to be made.

I hired a recording studio (Allan Eaton Studios in St Kilda), which is large enough to record an ensemble of this size. I have recorded there on a number of occasions, have

enjoyed the environment and had good results from the combination of this studio and the house engineer (Robin Grey).



Figure 14: Set up at Allan Eaton Studios

One of the critical aspects of a project like this is getting enough separation between the instruments while also maintaining an environment that facilitates performance. There is always a compromise in the recording studio between the quality of the recorded sound and the experience of the musicians, which naturally has a concomitant impact on the musical outcomes. Generally, given a choice, musicians would prefer to play in close physical proximity to one another in the manner of live performance, however this approach in a recording studio setting brings problems in terms of sound quality. In addition it reduces post-production flexibility as the 'bleed' that occurs between parts makes editing very difficult. I wanted to ensure that I would be able to edit so as to make full use of the potential of the studio setting.

We compromised by separating each musician with heavy baffles and Perspex screens

as is evident in Figure 14 (above). This worked well as it achieved a fair amount of separation while allowing us to be quite close together, maintain good sightlines and it also allowed us to hear each other enough so that headphones – which can be a real impediment to performance – were not essential.

Once we had tested the sounds for the engineer and established within the group that we were happy with the way those sounds were being recorded we approached the recording in a similar manner to rehearsal. I brought in a schedule for the sessions that ensured there would be three versions of each piece but I broke up the takes across the two days in the hope that each version would be 'fresh.' Often one of the issues I find in studio recordings with multiple takes of each piece is that the energy becomes 'stale.' This is especially true of music that relies on improvisation. Personally I often find the first thing I record is the best because it captures real spontaneity. On consecutive takes the memory of the previous take can interfere with this spontaneity: if something great happened in the take before I am trying to recapture it, if something went wrong I am trying to avoid it – I am distracted from the 'now.'

The schedule I developed interspersed takes of the structured material with free improvisations. We began the sessions by recording *Fish Boast of Fishing* and *And Men Are Caught By Worms* then recorded a number of free improvisations. We then recorded one of the *Unknownness* pieces, more free improvisations, and complete re-takes of the first two pieces. The second day was similar with the order slightly rearranged.

This led to very successful outcomes with a large amount of well-recorded and well-performed material to choose from. Indeed, during the editing my main challenge lay not so much in trying to work out what to use but in trying to work out what to leave out, and I probably could have included a number of other improvisations in my research outputs in addition to those that I chose. However, as I mentioned previously, my aim in creating the collection of finished pieces included herein was to

represent the work the ensemble made together and the creative territory we explored over the course of a year, in a concise manner.

REFLECTIONS

I began this project with a very clear process in mind: to use the improvisatory syntax of the musicians participating to develop the musical language of the compositions, and to work towards this through duo collaboration, transcription then notation. And, to a large extent, the work proceeded as planned. Nonetheless, I believe it is worth acknowledging at this point that with this project, as was the case for *Allotrope*, my natural tendency to embrace chance and to allow the creative process to head off in unexpected directions was at least as important as the creative framework I started with.

In truth, the process I describe in this chapter was not nearly as systematic as that which I intended to create. My belief now though, is that while it was valuable to impose a framework on my way of working, one of the real lessons for me lies in the way my ingrained modes of creativity asserted themselves. I have never actually properly acknowledged this tendency in me to allow the unexpected to influence the direction of my music – I have *noticed* it but not *acknowledged* it as a positive and integral part of my artistic process. The connection to the notion of 'feeling,' and to intuition is important to reiterate here, and it is more evident to me now that I use these as my primary tools for creation, over and above my capacity to analyse the formal features of the work with which I am engaged.

Fish Boast of Fishing has opened up these understandings. It created a space for me to examine how I can work with other musicians to create a singular mode of expression and impelled me to delve inwards to examine my own processes. It also resulted in a collection of musical works that are utterly unlike anything I have created before; the result of both the combination of players and the approach to composition that I employed. Indeed, the music itself is a source of great satisfaction to me as it fulfils

something of the overarching artistic aims stated in the journal entry at the very beginning of this exegesis: to create music wherein it is impossible to discern where the composition ends and the improvisation begins. I can't be certain of how this music will be heard by the listener but I do know that in the course of its creation the two modes of music making were intertwined from beginning to end.

CHAPTER 7: THE LAST PART

But why do we need to keep making art? Why isn't it enough to just keep reflecting on the artistic achievements of the past? What keeps art alive is its ungovernable dimensions and the ways in which it resists systematic forms of closure. The essence of Art lies exactly where it cannot be completely explicable or accounted for and in this way it points towards the quality of the infinite. (Lim L. 2001)

In this last chapter I feel it is appropriate to honour the 'inexplicable,' 'unaccountable' nature of art that Liza Lim frames in the quote above. To draw the reader's attention to the open questions raised by the work presented in this exegesis rather than 'summarise my findings.' With this in mind, I return here to the 'fractured' narrative approach employed previously in Chapter Four, as for me it embodies something of my creative process – there is music in these flashes of memory, in reflection, and in the intimacy of first person accounts.

* * *

In the early nineties I played with a quintet every Friday at the Rainbow Hotel in Fitzroy. Every other day I practiced until my lips were sore. I transcribed Lee Morgan and Miles, Sonny Rollins, Chet Baker and Clifford Brown. I had a tape of Kenny Dorham that played over and over in the car. 'Don't you get sick of it?'

'Nup.'

* * *

At the Rainbow I was playing with musicians older and more experienced than me and I was flat out just to keep up with them. If I played something that wasn't working, or if I became unfocussed, the drummer would drop these huge 'bombs' on me. *BANG*

BAP BAP BAP... cshhhhhhhh... It was funny, but he was letting me know what was going on too. Sometimes though, after a gig he would say something like, "you sounded good tonight," or "man, your tone is coming on," and I'd go home feeling like the king of the world.

I learnt to listen. Not just musically, but also to what was being said in the subtlest ways. I worked out that this is how it's done: jazz musicians rarely tell you something straight out about your playing but they do find a way of telling you things you need to know, it's just a matter of listening in the right way. The drummer in the band used to give me tapes that would always relate abstrusely to some conversation we'd had – it was like trying to decode a puzzle. *Miles In Berlin*: phrasing. Art Blakey and the Jazz Messengers: energy. Billy Holiday: time. The lessons arrived in little epiphanies after hours of listening and practicing. And this is really how I learnt about playing – it's a time-honoured path in jazz music with its roots in earlier aurally communicated music traditions, and it works.

I went back to university too, this time to study something I loved: music. There I learnt theory, history and technical aspects of music, but I found out how to actually play by listening.

* * *

There I am waiting at a red light in my Kingswood. Kenny Dorham on the stereo cranked as loud as it can go without distorting. I'm singing along to his clipped phrases. The lines swing but they're played so straight – how does he do that? The car behind me beeps and I am back in the now...

* * *

Suzanne Cusick observes, "music is most often expounded as if it were a *mind-mind* game, a game in which the composer has come to be understood as mind – 'mind that

creates patterns of sounds to which other minds assign meanings'" (1998, p. 45). She points out that we ignore the bodily practices which give rise to music and we undervalue the bodily experience of the performer. The examples she uses are from classical music in which the roles of performer and composer are clearly delineated, but it occurs to me that her observations are even more pertinent in the realm of improvised music and for the practice of a musician like me who both composes and performs.

When I think about the way jazz musicians talk to one another they often say things like 'it's all about the feel,' or 'it just doesn't swing.' And when I think about my discussions in earlier parts of this exegesis where I mention making music that 'feels right,' it is pretty obvious that this is all referring to something that is based in corporeal experience – that it is not just about the mind. I also referred to jazz (in Chapter Three) as being 'feeling music,' and while I stand by that description – which was written long before the words I am presently typing – I am now clearer about what that actually means: It is not 'feeling' as in feeling sad or happy, but as in an expression of something embodied in physical sensation. Though I have moved a long way from idiomatic jazz in my practice today, my process still very much reflects the 'feeling' approach I learnt from playing jazz, and it is this corporeal knowledge that I attempt to encapsulate in the italicised 'memory flashes' presented in this chapter as well as in Chapter Four.

Marcel Cobussen takes up the theme of embodied knowledge in a fascinating discussion about practice led research in the arts:

And where else than from a performer-centered subject position can a 'theory' of musical bodies be developed? Here, I think, we are encountering a site, a site of knowledge, which is accessible only for artists, a site which could function as a legitimization of practice based research. The site of the performer, the site where mind and body meet in a non-pre-established hierarchy, gives access to knowledge that is impossible to achieve through more detached and exclusively mind work. (Cobussen, 2007, p. 27)

Cobussen presents a perceptive argument here but I question whether this 'site of knowledge' is accessible only for artists. 'Feel' is not something that only musicians talk about, engaged listeners also understand it – also have 'musical bodies' – remember Small's notion that 'musicking' is a participatory activity shared by performers and audience. Importantly though, Cobussen and Cusick point to different ways we can think about the connections that music creates between people and the ways in which it articulates knowing.

* * *

"You can't write swing down," the drummer told me one Friday night after our gig at the Rainbow, "because the subdivision changes depending on the tempo. On a fast tempo the quavers are almost straight, and that's the thing Louis had and it runs right through Bird, Billie Holiday, to Miles and Tony Williams... on a slow tempo that's different, the quavers are swung more, it's almost like a twelve eight... and in between tempos – well it's kind of impossible to say, you just have to feel it. You have to listen..."

* * *

Kenny Dorham, up loud, whisking me away into some other reality – encrypted knowledge being passed from one body to another body across the decades, across cultures, across geographic locations, into the ears of a boy in a beaten up old Kingswood stuck in a traffic jam in Lonsdale St in Melbourne in 1993.

* * *

As I outlined in my opening paragraph, I have called this chapter 'The Last Part' as opposed to 'Conclusion' or something else pertaining to summarising the research results because I do not present a conclusion here. In fact the work itself – the music – is the conclusion. As Cobussen argues: "The art work is not a practical aid which

rushes in to help the discursively presented conclusions; it is itself the statement and the conclusion" (2007, p. 19).

The contribution to knowledge that is offered by this research is articulated in the main by the music I offer. My exegesis offers a context for this articulation and for the series of open questions detailed in my first chapter: How do composition and improvisation intersect in my practice as composer and improvising trumpeter? How can laptop electronics broaden my music practice and how can I further integrate it into my practice? How can extended trumpet techniques and trumpet preparations broaden my practice? How do my cultural context and personal biography influence my practice? What does my cultural context reveal about my music? What does my music reveal about my cultural context?

The music I have recorded during the course of my research really does provide insight into these questions. It also points to a way forward for me as an artist and researcher more clearly than anything I can write: How can laptop electronics broaden my music practice and how can I further integrate it into my practice? Here's how: This is what it sounds like and that sound is impossible to translate into words.

However, there are findings my research has led to that *are* easy to present discursively. These relate to the formal aspects of my music practice and to my methods of approaching music making. In particular I have developed solutions to notation that facilitate compositional direction and that also allow space and freedom for the voices of the individual improvising musicians that make up the ensemble. This has been an aspect of my work that has brought me great satisfaction and which also opens up possibilities for future projects using a similar model of development through closely working with musicians involved in a project to create an organic syntax based on the practices of those musicians. I expect that with different groups of players different notational strategies will need to be employed, however, the issues I solved during my research point to a way forward for the future.

Another notable result of my work, which emerged especially in my solo project, is the development of my practice as a laptop artist and the integration of this into my more established practice as an improvising trumpeter. The process of narrowing the field of possibilities in my approach and refining my choice of platforms has been valuable and creates the potential for the development of new works in the future. As I continue on my path in this area I envisage an opening up of new possibilities and a gradual broadening of choices of plugins, playing techniques, and other musical materials. Importantly though, this broadening will be building on a solid basis developed during the course of my research during the past four years.

* * *

As I have stated during the course of this exegesis my practice is based on a combination of formal strategies and techniques, and also on processes of trial and error, and intuition. This appears to be the case for many artists in music and other artforms and as Hannan (2006) states this is not an indication of a lack of rigour. Rather it indicates a different a different research paradigm and a different way of approaching the process of 'knowing.'

Cobussen uses the Trojan Horse story as an analogy in order to interrogate the validity of practice-based research and as a starting point for a discussion around the compatibility of art and science in the world of the university. When he proposes that in practice-based research, the artwork is the "statement and the conclusion" (2007, p. 19), he does so in the context of questioning whether knowledge can be articulated at all, "outside spoken and written language" (2007, p. 19). He acknowledges that the idea that research findings can be communicated through art (including music) is, indeed, revolutionary in the context of the traditional scientific paradigms associated with academia and that as such, it is treated with suspicion by some. However, he concludes on an optimistic note, which reflects aspects of my discussion in Chapter Three of this exegesis:

Artistic research contributes in a fundamental way to the development and realization of knowledge. It reopens the question of truth, it is an important participant in the discussion surrounding how discursive language and 'other utterances' relate to each other, and it adds different kinds of knowledge to already existing and accepted ones. Regarded this way, the academic Trojans should be more than welcoming to the artistic Greeks, instead of treating them as undesirable intruders, to be followed suspiciously. (2007, p. 32)

It is my hope that the work presented in my research output in some way fulfills Cobussen's description of the potential that practice-based research promises. That it makes connections and offers something to contemporary music practice: a personal perspective, a sound, an insight into my approach to music making, a way of listening.

* * *

The weather is warming up finally. Summer in Melbourne this year has made a couple of faltering starts punctuated by long weeks of steady rain but now it feels like it has arrived. That familiar hazy blue, a crackle underfoot and a directness about the heat from the sun. And a sense of slowing.

I've been tracing back through the work that began nearly four years ago. Listening, reading, flicking through scores. And it's remarkable just how far my thinking and my practice has come in that time. Of course it is hard to be concise about the uncertainty I felt in the early stages of this project – much easier to write about things you know than about things you don't know. But I can say that during the course of this research I have moved from uncertainty towards, not exactly its opposite, but at least towards a greater awareness of the strands of thinking, history and culture that shape my practice.

This growth of awareness has taken unexpected twists and has coalesced in surprising ways but it has been a transformative process for me, and I feel like

it has expressed itself in some worthwhile music. And surely it is in this symbiosis – existing between practice and reflection – that the value of this kind of work really resides, as well as in the sharing of the connections that may arise from it. (PK Journal entry 5/12/2010)

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APPENDICES

Appendix 1: CD recordings

Appendix 1A: *Allotrope*, finished works for solo trumpet and laptop

- Track 1: *Instant Composition 1*
- Track 2: *Instant Composition 2*
- Track 3: *Trumpet, Amplifier and Laptop*
- Track 4: *Music for Trumpet and Laptop*
- Track 5: *Breath and Fingers*

Appendix 1B: *Fish Boast of Fishing*, finished works for improvising sextet

- Track 1: *Fish Boast of Fishing*
- Track 2: *Unknownness 1*
- Track 3: *Short 1*
- Track 4: *And Men Are Caught By Worms*
- Track 5: *Short 2*
- Track 6: *Unknownness 2*
- Track 7: *Short 3*

Appendix 1C: Audio files

- Track 1: Glottal stop unprocessed
- Track 2: Glottal stop processed
- Track 3: Unpitched breath sound unprocessed
- Track 4: Unpitched breath sound processed
- Track 5: Slide removal preparation
- Track 6: Valve popping
- Track 7: Harmon mute overtones

- Track 8: Clarinet mouthpiece flugel horn preparation
- Track 9: Valve clicks
- Track 10: Mouthpiece removal preparation
- Track 11: Recording of trumpet with C12 microphone
- Track 12: Recording of trumpet with Fathead Ribbon Microphone
- Track 13: Duo development with Erik Griswold
- Track 14: Duo development with Vanessa Tomlinson
- Track 15: Duo development with Frank Di Sario. Fast strummed bass chords
- Track 16: Duo development with Frank Di Sario. Bass harmonics
- Track 17: Duo development with Adam Simmons. Sub tone low register
- Track 18: Duo development with Adam Simmons. High register effects
- Track 19: Duo development with Joe Talia. Chromatic melody
- Track 20: Live recording of trio with Joe Talia and Frank Di Sario
- Track 21: Live recording of quartet with Joe Talia, Frank Di Sario, Erik Griswold 1
- Track 22: Live recording of quartet with Joe Talia, Frank Di Sario, Erik Griswold 2
- Track 23: Ableton sketch

Appendix 1D: Audio Files

- Track 1: Sketch of *Fish Boast of Fishing* created with Ableton Live
- Track 2: Joe Talia's reverb spring
- Track 3: Live recording of quartet at Bennetts Lane Unknownness 2
- Track 4: Rehearsal recording of *Fish Boast of Fishing*
- Track 5: Rehearsal recording of *And Men Are Caught By Worms*
- Track 6: Rehearsal recording of free improvisation
- Track 7: Live solo recording at Disembraining Machine
- Track 8: Live recording of quartet at Bennetts Lane, excerpt illustrating Figure 8

Appendix 2: Scores

- 1: *Fish Boast of Fishing*
- 2: *And Men Are Caught by Worms*
- 3: *Unknownness 1*
- 4: *Unknownness 2*

Appendix 3: Video files

Episode 1: Solo concert La Mama Music Carlton: *Improvisation 1*

Episode 2: Solo concert La Mama Music Carlton: *Improvisation 2*