

Public Drum Project

**Exploring designs for musical composition that enable participation and
collaboration**

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Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

Sharon Williams, September 2017

Table of Contents

Abstract.....	viii
Audio-visual Materials.....	1
Data CD 1: Decoupage and accessories – JPEG Files	1
Data CD 2: 100 Drums – JPEG Files.....	1
DVD 1: Public Drum Project, Mount Tomah – Corin Shearston	1
DVD 2: Mount Tomah video excerpts – Sharon Williams.....	1
Audio CD 1: Creative data analysis	1
Introduction.....	2
Project methodology.....	4
Project structure.....	8
Studies in participation and collaboration	11
Exploring praxis	15
Motivations.....	19
Cage, Deleuze and Guattari, and Fuller – studies in participation and collaboration, rhythm, and rhizomatic methodology	20
Holistic participation	21
John Cage and participation	24
Gilles Deleuze, Félix Guattari and participation.....	29
R. Buckminster Fuller and participation	32
Collaboration	38
John Cage and collaboration	43
Gilles Deleuze, Félix Guattari and collaboration	45
R. Buckminster Fuller and collaboration	48
Rhythm	52

Cohabitation in time	56
Entrainment	60
Rhizomatic methodology.....	64
Music composition – exploring praxis in relationship with participation and collaboration	73
Western art music	74
Experimental music	79
Participatory experimental music	86
Participatory experimental music and the score.....	99
Drum kit.....	102
Drum kit history	108
<i>Public Drum Project</i> —drum kit preparation and spatial deconstruction.....	114
Public Drum Project.....	118
Early group drumming experiments	121
Compositional trials.....	124
Example 1: Crossing Boundaries Conference, 19 June 2013	126
Example 2: Playing With Fire, June 2014.....	127
Example 3: <i>Music Now</i> conference, contemporary approaches to research	130
Example 4: CAPOW, May 2015, Kingswood, WSU	133
Preliminary installation ideas	136
Installation trials	141
Example 1: Winter Magic Installation with “In-Lakesh” 22 June 2013	142
Example 2: Festival of Joy, October 2013.....	155
Example 3: Blue Mountains Rhododendron Festival, Blackheath, 2013	158

Example 4: WSU 25th Anniversary Concert, Playhouse Theatre, Kingswood, May 2014.....	160
Mount Tomah installation	163
Preparation	163
Photographs.....	166
Drum decoupage “scores”—examples	169
Mount Tomah signage	171
Reflections.....	172
Outcomes.....	175
Creative data analysis	177
Journal excerpts.....	180
Audio CD—track information	182
Reflections on the creative data analysis.....	188
Future works	190
Public Drum Project revisited	190
Prepared piano project.....	192
Reflections on praxis	193
Recapitulation	194
Main themes in relation to outcomes.....	194
Final reflections	199
Bibliography	204
Appendices.....	227

Table of Figures

Figure 1: Participants within the pergola section of the Mount Tomah installation, December 2015	6
Figure 2: One of the 100 drums prepared for the project	9
Figure 3: <i>Public Drum Project</i> revisited at North Katoomba, June 2016	16
Figure 4: “Crafting” the final batch of drums prior to the Mount Tomah installation, November 2015.....	18
Figure 5: Initial site visit to the Blue Mountains Botanical Gardens, Mount Tomah, September 2015 – Brunet pavilion and pergola.....	18
Figure 6: Padded mallets created for the installation.....	117
Figure 7: <i>Poll5</i> screen projection, May 2015.....	134
Figure 8: Drums set up before the event commenced, Winter Magic installation, June 2013.....	149
Figure 9: Drums and potential participants within the venue, Winter Magic installation, June 2013	150
Figure 10: Participants engaging with the installation. Winter Magic installation, June 2013	150
Figure 11: Drums set up before the event commenced, Blackheath, November 2013	159
Figure 12: Participants engaging with the installation. Blackheath, November 2013	159
Figure 13: Drums set up before the event commenced, WSU Kingswood, May 2014	160
Figure 14: Participants engaging with the installation, WSU Kingswood, May 2014	160

Figure 15: Sign placed on a wall near the installation, WSU Kingswood, May 2014	161
Figure 16: Photograph from site visit to Eveleigh Locomotive workshop, June 2014	163
Figure 17: Drums set up under the pergola before the event, Mount Tomah, December 2015	166
Figure 18: View of the drums set up along the pergola as the event commenced, Mount Tomah, December 2015	166
Figure 19: Final tuning in the pavilion before the event, Mount Tomah, December 2015.....	167
Figure 20: Participant engaging with the installation under the pergola, Mount Tomah, December 2015.....	167
Figure 21: Participants under the pergola, Mount Tomah, December 2015.....	168
Figure 22: Participants in the pavilion, Mount Tomah, December 2015.....	168
Figure 23: Drum decoupage, Title: <i>You are not meant for crawling</i>	169
Figure 24: Drum decoupage, Title: <i>Contemplation</i>	169
Figure 25: Drum decoupage, Title: <i>Unfortunately – European harmony</i>	170
Figure 26: Drum decoupage, Title: <i>At every instant</i>	170
Figure 27: Mount Tomah installation signage, December 2015.....	171
Figure 28: Participants engaging with the North Katoomba installation, June 2016	191
Figure 29: Participants within the North Katoomba installation, June 2016.....	191
Figure 30: Piano soundboard with preparations, 2017	192

Figure 1: Participants within the pergola section of the Mount Tomah installation, December 2015	6
Figure 2: One of the 100 drums prepared for the project	9
Figure 3: <i>Public Drum Project</i> revisited at North Katoomba, June 2016	16
Figure 4: “Crafting” the final batch of drums prior to the Mount Tomah installation, November 2015.....	18
Figure 5: Initial site visit to the Blue Mountains Botanical Gardens, Mount Tomah, September 2015 – Brunet pavilion and pergola.....	18
Figure 6: Padded mallets created for the installation.....	117
Figure 7: <i>Poll5</i> screen projection, May 2015.....	134
Figure 8: Drums set up before the event commenced, Winter Magic installation, June 2013.....	149
Figure 9: Drums and potential participants within the venue, Winter Magic installation, June 2013	150
Figure 10: Participants engaging with the installation. Winter Magic installation, June 2013	150
Figure 11: Drums set up before the event commenced, Blackheath, November 2013	159
Figure 12: Participants engaging with the installation. Blackheath, November 2013	159
Figure 13: Drums set up before the event commenced, WSU Kingswood, May 2014	160
Figure 14: Participants engaging with the installation, WSU Kingswood, May 2014	160

Figure 15: Sign placed on a wall near the installation, WSU Kingswood, May 2014	161
Figure 16: Photograph from site visit to Eveleigh Locomotive workshop, June 2014	163
Figure 17: Drums set up under the pergola before the event, Mount Tomah, December 2015	166
Figure 18: View of the drums set up along the pergola as the event commenced, Mount Tomah, December 2015	166
Figure 19: Final tuning in the pavilion before the event, Mount Tomah, December 2015.....	167
Figure 20: Participant engaging with the installation under the pergola, Mount Tomah, December 2015.....	167
Figure 21: Participants under the pergola, Mount Tomah, December 2015.....	168
Figure 22: Participants in the pavilion, Mount Tomah, December 2015.....	168
Figure 23: Drum decoupage, Title: <i>You are not meant for crawling</i>	169
Figure 24: Drum decoupage, Title: <i>Contemplation</i>	169
Figure 25: Drum decoupage, Title: <i>Unfortunately – European harmony</i>	170
Figure 26: Drum decoupage, Title: <i>At every instant</i>	170
Figure 27: Mount Tomah installation signage, December 2015.....	171
Figure 28: Participants engaging with the North Katoomba installation, June 2016	191
Figure 29: Participants within the North Katoomba installation, June 2016.....	191
Figure 30: Piano soundboard with preparations, 2017	192

Abstract

This research project explores designs for musical composition that enable participation and collaboration. The importance of *holistic participation* to this study is contingent on the idea that the level of involvement in music is central to the experience of it, and that greater engagement offers the potential for a deeper and more satisfying experience. The significance of *collaboration* hinges on the idea that diverse “knowledges” and ways of thinking are valuable components of the creative process and they enable innovation. The study examines alternatives to the tripartite Western art music model, which customarily separates composers, performers and listeners, and focuses on enabling collective music making that is inclusive and non-hierarchical. This involves theoretical research grounded in concepts drawn primarily from the philosophies and practices of John Cage, Gilles Deleuze and Félix Guattari, and R. Buckminster Fuller. It also involves praxis, focused on collaborative participatory musical composition, which evolved into a participatory sound installation, involving one hundred drums hanging in a public space. The majority of those who took part in the installation trials were able to *participate*, and to *collaborate*, and the enthusiastic involvement of these participating individuals points to the efficacy of the evolving installation design. The research indicates musical composition may have the potential to function as an exemplar for participation and social collaboration in other arenas.

The project could be described as both theory/concept-based *and* practice-based qualitative research that utilises an experimental *rhizomatic* methodology. The study utilises an assemblage of complex, interwoven and iterative processes and methods—at times characterised principally by practical creative work, and at other times more by theoretical research. In accord with the overall project’s rhizomatic approach, the thesis is divided into five main sections, which can be read in any order.

Audio-visual Materials

The following accompanying audio-visual recordings document the final creative work, and they are included as supporting material with this thesis.

Data CD 1: Decoupage and accessories – JPEG Files

A gallery of images detailing the decoupage designs and other aspects of the preparation of the drums for the Public Drum Project installation.

Data CD 2: 100 Drums – JPEG Files

A complete visual record of the design of all 100 drums.

DVD 1: Public Drum Project, Mount Tomah – Corin Shearston

A detailed audio-visual record of the Mount Tomah installation of the Public Drum Project prepared by videographer Corin Shearston.

DVD 2: Mount Tomah video excerpts – Sharon Williams

A detailed audio-visual record of the Mount Tomah installation of the Public Drum Project prepared by the author.

Audio CD 1: Creative data analysis

A collaborative, creative analysis of audio media from the Public Drum Project installation in the form of eight compositions by collaborating artists.

Introduction

The main objective of this research project is to explore designs for musical composition that enable participation and collaboration. The importance of *holistic participation* to this study is contingent on the idea that the level of involvement in music is central to the experience of it, and that a greater engagement offers the potential for a deeper and more satisfying experience. The significance of *collaboration* hinges on the idea that diverse knowledges and ways of thinking are valuable components in the creative process and enable innovation.

In this study, my role as a composer is not that of a primarily self-expressive solitary musical score creator, but rather that of an enabler of a participatory collaborative musical experience. This transdisciplinary compositional process also encompasses the roles of researcher, designer, visual artist, and craftsman. Furthermore, it could be regarded as meta-level composition in which I am composing *about* composing—or composing *to enable* composition. Although meta-level composition, in itself, deserves exploration, the primary focus of this study is the exploration of the potential of musical compositional design to facilitate collaborative music making. The importance of comprehensive participation, and also collaboration, to a more profoundly satisfying and holistic musical experience than listening alone provides, will be explored primarily in relation to “ordinary” people, who may spontaneously discover themselves to be musician-composers. A desirable outcome of this project would be to enable that self-discovery.

This is both a theoretical/conceptual and creative/practice-based study. It utilises a variety of qualitative methods and an experimental rhizomatic approach.^{1, 2} The theoretical component contemplates and synthesises ideas—primarily in relation to participation and collaboration—that may be useful when applied to the practice of musical composition, and also in a broader sense to other modes of transdisciplinary creative practice. The practical aspect focuses on the prototyping of designs for *participatory collaborative* musical composition. In an autoethnographic manner, the researcher’s own transformation throughout the course of the study, and its impact on the overall project, also needs to be taken into account. This personal evolution, as well as the conceptual work and the more practical compositional design elements of the project, are all interpenetrative and mutually adaptive.

¹ “Experimental” in the sense of Cage’s use of the word—as descriptive of “an act the outcome of which is unknown”. See John Cage, *Silence: Lectures and Writing* (London: Calder and Boyers, 1968), 13.

² I have characterised this research project as one that utilises primarily a *rhizomatic* methodology, embracing Deleuze and Guattari’s six principles of connection: heterogeneity, multiplicity, asignifying rupture, cartography, and decalomania. See the “Cage, Deleuze and Guattari, and Fuller – studies in participation and collaboration, rhythm, and rhizomatic methodology” section of the thesis for a more detailed exploration of rhizomatic concepts.

Project methodology

The etymology of the word “method” links it to the images of a path and a journey. A method is a way into one’s work. It is a way of going to work on one’s work, the making of a path that one follows into one’s work. When one designs a method, one is mapping out the journey that one will take from that place of not knowing one’s topic to that place of coming to know it.³

The methodology for this project is, at times, driven primarily by the practical creative work, and at other times more by the theoretical research. It has been suggested that qualitative arts-based research can be a complex, interwoven and iterative process, and in terms of this project, it seems this is also the case.⁴ The conceptual work is often a leaping off point for creative action. That does not, however, necessitate a characterisation of the overall study as primarily conceptual. The creative practical work frequently results in reflection, but again, that does not mean the research should be solely defined as practice-driven. Reflective practice is just one of a variety of research methods drawn upon, as needed. Rather than choosing a system of methods and attempting to constrain this study within that paradigm, my aim is for the methods to be improvisatory, creative, flexible and innovative, in order to adapt to the varying demands of a project in flux.⁵ This experimental methodological approach could be characterised as a rhizomatic one.

³ Robert D. Romanyshyn, *The Wounded Researcher: Research with Soul in Mind*. (New Orleans, LA: Spring Journal Books, 200) 7, 215.

⁴ Hazel Smith and Roger T. Dean. *Practice-led Research, Research-led Practice in the Creative Arts*. (Edinburgh University Press, 2009), 10.

⁵ Alphia Possamai-Inesedy, “Theories of Enquiry: Qualitative Research Methods”, Online Research Training Workshop, February 29, 2016.
https://vuws.westernsydney.edu.au/webapps/blackboard/content/listContent.jsp?course_id=_17756_1&content_id=_1915099_1

The focus of the *conceptual inquiry* is the exploration of ideas around participation and collaboration and their relationship with musical composition, and an investigation into the work of others in the area of participatory experimental composition. The methods used for the more *practical aspects* of the project include a variety of styles of musical composition. However, I focus on two primary methods. The first is the creative task of sound installation design. This involves designing, constructing, installing and documenting a public participatory sound event. The second compositional method focuses on the subsequent creation of a collaborative audio CD as the primary means of documenting and analysing the audio material recorded *during* the sound event. This is a creative way of handling the audio data (captured during the *Public Drum Project* installation at the Blue Mountains Botanic Garden, Mount Tomah).⁶

⁶ A variety of names for the primary installation design were considered—initially the project was called “100 drums”.



Figure 1: Participants within the pergola section of the Mount Tomah installation, December 2015

The methods used for data collection, inevitably, extend far beyond the recording of audio data during the sound installation event. The idea of “data” itself seems worth considering as a research concept that is becoming more elastic and open to individual interpretation and application.⁷ My own ongoing inner process, over the course of this study—considered as useful knowledge—is creatively analysed and represented using a variety of methods. The methods used to capture this data from one’s inner world and harness it in one’s research work, are not necessarily straightforward. Often, the focus can be on representing personal experience through various styles of (primarily reflective) writing. In this study, writing (journaling) is one method I draw upon in an attempt to articulate my inner experience; however, this individual process of transformation could be considered to also profoundly

⁷ Patricia Leavy and Ebooks Corporation. *Method Meets Art: Arts-based Research Practice*. (Second edn. 2015), 130, 1-38.

influence the activity of sound installation design, and the task of producing an audio CD. Therefore, the analysis and representation of this inner experience (as research data) could be considered as also manifesting in the creative work itself. It has been claimed that an exploration of the researcher's self-evolution enables a more holistic understanding of the research project and its results.⁸ Whitehead claims that “the experimenter cannot be separated from the experiment, because they are both present in the world in the same manner. I cannot observe other entities any differently from how I observe myself”.⁹ This autoethnographic approach of using oneself and one's artistic *process* as research material—gathering data from one's own creative practice—is a valuable one. A creative researcher-practitioner can consider themselves as “an agent of, and participant in, a change process”,¹⁰ and their creative practice as a source of new knowledge.¹¹ Aspects of the inner experience of the researcher-practitioner, such as imagination and intuition, are increasingly considered to have a valuable place within contemporary models of qualitative research.¹²

⁸ Romanyshyn, *The Wounded Researcher*, 106-107.

⁹ Steven Shaviro, *Deleuze's Encounter with Whitehead*, February 29, 2016. <http://www.shaviro.com/Othertexts/DeleuzeWhitehead.pdf>, 9.

¹⁰ Diana Blom, “Practice-led research”, in “Theories of Enquiry: Qualitative Research Methods”, Online Research Training Workshop, February 29, 2016. https://vuws.westernsydney.edu.au/webapps/blackboard/content/listContent.jsp?course_id=_17756_1&content_id=_1915105_1

¹¹ Blom, “Practice-led research”. 2016.

¹² Joy Higgs et al. and SpringerLink. *Creative Spaces for Qualitative Researching Living Research*. (Rotterdam: SensePublishers, 2011),180.

Project structure

This thesis is divided into five main sections, with accompanying audio-visual material. Rather than insisting on a predetermined chronological manner of approach to the overall text, the individual sections can be read in any order. This way of organising the thesis seems more in line with the project's rhizomatic approach. The reader may decide to commence the thesis with this introductory section; however, this is not the only way of approaching the written material. The project can be entered or exited in whatever manner is most convenient for the reader.

The "Cage, Deleuze and Guattari, Fuller" section focuses on a conceptual exploration of collaborative and participatory ways of working in relation to musical composition. A literature review that considers, primarily, ideas and theories drawn from the philosophies and practices of John Cage, Deleuze and Guattari, and Buckminster Fuller has been woven into the discussion.¹³ These contributors offer perspectives from the three discourses of philosophy, music, and design science, which are all relevant to collaboration and holistic participation. They seem at times to be talking across each other, but their contributions naturally converge in the context of this project. When relevant, ideas gleaned from a comprehensive selection of scholars and creative practitioners are also incorporated. This section also explores ideas around rhythm and rhizomatic methodology in relation to the project.

¹³ Although their respective fields may be commonly described as music composition, philosophy/psychology, and design, it is worth considering at least Cage and Fuller in relation to transdisciplinary practice. Cage was also, amongst other things, a visual artist, writer and expert mycologist. Fuller considered himself to be a 'comprehensivist'. This underlines the absurdity of narrowly defined disciplinary categories.

The primary aim of the “Music Composition” section is to examine participatory experimental music. However, to fully comprehend this field, some discussion in relation to more mainstream experimental music, and a consideration of the modes of thought that characterise Western art music, are also required. The reason for this focus is the close, but often ambivalent, relationship between experimental music and Western art music. A review of relevant musical scores, drawing on the work of other composers and creative practitioners within the areas of discussion, has been incorporated into this section. This section also covers the history of the drum kit, as well as the drum kit preparations undertaken within the praxis element of this project.



Figure 2: One of the 100 drums prepared for the project

The “Public Drum Project” section concentrates on the practical methods employed in this study, and also considers *what happened* as a result of these endeavours. It involves discussion in relation to the prototyping of sound installation designs and the subsequent collaborative creative analysis of audio data recorded during the primary installation event. It also necessitated a consideration of my experiences and research prior to this research project in relation to drumming and musical composition. Striving to make intelligible that which is not necessarily easily captured with language necessitates the use of a range of strategies; therefore, this section of the thesis draws on a variety of writing styles. It includes relevant excerpts from a journal kept over the course of the study, and also incorporates visual material.

The “Recapitulation” section further examines how the research sheds new light on the project’s crucial themes within the varying aspects of the study. This component of the thesis includes some final reflections on the overall project.

Studies in participation and collaboration

The consideration of participation and collaboration within this project is grounded in a philosophical assemblage of concepts drawn from the philosophies and practices of John Cage,¹⁴ Gilles Deleuze and Félix Guattari,¹⁵ R. Buckminster Fuller,¹⁶ and an accompanying comprehensive selection of scholars and creative practitioners in the field of music composition and beyond. Having said that, the importance of the interpretive subjectivity of the researcher in creating a useful synthesis from all of the contributing ideas cannot be overstated.

Functioning as a comprehensively participating human involves a movement (away from specialisation),¹⁷ and an embracing of transdisciplinary practice. It challenges the idea of the “composer as expert” and opens the field of music to the non-professional musician-composer. The idea that a shift from passive listener/audience member to fully participating composer-performer is beneficial is contingent on the ideas that everyone is musical, and that the degree of one’s involvement in music is central to the experience of it. This implies that the greater the level of participation, the deeper and more satisfying the experience. This approach replaces the older tripartite model of “composer/ performer/ audience” with fully functioning creative humans, able to make music for themselves. Stockpiling and consuming music is replaced with in-the-moment musical experience, and music becomes a verb, rather

¹⁴ Experimental composer, John Cage (1912–1992).

¹⁵ I would prefer not to label the theoretical underpinnings for this study as post-structuralist, although the inclusion of Gilles Deleuze (1925–1995) and Félix Guattari (1930–1992) might suggest that as a descriptor.

¹⁶ Visionary designer-inventor-systems-theorist, Richard Buckminster Fuller (1895–1983).

¹⁷ R. Buckminster Fuller, *Operating Manual for Spaceship Earth*. (New York: Aeonian Press, 1969).

than a noun.¹⁸ Concomitantly, it has been suggested that “music is not a thing at all but an activity, something that people do”.¹⁹ A compositional design that focuses on providing a transitory but potentially profoundly satisfying participatory musical *experience* differs from the more traditional model, which is often concerned primarily with production and consumption. The conventional focus is on the creation of a musical product or artefact, such as a score, public performance, or sound recording, which is then “consumed” by the listener/audience. In comparison, the artefact created in relation to this project—a sound installation consisting of one hundred drums—functions more as a useful *tool* that enables the facilitation of a comprehensive musical *experience*.

In addition, there may be a relationship between a compositional design focused on “experience facilitation” and the idea of working with an awareness of one’s surrounding environment. Buckminster Fuller discusses the importance of the impact of a person’s environment on their behaviour.²⁰ Place people in a conducive environment and they may behave in ways that are unexpected and surprisingly creative. Composition could function as a means to help people reclaim their musical sovereignty, to encourage them to cease acquiescing in their own musical subjugation and instead choose the path of “voluntary inservitude”.²¹ If individuals

¹⁸ “Whitehead marks an important turning-point in the history of philosophy because he affirms that, in fact, everything is an event. The world, he says, is made of events, and nothing but events: happenings rather than things, verbs rather than nouns, processes rather than substances ... for Whitehead, events do not ‘happen’ to things: rather, events themselves *are* the only things. An event is not ‘one of [the thing’s] predicates,’ but the very thing itself.” See Shaviro, *Deleuze’s Encounter With Whitehead*, 1,7.

¹⁹ Christopher Small, and Ebrary Inc. *Musicking – the Meanings of Performing and Listening*. Music/culture. (Middletown: Wesleyan University Press, 1998), 2.

²⁰ Fuller, *Spaceship Earth*, 1969.

²¹ “Critique is the movement through which the subject gives itself the right to question truth concerning its power effects and to question power about its discourses of truth. Critique will be the art of voluntary inservitude, of reflective indocility.” See Michel Foucault, “What is critique?” In *The*

could regain their ability to make music for themselves when, where, and how they required it, this could be considered a *revolutionary* action. Although more traditional styles of composing, performing and listening continue to provide pleasure for many, they could also be viewed as approaches that artificially separate people from each other, and from the possibility of making music for themselves.

Collaborative composition offers a viable alternative to working alone. In this paradigm, people work/improvise together inclusively, without telling each other directly what to do.²² In contrast to the idea that creativity always stems from a talented individual with brilliant insights, diverse knowledges and ways of thinking can be valuable components in the group creative process and they can enable innovation.²³ This improvisatory group model disrupts the stereotype of the solitary composer-as-genius. It seems worth examining the relationship between the concept of social responsibility and a model of musical composition that addresses the question of how to enable humans to work together creatively and productively. Knowledge gained in this pursuit could potentially be applied to collective social action outside of the microcosm of musical composition. This is, of course, contingent on the belief that lessons learned in the arts *can* be usefully translated into other cultural arenas—that music *can* be viewed as a microcosm of wider society and also, as Attali suggests,²⁴ as a precursor of patterns in society. Exploring ways of

Essential Foucault: Selections from the Essential Works of Foucault, 1954–1984, edited by Paul Rabinow and Nikolas S. Rose, 263–278. (New York: New Press, 2003), 267.

²² John Cage, *A Year from Monday* (Middletown, Conn.: Wesleyan University Press, 1967), ix.

²³ Charles Leadbeater, *We Think: Mass Innovation, not Mass Production*, (Surrey: Bookmarque Ltd., 2008).

²⁴ Jacques Attali. *Noise: The Political Economy of Music* (Minneapolis, MN: University of Minnesota Press, 1985).

working together may turn out to be a useful alternative to focusing on defending the territory of our individual livelihoods.

Exploring praxis

In this study, ideas around participatory collaborative composition are not only contemplated and synthesised conceptually, but also explored via creative praxis in which a variety of relevant designs for musical composition are prototyped. The practical creative task for this study is to research what types of musical compositions would best facilitate participatory, collaborative music making. This creative task necessitates a conceptual study of participatory experimental music, and begins by contemplating, primarily, the modes of thought that characterise Western art music. Experimental music, and in particular experimental participatory work, are then discussed in more detail, including a consideration of the ideas of Cage who briefly explored participatory work in the mid-twentieth century. It appears there have been few prolonged serious attempts to trial participatory work within the field of Western art music. Nevertheless, it seems logical that to make musical composition more relevant in a contemporary context, it would be beneficial to shift to a model that enables humans to become musically “self-sufficient”, and therefore able to create music for themselves. This could necessitate a philosophical disinvestment from Western art music, and also, the embracing of transdisciplinary approaches. A review of the relevant literature and experimental music scores suggest that exploring non-conventional methods of musical composition may be beneficial.

My focus, in the practical part of this study, is to design compositional prototypes. These prototypes assume that participation and collaboration are preferred and desirable states of “doing”, *and* that they may be essential if one is aiming for profoundly satisfying musical experiences and innovative creative work. Instead of

concentrating on the production and consumption of a commodity/artefact, my experimental musical composition designs are characterised primarily by the intention to facilitate a holistic and collaborative *experience* of music making. The drum is an ideal sound source for these designs, in that it can be easily utilised by participants—including inexperienced musician-composers. Consequently, the final sound installation design for this study involves one hundred “reconstructed” drums, hanging in a public space. Percussion instruments may have an important role to play in making a participatory experience of music accessible to the novice. My personal experience—as a facilitator of a variety of modalities of group drumming—suggests that inexperienced drummers are often rapidly able to spontaneously make music together. This may be related to the fact that, as Cage pointed out in relation to composition, a rhythmic structure provides an “openness” to any content.²⁵



Figure 3: Public Drum Project revisited at North Katoomba, June 2016

²⁵ Michael Nyman, *Experimental Music: Cage and Beyond (Music in the Twentieth Century)* 2nd ed.. (Cambridge, New York: Cambridge University Press, 1999), 33.

Remove the economic necessity for aesthetic concerns to be paramount (in relation to the perceived quality of the music produced by the participants), and *any* sound result becomes acceptable and even valuable. If our definition of music is flexible—if, as Cage suggests, “any sound” can be music²⁶—then, in terms of this project, the reality of *group participation* in the sound installation event could be regarded as the primary indicator of effective compositional design. The possibility of collecting audio data for further verification and creative analysis post-event offers an alternative to focusing on the perceived aesthetic quality of the music produced as an indicator of success.

Sound installation design—as meta-level composition—positions the researcher as a transdisciplinary composer-designer-visual artist-craftsperson whose principal task is the (primarily covert) facilitation of event participants in their collective endeavours as composer-performers (see Figures 4 & 5). In relation to this approach to composition it seems conceivable that creative practice could evolve into the relatively simple act of setting up a non-exclusive environment that enables creative musical play. This differs from the more orthodox (and often politically and socially complicated) compositional model which focuses initially on the creation of a musical score. This score commonly functions as a set of instructions which musicians use to perform sound events, typically in the presence of compliant listening.

²⁶ John Cage, *Silence* (London: Calder and Boyers, 1968).



Figure 4: “Crafting” the final batch of drums prior to the Mount Tomah installation, November 2015

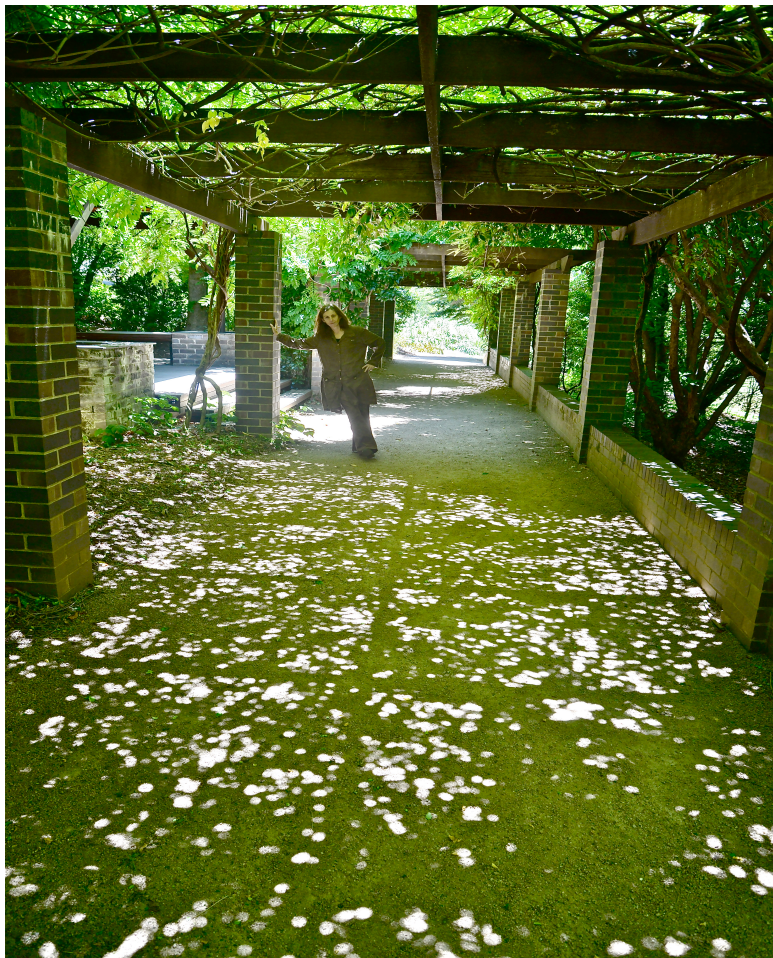


Figure 5: Initial site visit to the Blue Mountains Botanical Gardens, Mount Tomah, September 2015 – Brunet pavilion and pergola

Motivations

My past involvement with a variety of modalities of group drumming, both in Australia and abroad, is outlined in more detail in a later section of this thesis.²⁷ These experiences sowed the seeds that have grown into this current project. They included an Australian-West African hybrid style of group drumming, frame drumming, Brazilian samba drumming, and drum circles. There were issues for me not only from the perspective of cultural appropriation (in some instances) but also in terms of the hierarchical organisation of these groups. Over time, I became aware that none of these drumming modalities provided consistent opportunities for egalitarian musical collaboration. They were all facilitated, in a variety of ways, by an authority figure. Although there is no denying that many derive great joy from these types of experiences, I began to imagine a more *rhizomatic* style of group drumming, which would allow a multiplicity of *lateral* connections to form between the participants, replacing the need to seek permission or approval from authority figures. These types of groups would enable diverse assemblages of individuals, not only to play together joyfully, but also to contribute creatively, in their own unique fashion, to the musical outcomes. The research presented in this thesis describes my attempts to explore these possibilities.

²⁷ See the section, “Early group drumming experiments” in this thesis.

Cage, Deleuze and Guattari, and Fuller – studies in participation and collaboration, rhythm, and rhizomatic methodology

This section of the thesis focuses on the conceptual underpinnings of the study; it looks first at participation and collaboration, and then considers rhythm, and the rhizomatic methodology employed in the overall project. *Holistic participation* with respect to the creation and performance of music has little to do with what is commonly referred to as *audience participation*. Instead, it explores *alternatives* to the conventional tripartite Western art music model, which separates the roles of composing, performing and listening. My contention is that the level of one's involvement in music is central to one's experience of it, and that the greater the engagement, the deeper and more satisfying the experience. In terms of *collaboration*, I refer to ways of working together that are inclusive and non-hierarchical—in which the unique contributions of participants are valued, and where no-one is telling anyone else what to do. In relation to musical composition, this model of group creativity challenges the stereotype of the solitary composer-as-genius. Diverse knowledges and ways of thinking are crucial components in the collaborative creative process and enable innovation.²⁸ In the discussions that follow in the early parts of this section, I explore the concepts of holistic participation and working collaboratively, primarily through the lens of the thought of John Cage, Gilles Deleuze and Félix Guattari, and R. Buckminster Fuller.

²⁸ Charles Leadbeater, *We Think: Mass Innovation, not Mass Production*, (Surrey: Bookmarque Ltd., 2008).

Holistic participation

Working holistically is an approach that allows (and encourages) egalitarian and comprehensive participation. It hinges on the belief that most humans are capable of using not only their ears, but also the rest of their bodies, to make music for themselves when and where they require it. For Merleau-Ponty, the body is “the essential condition and context through which the subject is articulated in the world and by extension the original and primary source of meaning and expression; a subject of perception and experience as well as of cognition and reflection”.²⁹

Western art music can be non-participatory and exclusive, with carefully selected skilled performers expected to accurately reproduce previously composed material. The level of support (financial and otherwise) composers and musicians receive, is often contingent on a somewhat arbitrary system of ranking. “Preformed elements are at a maximum and spontaneity at a minimum”³⁰ and the corporeal is often treated as “cultural capital”.³¹ This is a scenario in which the physical body can become a mechanism through which to compete in the world, rather than it being a vehicle for experiencing the world and an instrument for free agency and expression. The audience’s role within this framework is conventionally one of quiet observance, contemplation, and the subjugation of many natural bodily responses.

It is worth considering, for the sake of comparison, the contrasting role participatory musical experience still plays in many non-Western cultures—cultures that do not

²⁹ Ingrid Richardson, and Carly Harper, “Corporeal Virtuality: The Impossibility of a Fleshless Ontology.” *Body, Space and Technology Journal*, 2 (2). 4.

³⁰ Christopher Small. *Music and the common tongue. Survival and celebration in Afro-American music* (John Calder Ltd., Great Britain, 1987), 59.

³¹ Pierre Bourdieu. *Distinction: A Social Critique of the Judgement of Taste* (Cambridge, MA: Harvard University Press, 1984).

subscribe to the culturally constructed ideal of the solitary (and often charismatic) “genius” composer/performer.³² This ideal was initiated primarily during the romantic period and carefully cultivated over the one hundred years or so since then. Let us consider, for example, the view that within traditional West African culture, “a human being can become fully human only in society”.³³ The relationship between individual and society finds expression through collective rituals. West African music is predominantly *participatory* and always fulfils a social function. Music is not considered an *art form* and is also not intended only for entertainment or pleasure. It is part of a way of life and has great cultural and social significance.³⁴ Music is traditionally inclusive, and everyone is expected to participate. In fact, music making is thought of as “being as basic a form of social interaction as talking”.³⁵ In West African Malinke culture, for example, everyone present at community functions participates in the music making. Those who are not taking turns at drumming, or playing other instruments, are clapping, dancing and singing. Music is *omnipresent* in Malinke society and customarily “accompanies activities such as farming, fishing, hunting and crafting. Each segment of life—birth, childhood, puberty, wedding, funeral—is accompanied by music”.³⁶

In many African languages there are no separate words for drum and dance,³⁷ as the two flow into each other seamlessly. In Malinke culture, dancers contribute to music-

³² Kenneth Hamilton, *After the Golden Age: Romantic Pianism and Modern Performance* (New York: Oxford University Press, 2008).

³³ Small, *Common Tongue*, 20.

³⁴ U. Billmeier and Mamady Keita. *A Life for the Djembe – Traditional Rhythms of the Malinke* (Arun - Verlag, Osststr, 1999), 27.

³⁵ Small, *Common Tongue*, 26.

³⁶ Billmeier, and Keita. *A life for the Djembe*, 27.

³⁷ Small, *Common Tongue*, 24.

making; they sometimes wear bells as they dance, and they clap and sing, and the drummers usually take their cues from the dancers. Although there is some debate around the idea,³⁸ it has been proposed that the musical capabilities of the brain may predate other types of communicative language abilities.³⁹ However, the claim that music and dance have been inseparable for thousands of years appears relatively uncontroversial.⁴⁰ Thaut discusses the important links between rhythm and motor coordination, and maintains, “the motor system has access to temporal information in the auditory system below levels of conscious perception”.⁴¹ Music taps into the activity centres of our brains, so that when we hear music our natural response is to move. This can even occur outside of our conscious awareness. Amongst other applications, this is a potentially useful brain adaptation in relation to the need to coordinate physical actions when collaborating with others.⁴² Unfortunately, this response has been “socialised out of many Western adults”.⁴³ However, Levitin claims “it takes a great act of will to hold the body still when there’s music playing”.⁴⁴ It is worth considering whether the preferencing of harmony over rhythm in Western art music may function as a method of easing frustration over the loss of the corporeal. It has been argued that for many people in Western culture, frustration arises due to the suppression of the impulse to move in the presence of complex and

³⁸ Aniruddh Patel, “Musical Rhythm, Linguistic Rhythm, and Human Evolution.” *Music Perception* 24, no. 1 (2006): 99-103.

³⁹ Michael H. Thaut, *Rhythm, Music, and the Brain: Scientific Foundations and Clinical Applications*. Studies on New Music Research. 1st in paperback ed. (New York: Routledge, 2008), 23.

⁴⁰ Daniel, J. Levitin. *The World in Six Songs: How The Musical Brain Created Human Nature* (New York: Penguin Group Inc, 2008), 21.

⁴¹ Thaut, *Rhythm, Music, and the Brain*, 57.

⁴² Levitin, *World in Six Songs*, 51.

⁴³ *Ibid.*, 101.

⁴⁴ Daniel Levitin, "Music and the Brain: The World in Six Songs: How the Musical." YouTube. Posted by “LibraryOfCongress”, August 13, 2009. Accessed April 13, 2016, 8:20.

multilayered pulsating rhythms.⁴⁵ The significance of the involvement of the physical body in fulfilling musical experiences highlights the importance of exploring styles of musical composition that involve holistic participation.

John Cage and participation

*“John Cage is best known as a composer, but he was also a philosopher, a poet, a chess master, a visual artist, a diarist, a mycologist, and an enthusiastic macrobiotic cook. As his biographer Ken Silverman once put it, turn over any rock and there's John Cage”.*⁴⁶

For John Cage the main precondition for effective creative action was *personal discipline*, and he believed that if one is not disciplined, then one should *not* participate. Cage had a similar view to Thoreau, who maintained “that government is best which governs not at all; and when [humans] are prepared for it, that will be the kind of government which they will have”.⁴⁷ It seems that Cage felt that apart from, perhaps, a creative elite, humans were *not* quite ready—in terms of not being sufficiently evolved—to *self-govern*.⁴⁸ He did briefly trial participatory works in the late sixties and early seventies.⁴⁹ However, these experiments appeared to do little to change his view of the general public as predominantly *undisciplined*, and in relation

⁴⁵ Thaut, *Rhythm, Music, and the Brain*, 43, 57.

⁴⁶ Laura Kuhn, "Grammy Salute to Music Legends," John Cage Trust. May 1, 2016. Accessed May 31, 2016. <http://johncagetrust.blogspot.com.au/2016/05/grammy-salute-to-music-legends.html>.

⁴⁷ Henry David Thoreau, *Walden and Civil Disobedience*. Owen Thomas (ed.), (New York: W.W. Norton, 1966), 224.

⁴⁸ John Cage and Hans G. Helms, "Reflections of a Progressive Composer on a Damaged Society." *October* 82 (1997): 77-93, 80-81.

⁴⁹ See Sharon Williams, "Uncaged: John Cage and conceptual approaches to participatory music-making." *Malaysian Music Journal*, 2 (2) (2013): 90-103.

to music, as often being capable of little more than “stringing together arbitrarily their own learned stupidities, the threadbare clichés of their thinking”.⁵⁰ Cage considered the use of chance procedures to be a way of *exercising discipline* in terms of one’s working methods, and also as a way of learning to become *more disciplined* (via the self-alteration that “acceptance of any outcome” required). Discipline, for Cage, referred primarily to the “giving up of control ... [and] training the mind to notice what is given”,⁵¹ instead of the predication of one’s work on personal notions of aesthetic value. He used chance operations with the intent of imitating nature’s “manner of operation”.⁵² This differs from Fuller’s view that “aesthetic beauty” is a serendipitous outcome of functional design. Underlying this design is a structural soundness, drawn from generalised principles conceptualised by human minds.⁵³ Although important to more practical designs (such as Fuller’s geodesic dome, for example), *structural integrity* is unimportant, according to Cage, to a music that does not need to “stand up”.⁵⁴ However, he pointed out that an emergent macro structure, can often be observed when using chance procedures, regardless of one’s intent.⁵⁵

Participation allows—in fact requires—one to function *comprehensively*. In terms of music, holistic participation offers an alternative to the conventional paradigm, which separates composer, performer, and audience. To fully participate, one must begin to draw on comprehensive musical abilities. Having said this, a satisfying

⁵⁰ Cage and Helms, “Reflections”, 80.

⁵¹ Joan Retallack, *Musicage* (Hanover: University of new England, 1996), 210.

⁵² “About John Cage” in Retallack, *Musicage*, closing page.

⁵³ Fuller viewed humans as ‘antientropic’ beings—“adding local order to Universe”. See J. Baldwin, *BuckyWorks: Buckminster Fuller's Ideas for Today* (New York: John Wiley, 1996), 226. It is worth noting that Fuller did explore Cage’s ideas in relation to chance, questioning how they might be applied to his functional design work. See Retallack, *Musicage*, 237.

⁵⁴ Retallack, *Musicage*, 239.

⁵⁵ *Ibid.*, 238.

participatory experience of music does not necessarily require the prior acquisition of musical skills. Participation does, however, necessitate embracing the role of listening performer-composer. For this to be possible, we must not only function as *whole* humans, but must also be prepared to *change our minds*, as required, in relation to aesthetics and to our very definition of what music *is* and of what it *can be*.⁵⁶ Cage discussed this concept of self-alteration at length. If we accept that music can be inclusive of all sounds, and if we let those sounds *be themselves*, noticing the relationships between them, without imposing anything on them, then we can begin to find interest in the sounds around us, and begin to hear them *as music*. This alteration of perception can increase one's enjoyment of life.⁵⁷

Cage attempted to construct a system of organising sound that was representative of the way a utopian society might function. Cage's musical "models" equated sounds with people. All sounds (including noise) were embraced, and allowed *to be themselves*.⁵⁸ Comprehensivity,⁵⁹ unlike specialisation, is an *inclusive* approach. It does not seek to devise and enforce abstract hierarchical divisions. Cage, as a

⁵⁶ "So if this was 'experimental music', what was the experiment? Perhaps it was the continual re-asking of the question 'what also could music be?', the attempt to discover what makes us able to experience something as music. And from it, we concluded that music didn't have to have rhythms, melodies, harmonies, structures, even notes, that it didn't have to involve instruments, musicians and special venues, It was accepted that music was not something intrinsic to certain arrangements of things—to certain ways of organising sounds—but was actually a process of apprehending that we, as listeners, could choose to conduct. It moved the site of music from 'out there' to 'in here'. If there is a lasting message from experimental music, it's this: music is something your mind does." See Brian Eno, "Foreword", in Nyman, *Experimental Music: Cage and Beyond*. 2nd ed. Music in the Twentieth Century. (Cambridge, New York: Cambridge University Press, 1999), p.xii.

⁵⁷ Retallack, *Musicage*, 55.

⁵⁸ John Cage, "Listen: John Cage - in Love with Another Sound -01." YouTube. Posted by "Casinodc00". February 18, 2007. Accessed May 31, 2016. <https://www.youtube.com/watch?v=2aYT1Pwp30M>

From the documentary film, *Listen*, (1992), directed by Miroslav Sebestik.

⁵⁹ See, for example, R. Buckminster Fuller, "The Music of the New Life." *Music Educators Journal* 52, no. 6 (1966): 52-68, 68, and R. Buckminster Fuller, "Education for Comprehensivity", in R. Buckminster Fuller, Eric A. Walker, and James Rhyne Killian. *Approaching the Benign Environment* (University, Ala.: Published for Auburn University by University of Alabama Press), 1970.

composer, performer, visual artist, mycologist, writer, cook and horticulturalist, was himself a “comprehensivist” who viewed specialisation as a dying phenomenon. It seems that the evolution of our global reality has enabled the interpenetration of many aspects of culture that were previously separated. As Cage points out, “the fences have come down and the labels are being removed. An up-to-date aquarium has all the fish swimming together in one huge tank”.⁶⁰

The considerable time it took for Cage’s work to gather popular momentum may be explained, to some extent, by the fact that initially many people found it not only unpleasant to listen to, but also difficult to understand.⁶¹ His (often inordinately conceptual) work did not always speak for itself. Perhaps *some* members of the public grasped what these works were referencing, but many did not. It seems to me that a greater degree of participation in relation to Cage’s music may have enabled a more profound comprehension of concepts he was striving to elucidate.⁶² Attempting to fully comprehend ideas—to the extent that they can be applied usefully to one’s life—often requires a more holistic experience than listening alone. Without this experience, some degree of *intellectual explanation* may be necessary. This can channel conceptual work (such as many experimental music compositions) towards an educated elite, as Cornelius Cardew contends.⁶³

⁶⁰ John Cage, *Empty Words: Writings '73-'78* (Middletown, Conn.: Wesleyan University Press, 1979), 179.

⁶¹ Richard Kostelanetz, *Conversing with Cage* (New York: Proscenium Publishers, 1987) 65.

⁶² For more discussion in relation to the importance of participation, see R. Buckminster Fuller, “Every Child is Born a Genius”, *Children’s Literature*, Volume 9, 1981, pp. 3-5 (Article), Published by John Hopkins University Press DOI: 10.1353/chl.0.0550, Levitin, *The World in Six Songs*, Levitin, *This is Your Brain on Music*, and Thaut, *Rhythm, Music, and the Brain*.

⁶³ Cornelius Cardew, “Program notes to the piano album” (1973) in *Cornelius Cardew: A Reader* (London: Copula, 2006) 275.

It could be said that Cage's modus operandi at times revealed a compositional ego not entirely happy to be sublimated, despite his protestations to the contrary.⁶⁴ He claims, "my music liberates because I give people the chance to change their minds in the way I've changed mine".⁶⁵ This was, however, quite often, not the case at all. Cage spoke from a position of privileged, comprehensive participation, whereas the "people" he referred to were predominantly passive listeners. In a universe where we learn best and most profoundly through *doing*, Cage repeatedly denies his "audience" the level of *participation* in music necessary for their greatest learning. Not only were the public expected to decipher his complex referential models *exclusively* through (often lengthy and torturous) listening, but they were also then *judged* for their inadequate comprehension (and their understandable resentment).⁶⁶ Their disempowered position contrasts with Cage's comprehensive participation. Professional musicians unfamiliar with Cage's work also at times found his work difficult to comprehend and refused to comply with his directions, with disastrous results.⁶⁷

Because of the limited possibility for holistic involvement in Cage's music, it often functioned as musical *product*, although this was not a singularly or characteristically Cagean problem. In explaining the role of the listener, Cage refers to Duchamp's notion,⁶⁸ of the viewer "completing the work".⁶⁹ However, while listening is

⁶⁴ Kostelanetz, *Conversing*, 229.

⁶⁵ *Ibid.*, 257.

⁶⁶ *Ibid.*, 65–69.

⁶⁷ *Ibid.*, 69.

⁶⁸ "All in all, the creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds [their] contribution to the creative act." See Marcel Duchamp, "The Creative Act," *ART - news*, 6(4) (Summer 1957).

obviously an important aspect of musical appreciation, it does not equate to egalitarian participation, and does not put the listener on an equal footing with the artist/composer/performer. No matter how active and creative one's listening may be, it is still more closely aligned with consumption (of the great master's "product"), than with a healthy model of participation. The listener has control over little more than their own thoughts, emotions and other responses, and certainly has no control at all in relation to the music itself, as there is no possibility of contributing to its creation or performance. Instead, without even the ability to close their ears, they must *take in* whatever is on offer. However inclusive the referential *content* of a musical model might be—and however non-conformist and discordant and inclusive of noise—it can still function as a creator of hierarchies of importance if it does not allow egalitarian participation.

Gilles Deleuze, Félix Guattari and participation

The French post-structuralist philosopher Gilles Deleuze and the activist, psychotherapist and philosopher Félix Guattari appear to have been familiar with aspects of Cage's work.⁷⁰ They also refer to the "cut-up method" of writing, employed by William S. Burroughs (which in some ways could be regarded as a literary equivalent to Cage's approach), as a procedure that shatters the "linear unit of the word, even of language".⁷¹ Within a Deleuzian framework, the oeuvres of both Cage and Burroughs could be regarded as more rhizomatic than arborescent. In their

⁶⁹ John Cage and Merce Cunningham, "Chance Conversations: An Interview with Merce Cunningham and John Cage." Walker Art Center. April 6, 1981. Accessed May 31, 2016. <https://walkerart.org/magazine/chance-conversations-an-interview-with-merce>

⁷⁰ For example, see Deleuze and Guattari, *Thousand Plateaus*, 267, 269, 344, 545 n.87.

⁷¹ Deleuze and Guattari, *Thousand Plateaus*, 6.

lionised two-volume co-authored text,⁷² Deleuze and Guattari contrast these two conceptual systems at length. To briefly summarise, the *rhizomatic* is often aligned with post-modern ways of thinking, in that it is an “acentred, nonhierarchical, nonsignifying system without a General and without an organising memory or central automaton”.⁷³ In comparison, the *arborescent* is a centre-periphery model that develops an argument and holds a privileged viewpoint. The tree model represents an over-signifying regime that *dominates* other regimes, whereas the rhizomatic operates underneath the surface of things and subverts things.⁷⁴ Deleuze and Guattari insist that “we should stop believing in trees, roots, and radicles, [as] they’ve made us suffer too much”.⁷⁵

In relation to the concept of the rhizome, the principles of connection and heterogeneity outlined by Deleuze and Guattari⁷⁶ are relevant when exploring participatory work. In the rhizomatic system, anything can connect to anything else, as it is inclusive and non-hierarchical in its method of organisation. Deleuze and Guattari suggest that there are relationships between the concepts of “tracing” and the arborescent, and between the concepts of “cartography” (map making) and the rhizomatic. They contend that *rhizomatic cartography* deals directly with performance (experience), whereas *arborescent tracing* “always involves an alleged ‘competence’”.⁷⁷ The “map” fosters connections and increases options for action and

⁷² Deleuze, and Guattari. *Thousand Plateaus, and Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem and Helen R. Lane, (London: The Athlone Press, 1984).

⁷³ Deleuze and Guattari, *Thousand Plateaus*, 21.

⁷⁴ Johndavidebert. "Deleuze & Guattari's *A Thousand Plateaus* Part 1 by John David Ebert 1/2." YouTube. Posted by “The John David Ebert Channel”, May 4, 2012. Accessed April 07, 2016. <http://www.youtube.com/watch?v=0pH--FtP0j4>.

⁷⁵ Deleuze and Guattari, *Thousand Plateaus*, 15.

⁷⁶ *Ibid.*, 7.

⁷⁷ Deleuze and Guattari, *Thousand Plateaus*, 13.

comprehensive participation in the world,⁷⁸ whereas the arborescent system closes off options, which causes all sorts of problems. We cannot act and we cannot escape, and instead, we become fixated on authority figures, and as Deleuze and Guattari maintain, “it’s all over, no desire stirs; for it is always by rhizome that desire moves and produces”.⁷⁹ Rhizomatic assemblages allow comprehensive connections to other “intensities”, forces, and abilities, in contrast to arborescent hierarchical systems, “of significance and subjectification ...[where] ... an element only receives information from a higher unit”.⁸⁰ Deleuze viewed information as a system of control, describing it as a “set of imperatives, slogans, directions: order words. When you are informed, you are told what you are supposed to believe”.⁸¹ This idea is worth exploring in relation to the participatory musical score. Perhaps a sparser (or even absent) score may equate with freer participation and genuine experimentation. Providing an environment conducive to musical “play”, while at the same time specifying very little in terms of verbal or written information and/or instructions, may be a reliable way of enabling participants to create their own *unique* (and spontaneous) musical experience together.

Deleuze and Guattari suggest (although they acknowledge the idea can be problematic) that the rhizomatic work of art does not *represent* the world but, instead, “forms a rhizome *with* the world”.⁸² An example of the way this works is their idea of the “drunk” forming a rhizomatic assemblage with the plant (in the form

⁷⁸ Deleuze and Guattari, *Thousand Plateaus*, 12.

⁷⁹ *Ibid.*, 14.

⁸⁰ *Ibid.*, 16.

⁸¹ Thinkingaloud7189, "Gilles Deleuze on Cinema: What Is the Creative Act 1987 (English Subs)." YouTube. Posted by "thinkingaloud7189", Jan 8, 2015. Accessed April 07, 2016. Piano soundboard with preparations, 2017. 30:00.

⁸² Deleuze and Guattari, *Thousand Plateaus*, 11.

of alcohol)—“drunkenness as a triumphant irruption of the plant in us”.⁸³ In relation to this, when exploring musical composition, it may be useful to question whether the work enables an *irruption* of “the music” within the listener. Although many compositions could be regarded as rhizomatic assemblages that enable rhizomatic proliferations to a degree, how they affect the observer/participant is of primary importance. Do they *enable action*, do they *interpenetrate*, or do they instead elicit “competence” and create hierarchies of importance?⁸⁴ The answer to this question depends to an extent on the qualities of *all* the unique elements that make up the assemblage in question.⁸⁵ Some elements may be more permeable (more open to interpenetration) than others, and all exhibit many characteristics that are variable over time. But even so, participation seems to be a relatively dependable enabler of new relationships and connections, and in its call to action participation *ensures* the irruption of the work into and through the participant.

R. Buckminster Fuller and participation

*“When describing himself Fuller preferred the term ‘comprehensive anticipatory design scientist’”*⁸⁶

Buckminster Fuller differentiates between the *brain* and the *mind*, and claims this distinction is a uniquely human phenomenon. He suggests the *brain* deals with

⁸³ Deleuze and Guattari, *Thousand Plateaus*, 11.

⁸⁴ *Ibid.*, 12-13.

⁸⁵ Deleuze and Guattari conceive of assemblages as “constellations of objects, bodies, expressions, qualities and territories that come together for varying periods of time to ideally create new ways of functioning.” See Graham Livesey, “Assemblage,” in *The Deleuze Dictionary: Revised Edition*, ed. Adrian Parr, (Edinburgh: Edinburgh University press, 2010) 18.

⁸⁶ See Chu, Hsiao-yun, and Roberto G. Trujillo. *New Views on R. Buckminster Fuller*. (Stanford, CA: Stanford University Press, 2009), 1.

“special case” experiences and that the *mind* creates “generalised principles”, recognising patterns in a multiplicity of separate events. It can take a lot of experiences to discover generalised principles in operation, as the relationships *between* the special cases are not obvious in the special cases themselves when considered individually.⁸⁷ Consequently, for Fuller, *participation* is a fundamental principle in a universe where humans learn through doing. He contends that questions “must be answered only in terms of experience ... hear-saids, beliefs, axioms, superstitions, guesses, opinions” are not considered as ways of *knowing*.⁸⁸

A *generalised principle* is a statement of the *relationship* between the parts of the whole, “persistently operative in nature, which hold true in every special case”.⁸⁹

Fuller uses the term “synergy” to describe the “behaviour of whole systems unpredicted by the behaviour of their parts taken separately”.⁹⁰ He believes that the synergetic system nature uses is experimentally demonstrable and easily understood by a small child. Fuller maintains that the reason science can be difficult to understand (and here, he refers repeatedly to the geometries of *pure* maths), is because the way it is taught is often non-representative of experiential reality, and therefore inaccurate.⁹¹ He points out that nature does not divide itself into separate disciplines and departments, but instead operates in a *comprehensive* manner.⁹²

According to Fuller “specialisation has bred feelings of isolation, futility, and

⁸⁷ R. Buckminster Fuller, “Buckminster Fuller Werner Erhard conversation.” YouTube video, 7:10:45. Posted by “emah mushu”, December 19, 2013. <https://www.youtube.com/watch?v=KxS0dSZPz9A>, 1:18:00 - 1:22:00.

⁸⁸ Allegra Fuller Snyder, “Buckminster Fuller: Experience and Experiencing.” *Dance Chronicle* 19, no. 3 (1996): 299-308.

⁸⁹ R. Buckminster Fuller, “The Music of the New Life.” *Music Educators Journal* 52, no. 5 (1966): 46-48, 124-146, 47.

⁹⁰ R. Buckminster Fuller, “Time Present.” *Harper's* 250, no. 1498 (1975): 72-76, 72.

⁹¹ Fuller, “Buckminster Fuller Werner Erhard conversation”, 2:53:00.

⁹² Fuller, “Music of the New Life”, 68.

confusion in individuals [and] has also resulted in the individual's leaving responsibility for thinking and social action to others".⁹³

When contemplating suicide in 1927, Fuller decided, instead, to use the aggregate of his accumulated experiences and dedicate his efforts to the success of all humanity, rather than to self-struggle.⁹⁴ In a world where technology was becoming largely invisible to our senses, Fuller suggests integrity (in the sense of an individual's personal ethics) as the contemporary governing aesthetic principle.⁹⁵ One can still be a "wheel rolling out of one's centre",⁹⁶ but when guided by humane moral principles, the action that emanates from this centre is often directed towards the good of all. This focus embraces all of humanity, and not just family, friends, nations or other groups one may identify with. Fuller (somewhat presciently) claims that there is no such thing as race or class, preferring the notion of a "crossbreeding world human".⁹⁷ Divisive abstract classifications, with their often-erroneous modes of separation, mirror the trends of specialisation, which "ultimately aggregate as international and ideological discord, which, in turn, leads to war".⁹⁸ Fuller points out that extinction is usually a "consequence of over-specialisation—we can say that world society through over-specialisation has reached the brink of extinction".⁹⁹ There seem to be connections here with Cage's view of specialisation as a dying phenomenon, and

⁹³ R. Buckminster Fuller and Applewhite, E. J. *Synergetics : Explorations in the Geometry of Thinking*. (1st Macmillan Paperbacks ed. New York: Macmillan, 1982), xxv.

⁹⁴ Fuller, "Buckminster Fuller Werner Erhard conversation." 22:30.

⁹⁵ *Ibid.* 6:26:00.

⁹⁶ Friedrich Nietzsche, *Thus Spoke Zarathustra*, translated by R.J. Hollingdale, (Harmondsworth: Penguin Books, 1961), in Ep. 4: Joseph Campbell and the Power of Myth -- 'Sacrifice and Bliss' <http://billmoyers.com/content/ep-4-joseph-campbell-and-the-power-of-myth-sacrifice-and-bliss-audio/>

⁹⁷ Fuller, "Buckminster Fuller Werner Erhard conversation." 2:05:00.

⁹⁸ Fuller & Applewhite, *Synergetics*. pxxv.

⁹⁹ Fuller, "Music of the New Life", no.5, 143.

also with Deleuze and Guattari's inclusive and non-hierarchical rhizomatic system of organisation. Most importantly, in relation to musical participation one can only wonder what may be possible if we begin to explore alternatives to the conventional tripartite system of Western art music which separates composer, performer and listener, and also often privileges an elite.

Fuller emphasises the importance of reforming the environment rather than trying to reform people. He believes that an “adequately organised environment [would] permit humanity's original, innate capabilities to become successful ... in contradistinction to the almost universal attempts of humans to reform and restrain other humans by political actions, laws, and codes. This restraining begins with the earliest parental attempts to reform their children's spontaneous behaviours in order to conform them to ‘accepted’ standards and codes”.¹⁰⁰ He emphasises the importance of solitude to imaginative conceptualisation, pointing out the inadequacy of the schoolroom with its “desk prisons”, “where you are put on exhibition as they ask you to say things in front of others so that if you venture an original thought the others can laugh”.¹⁰¹ An environment designed with altruistic intent can function, amongst other things, as a valuable tool, and a *useful* artefact, in the sense that the “user” is able to have an experience in which they can learn through *doing*. They can fully participate, rather than passively consume the second-hand ideas and creative output of others. Based as they are on *generalised principles*, many of Fuller's ideas are transferable from one field of endeavour to another, and can be readily applied to creative work in general, and more specifically to musical participation. Given a

¹⁰⁰ R. Buckminster Fuller, *Utopia or Oblivion: The Prospects for Humanity*. (Pelican Books. Harmondsworth: Penguin, 1972), 366.

¹⁰¹ Fuller, “Music of the New Life”, no.5,137.

favourable environment, prior instruction or specialised skills need not be essential components of a profoundly satisfying musical *experience*.

Fuller claimed that children are designed to essentially “teach themselves—if given the chance—at the right time”.¹⁰² They learn about the world in an experiential fashion, intuitively converting a multitude of separate experiences into generalised principles, and then re-employing/testing these principles in special-case undertakings.¹⁰³ This process can be encouraged by designing environments in which the child “will be neither frustrated nor hurt, yet free to develop spontaneously without trespassing on others”.¹⁰⁴ According to Fuller, *innate comprehensive capabilities* (to recognise and apply generalised principles) are often undone by processes of socialisation and education.¹⁰⁵ This can be demonstrated by the rapid speed at which young children are reduced to *specialists*. Fuller also discusses what he calls the “Whitehead dilemma”,¹⁰⁶ a phenomenon whereby the most “scholastically brilliant” children are channelled into specialisations, leaving the “dullest” bunch to try to work out how to *comprehensively* make the world work.¹⁰⁷

It is worth noting that, in light of more recent research, Fuller’s comments in relation to brain plasticity are now somewhat out-dated, and it may be possible to reclaim more of our comprehensive capabilities than he imagined.¹⁰⁸ Although it is true that

¹⁰² Fuller, *Born a Genius*, 4.

¹⁰³ Ibid.

¹⁰⁴ Ibid., 6.

¹⁰⁵ Fuller, “Buckminster Fuller Werner Erhard conversation.”, 1:39:30.

¹⁰⁶ Fuller is referring here to the mathematician and philosopher, Alfred North Whitehead (1861–1947).

¹⁰⁷ Fuller, “Music of the New Life”, no.5, 138.

¹⁰⁸ Norman Doidge, *The Brain That Changes Itself* (Carlton North, Vic.: Scribe Publications, 2008).

childhood *is* the period of greatest brain plasticity, we now know that everything is not permanently fixed by the age of thirteen, as Fuller suggests.¹⁰⁹ The brain stays plastic for much longer than originally thought. Humans can continue to build neural pathways—learning new skills, and comprehending unfamiliar ideas—into old age. In relation to musical composition, research now suggests that it is never too late to have *new* experiences of music (or even to recover from traumatic experiences of music), given a beneficial environment. In any case, these new discoveries offer a way of thinking that seems aligned with Fuller’s own “Einsteinian-influenced” philosophy which sees humans as evolutionary *processes* integral to a universe of constantly transforming energy.¹¹⁰

¹⁰⁹ Fuller, *Born a Genius*, 4.

¹¹⁰ Fuller, R. Buckminster, Jerome Agel & Quentin Fiore. *I Seem to Be a Verb*. (New York: Bantam Books, 1970).

Collaboration

Knowledge gained through research in the arts, and more specifically the field of musical composition, may be applicable to other fields of endeavour. Music can be viewed as a microcosmic model of a wider society. Lessons learned, and generalised principles discovered, may be translatable into other cultural arenas. It is for this reason that exploring models of musical composition that enable humans to work creatively and productively together is so valuable. Effective creative collaboration could prove useful in many fields, but is probably most desperately needed in relation to the urgent task of finding ways to intelligently manage shared global (and local) resources without harming nature's regenerative systems. Before a closer examination of the ideas of Cage, Deleuze and Guattari, and Fuller, in relation to collaboration, it is worth examining impediments to effective collaboration from a wider sociological perspective.

An exploration of the concept of social dilemmas—drawn from the social sciences—may help us gain some understanding of the source of many world resource management problems. Social dilemmas relate to conflicts between individual and collective rationality.¹¹¹ They are often seemingly paradoxical situations, where individually reasonable behaviour can lead to a situation where everyone is worse off. They hinge on the belief that one's behaviour “in and of itself makes no difference”.¹¹² One of the most discussed social dilemmas is probably the tragedy of

¹¹¹ Peter Kollock. “Social Dilemmas: The Anatomy of Cooperation.” *Annual Review of Sociology* 24, no. 1 1 (1998): 183-214.

¹¹² Kollock, “Social Dilemmas”.

the commons.¹¹³ This dilemma relates to a scenario where individuals acting in their own best interests may not be acting in accordance with the common good. There are differing views on the subject of whether the tragedy of the commons is inevitable.¹¹⁴ Ostrom claims that proposing simple solutions (such as private or government ownership of public property or goods) for complex issues is problematic.¹¹⁵ However, she suggests that when people “cannot communicate, don't have trust, can't build it, and don't have rules, we have to expect the tragedy of the commons to occur”.¹¹⁶ Rules, in this context, are viewed as tools that can be mutually beneficial and used to cultivate trust. Notwithstanding, Ostrom maintains that when rules are created and imposed externally, by an authority figure, for example, they are usually ineffective.¹¹⁷ In comparison, when people have a degree of autonomy, and are able to participate in discussion, “they may be able to organise and overcome the ‘tragedy’”.¹¹⁸

The global situation has become so dire, and the need for immediate all-pervasive collective action so urgent, that one begins to wonder why this urgent action has not yet taken place. As the proverb suggests, it makes sense that *if you find yourself in a*

¹¹³ Garrett Hardin, *The Tragedy of the Commons* (Washington, D.C.: American Association for the Advancement of Science, 1968).

¹¹⁴ Elinor Ostrom, "Managing resources in the global commons". *Journal of Business Administration and Policy Analysis*, , (2002, Annual). 30-31, 401+. Retrieved from <http://ezproxy.uws.edu.au/login?url=http://go.galegroup.com.ezproxy.uws.edu.au/ps/i.do?id=GALE%7CA125338385&v=2.1&u=uwsydney&it=r&p=AONE&sw=w&asid=6601582732a084cfdb0622f20a93e3cf>

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ Ibid.

*hole, stop digging.*¹¹⁹ However, a self-serving few continue to benefit—accumulating wealth and resources—at the expense of the multitudes (and future generations), and many people feel powerless to change things. Klein suggests that we have developed a meaner, and crueller, capitalistic throw-away culture that turns the precious into trash.¹²⁰ She refers to the racist notion of “sacrifice zones”,¹²¹ where in the process of extracting a resource the environment is destroyed and rendered uninhabitable.¹²² The resource extractor then moves on to degrade and destroy another area and its (often indigenous) inhabitants. It is an approach that places no value on human beings.¹²³ Many acts of environmental and social destruction are driven by the narcissistic practices of large corporations. They involve an ability to act without conscience.¹²⁴ Some have suggested we are experiencing a narcissistic epidemic on a global scale.¹²⁵

A degree of narcissism, when it operates as healthy self-regard, is an unavoidable aspect of human experience, and plays an important role in a variety of events—including the composition and performance of many types of music. However, when narcissism ventures into the territory of *pathology*—and here there is obviously a

¹¹⁹ Ideasatthehouse. "Naomi Klein: Capitalism and the Climate, Festival of Dangerous Ideas 2015." YouTube. Posted by "Sydney Opera House Talks & Ideas", September 5, 2015. Accessed April 15, 2016. <https://www.youtube.com/watch?v=a5LuIAJEFUc>.

¹²⁰ Ibid.

¹²¹ Naomi Klein, *This Changes Everything: Capitalism vs. the Climate*. (London: Penguin Books, 2014), 310-315.

¹²² The island of Nauru is a disturbing example of this practice. eighty per cent of the nation's surface has been strip-mined to extract phosphate, which has led to environmental catastrophe, with phosphate resources now virtually exhausted.

¹²³ Klein, *This Changes Everything*, 310-315.

¹²⁴ Samuel Vaknin, and Lidija Rangelovska. *Malignant Self Love: Narcissism Revisited*. (Prague: Narcissus Publications, 2007).

¹²⁵ For a light-hearted discussion, see Ideasatthehouse. "Festival of Dangerous Ideas: Anne Manne - The Narcissism Epidemic." YouTube. Posted by "Sydney Opera House Talks & Ideas", September 1, 2014. Accessed April 15, 2016. https://www.youtube.com/watch?v=smCxe_3Tq1E.

grey area—it can make effective collaboration, in a variety of arenas, extremely problematic (if not downright impossible). When one is dealing with a pathological narcissist—an individual diagnosed with Narcissistic Personality Disorder—one is dealing with a profoundly damaged person.¹²⁶ They can be highly competitive, manipulative, incapable of empathy, and completely self-absorbed,¹²⁷ and they view other humans as little more than sources of narcissistic “supply”. When “supply” is depleted, for a variety of reasons, they move on to greener pastures, often leaving destruction in their wake.¹²⁸ The inability to empathise, in its most extreme manifestation, can extend to deriving pleasure from inflicting suffering. Seeing others as inferior can bolster a grandiose sense of self.¹²⁹

Control over others can be garnered through creating division and separation, as isolation prevents people from talking with each other and working together to regain personal and collective self-governance. This tactic can help those with narcissistic intent to retain authority. Social dilemmas are, in effect, not dilemmas at all for an individual who holds the view that “others exist for me”.¹³⁰ However, it is important to remember that the behaviours of pathologically narcissistic individuals are severely dysfunctional, and that the majority of people do not behave in this fashion, and in comparison are happy to collaborate and share things. It has been claimed that

¹²⁶ American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. 5th ed. (Arlington, VA: American Psychiatric Association, 2013).

¹²⁷ Ibid.

¹²⁸ Vaknin, and Rangelovska. *Malignant Self Love*.

¹²⁹ Ibid.

¹³⁰ C. Sedikides, Campbell, W. K., Reeder, G. D., Elliot, A. J., and Gregg, A. P., “Do others bring out the worst in narcissists? The “others exist for me” illusion,” in *Self and Identity: Personal, Social, and Symbolic*, eds Y. Kashima and M. Foddy (Mahwah, NJ: Erlbaum, 2002), 103–124.

emotionally healthy people like participating and sharing,¹³¹ and will also punish cheaters.¹³² It appears that fully functioning humans are social creatures, geared towards cooperative action.¹³³

Just as knowledge gained through research in musical composition could be applicable to other fields, research in the fields of sociology and psychology may be translatable into the arena of musical composition. It is worth exploring connections between some of the conventions and practices of Western art music and ideas around narcissism. The common narcissistic practice of creating separation and division as a means of control, and the tripartite Western art music convention of separating composer, performer and audience, could perhaps be correlated. One could also conceive of a relationship between a narcissistic disregard for others and a musical composition that silences a majority for the benefit of an elite few. If psychologically healthy humans like to participate and share with others, and if they derive most benefit from working productively together, then healthier models of musical composition may benefit from a high level of collaborative participation. These would be models that care for, and include, all humans, and value their unique contributions.

¹³¹ Clay Shirky. "How Cognitive Surplus Will Change the World." TED@Cannes video, 13.07, filmed June 2010. Accessed April 15, 2016. https://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world?language=en#t-14783.

¹³² Rheingold points out that in recent research "neurophysiological measures have shown that people who punish cheaters in economic games show activity in the reward centres of their brain". See Howard Rheingold, "The New Power of Collaboration". TED video, 19.31, posted February 2008. Accessed April 15, 2016. https://www.ted.com/talks/howard_rheingold_on_collaboration/transcript?language=en#t-767000.

¹³³ Levitin, *World in Six Songs*.

John Cage and collaboration

Cage's microcosmic musical models are representative of improvements he wanted to see in society.¹³⁴ In these musical models, *sounds* are analogous to *humans*. For example, Cage maintains that, in relation to society, "musical sounds were like the rich people and noises were like the poor people ... we need to change our governments, so that the poor people get a chance ... so we have a world that is not divided between the rich and the poor, but which tries to make a life that is good for everyone ... so I want to make a music that is open to all sounds".¹³⁵ Cage's sonic palette is inclusive of, and respectful towards, all sounds (regardless of their unique characteristics). Sounds interpenetrate, while retaining their personal sovereignty. They do not obstruct, harm or boss around, other sounds.¹³⁶ In Cage's view, effective collaboration requires rigorous personal discipline. In order to work creatively with others, one must find a way to rise above the intractable demands of the ego, with its likes and dislikes. When you assemble a group of *highly disciplined individuals* (as Cage did on occasion),¹³⁷ then you have an example of what an anarchic utopian society might look like, where people "go about their business", leading productive lives, without anyone telling anyone else what to do.¹³⁸

A Cagean model of collaboration can be viewed as a convergence, or relationship, of two or more things or individuals, which ideally allows these things or individuals to be themselves—functioning as separate identities, in co-existence. The collaborative

¹³⁴ Kostelanetz, *Conversing with Cage*, 258, and Retallack, *Musicage*, xxx.

¹³⁵ John Cage, "John Cage. From Zero." YouTube. Posted by "Crimson King", March 25, 2014. Accessed March 24, 2016. <https://www.youtube.com/watch?v=saGo9DsDB80> 31:00. From the documentary film, *John Cage: From Zero*, (1995), directed by Andrew Culver and Frank Scheffer.

¹³⁶ Cage, "Listen".

¹³⁷ Cage and Helms, "Reflections", 80, and Kostelanetz, *Conversing with Cage*, 67.

¹³⁸ *Ibid.*

partnership between Merce Cunningham and Cage exemplifies this way of working. They agreed, early in their relationship, that “the music didn’t have to support the dance, nor the dance support the music, but they could be two things going on *at the same time* ... not necessarily connected or disconnected”.¹³⁹ To facilitate working together, they used time as a common denominator, drawing on a durational structure devised by Cage. Using time as an organising principle allowed a multiplicity of events to be “together in the same place, and the same time, [while leaving] space around each art”.¹⁴⁰ This method of structuring their collaboration relates to a world where we have an ongoing experience of “a multiplicity of centres, all in interpenetration and non-obstruction”.¹⁴¹ Far from designing the choreography to fit with the music, Cunningham and his dancers customarily heard Cage’s musical scores for the first time during the initial public performance. Dance and music, Cage contended (when interrogated by a frustrated audience member), *need not* even occur together in the same place, but the fact that they did made it convenient for the observer.¹⁴² This model of music and dance seems a stark contrast to the participatory Malinke model discussed previously, where the two are inextricably linked in an interdependent manner. It may be that there is a “multiplicity” of ways of working together, with the method chosen being appropriate to the particular assemblage in question.

¹³⁹ Cage, “I have nothing to say”, *American Masters*, 13:08.

¹⁴⁰ Cage and Cunningham, “Chance Conversations”. 2:50.

¹⁴¹ Cage, “From Zero”, 28:30.

¹⁴² *Ibid.*, 12:50.

Gilles Deleuze, Félix Guattari and collaboration

Deleuze and Guattari claim that nature works rhizomatically and that arborescent thought “lags behind nature”.¹⁴³ In a philosophy that is geared towards enabling creative action, in relationship, an arborescent model of thinking “doesn’t get us very far”.¹⁴⁴ If we are, after all, social creatures, designed for relationship, then collective participation may be a more natural and organic mode of experiencing the creative arts than conventional (arboreal) divisive models that cultivate spectating and consuming. Deleuze and Guattari talk at length about “multiplicities” in relation to the rhizome. There is always more than one —never a “unity”—yet, never a dichotomy or a duality.¹⁴⁵ Like Fuller’s geodesic dome that grows stronger and more stable as it increases in size, so also, the larger the multiplicity the greater the number of connections that can be made. Deleuze and Guattari maintain “a multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature (the laws of combination therefore increase in number as the multiplicity grows)”.¹⁴⁶ These rhizomatic principles, when applied to groups of corporeally interacting humans, suggest that there may be advantages in working collaboratively (and the larger the group, the greater the potential advantage).

The rhizome is *a-centred*, and “communication runs from any neighbour to any other, the stems or channels do not pre-exist, and all individuals are interchangeable, defined only by their state at a given moment—such that the local operations are

¹⁴³ Deleuze and Guattari, *Thousand Plateaus*, 5.

¹⁴⁴ *Ibid.*, 5.

¹⁴⁵ *Ibid.*, 8.

¹⁴⁶ *Ibid.*

coordinated and the final, global result synchronised without a central agency”.¹⁴⁷

Again, this rhizomatic model can be related to egalitarian ways of working creatively with others, without the need for an authority figure or leader. Deleuze and Guattari describe the arborescent as a “sad image of thought that is forever imitating the multiple on the basis of a centred or segmented higher authority”.¹⁴⁸ In contrast, the rhizomatic is an inclusive and non-divisive model which can be entered or exited at any moment, and from many possible entry and exit points. Connections can be made with whatever is around, near and far—everything that comes within range¹⁴⁹—and these connections extend omni-directionally beyond the vertical hierarchical model of authoritarian organisation in which we must predominantly refer to the connection directly above.¹⁵⁰

Through the, at times, apparent chaos of collaborative action (for example, group drumming), a supplementary breakthrough “element” often emerges—a non-quantifiable “something”. In my experience, this has proved to be the case time after time. Deleuze and Guattari discuss Burroughs’ work in relation to the extra dimension that is created as a result of the process of cutting up text.¹⁵¹ They argue that “the folding of one text into another, which constitutes multiple and even adventitious roots (like a cutting), implies a supplementary dimension to that of the texts under consideration”.¹⁵² In connection with the creative process, there *does* seem to be a dimension beyond aesthetic considerations of good and bad (and as

¹⁴⁷ Deleuze and Guattari, *Thousand Plateaus*, 17.

¹⁴⁸ *Ibid.*, 16.

¹⁴⁹ *Ibid.*, 3.

¹⁵⁰ *Ibid.*, 16.

¹⁵¹ See also, William S. Burroughs, and Brion Gysin. *The Third Mind*. (New York: Viking Press, 1978).

¹⁵² Deleuze and Guattari, *Thousand Plateaus*, 6.

Cage would suggest, beyond the likes and dislikes of the ego). Deleuze and Guattari claim that, in any case, “good and bad are only the products of an active and temporary selection, which must be renewed”.¹⁵³ The idea of an emergent supplementary dimension also appears to relate to Cage’s observance of an unintended macro structure that often emerges when one employs chance operations.¹⁵⁴ The absence of intention does not necessarily imply absence of organisation. *Something* usually emerges, often in the form of “a properly angelic and superior unity”.¹⁵⁵ There may also be esoteric connections here with Fuller’s idea of aesthetic beauty emerging from “correct” functional design. In returning to the discussion of human collaboration, it may be that out of the apparent random chaos of the “group-mind” and the “group-action”, something special and unexpected is able, and likely, to emerge.

¹⁵³ Deleuze and Guattari, *Thousand Plateaus*, 10.

¹⁵⁴ Retallack, *Musicage*, 238.

¹⁵⁵ Deleuze and Guattari, *Thousand Plateaus*, 6.

R. Buckminster Fuller and collaboration

*“Environment to each must be
All that is
That isn’t me.
And Universe in turn must be
All that isn’t me
And me” – Buckminster Fuller.*¹⁵⁶

The idea that one can work completely alone may be a misconception. As Fuller points out, the ever-increasing amount of information available to us, derived from the accumulated life experiences and scientific discoveries of all humanity,¹⁵⁷ create a vast pool of knowledge from which to draw when working creatively. Fuller claims aesthetics and imagination come from a “twilight zone between the conscious and unconscious”.¹⁵⁸ This twilight zone could be considered as a collaborative reservoir, stocked with a wide variety of potentially useful information. Fuller considers “the ability of the imagination to formulate conceptually” to be the most important of the human faculties.¹⁵⁹ The importance of the imagination to arts practice and research cannot be overstated.

Fuller asserted that *autonomy* and *initiative* are critically important to the developing child. Of crucial importance is a sense of having a minimal space or territory that is theirs alone. The freedom for children to safely explore and learn about the world without having their efforts thwarted is also essential.¹⁶⁰ Fuller believed that humans are able to spontaneously *self-discipline* if given this favourable early

¹⁵⁶ Howard Brown, Robert Cook, and Medard Gabel. *Environmental Design Science Primer* (New Haven, CT: Advocate Press, 1978), 8.

¹⁵⁷ Fuller, “Buckminster Fuller Werner Erhard conversation.”

¹⁵⁸ *Ibid.*, 6:26:00.

¹⁵⁹ Fuller, “Time Present”, 73.

¹⁶⁰ *Ibid.*, 132.

environment.¹⁶¹ In a healthy model of collaboration, individual efforts are synergetically combined without the loss of an individual's self-governance. Cage and Cunningham's method of working together, discussed above, is a good example of this type of collaboration. A conception of collaboration that harnesses the power of collective action does not automatically involve consensus or cooperation, but instead involves the combined forces of each individual, fully participating and actualising their potential. It seems possible, in theory, to combine individual *conceptualisations* and *physical efforts*, to create something *collaboratively*, without the necessity of anyone having to tell anyone else what to do, and also without the necessity of compromising one's own autonomy. Large projects need many people to realise them. However, to be able to collaborate well, we need to have something useful to offer. If we have become habituated, over time, to mistrusting any movement from our own centre (our own intuition and imagination), and to instead rehash the ideas of others, then we have little to contribute. We must be open to learning from our own experience.

For Fuller, everything is about relationships, since physics has shown that there is no such thing as a solid (better described as a *plurality of events*), and that all systems are full of holes and constantly trading energy with other systems.¹⁶² Humans are constantly in relationship, transforming and exchanging energy with other "event pluralities" (humans). A generalised principle is a statement of the relationship between parts of the whole.¹⁶³ For example, gravity is something that happens between "energetic things" that is not obvious just by observing one of them. Our

¹⁶¹ Fuller, "Music of the New Life", no.5, 128.

¹⁶² Fuller, "Music of the New Life", no.6, 60.

¹⁶³ Fuller, "Buckminster Fuller Werner Erhard conversation." 1.29.00.

first awareness, according to Fuller, is of the “other”, in the form of the mother.¹⁶⁴

Following on from these ideas, relationships can be viewed as convergences of events. Productive convergences can create unexpected *interferences*, which generate “original” questions.¹⁶⁵ Again, *convergence*, in terms of creative collaboration does not require a giving up of one’s individual autonomy. It does, however, necessitate a certain openness to influence, and an acceptance of the unique importance of other “event pluralities”.

We can no longer rationalise selfishness, in any arena when we now know there are enough resources for everyone, if managed equitably.¹⁶⁶ In Fuller’s eternally regenerative universe, scarcity is demonstrably a social construction; however, the actualisation of regenerative abundance is contingent on our ability to work together. His often stated underlying motivation and primary design purpose was to “employ resources and generalised principles, so as to render 100% of humanity successful without doing harm to other vital components of the biosphere”.¹⁶⁷ His designs were guided by a set of values and ethics that recognised the importance of sustainability as essential to nature’s regenerative system of organisation.¹⁶⁸ Fuller’s philosophy is a long way from the narcissistic sacrifice zones discussed earlier, in which little value is placed on human lives, where only a self-serving few benefit, and where whole ecosystems are destroyed and rendered uninhabitable. In the more narcissistic model, people are isolated from each other. Separation and division can destroy trust, and impede transparent and productive communication, which helps enable the

¹⁶⁴ Fuller, “Buckminster Fuller Werner Erhard conversation.” 3:57:00.

¹⁶⁵ Fuller, “Music of the New Life”, no.5, 142.

¹⁶⁶ Fuller, “Buckminster Fuller Werner Erhard conversation.” 24.00.

¹⁶⁷ Brown, Cook, and Gabel, *Environmental Design Science Primer*, 44.

¹⁶⁸ *Ibid.*, 54.

monopolisation of resources for the personal gain of a minority. People who talk with each other, and work together, pose a threat to those in positions of authority. Those who collaborate creatively—and perhaps even make music together—may pose the greatest threat of all.

In light of many of the ideas discussed above, it seems essential to work together to re-establish a musical culture of caretaking¹⁶⁹—a *culture* that is sustainable and inclusive and that honours each individual as precious. Socially responsible creative arts practice, in its many forms, may sometimes require the adoption of Foucault’s approach of “voluntary inservitude” (*Non serviam*).¹⁷⁰ As Deleuze suggests, “there is a fundamental affinity between the work of *art* and the act of resistance”.¹⁷¹ It seems that there are connections between the primarily arborescent Western art music model of musical composition and the narcissistic template discussed at length in this section. In contrast, musical composition that enables collaborative participation aligns predominantly with the non-hierarchical, and subversive, rhizomatic model. Rhizomatic creative work takes place below the surface of things, drawing on collective wisdom to undermine narcissistic arboreal power structures. Taking back control in a “control” society¹⁷² requires *holistic participation* and *collaborative imagination*.

¹⁶⁹ Ideasatthehouse. "Naomi Klein".

¹⁷⁰ See 21n in “Studies in participation & Collaboration”. *Non serviam* is Latin for “I will not serve”, or the more polite and colloquial—“I would prefer not to”.

¹⁷¹ Thinkinaloud7189. "Gilles Deleuze on Cinema"

¹⁷² Moving on from Foucault’s idea of the *disciplinary society*, Deleuze believed that we were entering *societies of control*, where spaces of ‘confinement’ were no longer required. For example, information customarily functions as a form of control. According to Deleuze, in terms of *resistance*, the role of art should be that of a ‘counter-information’ system. See Thinkinaloud7189. "Gilles Deleuze on Cinema".

Rhythm

This part of the conceptually-focused section of the thesis will explore rhythm, discussing its connections with the concepts of participation and collaboration, and drawing predominantly on the ideas of Fuller, Cage, and Deleuze and Guattari to explore the idea of the rhythmic “cohabitation” of space-time. The phenomenon of entrainment, the various benefits of participation in rhythm-focused group activities, and the use of rhythm as an inclusive tool for enabling spontaneous musical co-creation amongst previously unskilled musicians, will also be covered.

It could be argued the rhythm is *the* most important element within the neural circuitry of the brain dedicated specifically to music.¹⁷³ Polyphony— “the vertical simultaneity of sound in multiple melodies, intervals and harmonies”¹⁷⁴—could be considered to be embraced *within* a larger field of rhythmic organisation, if rhythm is defined “in the broadest sense as structure of temporal distribution and organisation”.¹⁷⁵ Despite the primary importance of rhythm in terms of the “auditory temporal architecture” of the human brain,¹⁷⁶ its role in Western art music has traditionally been of secondary importance to that of harmony.¹⁷⁷ The function of rhythm has often been regarded as little more than providing “the coordination needed for the ‘real’ music to occur”.¹⁷⁸ However, Nelson suggests that “the notion of a potent performance ecosystem would be one in which the possibilities for rhythmic binding and participation are varied and subtle, and involve explicit

¹⁷³ Thaut, *Rhythm, Music and the Brain*, viii.

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

¹⁷⁷ There are, of course, exceptions, such as the experimental compositions of John Cage.

¹⁷⁸ Richard A. Rogers, "Rhythm and the Performance of Organization." *Text and Performance Quarterly* 14, no. 3 (1994): 222-37.

potential for identifications outside of the narrow confines of human agency and current human modes of communication”.¹⁷⁹ The role of rhythm in relation to collaborative drumming extends well beyond the phenomenon of rhythmic entrainment where participants manage to synchronise to an obvious pulse. Nelson points out that there are a complex variety of ways to “cohabit” in time.¹⁸⁰

Cohabitation is a useful way of imagining collaborative music making, particularly in terms of the installation design for this project, as it is inclusive of many modes of rhythmical interaction, both pulsed and non-pulsed. This open approach frees the tentative inexperienced composer-musician from the sometimes-intimidating expectation that drumming must involve *keeping time* with others. Collaborative encounters in the creation and performance of *experimental* music¹⁸¹ should ideally offer an enticing entry point for the non-professional into the milieu of musical co-creation.

The connections between embodied holistic participation, inclusive collaboration and musical composition are considered at length in this thesis. There are also connections between rhythm and these areas of research. In discussing rhythm and its links to brain function, Thaut claims that *participation* in the arts is a necessity for healthy brain function. He points out “the brain needs to engage in combining forms of lines and colours, creating vertical and horizontal layers of sounds of different timbres, building physical shapes and movements of the human body in dance, in order to build, sharpen, maintain, and create order in its perceptual machinery as an

¹⁷⁹ Peter Nelson, "Cohabiting in Time: Towards an Ecology of Rhythm." *Organised Sound* 16, no. 2 (2011): 109-14.113.

¹⁸⁰ Ibid.

¹⁸¹ I use the word ‘experimental’ here, again in terms of Cage’s definition, not as “descriptive of an act to be later judged in terms of success or failure, but simply as of an act the outcome of which is unknown”. See Cage, *Silence*, 13.

essential aspect of brain function”.¹⁸² The behavioural expectation (particularly within the Western art music paradigm) that an audience’s customary role need not extend beyond *listening*—with many bodily responses subjugated in the process—is seldom questioned. This expectation, however, seems unreasonable if one considers compelling research, emerging from a variety of transdisciplinary fields, that explores the relationships between human cognition and behaviour, and music.¹⁸³ Bispham maintains, “rhythmic behaviours and abilities pervade all human social interactions”.¹⁸⁴ It could be suggested that humans are well suited for (perhaps even designed for) collaborative participation in music making.

Oliver Sacks has pointed out that rhythmic ability is considered to be supramodal. This means, “once a rhythm is established, it may be played out with any motor modality, including the hands, feet, mouth, or the whole body”.¹⁸⁵ This ability can be observed in many traditional drumming cultures where vocalisation and/or movement are not only important aspects of a drummer’s education and performance practices, but furthermore, ways for the extended community to participate.¹⁸⁶ The drum kit also relies on this supramodal rhythmic ability to an extent, as the player customarily utilises all four limbs. The use of vocalisation during performance or as

¹⁸² Thaut, *Rhythm, Music and the Brain*, 25.

¹⁸³ See, for example, Thaut, *Rhythm, Music and the Brain*, Aniruddh D. Patel, and UPSO, *Music, Language, and the Brain*. (Oxford, New York: Oxford University Press, 2008), and Thomas Turino, *Music as Social Life: The Politics of Participation*. Chicago Studies in Ethnomusicology (Chicago: University of Chicago Press, 2008).

¹⁸⁴ John Bispham, "Rhythm in music: what is it? Who has it? And why?" *Music Perception* 24, no. 2 (12, 2006): 125-134. Accessed May 11, 2016. <http://search.proquest.com.ezproxy.uws.edu.au/docview/222291912?accountid=36155>.

¹⁸⁵ Merlin Donald, *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. (Cambridge, MA: Harvard University Press, 1991), quoted in Oliver Sacks, *Musophilia: Tales of Music and the Brain*. (London: Picador, 2007), 247.

¹⁸⁶ Uschi Billmeier and Mamady Keita. *A life for the Djembe – Traditional Rhythms of the Malinke*. (Arun - Verlag, Osststr, 1999), 27.

a method of learning rhythms is, however, quite rare, and usually not part of a drum kit player's education to the extent that it is in older drumming traditions around the world. For example, in Hindustani classical music, mastering the vocal drum language of the tabla is an indispensable part of a tabla player's education. Prior to drumming, rhythms are recited out loud, while the "tala" (the rhythmic framework), is indicated by clapping. My own experience as a facilitator of a variety of modalities of group drumming is that the use of a vocal drum language (while stepping in time, or clapping, to a common pulse) as a method of learning (and remembering) a rhythm produces a much more stable and cohesive "groove" when the rhythm is finally translated (through the arms) onto the actual drums.

Cohabitation in time

Music structures time, and rhythm is predominantly responsible for creating our perceptions of time, and for rendering them audible.¹⁸⁷ Our perceptions in relation to rhythm can extend beyond the regular pulsation of “clock” time to a wider apprehension of a complex temporal architecture that encompasses not only the sequential nature of duration, but also the perception of simultaneity offered by harmonic events.¹⁸⁸ However, it is worth noting that, as Fuller points out, events converge but do not intersect. The word “intersect” is a misnomer, in that it is impossible in terms of physics for two things (lines/events) to move through the same point simultaneously. This idea embraces Einstein’s theory of relativity in relation to the non-simultaneity of the universe. In the process we lose Newton’s outdated view of a static universe at rest.¹⁸⁹ Though experientially perhaps difficult to grasp, the inclusion of the concept of space-time can explain the sensory illusion of *simultaneity*. For example, although we visually apprehend distant stars as a static field, we are in fact apprehending a large number of non-simultaneous events that have already taken place over varying immense spans of time. The light and warmth from our own sun is already eight minutes “past” by the time it reaches our senses. These concepts can also be applied to collective creative action. When the idea of jointly occupying a limited space is abolished, competition becomes redundant. One can begin to think more in terms of a collaborative *convergence* that need not require loss of apparent autonomy.

¹⁸⁷ Thaut, *Rhythm, Music and the Brain*, 15.

¹⁸⁸ Ibid.

¹⁸⁹ Fuller, “Music of the new life”, no.6, 62.

In an interview in 1963, Cage describes “clock” time as a “grid of organisation laid over our experience”.¹⁹⁰ Some experimental composers of the time, including Cage, were no longer writing or constructing rhythms in a linear fashion but were instead using “space” as a way of creating rhythm. Instead of counting (1, 2, 3, 4, and so on), “things could be at the point in space that would be analogous to their point in time. In this way rhythms need not be bound by ‘ruler-like’ aspects”.¹⁹¹ Cage also noted the ways in which our perceptions of time—whether it flies or stands still—can vary, depending partly on these issues (of counting and not counting) and he had begun to experiment with these ideas in his composition.¹⁹² Cage was primarily a “percussion” composer, who initially used duration as a method of structuring his work. He claimed that a rhythmic structure provides openness to any content,¹⁹³ pointing out that “the strings, the winds, the brass know more about music than they do about sound. To study noise they must go to the school of percussion. There they will discover silence, a way to change one's mind; and aspects of time that have not yet been put into practice. European musical history began the study (the isorhythmic motet) but it was put aside by the theory of harmony ... the spirit of percussion opens everything, even what was, so to speak, completely closed”.¹⁹⁴

Connections could be drawn between Deleuze and Guattari’s concept of striated/non-striated space and pulsed/non-pulsed rhythms. An insistence on adherence to a strict

¹⁹⁰ "John Cage interviewed by Jonathan Cott: Jonathan Cott & John Cage: Free Streaming: Internet Archive." Internet Archive. Accessed May 18, 2016. <https://archive.org/details/CottInterviews>.

¹⁹¹ Cage, *John Cage Interviewed by Jonathan Cott*.

¹⁹² Ibid.

¹⁹³ Nyman, *Experimental Music*, 33.

¹⁹⁴ Cage, *An Autobiographical Statement*, 1989-1991.

pulse at all times could be viewed as a type of “overcoding” or striation of space.¹⁹⁵ Drawing on Boulez, Deleuze and Guattari suggest that “in a smooth space-time one occupies without counting, whereas in a striated space-time one counts in order to occupy”.¹⁹⁶ However, the relationship between striated and non-striated space involves a more complex communication than a simple exclusionary binary division of either “this” or “that”.¹⁹⁷ A primarily smooth or non-striated (non-pulsating) space does not necessarily preclude pulsation/striation, and furthermore, is inclusive of a diverse variety of ways of cohabiting rhythmically. When one is in open space, one need only *hold* that space, in the surety that a movement at any point in time is viable.¹⁹⁸ Action is not limited to movement “from one point to another, but becomes perpetual, without aim or destination, without departure or arrival”.¹⁹⁹

According to Ebert,²⁰⁰ Deleuze’s later work is concerned with three primary ideas in relation to time. The first concerns the idea of time as a passive synthesis of habit. Because things have been a certain way in the past, we assume that they will continue to be this way. Habit is a contraction of reality—a contraction of the past into the present. The second idea is that of the active synthesis of memory—of the past-present and the present-present, with memory oscillating between the two. These first two concepts of time stabilise the personality into the idea of the subject.

¹⁹⁵ Deleuze and Guattari explain overcoding as a “phenomen[on] of centering, unification, totalization, integration, hierarchization and finalization”. See Deleuze and Guattari, *Thousand Plateaus*, 41, 8-9.

¹⁹⁶ Deleuze and Guattari, *Thousand Plateaus*, 477.

¹⁹⁷ *Ibid.*, 473-475, 478.

¹⁹⁸ *Ibid.*, 353.

¹⁹⁹ *Ibid.*

²⁰⁰ John David Ebert, “Gilles Deleuze's *Difference and Repetition* Discussed by John David Ebert”. <http://www.youtube.com/watch?v=Po78dF40mrk&feature=relmfu> (accessed September, 2012).

The third synthesis is that of empty time—the rupture of the circle of habit and memory and the emergence of the novel, the singularity, the “new”. Ebert suggests that this rupture, “blows apart” the axis of “self” and reveals a human without qualities.²⁰¹ The installation design for this project aims to facilitate an event that allows the possibility of self-alteration in those who participate. This may involve the emergence of new behaviours rather than a collapse into habit and memory. The introduction of unfamiliar musical instruments in terms of the “prepared” drums, arranged in a nonconventional way (suspended from above), may help enable action that emanates from outside of potentially limiting memories or habits, in relation to musical participation.

An aspect of rhythm quite common in West African drumming traditions, but less commonly observed within the world of Western art music, is that of polyrhythm. Thaut explains that polyrhythmic structures involve “different meters ... simultaneously performed against [I prefer the word “with”] each other in sequence, creating ambiguity—through continuous phase shifts between alignments of metric beats—as to what the basic felt pulse pattern is”.²⁰² Patel points out that polyrhythmic music “emphasises diversity in terms of the way it can be heard”.²⁰³ Patel’s claim, however, that traditional Ghanaian drumming ensembles do not rely on a common isochronous beat as an anchoring point in time, is contentious, at least in terms of my experience of observing and participating in traditional Malinke drumming ensembles in West Africa. The reliance on a shared pulsation can be

²⁰¹ Ebert also suggests that this idea was the seed for Badiou’s concept of the ‘event’.

²⁰² Thaut, *Rhythm, Music and the Brain*, 11.

²⁰³ Aniruddh D. Patel, and UPSO. *Music, Language, and the Brain*. (Oxford; New York: Oxford University Press, 2008), 98.

observed not only in the standard practice of drummers stepping together in time while drumming, but also in the methods of signalling and soloing employed by the *Djembéfolá*. One also feels (and relies on) an isochronous pulse while drumming within such an ensemble, although here my perception is obviously coloured by my subjective experience —as a non-African participant and observer.

Entrainment

Experimental composer Cornelius Cardew observed the phenomenon of entrainment as early as 1975. He points out, when discussing the concept of accompaniment, that “if you get a lot of people engaging in activities in the same space ... then these activities will accommodate themselves to each other”.²⁰⁴ Rhythmical entrainment can sometimes be observed within “drumming-circles”, and is, in point of fact, what many drum circle facilitators ultimately aim for. It refers to moments where there is a shift out of a hierarchical model and into a self-regulatory synchronisation of rhythm.²⁰⁵ When this state is attained, no leader is required, as the group is able to *self-facilitate*. The idea that humans can readily synchronise their movements with each other via a common auditory pulsation is relatively uncontentious.²⁰⁶ So also is the idea that this rhythmic entrainment can function as an important enabler of collective action and social cohesion.²⁰⁷ According to Thaut, the perception of

²⁰⁴ Cornelius Cardew, “The Politics and Music of Cornelius Cardew” (January 25, 1975), http://archive.org/details/AM_1975_01_25 (accessed, September, 2012).

²⁰⁵ See Arthur Hull, *Drum Circle Spirit: Facilitating Human Potential through Rhythm*. (Tempe, Ariz.: White Cliffs Media, 1998).

²⁰⁶ See, for example, Bispham, “Rhythm in music” and Thaut, *Rhythm, Music and the Brain*. 7-8.

²⁰⁷ See, for example, Munro, Martin. “Slaves to the Rhythm: The Rhythmic Evolution of Plantation Societies.” *Contemporary French and Francophone Studies* 15, no. 1 (2011): 27-35, and Beatriz Ilari, “Music in the Early Years: Pathways into the Social World.” *Research Studies in Music Education* 38, no. 1, 23-39.

rhythm, that enables us to synchronise, is not based on the pulsation event itself, but instead is an “interval period-based process, with pulses simply serving as event markers demarcating rhythmic intervals ... rhythmic events are referenced and synchronised against underlying sensations of [these] pulse patterns”.²⁰⁸ However, Thaut points out that although the anticipation and predictability produced by regular pulsation has “tremendous influence on the regulation of nonmusical temporal processes in perception, cognition and motor control”, in terms of music, a strict adherence to “clock” time can be constraining.²⁰⁹

Another aspect of the phenomenon of entrainment that impacts the human organism is the ability of brainwaves to synchronise to an external auditory pulsation. This is known as *auditory driving*, further explained as, “the way brainwaves modulate in tempo or frequency to gradually match the frequency of a rhythmic stimulus in the environment”.²¹⁰ This sympathetic response has proven to be useful in areas such as “stress reduction, pain control and the improvement of concentration and information retention”.²¹¹ It has been suggested that group drumming enhances brainwave entrainment, particularly in the theta and alpha ranges, increasing relaxation and hypnotic susceptibility, and sometimes even inducing shamanic experiences.²¹²

²⁰⁸ Thaut *Rhythm, Music and the Brain*, 7.

²⁰⁹ *Ibid.*, 8.

²¹⁰ CCRMA. "Brainwave Entrainment to External Rhythmic Stimuli: Interdisciplinary Research and Clinical Perspectives." Symposium 2007. May 13, 2006. Accessed August 11, 2016. <http://web.stanford.edu/group/brainwaves/2006/index.html>.

²¹¹ David First, "The Music of the Sphere: An Investigation into Asymptotic Harmonics, Brainwave Entrainment and the Earth as a Giant Bell." *Leonardo Music Journal* 13 (2003): 31-37. p31.

²¹² Michael Winkelman, "Complementary Therapy for Addiction: "Drumming Out Drugs"." *American Journal of Public Health* 93, no. 4 (04, 2003): 647-51. <http://search.proquest.com.ezproxy.uws.edu.au/docview/215101491?accountid=36155>.

Support for the importance of rhythm comes from a diverse range of research perspectives. Keil claims that participatory consciousness is essential if we “are to get back into ecological synchrony with ourselves and with the natural world”.²¹³ Ilari proposes that participatory musical experiences have the ability to create powerful bonds between individuals.²¹⁴ It is also evident that rhythm in particular (and more specifically, in relation to this project, group drumming) may be a “powerful, way in which integration, whether in a personal, social or ecological sense, can be accomplished”.²¹⁵ Munro points out that rhythm “transcends linguistic and national barriers ... [and] plays a fundamental role in the creation and establishment of stable, functioning individuals [and] societies ... creating a collective experience of time”.²¹⁶

In terms of the installation design for this project, the spatial dispersion, and reconstruction processes performed on the drum kit assemblage, culminate in percussion instruments that can be readily utilised by participants with no prior drumming experience. A focus on duration rather than pitch simplifies and improves accessibility to the systems of musical composition and performance—particularly for the novice. Thaut claims that “discernible temporal distributions and organisation of events in groupings imposed by a rhythmic structure allow for better perceptual gestalts to emerge, minimising conflict and difficulty in perception, such as being

²¹³ Charles Keil, "Participatory Discrepancies and the Power of Music." *Cultural Anthropology* 2, no. 3 (1987): 275-83. <http://www.jstor.org.ezproxy.uws.edu.au/stable/656427>. 276.

²¹⁴ Beatriz Ilari, "Music in the Early Years: Pathways into the Social World." *Research Studies in Music Education* 38, no. 1, 23-39. 30-31.

²¹⁵ Peter Nelson, "Cohabiting in Time: Towards an Ecology of Rhythm." *Organised Sound* 16, no. 2 (2011): 109-14. 113.

²¹⁶ Munro, Martin. "Slaves to the Rhythm: The Rhythmic Evolution of Plantation Societies." *Contemporary French and Francophone Studies* 15, no. 1 (2011): 27-35. p27-28.

confronted by stimuli that are hard to distinguish”.²¹⁷ Rhythm seems to be of such fundamental importance to the human organism that it could be considered as a useful universal common denominator to draw upon when designing and participating in collaborative music making.

²¹⁷ Thaut, *Rhythm, Music and the Brain*, 6.

Rhizomatic methodology

This section of the thesis explores the conceptual underpinnings of the methodology employed for the overall research project. This methodology could be described as both theory/concept-based *and* practice-based qualitative research. As outlined in the “Introduction” section of the overall thesis, an additional way of conceptualising the approach—that is in keeping with the overall approach of this study—is a consideration of the research project as one that utilises primarily a *rhizomatic* methodology. This methodological style encompasses an assemblage of methods which at times are characterised principally by “practical” creative work, and at other times more by “theoretical” research. It is a qualitative arts-based research project that embodies complex, interwoven and iterative processes and methods.²¹⁸ Deleuze and Guattari’s ideas in relation to the rhizome have influenced not only my musical compositional work, but also the *methodological* compositional work of “putting together” this research project. What exactly is a “rhizomatic” methodology, or more precisely, how does this particular rhizomatic methodology interact with the world? How does it *form a rhizome with* the world? In the paragraphs that follow, my aim is to suggest some connections between Deleuze and Guattari’s rhizomatic concepts and the assemblage of methods that make up the methodological milieu of this project. It may be helpful to consider the rhizome as not so much a static thing in itself, but rather as an assemblage of behavioural principles with characteristics that can manifest in a variety of diverse forms.²¹⁹ The six principles outlined by Deleuze and Guattari in relation to the rhizome are: connection, heterogeneity, multiplicity, asignifying rupture, cartography and decalcomania. These are discussed below in

²¹⁸ Smith and Dean. *Practice-led Research*, 10.

²¹⁹ Deleuze and Guattari, *Thousand Plateaus*, 7.

more detail in terms of their connections with the methodological approach of this study.

The transdisciplinary nature of this project embodies the rhizomatic principles of heterogeneity and connectivity, where anything can be connected to anything else.²²⁰ In transdisciplinary work, “engagement is never with one thing or one field of knowledge in isolation”.²²¹ The wide variety of research methods used (both theoretical and practical)—many of them activities imagined to be separate—are interwoven in this project. Elements of musical composition form relationships with, for example, aspects of visual art, sound art, craftwork, instrument building, event design and management, reading and writing, philosophy, psychology, sociology, and autoethnography. One can see here the principle of *heterogeneity* at work, as it becomes evident that rhizomatic connections do not necessarily only take place between things of a similar nature, and also that this characteristic (in its encouragement of diverse and unusual relationships) may produce the most innovative outcomes possible. The “Deleuzian-Guattarian” rhizome spreads laterally underground, rather than in a more hierarchical vertical fashion, where the connections made are often more conventional and predictable. A rhizomatic *methodology* does not rely on methods previously used and approved of by a higher authority, but instead can simply make connections and build relationships, when useful, between things, drawing on a variety of often original methods as needed. This is a different process to that of relying on methods that have appeared to be

²²⁰ Deleuze and Guattari, *Thousand Plateaus*, 7.

²²¹ Kim Vincs, “Rhizome/Myzone: a Case Study in Studio-Based Dance Research.” In *Practice as research: approaches to creative arts enquiry*, edited by Estelle Barrett and Barbara Bolt, London: I. B. Tauris, 2007, 99.

useful in the past, and/or that have been used frequently by other researchers.

Conventional approaches may offer a sense of security, but ultimately can lead to unproductive (and uninspiring) research. Richards claims that “handling data well and producing a good research outcome does not *require* knowing the range and rules of particular methods”.²²² She also points out “a high proportion of qualitative research is done outside the methodological literature”.²²³

A rhizomatic methodology seems a good fit for a project that researches rhizomatic styles of musical composition. Participatory and collaborative approaches embody many rhizomatic principles. Working with others in a holistic manner expands one’s sphere of connectivity, enlarging the connections that can be made with other humans and with things as one becomes less constrained by the narrow limitations of one’s specialisation. A person does not have to choose between the roles of listener, performer, and composer, but can instead embrace all three roles, with the many extra connections and relationships this expanded sphere of activity and experience offers. Rhizomatic connections can be made laterally, in a non-hierarchical and inclusive manner, with anything and anyone nearby, without the need for approval from an authority figure. The sound installation designed for this project aims to facilitate the irruption of an embodied and empowering experience of musical composition in the participants. Arriving at this style of musical composition through a rigorously experimental research process has required a methodology that was open to making new connections and forming new relationships between things that formerly may not have seemed to be related at all. The particular methodological

²²² Lyn Richards, *Handling Qualitative Data: A Practical Guide*. Third ed. 2015, xi.

²²³ Richards, *Handling Qualitative Data*, 16.

assemblage for this project is exemplified by the connections that are made between the methods employed. The individual methods should not be regarded as independent categories that describe isolated activities. For example, the autoethnographic approach of drawing on the subjective experience of the researcher (often not considered as providing useful data) is part of an interwoven assemblage of methods, and is not in any way separate from the other research activities. On this theme, Barrett and Bolt point out that the “subjective and situated approach of artistic research ... draws not only on established knowledge, but tacit and intuitive processes”.²²⁴

Deleuze and Guattari talk at length about “multiplicities” in relation to the rhizome. The larger the multiplicity, the greater the number of connections that can be made. Deleuze and Guattari maintain that “a multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature (the laws of combination therefore increase in number as the multiplicity grows)”.²²⁵ These rhizomatic principles, when applied to a research methodology, suggest that there may be advantages in drawing on a wide variety of methods, and perhaps the larger the number, the greater the potential advantage. Richards suggests “methodological ghettoism serves neither those outside nor those working inside the closed world of a particular method”.²²⁶ This project has drawn on numerous methods as needed, and some of these could not have been conceived of prior to the start of the project. The final sound installation

²²⁴ Estelle Barrett, and Barbara Bolt, eds. *Material Invention: Applying Creative Arts Research*. Proceedings: Applying Creative Arts Research Conference, Deakin University, Burwood, Victoria, Australia, December 2009. London: I.B. Tauris & Co. Ltd, 2014, 3.

²²⁵ *Ibid.*, 8.

²²⁶ Richards, *Handling Qualitative Data*, xi.

itself came into being only through several years of creative—conceptual *and* practical—designing and prototyping, as well as extensive theoretical research. Many of the methods employed for this study were “specifically born out of the needs of the research process, coming and going as necessary”.²²⁷

In terms of methodology, naming the methods used is probably a less important activity than considering what these methods *do*, and how any particular assemblage of methods *works*. In this project, and perhaps also in many other arts-based projects, the methods employed are not actually fixed in a particular space/time location, but instead are constantly in flux and difficult to pin down. Naming things that are moving and changing, and shifting and innovating with respect to their relationships, can be problematic. Hamon claims “asignifying rupture is a process by which the rhizome resists territorialization, or attempts to signify, or name it by an overcoding power. It is the process by which the rhizome breaks out of its boundaries (deterritorializes) and then reassembles or re-collects itself elsewhere and else-when (reterritorializes), often assuming a new or shifted identity”.²²⁸ Twenty years prior to the publication of *Thousand Plateaus*, Eisner had identified boundary pushing and boundary breaking as important aspects of creative behaviour.²²⁹

Attempting to install a methodological regime prior to the start of an arts-based research project may be less productive than waiting to see what happens (and what the creatively-generated data reveals) as the project unfolds. This approach draws

²²⁷ Leah Mercer, Julie Robson, and David Fenton, *Live Research: Methods of Practice-led Inquiry in Performance*. Nerang, Qld.: Ladyfinger, 2012, 14.

²²⁸ Keith Hamon A blog to support Keith Hamon's rhizomatic explorations of complexity. <http://dst-2215.blogspot.com.au/2010/01/asignifying-ruptures-in-classroom.html> (Accessed 5 October 2017).

²²⁹ Julia Coyle and Marissa Olsen, “Learning to be a Researcher: Bridging the Gap between Research and Creativity”. In Higgs et al. *Creative Spaces*, 174.

more on the spirit of experimentation, where what will happen cannot be known prior to the event itself. Attempting to name an event before it takes place can impose unnecessary limitations, which impact its development. Sometimes it is best to simply proceed and focus one's attention on what is revealed through an exploration of the data produced. Moldoveanu and Langer claim "it is only by maintaining a sceptical attitude toward the categories which we are currently using that we can retain the capability to improve upon them, and to make our own ways of expression more truth-like or verisimilar in nature".²³⁰ An awareness of the limitations of classification could be a perspective worth cultivating in the context of arts-based qualitative research. Hamon reminds us that a *rhizomatic rupture* "stands against or ignores any label applied to it, rendering the label sterile, inappropriate, incoherent, an obvious power-play by the signifying, overcoding fascist who applies it".²³¹ It is important to note that when one is working within (and is partially funded and supervised by) a large institution, often the procedures followed are not the researcher's choice alone, and are outside of their locus of control. Fenton points out that "surfacing or articulating artistic methods and their rationale within an academic framework can be challenging, at times compromising the fullness, sense-ability or dimensionality of the creative process that has matured over years of practice".²³²

As mentioned previously, Deleuze and Guattari also compare the concepts of "tracing" (decalcomania) and "cartography" (map making).²³³ They consider

²³⁰ M.C. Moldoveanu, E. Langer. "Mindfulness." In Runco, Mark A., Pritzker, Steven R, ed., and ScienceDirect. *Encyclopedia of Creativity*. 2nd ed. ScienceDirect EBooks. Amsterdam; Boston: Academic Press/Elsevier, 2011. 126–135.

²³¹ Hamon, Rhizomatic explorations of complexity.

²³² Mercer, Robson and Fenton, *Live Research*, 15.

²³³ See "Gilles Deleuze, Félix Guattari, & participation" section of this thesis, page 38.

cartography to be primarily rhizomatic. It deals directly with performance (experience), fostering new connections and increasing options for action and comprehensive participation in the world.²³⁴ Maps are relatively “open” systems, in that they can be entered or exited at any point in space-time, by anyone. In comparison *decalcomania* “always involves an alleged ‘competence’”,²³⁵ with an emphasis on replication. This predominantly arborescent system closes off options and precludes innovation. These different ways of approaching one’s research methodology may have an impact on a project’s outcomes. An exclusively arborescent approach, for example, could deliver the “kiss of death” to a potentially innovative project before it even gets off the ground. Often, experimentation is required to “find the best methods and tools to suit the project”.²³⁶ This more rhizomatic approach has little in common with replication. Horsfall and Higgs point out “there are times ... when it is more useful and creative to cross, blur and even ignore the way things have been done before, especially when concerned with a research agenda that seeks change at personal, organisational or societal levels”.²³⁷

Martin and Booth claim that “there are many ways of 'knowing' and making sense of the world”.²³⁸ Arts-based research often involves complex processes in which theory and praxis are of equal importance—and are inextricably interwoven in a rhizomatic

²³⁴ Deleuze and Guattari, *Thousand Plateaus*, 12.

²³⁵ *Ibid.*, 13.

²³⁶ Mercer, Robson and Fenton, *Live Research*, 15.

²³⁷ Horsfall and Higgs, “Boundary Riding and Shaping Research Spaces”. In *Creative Spaces for Qualitative Researching*, 45.

²³⁸ Elaine Martin and Judith Booth, Victoria University of Technology. Office for Postgraduate Research, and I, We, They, It: Finding Voice in Creative Research Symposium. *Art-based Research: A Proper Thesis?* (Altona, Vic.: Common Ground in Association with Office for Postgraduate Research, Victoria University, 2006) v.

manner. The conceptual and the practical are not necessarily aligned, correspondent, or connected in a simple or static fashion, but rather, form fluctuating assemblages of interpenetrative events. Insights gained in one area of research can “iterate and deepen understanding in the other”.²³⁹ The variety of methods used to approach the more conceptual side of this project could be viewed, not only as types of data gathering, but also, when integrated, as creative data analysis, through which the researcher grows and changes and acquires new understandings. This new knowledge—part of the iterative research cycle—not only impacts the project itself, but is also conveyed to others through writing and other arts-based “communicative” means. Nonetheless, this is an example of how attempting to separate praxis and theory can sometimes be problematic, as the subjective experiences and personal development of the researcher relate to both aspects. It is also worth considering the relationship between the reader (of this thesis) and the thesis itself, as dynamic and potentially creative. The nature of this rhizomatic connection will vary, depending somewhat on the reader themselves and what they bring to the relationship. A rhizomatic study could form productive connections *with* the reader, rather than simply attempting to represent itself. My intention is that this thesis will *enable action* in the reader—that it will *interpenetrate*—rather than exhibiting competence and encouraging passive consumption.

The theoretical research for this project obviously involved extensive reading, and contemplation in relation to the ideas and creative work of others, before any writing took place. The importance of contemplation and the creative incubation of ideas to this project cannot be overstated. The passage of time has enabled the assimilation

²³⁹ Martin and Booth, *Art-based Research*, vi.

and synthesis of ideas, the exploration of their relevance to the themes under consideration, and the unfolding of these events in close relationship with the personal evolution of the researcher. The function of contemplation, in terms of this project, has also included a lengthy process of re-reading, reflection on, and re-writing of, my own text-based work. In terms of the more utilitarian aspects of the writing, it has been necessary to change writing styles within the thesis, depending on the current focus at any given time. These styles range from the formal register of academic English to a more colloquial descriptive style. This more informal style of writing includes numerous journal excerpts that give some insight into the progression of my thinking (particularly in relation to praxis), throughout the course of the project.

Music composition – exploring praxis in relationship with participation and collaboration

This section of the thesis focuses on a discussion of compositional practice in relation to participation and collaboration. Accordingly, it will examine what types of musical composition best facilitate participatory, and collaborative, music making. To provide some context for this study, the discussion will begin with the idea, put forward by Canadian composer R. Murray Schafer,²⁴⁰ of the world “soundscape” as a form of large-scale musical composition. It will then consider the modes of thought, and action that commonly characterise Western art music. After an examination of the definition and historicisation of experimental music, there will be an exploration of some *known* attempts to trial *participatory* experimental work, inside and outside of the field of Western art music. This will include a brief discussion of the *participatory experimental score*. The compositional survey undertaken in this section does not aim to be comprehensive but rather focuses on works relevant to the development of my own.

²⁴⁰ R. Murray Schafer, *The Tuning of the World: Toward a Theory of Soundscape Design*. (New York: Alfred A. Knopf, Inc, 1977), 5.

Western art music

Before focusing on Western art music, it may be useful to consider sound composition on a larger scale. Schafer proposes that the world “soundscape” could be viewed as a “macrocosmic musical composition”.²⁴¹ He questions whether this soundscape is “an indeterminate composition over which we have no control, or [whether we were] its composers and performers, responsible for giving it form and beauty”.²⁴² The history of the Western soundscape chronicles the control of sonic space by those in power. Sound has often been taken out of the hands of the public and placed into the jurisdiction of external higher authorities. It is worth noting, however, that at least in terms of music, there are exceptions to this practice, for instance in the case of primarily orally transmitted music created by, and for, specific communities. One such example is folk music (arguably difficult to define)²⁴³ which evolved “from rudimentary beginnings”, and continues to be refashioned “by a community uninfluenced by art music”.²⁴⁴ Nevertheless, many of the changes brought about by the industrial revolution, and later on the electrical revolution, totally transformed the private sonic worlds of many. As Schafer points out, there is little evidence of public opposition to these new noises.²⁴⁵ Prior to the industrial revolution, any disturbances to the relatively peaceful rural soundscape were controlled by the church and the military, and consisted of the sounds of religion and

²⁴¹ Schafer, *Tuning of the World*.

²⁴² Ibid.

²⁴³ Norm Cohen. "Folk music." *Grove Music Online*. Oxford University Press, accessed September 9, 2016, <http://www.oxfordmusiconline.com.ezproxy.uws.edu.au/subscriber/article/grove/music/A2241135>

²⁴⁴ Ibid.

²⁴⁵ Schafer, *Tuning of the World*.

war. Schafer suggests that the motivation for the creation of church sounds was to “regulate the behaviour of everyone living within Christian society”.^{246, 247}

The low-fi environment of the post-industrial landscape was dominated by the ear-splitting sounds of crunching metal and machinery,²⁴⁸ and controlled by ruthless and often inhumane business owners, motivated primarily by economic considerations.²⁴⁹ As Schafer points out, it was, and still is, those in power who have permission to make noise.²⁵⁰ With the arrival of the industrial revolution, power began to shift from the hands of the church to big business. Schafer maintains that what appears to be a lack of resistance to the gradual degradation of our sonic lives could be explained by the fact that, “the association of noise and power has never really been broken in the human imagination”.²⁵¹ Attali suggests that attempts to wrestle back control of noisemaking are ways of challenging “repetitive” power.²⁵² He claims that “we are all condemned to silence—unless we create our own relation with the world ... that is what composing is. Doing solely for the sake of doing, without trying artificially to recreate the old codes in order to reinsert communication into them ... playing for one’s own pleasure ... relates to the emergence of the free act, self-transcendence, pleasure in being instead of having”.²⁵³

²⁴⁶ R. Murray Schafer, “Open Ears,” in *The Auditory Culture Reader*. eds. M. Bull & L. Black, (Oxford & New York: Berg, 2003), 25-39, 28.

²⁴⁷ Parenthetically, religion, already long used by the Catholic Church as a means of controlling and robbing the masses, was also co-opted to help facilitate the initiation of the process of institutionalising music. See Glahn and Broyles, “Art Music.” *Grove Music Online*.

²⁴⁸ Schafer describes a “lo-fi” environment as one that is characterised by sound congestion. An environment where there is “so much acoustic information that little of it can emerge with clarity” *Tuning of the World*, 71.

²⁴⁹ Schafer, *Tuning of the World*, 75.

²⁵⁰ *Ibid.*, 76.

²⁵¹ *Ibid.*

²⁵² Attali, *Noise*, 132.

²⁵³ *Ibid.*, 132-134.

Before discussing experimental music and participatory experimental music, it is important to examine the subject of Western art music more closely, as experimental music is conventionally located within (or is at least related to) this field. Western art music can be imagined to exist within a larger and more complex soundscape, as outlined above. This soundscape, of course, includes many other varieties of music composition and performance, including popular and commercial music, which this thesis does not aim to address. My discussion of Western art music will explore primarily its connections with a philosophy that hinges on the idea of privilege, rather than attempting to characterise it in relation to a geographical location and a list of functional musical attributes. However, it is worth noting that other varieties of music composition and performance, beyond the field of Western art music, may merit the same criticism. Many musical conventions have evolved in relation to particular modes of thought. In terms of Deleuzian thought, Western art music tends to be based more on an arboreal model than a rhizomatic one. It is part of a contemporary musical taxonomy whose existence can be explained partly by the desire to establish an “aesthetic hierarchy”.²⁵⁴ This has required the formation of a system of musical classification and the maintenance of firm boundaries between the created categories. It appears there are a complex variety of covert and overt motives involved in the creation of hierarchical categories. In the case of Western art music these motives may be related, in some instances, to the desire for economic gain. Attali points out that “wherever there is music, there is money”.²⁵⁵ Furthermore, he

²⁵⁴ Denise von Glahn and Michael Broyles. "Art music." *Grove Music Online*. *Oxford Music Online*. (Oxford University Press), accessed May 18, 2016, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/A2227279>.

²⁵⁵ Attali, *Noise*, 3-5.

claims “music is illustrative of the evolution of our entire society: de-ritualise a social form, repress an activity of the body, specialise its practice, sell it as a spectacle, generalise its consumption, then see to it that it is stockpiled until it loses its meaning”.²⁵⁶

Nyman suggests that the “classical system, and its contemporary continuation ... is essentially a system of *priorities* which sets up ordered relationships between its components ... where one thing is defined in terms of its opposite ... dualism plays a large part: high/low, rise/fall, fast/slow, climax/stasis, important/unimportant, melody/accompaniment, dense/open textured, solo/tutti, mobile/immobile, high profile/low profile, sound/silence, colourful/monochrome – the one only exists in terms of the other”.²⁵⁷ This process of drawing comparisons between things was something that Cage had little interest in. He suggests that we could benefit from “seeing each thing in its own terms” and he explains this view as one of the reasons why he had little interest in harmony ... being as it is, centred on “relationships”, primarily referencing a tonal centre.²⁵⁸ The idea of the redundancy of dualistic “arboreal” ways of thinking has been touched on in an earlier section.²⁵⁹ A Deleuzian understanding of difference, for example, is one in which difference is not subordinated to sameness but is instead “conceived in terms of ‘difference-in-itself’, the uniqueness implicit in the particularity of things and the moments of their conception ... there is nothing ‘behind’ such difference; difference is not grounded

²⁵⁶ Attali, *Noise*, 3-5.

²⁵⁷ Nyman, *Experimental Music*, 27.

²⁵⁸ Cage, *John Cage Interviewed by Jonathan Cott*.

²⁵⁹ See “studies in participation and collaboration”.

in anything else”.²⁶⁰ Work within the field of Western art music, at times, displays reluctance to accept ‘difference’ in its many manifestations. Music composition within this arena sometimes functions as an “overcoder” of sonic material,²⁶¹ keeping everything in its rightful place and “holding people down”.²⁶² It has been suggested that most innovative music emerges through the unexpected connections formed as a result of the “coalescence of heterogeneous forces from a variety of milieus” when utilising rhizomatic approaches to composition.²⁶³

²⁶⁰ Cliff Stagoll, “Difference”, in *The Deleuze Dictionary: Revised Edition*, ed . Adrian Parr, (Edinburgh: Edinburgh University Press, 2010), 73.

²⁶¹ In relation to ‘overcoding’, see Deleuze and Guattari, *Thousand Plateaus*, 8-9.

²⁶² Cardew, *Stockhausen Serves Imperialism*, 85.

²⁶³ Edward Campbell, *Music after Deleuze* (London: Bloomsbury, 2013) 64.

Experimental music

“What writing music comes down to, in the end, is care.

We create situations.

We care about them and take care of them.

*And we care for the people involved”.*²⁶⁴

Experimental music has never been completely at home within the institution of Western art music, and from its inception it has challenged many compositional and performance conventions within this paradigm. A key to the place of experimental music in relation to Western art music seems to be the perceived distinction between the *avant-garde* and *experimental music*.²⁶⁵ In fact, some claim that in contrast to the institutionalisation of the *avant-garde*,²⁶⁶ experimental music lies completely outside of the art music tradition.²⁶⁷ Cage famously used the word “experimental”, “not as descriptive of an act to be later judged in terms of success or failure, but simply as of an act the outcome of which is unknown”.²⁶⁸ Burt, however, points out that like all definitions, the definition of experimental music is “heavily dependent on context”.²⁶⁹ He suggests that to “define a field which is as wide-ranging and sometimes conceptually anarchic as experimental music requires a similarly wide-

²⁶⁴ Michael Pisaro, “Writing Music.” In *The Ashgate Research Companion to Experimental Music*, edited by James Saunders, Ashgate Research Companion. (Farnham, England; Burlington, VT: Ashgate, 2009), 76.

²⁶⁵ David Cope. *Techniques of the Contemporary Composer* (New York: Schirmer Books., 1997), 222., and Nyman, *Experimental Music*.

²⁶⁶ Maya Lisa Ginsberg. *Documenting the American Experimental Tradition, a Historical Examination of Source and Soundings*. PhD dissertation. San Diego: San Diego State University, 2011.

²⁶⁷ David Nicholls. *The Cambridge History of American Music*. (Cambridge, UK: Cambridge University Press, 1998),318.

²⁶⁸ John Cage. *Silence: Lectures and Writings*. (Middletown, Connecticut: Wesleyan University Press. Unaltered reprints: Wesleyan University press, 1961), 13.

²⁶⁹ Warren Burt. “Some Musical and Sociological Aspects of Australian Experimental Music” <http://www.australianmusiccentre.com.au/article/some-musical-and-sociological-aspects-of-australian-experimental-music> (Accessed May 19, 2016).

ranging non-exclusive definition”.²⁷⁰ However, experimental musical composition *was* originally intended to facilitate a subversive journey into the unknown, outside of the norms of Western art music and the constrictions of memory brought about by its more conventional modes of thought. Feldman claimed that “only by ‘unfixing’ the elements traditionally used to construct a piece of music could the sounds exist in themselves—not as symbols, or memories which were memories of other music to begin with”.²⁷¹

Nyman, focusing on the American mid-century experimentalists such as Cage, Feldman, and Young,²⁷² attempts to define experimental music by a variety of means, including determining the quintessential characteristics of compositional processes employed.²⁷³ In relation to the idea of a distinction between the avant-garde and experimental schools, Johnson suggests that in relation to scoring, avant-garde composers “sought to notate actual, objective sounds, [whereas] the “experimentalists” favoured descriptions of the performer’s actions, materials and

²⁷⁰ Burt, *Australian Experimental Music*.

²⁷¹ Nyman, *Experimental Music*, 50.

²⁷² Ginsberg, *Documenting the American Experimental Tradition*, 20.

²⁷³ Nyman explains the processes evolved by experimental composers as follows:

1. Chance determination processes – the placing of the material at one remove from the composer by allowing it to be determined by a system they determined ... the innovation lies in the creation of a system.
2. People processes – allow people to move through suggested material at their own speed ... “The idea of one and the same activity being done simultaneously by a number of people, so that everyone does it slightly differently, ‘unity’ becoming ‘multiplicity’, gives one a very economical form of notation - it is only necessary to specify one procedure and the variety comes from the way everyone does it differently. This is an example of making use of hidden resources in the sense of natural individual differences”.
3. Contextual Processes – concerned with actions dependent on unpredictable variables which arise during the musical continuity. See Christian Wolff’s work for more on contextual systems.
4. Repetition Processes – extended repetition as the sole means of generating movement.
5. Electronic Processes.

See Nyman, *Experimental Music*, 5-6.

attitudes”.²⁷⁴ On this subject, though, it is important to note that there is not necessarily a consensus about which composers belong to which school,²⁷⁵ and there is a plethora of perspectives. Cardew and Tilbury, for example, consider both the avant-garde *and* experimental music as sharing “overriding similarities [residing] in the elitist, individualistic, bourgeois culture which has spawned both”.²⁷⁶ As Christopher Fox points out, the history of experimental music and the avant-garde cannot be reduced to a clear-cut binary division. He suggests that “what has become clear in the years since 1974 is that there is not just one true history, that of the post-1945 modernist avant-garde with, possibly, and in contra-distinction, a shadowy alternative history, that of experimental music: instead there is an abundance of histories. Furthermore, these histories are themselves contingent on the perspectives adopted by the writers who fashion them and on the contexts in which the histories are recounted”.²⁷⁷ Fox claims that since the mid-seventies we have also begun to see a “broadening of the history of modernism itself to allow the re-adoption of figures such as Scelsi and Nancarrow, whose music had been marginalised by the avant-garde in the 1950s and 1960s”.²⁷⁸

A lot has been written and spoken about the heyday of experimental music, with Cage the frontrunner for the title of most important *canonised* experimental composer in America, and Cardew leading the British contingent. Rather than revisiting this discussion, it seems worth examining how experimental music is

²⁷⁴ Roger Johnson. *Scores: An Anthology of New Music*. (Collier Macmillan Publishers, London, 1981), xv.

²⁷⁵ Ginsberg, *Documenting the American Experimental Tradition*, 57.

²⁷⁶ Nyman, *Experimental Music*, 2n.

²⁷⁷ Christopher Fox. “Why Experimental, Why Me?” In *The Ashgate Research Companion to Experimental Music*, 9.

²⁷⁸ *Ibid.*, 10.

defined and portrayed in contemporary Australia (circa 2015). A recent example is two Sydney Seymour Centre performances described optimistically as “two concerts of adventurous experimental music by leading Australian artists”.²⁷⁹ During these concerts, compositional and performance practices, demonstrably over fifty years old, were repeatedly promoted as “cutting edge”. “Adventurous experimental” seems an ironic descriptor, considering the predictability and conservative nature of this particular event in the context of an Australian musical establishment that has historically shunned truly experimental work, and viewed the (often poverty-stricken) experimental composer as an outsider.²⁸⁰ Burt is not the first to suggest that Australian society can be “extremely conformist and materialist”.²⁸¹ One notable casualty of this conservatism was Australian composer David Ahern. After a formative period spent working with Stockhausen in Darmstadt and then with Cardew in London, he attempted to promote some of Cardew’s approaches in Australia (in the early seventies), with little success. His efforts customarily received a toxic mix of poor reviews and public hostility.²⁸² Humberstone notes that in relation to experimental music “Australian audiences were less enthusiastic in reaction, to say the least, than their European counterparts”.²⁸³ It has been suggested that Ahern’s despair at the lack of interest in his work contributed to his early demise.²⁸⁴ Many struggled to continue their work in what seemed at times to be quite a bleak environment. Although perhaps not treated as disparagingly as Ahern, Jon

²⁷⁹ See "Musify Gamify – Contemporary Perspectives on Musified Games and Gamified Music." *Musify Gamify*. Accessed May 18, 2016. <http://www.musifygamify.info/>.

²⁸⁰ Burt, *Australian Experimental Music*.

²⁸¹ Ibid.

²⁸² James Humberstone. "Following the Least-Trodden Path". *Resonate Magazine*, Australian Music Centre. March 1, 2008. <http://www.australianmusiccentre.com.au/article/following-the-least-trodden-paths>. (Accessed May 18, 2016).

²⁸³ Ibid.

²⁸⁴ Ibid

Rose left Australia after ten years, disappointed in the “lack of response to his efforts”, while innovative American composer Bill Fontana stayed in Australia for only a few years, but had a profound impact in that time.²⁸⁵

Genuinely experimental work has gone on, and continues to go on in Australia. However, much of this experimental activity occurs outside of the awareness of the musical mainstream. Burt points out “if one makes work which questions the viability of an institution, usually that institution will be little inclined to show the work”.²⁸⁶ It is not the role of this research to present a comprehensive survey of the history of Australian experimental music, although this has been bravely attempted by others, such as Burt.²⁸⁷ It is, however, relevant to note that music described (in the above example, for instance) as “adventurously experimental” may actually be firmly entrenched within the more conservative aspects of the institution and privilege of Western art music. Conrad suggests that “fifty years have etched away at the critical issues that John Cage had set before serious music during the 1950s, and have left us with values that are registers of social consensus rather than problematic challenges addressed to a roiling arena of investigative artists”.²⁸⁸ Curran similarly claims that contemporary new music practice that re-embraces past musical conventions—such as broad tonality, pulsation, virtuosity and expressivity—“has all

²⁸⁵ Burt, *Australian Experimental Music*.

²⁸⁶ Ibid.

²⁸⁷ Ibid.

²⁸⁸ Tony Conrad. “Word Scoring”, In Lely, John, and James Saunders. *Word Events: Perspectives on Verbal Notation*. (London: Continuum, 2012), 163.

but cancelled the memory of 100 years of avant-garde modernism and experimentalism in music”.²⁸⁹

The Australian musical establishment is not alone in terms of its historical (and contemporary) marginalising of *innovative* composition. In the US, the institutionalisation of the avant-garde assured the employment of avant-garde composers in academia, while experimental composers struggled to secure university positions.²⁹⁰ However, one can imagine the difficulties of a composer with an experimental mindset attempting to function productively and ethically within a large institution. Cage was a notable exception, and perhaps due to his fame (and notoriety) his unconventional approach to the tasks required of a university academic was tolerated.²⁹¹ His relatively early involvement with the academy,²⁹² including a residency at Wesleyan University and involvement with academic courses at the New School,²⁹³ had lasting repercussions.²⁹⁴ In comparison, many lesser-known American experimental composers of the time, including the founders, for example, of *Musica Elettronica Viva*, were “refugees from esteemed American academies”.²⁹⁵

²⁸⁹ Alvin Curran. “There Went Everybody.” (Banquet, France, 2012). Accessed May 18, 2016. [http://alvincurran.com/writings/There Went Everybody.html](http://alvincurran.com/writings/There%20Went%20Everybody.html).

²⁹⁰ Ginsberg, *Documenting the American Experimental Tradition*, 7.

²⁹¹ Kostelanetz, *Conversing*, 20, 247.

²⁹² *Ibid.*, 18.

²⁹³ Wesleyan University (1960-61) and the New School for Social Research (1950-1960). See: John Cage Trust, “John Cage at the New School (1950-1960)” . <http://johncagetrust.blogspot.com.au/2014/08/john-cage-at-new-school-1950-1960.html>. (Accessed May 18, 2016).

²⁹⁴ Alvin Curran. “OnoffaboutunderaroundCage.”, 1999. In David W. Bernstein and Christopher Hatch, editors, “Writings through John Cage's Music, Poetry, and Art”, (University of Chicago Press, 2000) 177-179. <http://www.alvincurran.com/writings/aroundundercage.html>. (Accessed May 18, 2016).

²⁹⁵ The original core group of MEV, at its founding in Rome in 1966, were: Alan Bryant, Alvin Curran, Jon Phetteplace, Carol Plantamura, Frederic Rzewski, Richard Teitelbaum, and Ivan Vandor. In its heyday (1966-1973) MEV “struck fear into the heart of the music establishment, because [they] believed that the music was the property of no one individual or author, but that of the group, and that music is a universal human right, and any human being, by mere will, can also be a music-maker.”

In attempting to explain experimental music, some have claimed that “function—social, personal, curative or spiritual” is of greater importance, than any particular sound structure.²⁹⁶ As Cage maintains, in supporting the views of Henry David Thoreau “it is not important what form the sculptor gives the stone—what is important is what sculpting the stone does to the sculptor”.²⁹⁷ Deleuze and Guattari suggest that the test of an experiment or experience is its effectiveness in increasing or decreasing one’s ability to take action, which always occurs in relationship.²⁹⁸ Perhaps this could be viewed as an essential characteristic of a music that claims to be experimental. Attali argued for a music that was “no longer made to be represented or stockpiled, but for participation in collective play, in an ongoing quest for new, immediate communication, without ritual and always unstable ... an exchange between bodies—through work, not through objects”.²⁹⁹ Ryan extrapolates on Attali's vision of experimental composition as embracing a diversity of inputs rather than existing in isolation. He suggests that “social networks, conviviality and play ... might be seen as the hallmarks of experimental practices in the early stages of the new century”.³⁰⁰

See Alvin Curran. "From the Bottom of the Sound Pool."
<http://www.alvincurran.com/writings/soundpool.html>. (Accessed May 18, 2016).

²⁹⁶ Johnson. *Scores*, xvi.

²⁹⁷ Cage, “Interviewed by Cott”.

²⁹⁸ Bruce Baugh, “Experimentation”. In *The Deleuze Dictionary: Revised Edition*, ed. Adrian Parr, (Edinburgh: Edinburgh University press, 2010), 91.

²⁹⁹ Attali, *Noise*, 141, 143.

³⁰⁰ David Ryan. “We have Eyes as well as Ears”. In *The Ashgate Research Companion to Experimental Music*, 216.

Participatory experimental music

Although a variety of collaborative transdisciplinary creative activities are not uncommon within the experimental music paradigm, participatory work—as a holistic alternative to the conventional triplicity of composer/performer/audience—is less common. Musical composition that involves collaborative comprehensive *participation* in varying degrees, from inception to final performance, offers a divergent approach, even further outside the “triplicitous” Western art music model than most experimental music. This field has vast, and largely untapped, potential. As Attali maintains, compositional explorations beyond the economic conditions of music could address the need for a “truly different system of organisation, a network within which a different kind of music and different social relations can arise. A music produced by each individual for [themselves], for pleasure outside of meaning, usage and exchange”.³⁰¹

Cage was possibly the most well-known composer to trial participatory work in the mid-century.³⁰² It seems a well-reasoned step towards the anarchic freedom that interested him, despite the fact that he describes these attempts as having mixed results.³⁰³ If Cage and his contemporaries had continued to create and develop participatory pieces, they may have instigated a musical revolution with far-reaching reverberations. However, for numerous reasons, the movement towards participation foundered. *Participatory* experimental music seemed to briefly emerge from the

³⁰¹ Attali, *Noise*, 137.

³⁰² Cage trialled works such as *Newport Mix* (1967), *33 1/3* (1969), and *Demonstration of The Sounds of the Environment* – an early ‘sound-walk’ (1971). For further discussion, see Sharon Williams “Uncaged: John Cage and conceptual approaches to participatory music-making.” *Malaysian Music Journal*, vol 2, No. 2 (2013): 90-103.

³⁰³ Kostelanetz, *Conversing*, 111.

experimental milieu, only to vanish again before the risky business of “bringing people together to make music anywhere without a score”,³⁰⁴ did irreversible damage to the reputation and precarious privilege of composers such as Cage. Curran notes that in spite of his “voracious imagination and rigorous radicality ... [and] dedicated commitment to freedom, liberation of the spirit, mind and body [Cage] remained a modernist composer true to his time—fully horrified at the thought of taking one’s own music and throwing it away”.³⁰⁵ Prevost points out that while Cage and his associates opened the world of music to all sounds, including “noises”, their own contributions were often “anaemic musics squeezed dry of the life-giving blood cells of meaningful participation”, that replaced “the possibility of social involvement [with] the projection of celebrity”.³⁰⁶

There seemed at times to be incongruence between Cage’s anarchic pronouncements and his ongoing musical praxis.³⁰⁷ Some found the “extreme proclamations which are not acted upon (and in hindsight were not even meant)” to be troublingly inconsistent.³⁰⁸ Cage had a different view, arguing that “education leads us to think that it’s wrong to be inconsistent. All consistency is, really, is getting one idea and not deviating from it, even if the circumstances change so radically that one ought to deviate”.³⁰⁹ Burt suggests that Cage’s focus was not the construction of a coherent

³⁰⁴ Curran. “Onoffaboutunderaroundcage.”

³⁰⁵ Ibid.

³⁰⁶ Edwin Prévost. “Free Improvisation in Music and Capitalism: Resisting Authority and the Cults of Scientism and Celebrity”. In *The Ashgate Research Companion to Experimental Music*, 139.

³⁰⁷ Henry Flynt, “Cage and Fluxus”, in Richard Kostelanetz. (ed) *Writings about John Cage* (Ann Arbor: University of Michigan Press, 1993), 280-281, and Ryan. *The Ashgate Research Companion to Experimental Music*, 208.

³⁰⁸ Ibid., 208.

³⁰⁹ Kostelanetz, *Conversing*, 45.

musical philosophy.³¹⁰ After all, the man who had stated in 1961 that “composing’s one thing, performing’s another, listening’s a third. What can they have to do with one another?”³¹¹ was the same man who trialled participatory work in the late sixties, which necessitated the comprehensive integration of all three roles. Burt proposes that after Cage’s brief flirtation with participatory work, he may have simply moved on to other more interesting projects, such as working with virtuosos.³¹² Cage explained his interest in composing for virtuosos as being based on the desire to create an example “of the possibility of accomplishing the impossible, because our society in general now has serious problems ... the example of the virtuoso seems to me more and more necessary to a society that thinks nothing can be done”.³¹³ Depending on one’s philosophy and perspective, essential aspects of Cage’s work and philosophy could be viewed as remaining constant over the course of his lifetime. I refer here primarily to his *consistent* interest in exploring a variety of microcosmic musical models of utopian societies. His trialling of a wide variety of models—which some might view as inconsistency—could be regarded as content variation within a consistent process. His aim often seemed to be to simply *represent the world*, with his compositions. I would argue that his participatory compositional works were his best attempts to (in a Deleuzian sense) form rhizomatic connections with the world.³¹⁴

There were, of course, others who trialled participatory work. Perhaps the most dedicated and radical collaborative effort in this regard was *Musica Elettronica Viva*

³¹⁰ Warren Burt, e-mail message to author, August 2013.

³¹¹ Cage, *Silence*, 1961, 15.

³¹² Burt, e-mail message to author.

³¹³ David Cope, *New Directions in Music*. 7th ed. (Prospect Heights, Ill.: Waveland Press, 2001), 101.

³¹⁴ See “Gilles Deleuze, Félix Guattari, & participation” section of this thesis, page 39.

(MEV). The proponents of MEV believed that music belonged to everyone, and encouraged “its creation freely by and through anyone anywhere”.³¹⁵ Curran claims “there had never before been a music made on such far reaching principles of individual freedom and democratic consciousness; this was COLLECTIVE MUSIC pure and simple—and without knowing it, a stunning artistic example of political anarchy”.³¹⁶ A concept that emerged from MEV, promoted predominantly by Rzewski, was to “create a music by inviting the general public to participate, without any structure or rules”.³¹⁷ The “sound pool”, as it was termed, was an open invitation for members of the public to join MEV in collective music-making. Curran describes this as “an act of temporary suicide for the music of the ‘closed’ group”, as well as a challenge to bourgeois culture.³¹⁸ Rzewski’s *Sound Pool Notes*,³¹⁹ contain some useful practical directives for *Sound Pool* participation, in terms of the importance of listening to, leaving space for, and supporting, other players.³²⁰ There is an overriding attitude of *service*, although players are told that occasionally it is permissible to just play for yourself without regard to what is happening for others. In terms of methods of approaching group improvisation, he describes three kinds of activities: *silence*, *accompaniment*, and *solo*.³²¹ Curran observes that the collective efforts of the group and members of the public could make music that had “powerful emotive content and attraction, outside the canons of historical Western

³¹⁵ Alvin Curran. "On Spontaneous Music." In response to Sabine Feisst, for her Doctoral thesis, July 17, 1995. Accessed May 19, 2016. <http://www.alvincurran.com/writings/spontaneous.html>. Portions published in English in the *Contemporary Music Review* Vol. 25, No. 5, October 2006, 485 – 492.

³¹⁶ Curran. “Onoffaboutunderaroundcage.”

³¹⁷ Curran. "From the Bottom of the Sound Pool."

³¹⁸ Ibid.

³¹⁹ Johnson, *Scores*, 144.

³²⁰ For example: “Bring your own sound, and add it to the pool when you feel the moment is right. Don’t take anybody else’s instrument away from [them]. Make both sounds and silences. The more people playing, the less there is for each individual to do.” See, Johnson. *Scores*, 144.

³²¹ Ibid.

compositional practice”.³²² This was, apparently, a revelation to the members of the group and also to many others.³²³ Sadly, many of the radical initiatives of MEV have since been “absorbed, codified, contested, marginalised, and somewhat forgotten”.³²⁴ However, Curran claims that the origins of standardised improvisatory practices can be traced back to the work of this collective.³²⁵

Women composers were scarce in the field of 1960s experimental music. There were, however, some notable exceptions, such as Jocy de Oliveira, Annea Lockwood, Pauline Oliveros and Ruth Seeger (an early pioneer, along with Ives and Cowell).³²⁶ Pauline Oliveros deserves consideration in relation to her attempts to “erase the subject/object or performer/audience relationship by returning to ancient forms which preclude spectators”.³²⁷ For example, in *Sonic Meditations*, Oliveros instructs the reader/performer to “take a walk at night ... walk so silently that the bottoms of your feet become ears”.³²⁸ Oliveros, quite prescriptively, outlines group and solo exercises, possibly with the intention of encouraging a certain state of mind/awareness in the participants. One possible stumbling block (in relation to egalitarian participation) with elements of Oliveros’s work (for example, *Sonic Meditations*) is that some pieces actually require a leader/facilitator, or if not, then at least some degree of access to the score for every individual who is involved. This

³²² Curran, "From the Bottom of the Sound Pool."

³²³ Ibid.

³²⁴ Ibid.

³²⁵ Ibid.

³²⁶ Larry Austin, Douglas Kahn, and Nilendra Gurusinghe. *Source: Music of the Avant-garde, 1966-1973*. (Berkeley: University of California Press, 2011), 7.

³²⁷ Johnson, *Scores*, 4.

³²⁸ Pauline Oliveros, *Sonic Meditation I-XII*, (1974), V.

could bring about a situation where the participants may experience a loss of autonomy.

Alvin Lucier is another experimental composer who at times veers toward participatory work. *Chambers*³²⁹, for example, consists of two simple sets of instructions—to collect and make large and small resonant environments and then find ways to make them “sound”. Each set of instructions contains some suggestions. Examples of resonant environments are given, such as seashells, rooms and so on, and the “performers” are also free to choose their own. The same format is offered for ways to make them “sound”, with suggestions such as blowing, and bowing, and again, one is given the freedom to imagine *other* ways. This approach engages the participants and offers them a degree of freedom. Christian Wolff also trials participatory ideas in works such as *Stones, Sticks* and *Pit Music*.³³⁰ *Stones*, for example, utilises simple directions to make sounds with the objects in question. Although permission is given to make sound, the directive to “not break anything” is added. *Sticks* is similar, but a little more complex, with additional directions. *Pit Music* includes instructions for *setting up an environment* conducive to new sonic experiences. There is no overt directive in terms of what must *take place* within that environment. Importance is given, instead, to the environment itself, as a catalyst for action. Although the pieces discussed above do allow some autonomy for the performer and the possibility of public engagement, they fail to shed much light on the task of collective music making—at least not to the extent, for example, that an initiative like Rzeweski’s *Sound Pool Notes* does.

³²⁹ Alvin Lucier, “Chambers”, (1980).

³³⁰ Christian Wolff, “Stones” (1969), “Sticks” and “Pit Music” (1971). In *Prose Collection*.

There appears to be little historical evidence of British participatory work, and available scores are thin on the ground. British efforts, at the participatory end of the experimental spectrum, often focused on the inclusion of non-musicians/unskilled performers—for example, the Scratch Orchestra, and the Portsmouth Sinfonia—yet continued to rely on the conventional division between performers and audience.³³¹ The Scratch Orchestra, formed by Cardew, Michael Parsons and Howard Skempton in 1969, was a blend of skilled and unskilled (experienced and inexperienced) musicians. Cardew described the orchestra as “a large number of enthusiasts pooling their resources (not primarily material resources) and assembling for action (music-making, performance, edification)”.³³² They performed primarily from graphic scores which emphasised the importance of improvisation. This included the performance of works by Cardew, such as *The Great Learning*.³³³ In comparison, the Portsmouth Sinfonia, formed in England in 1970, was made up primarily of participants with either no musical training, or musicians that were performing for the first time on an unfamiliar instrument, initially attempting to play Western art music classics.

Meanwhile, back in the US, performance art pioneer Allen Kaprow, fresh out of Cage’s classes in Experimental Composition at the New School for Social Research

³³¹ “Amongst the Orchestra there was diminishing interest in the formal concert. In the country the Scratch came across a different kind of audience. The reception was friendly and good-natured by people who had not heard of Cage or Stockhausen. People joined in and played with the Scratchers. People in the country seemed to have the self-assurance and emotional maturity to enable them to accommodate this ‘foreign body’. This was in stark contrast to the crippling inhibition and alienation amongst the usual audiences in London and in colleges the ‘respectable’ and the ‘intellectual’, the bourgeois and the petty bourgeois.” See Cardew, *Stockhausen Serves Imperialism*, 20.

³³² Cardew, “The Scratch Orchestra, draft constitution.” In Austin, Kahn, and Gurusingshe, *Source*, 332.

³³³ Cornelius Cardew, “The Great Learning”, (1968-71).

(in New York in the late fifties), had begun to create “happenings”. Cage’s role in this should not be underestimated, and at the very least, the connection between the two is worth noting, as the first happenings began soon after Kaprow’s classes with Cage. However, although sound was included in Kaprow’s multimedia events, it was not his primary field of enquiry. The more holistic objective was to break the “barrier between life and art”.³³⁴ He suggested that the “audience should be eliminated entirely”³³⁵ to allow all elements of the environment (including people) to be integrated into the work.³³⁶ Kaprow (initially a painter, but later to be termed an assemblage and performance artist) saw the nature of composition as dependent on all the available materials.³³⁷

In relation to the customary lack of adequate social and political debate in musical schools and conservatoires, Fluxus artist Robert Filliou suggested that *art* offered “an immediate ‘right of asylum’ to all deviant practices which cannot find a place in their natural bed”.³³⁸ Attempts by experimental composers to “liberate music from various forms of tyranny, real or imagined”³³⁹ often proved futile, and were seldom embraced by many. In comparison, by the 1970s, performance art had become an accepted form of artistic expression, and was viewed as a way to demonstrate some

³³⁴ Allan Kaprow, “Assemblages, Environments and Happenings.” Accessed May 19, 2016. http://web.mit.edu/jscheib/Public/performancemedia/kaprow_assemblages.pdf. 263.

³³⁵ Kaprow, “Assemblages, Environments and Happenings.” 264.

³³⁶ “Kaprow was later to distinguish between sub-categories of happenings, ‘Events’ and ‘Activities’. Events ... tended to take place with a conventional performer/audience relationship, while Activities foregrounded the idea of participation in the given activity by abolishing, literally, the distinction between performer, participant and audience, in that everyone taking part in the Activity must *participate*.” See David Ryan. In *The Ashgate Research Companion*, 206.

³³⁷ Kaprow, “Assemblages, Environments and Happenings.” 266.

³³⁸ Nicolas Bourriaud, *Relational Aesthetics*. (Dijon: Les Presses Du Réel, 2002), 102.

³³⁹ Curran. "On Spontaneous Music."

of the ideas of conceptual art (which were popular at the time).³⁴⁰ Conceptual art dealt with experience rather than the creation of art objects, and through performance art “the body became the most direct medium of expression”.³⁴¹ Rather than focusing on the passive apprehension of finished artworks, performance art events, by suggesting conceptual actions, invited the observer to view the world in new ways. These actions were often “more written instructions than actual performance, a set of proposals which the reader could perform or not, at will”.³⁴² Since its inception, a variety of approaches to performance art have developed, with varying degrees and styles of inclusivity and participation. Some performance art is conceived simply with the aim of improving the daily lives of others. An example is Paul Panhuysen’s socially motivated *Road Block*³⁴³ which allows children to play safely in the street. Other contemporary performance artists, such as Yoko Ono³⁴⁴ and Marina Abramovic,³⁴⁵ have explored the relationship between the artist and the audience by inviting the public to take part in many of their performance pieces, sometimes with disturbing results.

Following on from conceptual and performance art movements, the emergence of so-called *sound art* introduces new issues for consideration. Alan Licht has pointed out that in recent times, “calling oneself a ‘sound artist’ lends a certain legitimacy ‘experimental musician’ may not have. Even the term ‘experimental,’ in many

³⁴⁰ RoseLee Goldberg, *Performance Art: From Futurism to the Present*. (New York: Thames & Hudson, 2001), 7.

³⁴¹ *Ibid.*, 152.

³⁴² *Ibid.*, 154.

³⁴³ Paul Panhuysen, “Roadblock”, Veendam (1970).

³⁴⁴ See Kevin. Concannon, "Yoko Ono's Cut Piece: From Text to Performance and Back Again." *PAJ: A Journal of Performance and Art* 30, no. 3 (2008): 81-93. doi:10.1162/pajj.2008.30.3.81.

³⁴⁵ See "Marina Abramovic on Rhythm 0 (1974)." Vimeo. Accessed May 19, 2016. <https://vimeo.com/71952791>.

people's minds, may have some psychological indication that the musician may not know what they're doing (or that the listener can't understand what they're doing), which, however erroneous and unfair, still strikes an unwanted undertone of semi-professionalism as a calling card".³⁴⁶ Sound installation artists emerging from the field of visual arts occasionally explore participatory themes. One example is English installation artist Luke Jerram, whose interest is not primarily sound, although he explores musical themes in works such as his street piano installation, *Play Me, I'm Yours* and *Sky Orchestra*.³⁴⁷ His piano installation, however, tends to attract players who are *already able* to play the piano and does not necessarily encourage the public to make "new" music together. Australian Ros Bandt describes herself as a sound artist, even though she could also be regarded as a composer, researcher, author and scholar.³⁴⁸ Although participatory themes are not her primary focus, installations such as the interactive play sculpture, *Sound Playground* and the aeolian harp installation, *Mungo*, involve varying degrees of interaction between the public and the sound work.³⁴⁹ Bandt has written a book that focuses on 'sound sculpture' which includes relevant works either produced in Australia or created by Australian composers.³⁵⁰ Graeme Leak is another Australian composer whose participatory

³⁴⁶ Alan Licht, *Sound Art: Beyond Music, Between Categories*. (New York, N.Y.: Rizzoli International Publications, 2007), 13.

³⁴⁷ See Luke Jerram, "Play Me, I'm Yours" (2008-ongoing). Accessed May 19, 2016. <http://www.streetpianos.com/> and "Sky Orchestra" (2006-ongoing). Accessed May 19, 2016. <http://www.skyorchestra.co.uk/>.

³⁴⁸ "Australian Music Centre | Breaking Sound Barriers." Ros Bandt: Represented Artist Profile: Australian Music Centre. Accessed May 19, 2016. <http://www.australianmusiccentre.com.au/artist/bandt-ros>.

³⁴⁹ Ros Bandt, "Sound Playground" (1981 - 1982) and "Mungo" (1992).

³⁵⁰ Ros Bandt, *Sound Sculpture: Intersections in Sound and Sculpture in Australian Artworks*. (St. Leonards, N.S.W.: Craftsman House, 2001).

work is worth noting.³⁵¹ Particularly relevant to this project is his community-focused *Musical Fence*, installed in Winton, Outback Queensland, in 2003. This is a “standard wire fence with added acoustic resonators that amplify any sound in the wires, caused either by striking or by wind action.”³⁵²

Another relevant and recent (2015) participatory work is *1000 Bells*, created for the Sydney Festival. This is a large-scale sound installation created by Lauren Brincat and Bree van Reyk. Participants initially attend a free public bell-making workshop, and at a later date, the ceramic bells and their creators reunite for a group performance and installation.³⁵³ Percussionist/composer van Reyk has also trialled other participatory works, such as the sound installation *Arbor Sonata* (directed towards children). This is a collaboration with designer Chloe Goldsmith, and uses a combination of percussion instruments and found objects, which are hung from a tree.³⁵⁴ These works have a close relationship to my own sound installation work (*Public Drum Project*), created for this research project; however, there are some notable differences. *Arbor Sonata* is a relatively small-scale piece created for children, and *1000 Bells* (although a large-scale work) does not offer the possibility of complex, collaborative musical co-creation to the degree that *Public Drum Project*

³⁵¹ “Australian Music Centre | Breaking Sound Barriers.” Graeme Leak: Represented Artist Profile: Australian Music Centre, August 2014. Accessed May 19, 2018.

<https://www.australianmusiccentre.com.au/artist/leak-graeme>.

³⁵² Graeme Leak, “Graeme Leak’s Musical Fence in Winton - Background and Information.” Graeme Leak. Accessed May 19, 2018. <https://www.graemeleak.com/the-musical-fence-in-winton.html>.

³⁵³ “1000 Bells is a large-scale installation that embraces the diversity of Sydney’s communities through the hand-making of 1000 ceramic bells. Through a series of free public workshops in late 2015, Artists Lauren Brincat and Bree van Reyk worked with communities throughout Sydney, inviting people to sit together around communal tables and create simple pinch-pot bells. In January, the bells and their creators [reunited] in a performance and installation in Prince Alfred Square, Parramatta.” See “1000 Bells - Sydney Festival 2016.” Sydney Festival. Accessed May 20, 2016. <http://www.sydneyfestival.org.au/2016/1000-bells>.

³⁵⁴ See “Arbor Sonata.” Chloe Goldsmith. Accessed May 20, 2016. <http://www.chloegoldsmith.com.au/arbor-sonata>.

does. This is partly due to the choice of an instrument (the ceramic bell) with a relatively limited pitch range and long acoustic “decay” time, and also the complex requirements involved in attending a bell-making workshop and then returning for a performance. The vibrating “heads” of *Public Drum Project’s* one hundred drums provide a wide variety of randomly chosen pitches, timbres, and resonant characteristics. The option of using either a stick or one’s hands to make the drums sound is also an advantage. These characteristics contribute to the creation of an environment where simple collaborative musical play can also, at times, evolve into a collective exploration of pulsation and complex rhythmical structures. Furthermore, the drums are available to anyone (including passers-by), without the necessity of prior involvement or preparation.

Another popular form of participatory sound work in contemporary times is that of sound installation artists emerging from the field of electronic music. This model usually relies heavily on technology and the notion of *interactivity*. Aesthetic interest is often pursued through the creation of electroacoustic sounds with novel or unusual textures and timbres. Interactivity customarily focuses on interaction between the participant(s) and the technology/electronic system. According to Rowe, an interactive system needs to be able to “change in response to musical inputs”.³⁵⁵ To explain interactive systems,³⁵⁶ proponents often use the metaphor of an egalitarian *conversation* in which “two people [share] words and thoughts, both parties are

³⁵⁵ R. Rowe, *Interactive Music Systems: Machine Listening and Composing*.

Cambridge, MA: The MIT Press, 1993, 6-7, referenced in Drummond, “Understanding Interactive Systems.”

³⁵⁶ See Jon Drummond, “Understanding Interactive Systems.” *Organised Sound* 14, no. 2 (2009): 124-33, and Todd Winkler, *Composing Interactive Music: Techniques and Ideas Using Max*, MIT Press, Cambridge, MA, 1998.

engaged ... and one thought spontaneously affects the next”.³⁵⁷ However, it seems worth noting that conversations (between humans) can be complex and “messy”, and rarely emulate the above ideal. Conversation can also be eternally frustrating, involving as it does the common rule of taking turns (not always observed). We may reach the point of pretending to be interested in another, while impatiently waiting to have our own say.³⁵⁸ In a conversation, to talk when another is talking is often considered bad manners. However, collaborative and *participatory* experimental music derives no benefit from such rules, as it offers the possibility for infinitely more complex multi-layered communication than that of a verbal conversation.³⁵⁹ Furthermore, ideally, the interaction takes place between two or more humans. However, the popularity of “interactive” sound installations is not surprising, considering our increasing contemporary reliance on the augmentation of our realities through individual technological devices (such as smart phones, iPads, and laptops). While not wanting to undervalue the importance of developing healthy relationships between humans and indispensable contemporary technological tools, it also seems essential to remember the significance of developing healthy relationships *between humans*.

³⁵⁷ Todd Winkler, *Composing Interactive Music: Techniques and Ideas Using Max*, MIT Press, Cambridge, MA, 1998, 3.

³⁵⁸ ‘Other people’ can sometimes be perceived as ‘tedious’, as Hitchens notably declared. See Christopher Hitchens, *Hitch-22: A Memoir*. 1st ed. New York: Twelve, 2010.

³⁵⁹ Michael Thaut divides the temporal basis of music into “sequentiality and simultaneity. Music’s particular nature allows it to express both at once. This is a unique feature among art forms and communication systems. Language is sequential but monophonic”. See Michael H. Thaut, *Rhythm, Music, and the Brain: Scientific Foundations and Clinical Applications*. Studies on New Music Research. 1st in paperback ed. (New York: Routledge, 2008), 3.

Participatory experimental music and the score

The musical score could be regarded primarily as a means of communication.

However, when music making is viewed as an egalitarian collaborative activity, the musical score used is radically different in its nature and responsibility to the conventional Western art music score, or even the experimental score. It need no longer function primarily as “transcribed information about the composer’s music-making process [which] contains a way of imparting this information to others who might recreate the composition”.³⁶⁰ Experimental scores that explore holistic participation usually forgo the use of representational symbols (such as conventional musical notation, or even graphical notation) in favour of *verbal notation*. Verbal notation is “an approach to scoring that uses the written word ... to convey information”.³⁶¹ There is a range of reasons as to why this is a preferable method of scoring for participatory experimental work. For example, verbal notation ensures accessibility for people who do not read musical notation, and also offers the ability to express ideas and concepts with precision.³⁶² These might include a variety of encouraging suggestions in terms of ways of approaching the work, or simple explanations and invitations to action. Lely and Saunders attempt to sort types of verbal notation scores into categories.³⁶³ These include (and I have given examples of how they might “read”, in relation to the sound installation work created for this study—*Public Drum Project*):

Imperative clauses – “please play these drums” or a gentler version “you are cordially invited to play these drums”. The “please do not touch this artwork”

³⁶⁰ Austin, Kahn, and Gurusinghe, *Source*, 12.

³⁶¹ “Introduction”. In Lely and Saunders. *Word Events*, xviii.

³⁶² *Ibid.*

³⁶³ Lely and Saunders. *Word Events*, 27.

imperative can be countered with, “you are welcome to play the drums if you wish”, while another possible ‘counter’ is “Please ~~DO NOT~~ TOUCH the drums”.

Indicative clauses – divided into *declarative* “these drums are made for playing” and *interrogative* “who wants to play these drums?”

In terms of participatory work, it is essential that any score employed enables the participants to interact with the compositional design system *primarily through play and experimentation*, rather than through following directions via written instructions from a higher authority. The aim of the *Public Drum Project* is to function as a productive, rather than a consumptive, system, ideally inspiring ideas in the participants rather than expressing the ideas or feelings of the composer. This way of working was described aptly and presciently by Cage with respect to his writing. He wanted to “find a way of writing which though coming from ideas is not about them; or is not about ideas but produces them”³⁶⁴ Cardew suggests that the composer should serve the community, rather than the community serving the composer.³⁶⁵ Tilbury claims that anything is beneficial to the community when it “(a) satisfies their needs, (b) raises their level of consciousness, and (c) (following from the others) encourages them to develop the energy and ability and initiative to change the world according to their collective needs”.³⁶⁶ Cardew views the score as a vehicle for “making people move”.³⁶⁷ He insists that a composition “is not an object to be

³⁶⁴ John Cage, *Composition in Retrospect*. (Cambridge, MA: Exact Change, 1993), 63.

³⁶⁵ Cardew, “John Cage: Ghost or Monster?” In Cardew, *Stockhausen Serves Imperialism*, 39.

³⁶⁶ John Tilbury, “Introduction to Cage’s Music of Changes”. In Cardew, *Stockhausen Serves Imperialism*, 62.

³⁶⁷ Cardew, *Treatise handbook*, 1971, quoted in Philip Thomas, “A prescription for action”. In *The Ashgate Research Companion*, 78.

evaluated ... but a force to influence the consciousness of living people and as such it functions morally and politically”.³⁶⁸

The minimal scoring for *Public Drum Project* is multi-layered, and not restricted to verbal notation. The scores gently (and sometimes obliquely) suggest ways of approaching group musical co-creation and engagement with these scores is optional. There is, first of all, a score placed at the entrance to the installation, giving permission and encouragement for participants to engage with the work.³⁶⁹ Scores of varying types are also decoupled onto the one hundred hanging drums. The facilitation of participants as composer-performers necessitates a sound installation design that functions as meta-level composition (composition that enables composition). The transdisciplinary researcher must also embrace the multiplicity of activities and roles traditionally divided into specialisations such as those of composer, designer and visual artist. In a sense, the written thesis for this research project could be regarded as a detailed meta-level “score” that describes how one could go about re-creating and facilitating such a project if one desires.

³⁶⁸ Cardew, “Talk for Rome Symposium on Problems of Notation”. In Cardew, *Stockhausen Serves Imperialism*, 89.

³⁶⁹ See “Mount Tomah installation – photographs” section of this thesis, p. 165.

Drum kit

The drum kit and its “deconstruction” was a key musical reference point in my compositional approach in this project. The discussion in this section will centre on the connections between the kit, and the concepts of participation and collaboration. It will examine the origins and history of the drum kit, and it will explore the extension and re-thinking of its purpose within the praxis element of this project. The drum kit (as a multiple percussion instrument for solo player) is a relatively new arrival, in comparison to many other well-established orchestral instruments. The story of the drum kit is one of a musical instrument with untapped possibilities, domiciled as it is “within the sphere of popular music, having limited functions, low cultural status and a history of masculine gendering”.³⁷⁰ The drum kit has failed to realise its potential to employ the “complex cyclical polyrhythmic organisation common to rhythmical music in traditional drumming cultures”.³⁷¹ Historically, it has been under-utilised, not only within the Western art music canon, but also more particularly within the field of experimental music, and the arena of participatory work. Cage’s composition *One4* is a rare example of a “mainstream” experimental music composition written specifically for the drum kit.³⁷² The piece was commissioned especially for the kit by the drummer Fritz Hauser,³⁷³ but even so, the work only specifies the use of two limbs rather than four.³⁷⁴ The work seems to focus more on exploring the timbral possibilities of the kit than on employing the kit in its

³⁷⁰ Sharon Williams, “Composition as ‘Line of Flight’: Exploring the unknown potential of the drum kit”, Bachelor of Music Honours Thesis, (University of Western Sydney, 2011), 10.

³⁷¹ Famoudou Konate and Thomas Ott, *Rhythms and Songs from Guinea*. (Institute for the Didactics of Popular Music. Oldershausen, Germany, 1997), in *Composition as ‘Line of Flight’*, 16.

³⁷² John Cage, *One4*, (New York; London: Peters Edition, EP 67349, 1990).

³⁷³ Kevin Arthur Nichols, "Important Works for Drum Set as a Multiple Percussion Instrument." PhD dissertation, (University of Iowa, 2012), 32.

³⁷⁴ Ibid. 40.

conventional role as a timekeeper, in relation to a regular driving pulsation. Other important composers in relation to the development of notated works for the drum kit include Stuart Saunders Smith, James Dillon and Frank Zappa.³⁷⁵ However, Nichols points out that in 2012, there were fewer than “200 published compositions for unaccompanied solo drum set”.³⁷⁶

In contrast to the scarcity of scores that utilise the drum kit assemblage, as early as the classical period composers including Mozart began introducing a variety of percussion instruments into Western art music orchestras. However, in the classical period each person played one instrument, rather than one player functioning as a multi-percussionist.³⁷⁷ This custom also characterised the early use of percussion in the brass bands of New Orleans in the days pre-dating the development of the drum kit as a multiple percussion instrument.³⁷⁸ Reimer points out that in more recent times (2013), the drum kit has begun to emerge in Western art music “as a solo instrument with prescribed notation ... [where] rich traditions, iconic players, grooves and styles, form the platform through which composers of this new repertoire navigate”.³⁷⁹

Although experimental music has had little to offer the drum kit, it has extended the Western European musical tradition’s understanding of *rhythm* beyond that of a “regularly timed beat, a perceptually isochronous pulse to which one can synchronise

³⁷⁵ Nichols, "Important Works for Drum Set", 2.

³⁷⁶ Ibid.

³⁷⁷ Ibid., 9

³⁷⁸ Ibid.

³⁷⁹ Benjamin N. Reimer, “Defining the Role of Drumset Performance in Contemporary Music”, Doctor of Music diss., (McGill University, Montreal, 2013), 1.

with periodic movements”.³⁸⁰ This broader understanding of rhythmical organisation (that is nonetheless *inclusive* of periodicity) may have reclaimed its raison d'être in experimental music. Cage points out that European musical history has abandoned the study of rhythm in favour of the theory of harmony.³⁸¹ He, in particular, champions the use of rhythm as a method of structuring one's experimental work, claiming that it provides openness to any sonic content.³⁸² However, he uses rhythm in the broader sense, described above, with the structural focus being a “durational” one that incorporates both *sounds* and *silence*, without reliance on a regular pulsation. Rhythm is not only of crucial importance in relation to collaborative participatory musical experiences (and hence to this research project), but also as an enabler of social cohesion on a variety of levels.³⁸³ It has been claimed, “rhythmic behaviours and abilities pervade all human social interactions”.³⁸⁴ The importance of rhythm to the human organism cannot be overstated.

The history of the development of the drum kit is a “perfect storm” of adverse circumstances, and unfavourable influences, in terms of encouraging participation and collaboration in rhythmical music making. Thanks largely to several early

³⁸⁰ Patel, *Music, Language, and the Brain*, 97.

³⁸¹ John Cage, *An Autobiographical Statement*, 1989-1991.

Author's note: "An Autobiographical Statement" was written for the Inamori Foundation and delivered in Kyoto as a commemorative lecture in response to having received the Kyoto Prize in November 1989. It is a work in progress. Editor's note: John Cage delivered "An Autobiographical Statement" at Southern Methodist University on 17 April 1990, as part of the year-long celebration of the Algur H. Meadows award for excellence in the arts given to Robert Rauschenberg. It first appeared in print in the *Southwest Review*, 1991. It is reprinted here with the kind permission of The John Cage Trust at Bard College, Annandale-on-Hudson, New York.

http://www.johncage.org/autobiographical_statement.html (Accessed, September, 2102).

³⁸² Nyman, *Experimental Music*, 33.

³⁸³ Peter Nelson, "Cohabiting in Time: Towards an Ecology of Rhythm." *Organised Sound* 16, no. 2 (2011): 109-14. 113.

³⁸⁴ John Bispham, "Rhythm in music: What is it? Who has it? And why?" *Music Perception* 24, no. 2 (12, 2006): 125-134.

<http://search.proquest.com.ezproxy.uws.edu.au/docview/222291912?accountid=36155>.

twentieth century American inventions (primarily the bass drum pedal, hi-hats and mounted tuneable toms) it became possible for one person (utilising all four limbs) to play an eclectic assemblage of *globally sourced* percussion instruments. Now, *one* person could do what had previously been done by *many*. Although this came about partly through economic and spatial performance considerations, the deleterious impact on collaborative drumming possibilities was profound. Due to the need for a drummer to be able to co-ordinate their four limbs so as to be able to play many percussion instruments simultaneously, the drum kit demanded a *highly skilled and well-rehearsed* single player.

Drum kit players have customarily been predominantly male. According to Hallam et al.,³⁸⁵ research has shown that “historically, instruments such as drums, trombone and trumpet have tended to be played more by boys”.³⁸⁶ This cultural gender-stereotyping of musical instruments can become self-perpetuating, as it “invariably has an impact on the preferences of boys and girls for playing particular instruments, leading to girls typically preferring to play smaller, higher pitched instruments”.³⁸⁷ Contributing factors in relation to the kit’s history of masculine gendering may include the military origins of its original and most important drums (the snare and bass drum),³⁸⁸ as well as the gender stereotypes at play during the early years of the kit’s development, where employment opportunities for women (musical or

³⁸⁵ Susan Hallam, Lynne Rogers and Andrea Creech. “Gender Differences in Musical Instrument Choice.” *International Journal of Music Education*, Vol. 26, No.7, 2008.

³⁸⁶ Harold F. Abeles and Susan Yank Porter. “The Sex-Stereotyping of Musical Instruments.” *Journal of Research in Music Education*, Vol. 26, No.2 (Summer, 1978): 65-75.

³⁸⁷ Hallam, Rogers and Creech, *Gender Differences in Musical Instrument Choice*, 7-8.

³⁸⁸ Raoul F. Camus. "Military music". (Oxford University Press), <http://www.oxfordmusiconline.com.ezproxy.uws.edu.au/subscriber/article/grove/music/A2253690> (Accessed July 22, 2016).

otherwise) often ceased after marriage.³⁸⁹ It is worth noting, however, that female vocalists, in particular, fulfilled important roles in a variety of musical genres, during the late nineteenth and early twentieth century.

The founding influence of newly emancipated African Americans after the end of the American Civil War cannot be underestimated in terms of the kit's early development. It is also worth noting that the banning of the drum in slave colonies had a profound impact on transplanted African culture³⁹⁰ and the shaping of its rhythmical legacy.³⁹¹ This may partly explain how the simple quadruple time signature has continued to dominate American popular music, even though forcibly transplanted Africans struggled to keep their collaborative polyrhythmic drumming culture alive in adverse circumstances during their years of enslavement.³⁹²

It seems that the relatively standardised assemblage of drums in the modern drum kit came about through a variety of multicultural and industrial influences. This is also true in relation to conventional drum kit performance and composition, including customary modes of interaction with other musical instruments and the drum kit's role in musical ensembles. The basic configuration of the kit was well established by 1940, and consisted of a bass (or kick) drum, a snare drum, a hi-hat, a mounted tom,

³⁸⁹ Susan Ware. *American Women's History: A Very Short Introduction*. (Cary: Oxford University Press, 2014), <http://UWSAU.ebib.com.au/patron/FullRecord.aspx?p=1876210>, 59. (Accessed July 22, 2016).

³⁹⁰ See "An Act for The Better Ordering and Governing Negroes and Other Slaves in this Province, clause XXXVI." Transcription from: David J. McCord, ed. "The Statutes at Large of South Carolina" Vol. 7, (Columbia, SC: A.S. Johnston, 1840). <http://www.teachingushistory.org/pdfs/Transcriptionof1740SlaveCodes.pdf> (Accessed July 22, 2016)

³⁹¹ Guthrie P. Ramsey. "African American music." *Grove Music Online. Oxford Music Online*. (Oxford University Press <http://www.oxfordmusiconline.com.ezproxy.uws.edu.au/subscriber/article/grove/music/A2226838>.), (Accessed July 25, 2016).

³⁹² Ibid.

a floor tom, a ride cymbal and a crash cymbal.³⁹³ The focus of the practical aspect of this project is to spatially and materially “deconstruct” this contemporary drum kit. The aim is to re-establish the drum as an inviting and non-intimidating instrument that can be easily utilised for group music making without the need for overt skill development, re-establishing the drum as an accessible collaborative instrument within a flexible rhythm ensemble.

³⁹³ Nichols, "Important Works for Drum Set", 16-17.

Drum kit history

Although some claim the drum kit is an American invention, it could also be viewed as a site of cultural appropriation.³⁹⁴ The culturally diverse ancestors of this assemblage of percussion instruments can be traced back to medieval times, and possibly beyond. The snare drum, for example, often used for military purposes, including during the American Civil War, is related to the medieval tabor.³⁹⁵ Many of the various cymbals incorporated into the kit have ancient origins.³⁹⁶ Some made their way to America from China, as did early (non-tuneable) “tacked” toms.³⁹⁷ Cymbals were also employed in the Janissary military music of the Ottoman Empire, and were brought to America from Turkey, not only through their incorporation into the military bands of Western Europe, but also via the European classical tradition.³⁹⁸ European classical composers—most notably Mozart—also introduced other percussive instruments (such as the bass drum, side drum, triangle, and tambourine) into their orchestral scores when they sought to impart a Turkish flavour to their compositions.³⁹⁹

One of the first steps towards developing the kit was possibly the practice, popular in the late nineteenth century, of attaching a cymbal to a bass drum so that they could both be played by one drummer within a variety of musical contexts, such as

³⁹⁴ Robert B. Breithaupt, “The Drum Set: a History”, in John Beck, *Encyclopedia of Percussion*. (New York: Garland Pub., 1995), 173-185.

³⁹⁵ Beck, *Encyclopedia of Percussion*, 91.

³⁹⁶ *Ibid.* 169.

³⁹⁷ *Ibid.*

³⁹⁸ Catherine Schmidt-Jones, Janissary Music and Turkish Influences on Western Music. OpenStax CNX. <http://cnx.org/contents/6e2faff4-deba-4fe3-8a4b-c3e3d3236817@2>. (Accessed May 11, 2010).

³⁹⁹ *Ibid.*

marching or concert bands, and vaudeville shows.⁴⁰⁰ There are significant connections between this early American practice of an individual player combining a bass drum with metal percussion and West African drumming conventions. It is a common practice, for example, in West African Malinke drum ensembles, to play one head of a transverse bass drum with the right hand while a bell attached to the top of the drum is played with the left, with the bell acting as a type of timekeeping device. Another American drumming practice, popular around the turn of the century, involved playing a snare with one hand and a bass drum, with mounted cymbal on top, with the other. This was known as “double drumming”.⁴⁰¹ A milestone in the development of the drum kit was William F. Ludwig’s invention of the “direct drive” bass drum pedal in 1909 (although there were patents in existence for earlier pedal variations),⁴⁰² which freed up both the drummer’s hands. Two hands could now be used for the snare drum and a menagerie of other instruments, such as cymbals, gongs, a variety of wood blocks, “tacked” tom toms, and so on. The transition from the “sock cymbal” or “low boy” to the hi-hat (both operated by the left foot) and the addition of tuneable mounted toms in the 1930s, further expanded the timbral and rhythmical possibilities of the kit.

One drummer (customarily male) was now expected to do a job that had previously been done by many. Although this offered many advantages, it also signalled the end of rhythmic collaboration in a percussion ensemble. Drumming was no longer a group activity, and participation (as a kit player) required a high level of skill. There

⁴⁰⁰ Marc De Douvan, "The Drumset: History." *History of Modern Drumset*. October 2011. http://www.marcedouvan.com/en/modern_drumset_history.php. (Accessed July 24, 2016).

⁴⁰¹ Peter Avanti, "Black Musics, Technology, and Modernity: Exhibit A, the Drum Kit." *Popular Music and Society* 36, no. 4 (2013): 476-504, 483. <http://dx.doi.org/10.1080/03007766.2012.681111>

⁴⁰² Avanti, "Black Musics, Technology, and Modernity", 487.

were also numerous other related disadvantages. The seated player needed to use all four limbs and this precluded previous modes of moving while drumming, such as walking, or stepping to keep time within a collective. The level of concentration needed, due to the complexity of coordinating four limbs, also made vocalisation difficult. Over time, the drum kit became, increasingly, an expensive commodity which a drummer had to purchase.⁴⁰³ The architecture of the kit required the drummer to sit behind a fortification of percussion instruments, which distanced them from their fellow musicians, and from those who were listening or dancing. Another often problematic aspect of the drum kit's evolution was the accompanying transmutation of the drum from a loud instrument that was conventionally played outdoors, and was designed to be heard from long distances away, to an instrument that was now usually played indoors. This was troublesome in some contexts, as the drum kit was capable of drowning out other musicians in musical ensembles. The amplification of accompanying musical instruments during the course of the twentieth century slowly addressed this issue. In the interim, the use of wire brushes, originally based on retractable metal fly swatters,⁴⁰⁴ was one mode of quietening the snare drum, and adding timbral variation when required.

The French withdrawal from Louisiana in 1803, and the corresponding surplus of military instruments,⁴⁰⁵ as well as the end of the American Civil War and slavery in 1865, all had an impact on the development of the hardware of the kit, as well as

⁴⁰³ This is a stark contrast to instrument making practices in more traditional drumming cultures (such as those of the Malinke), where a drum was customarily created by an individual or group (with a variety of skill levels), for use in their own community music making. Traditional rituals were also considered important in relation to drum making. See Famoudou Konate, and Thomas Ott, *Rhythms and Songs from Guinea*. (Institute for the Didactics of Popular Music. Oldershausen, Germany, 1997), 19.

⁴⁰⁴ According to William F. Ludwig. See Appendix 1 of this thesis.

⁴⁰⁵ De Douvan, "The Drumset: History."

who played it and how. Military snare and bass drumming during the Civil War was predominantly a job for teenage boys, and also often African Americans, who in many colonies were forbidden to bear arms.⁴⁰⁶ Able-bodied adult white males were needed as soldiers, and roles for women—unless they disguised themselves as men—were seldom on the front line.⁴⁰⁷ A drummer's role in the military during this period was of critical importance. Drums were employed for a variety of purposes on and off the battlefield, including the relaying of military orders. Rhythmic patterns drawn from traditional military rudiments are still employed by many contemporary kit drummers.⁴⁰⁸ Military music, however, was rarely a light hearted affair, and heightened inequalities.⁴⁰⁹ It was rigorously controlled, and experienced in a bleak environment characterised by extreme violence, deprivation and misery.⁴¹⁰ Collaborative drumming was not geared towards joyous dancing, but rather towards enabling the coordination of the movement and actions of large groups of military personnel. Primarily, the drums had to be loud, as the rhythms played on them needed to be heard over the clamour of the battlefield. The field drum seems to have functioned primarily as a utilitarian communicative medium, rather than as a “musical instrument” as we have come to understand the term in more recent times.

⁴⁰⁶ Camus, "Military music."

⁴⁰⁷ Ware, *American Women's History*, 54.

⁴⁰⁸ T. Dennis Brown. "Rudiments." *The New Grove Dictionary of Jazz*, 2nd ed., *Oxford Music Online*. (Oxford University Press) (Accessed July 25, 2016)
<http://www.oxfordmusiconline.com.ezproxy.uws.edu.au/subscriber/article/grove/music/J389400>

⁴⁰⁹ Charles Keil, "Participatory Discrepancies and the Power of Music." *Cultural Anthropology* 2, no. 3 (1987): 275-83. <http://www.jstor.org.ezproxy.uws.edu.au/stable/656427>, pp. 267-277

⁴¹⁰ Stephen Currie, "Drummer Boys." *Cobblestone* 20, no. 9 (1999): 3-7.

It has been suggested that the drum kit has a “spiritual heritage traceable to the ancient drum orchestras of West Africa”,⁴¹¹ but it could be claimed that the African American founding influence extends well beyond the purely spiritual. It is worth pointing out interesting correlations between the sound palette of the modern drum kit ensemble and that of, for example, the traditional West African Malinke drumming ensemble, which consists of “one or two *djembe* solo drums, one or two *djembe* accompanying drums and three bass drums of different sizes, each with a small iron bell”.⁴¹² Similarities may be, to some extent, a result of the profound West African influence on the creation of the kit, although they may also be partly a result of cross-cultural, and possibly innate, human *common sense* in relation to rhythm. Both late nineteenth century American and traditional West African drumming cultures originally employed wooden shelled drums with heads made from animal skin (goat, calf or pig). The kit’s high-pitched snare drum fulfils the attention seeking, communicative role assigned to the “slap” of a tautly skinned solo *djembe*, whereas the cast iron bells in a Malinke ensemble correlate with the metal time-keeping percussion elements of the kit, such as the hi-hat and ride cymbals. The (high, mid and low) transverse bass drums of the Malinke ensemble could be compared with the drum kit’s multiple upright tom and transverse bass drum set up. The primary differences between the two drumming cultures, in relation to this thesis, are the numerous disadvantages that the non-collaborative approach to kit drumming exhibits. The melodic musicality of the Malinke ensemble can be difficult to replicate in the modern drum kit due to the constraints of the “one player” set up.

⁴¹¹ Royal Hartigan, "The Heritage of the Drumset." *African American Review* 29, no. 2 (1995): 234-36.

⁴¹² Famoudou Konate and Thomas Ott, *Rhythms and Songs from Guinea*. (Institute for the Didactics of Popular Music. Oldershausen, Germany, 1997), 19.

Polyrhythmic complexity and the unplanned fortuitous juxtapositions of collaborative drumming that come about through utilising diverse inputs are difficult to accomplish for the non-virtuosic performer. It is worth pointing out the contribution to the expansion of the drum kit's melodic, and polyrhythmic, vocabulary made by virtuosic performers such as Max Roach (1924–2004) and Elvin Jones (1927–2004).⁴¹³ In more recent times Glenn Kotche has experimented with drum kit “preparations” and a variety of other techniques to further expand the sonic possibilities of the kit.⁴¹⁴

⁴¹³ Nichols, "Important Works for Drum Set", 1.

⁴¹⁴ Ibid., 2.

Public Drum Project—drum kit preparation and spatial

deconstruction

In terms of this study, the revitalisation of the drum kit, via the material reconstruction of the individual drums and the spatial deconstruction of the kit, is partly inspired by Cage’s bold piano “preparations”. These preparations, in effect, transformed the piano into a percussion instrument.⁴¹⁵ Cage first “prepared” a piano in the late thirties, although Henry Cowell had made some earlier nonconventional attempts to explore the inner mechanism of the piano, for example, “by plucking and muting the strings with fingers and hands”.⁴¹⁶ By inserting a variety of objects, such as screws, bolts, and pieces of rubber between the piano strings, Cage began to explore the untapped potential of the piano as a percussion instrument. Cage claimed that his initial piano preparations were made in relation to practical necessity, rather than being a criticism of the instrument.⁴¹⁷ However, a serendipitous effect of these preparations was to free the piano from often oppressive conventional modes of piano composition and performance. Preparing the piano effectively created a new instrument that could be freshly encountered by composers, performers and listeners, as if for the first time. My intention in “preparing” the drum kit is to make it aesthetically inviting, and musically accessible, to a largely unskilled public.

⁴¹⁵ John Cage, and Joan Retallack, *Musilage: Cage Muses on Words, Art, Music*. (Hanover, NH: University Press of New England, 1996) 204-205.

⁴¹⁶ This text was written in 1972 as a foreword for Richard Bunker’s, *The Well-Prepared Piano* (The Colorado College Music Press, Colorado Springs, 1973; reprinted Litoral Arts Press, 1981). It was slightly changed for reprinting in John Cage, *Empty Words: Writings '73-'78* (Wesleyan University Press, 1979), and has been further revised for the present circumstance. (Accessed July 25, 2016) http://johncage.org/prepared_piano_essay.html

⁴¹⁷ John Cage, booklet text for Ajemian's recording of the cycle: *John Cage: Sonatas and Interludes*, Composers Recordings Inc. CRI 700 (reissue).

The drum installation designed for this project (*Public Drum Project*), while also having practical rationalisations, aims to deconstruct many of the norms and conventions that surround the modern drum kit. The aim is to facilitate comprehensive participation, so that *everyone* can be involved in musical co-creation, to whatever extent they desire. Inclusion is not predicated on one's level of musical skill, or on personal characteristics such as gender, sexuality, national identity, age, economic status, political persuasion or musical preferences. The deconstruction process includes not only the physical refurbishing of the kit itself and its spatial re-organisation, but also the concomitant re-thinking of methods of playing, performing and composing. The intention of this investigation into new avenues for the drum kit assemblage is to facilitate a participatory approach that not only encourages inclusivity, but also draws on the comprehensive group intelligence offered by diverse creative inputs.

In terms of the more practical aspects of the installation design for *Public Drum Project*, the expansion of the kit assemblage to include one hundred drums, and the corresponding generous spatial dispersion (allowing at least one square metre per drum), means that multiple players are now able to stand while playing, and are also free to move around, and amongst, the hanging drums. Only one mallet is initially offered per drum, although more can be accessed if desired. The mallet heads are padded to protect the drum skins from damage by enthusiastic drummers (see Figure 6). No prior skills are required to engage with the installation and to begin playing, as even a novice is capable of hitting a drum with one mallet. Many may also be able

to spontaneously synchronise rhythmically with others while doing this.⁴¹⁸ The plastic drumheads that arrived in the second half of the twentieth century have been replaced with “warmer” sounding animal skins (ethically sourced feral goat), which also provide timbral variety and furry tactile interest. The drum shells, originally factory-made from thin ‘plys’ of wood or synthetic materials glued together and then customarily covered with a glossy synthetic ‘wrapping’, are stripped back to the base material and then decouped with text and/or images. This process of custom-deconstruction and rebuilding personalises the drum shells. It also offers a non-obligatory, informal and subtle score that suggests methods of approaching group drumming and music making. An important motivation behind the deconstruction of the kit is the desire to create a percussion instrument that is not readily aligned with a particular performance style or compositional convention. The intention is to enable participants to approach group drumming in the installation unfettered by prior musical experiences and expectations, or perceived inadequacies in relation to their own musical creativity. Deconstruction of the kit helps enable holistic participation and musical collaboration within the installation.

⁴¹⁸ See John Bisham, "Rhythm in music: what is it? Who has it? and why?" *Music Perception* 24, no. 2 (12, 2006) 125-134.
<http://search.proquest.com.ezproxy.uws.edu.au/docview/222291912?accountid=36155>. 128-129 and Thaut, *Rhythm, Music and the Brain*. 7-8.



Figure 6: Padded mallets created for the installation

Public Drum Project

My compositional role transformed significantly during the course of this study—evolving into predominantly the design, construction and prototyping of environments that encourage group music making. The *Public Drum Project* has become a “no-tech”, participatory sound installation, involving one hundred acoustic drums hanging in a public space. It offers an opportunity for musical collaboration, not only through the exploration of simple percussive sounds, but also, if desired, through the exploration of pulsation and rhythmical structures. The installation design functions as a catalyst for action—a platform that enables collaborative composition with the potential for surprising depth and complexity.

Interest seems to be growing in the praxis component of arts-based qualitative research.⁴¹⁹ Praxis “has been defined as morally informed and morally committed action”.⁴²⁰ There are connections here with Fuller, who dedicated his efforts to the success of all humanity.⁴²¹ He suggested integrity should be *the* contemporary governing aesthetic principle.⁴²² The guiding principle for the praxis element of this study is the idea of designing environments conducive to collaborative musical participation. My intention is that these designs will also, serendipitously, explore social cooperation, build community, and facilitate social cohesion. The overall project could be viewed as a conceptual and practical exploration of compositional

⁴¹⁹ Horsfall and Higgs, *Creative Spaces for Qualitative Researching*, 3.

⁴²⁰ Carr and Kemmis, 1986, quoted in Horsfall and Higgs, *Creative Spaces for Qualitative Researching*, 5.

⁴²¹ Fuller, “Buckminster Fuller Werner Erhard conversation.” 22:30.

⁴²² Ibid. 6:26:00.

ideas that draw on the synergy of group creativity. I view this work as a natural extension of the participatory experiments tentatively explored by Cage, and other experimental composers and musicians, such as MEV.

Some of the practical research experiments covered in this section of the thesis occurred prior to the official beginning of the project in January 2012. These experiences, however, are still relevant to the study, mainly because of the way they informed my thinking in relation to the potential for group music-making to function as an egalitarian alternative to more conventional styles of solitary compositional practice. In the year 2000, I discovered a West African-influenced group drumming class in my local area (the Blue Mountains region of New South Wales, in eastern Australia). I was eventually asked to take over a similar local class as teacher, and trips to Guinea in West Africa to study traditional Malinké drumming with Famoudou Konaté ensued. This was followed by explorations of a variety of modalities of group drumming, including frame drumming and Konnakhol vocal percussion (with Layne Redmond, Glen Velez and Lori Cotler), samba drumming (with a local teacher), and drum circle facilitation (with Arthur Hull). I was curious about what made group drumming “work”, and interested in finding ways for people to play together joyfully. However, what was missing was *empowered collaborative* drumming—improvised in the moment, without reference to a higher authority. It seemed to me that this authority, in the form of a leader or facilitator, an ancient tradition, an inflexible rhythmical structure or a score could negatively impact individuals’ innate ability to rhythmically self-govern.

When I began my undergraduate study in music in 2008, my primary interests were percussion composition and group percussion performance, and there were occasional opportunities to trial compositional ideas during this period. Once this current research project commenced in 2012, I also used the platform of CAPOW⁴²³, and several conference presentations, to experiment with a variety of interactive and participatory approaches. My initial sound installation ideas at the outset of this project were primarily interactive approaches that utilised MaxMSP (a visual programming language for computer music).⁴²⁴ I was also interested, at one stage, in the possibility of creating a multi-sensory installation.⁴²⁵ The first attempts at a low-tech drum installation took place at local Blue Mountains events, including the annual Blue Mountains Winter Magic Festival. Later on, a slightly larger installation was trialled a couple of times at Western Sydney University events at Kingswood. The first complete hanging of *Public Drum Project's* one hundred drums was installed at the Blue Mountains Botanic Garden, Mount Tomah, in December of 2015. The audio data recorded during this event has been creatively analysed via the production of a collaborative audio CD.

⁴²³ "Composers and Performers Out West". This is a semi-formal series of concerts organised by and for staff and students in the music program at Western Sydney University.

⁴²⁴ MaxMSP was created in the mid-1980s at the Institut de Recherche et Coordination Acoustique/Musique (IRCAM) by Miller Puckette. See "MaxMSPHistory < FAQs < TWiki." Atom. (Accessed September 14, 2017) <https://web.archive.org/web/20090609205550/http://www.cycling74.com/twiki/bin/view/FAQs/MaxMSPHistory>.

⁴²⁵ See Appendix 4 of this thesis.

Early group drumming experiments

My involvement with group drumming prior to the start of this current project had a big impact on my thinking in relation to collective music making. The first experience was what could be described as an Australian-West African hybrid style of group drumming. This has become quite popular in the Blue Mountains, with classes functioning primarily as lively social events. The focus is recreational, rather than being about perfecting one's drum or dance skills, the authentic transmission of West African traditional practices, or providing opportunities for egalitarian musical collaboration. The drumming classes are often followed by an "African dance" class, and these combined events provide an opportunity for musical interaction between novice drummers and dance students.⁴²⁶ However, what is being taught only has tenuous links to *traditional* African rhythm or dance. There is no instruction in relation to where the rhythms have originated,⁴²⁷ and no consideration given to whether they are even appropriate rhythms to be teaching in Australia. Often, rhythms are sourced online. These rhythms could be considered to have been appropriated as no permission has been attained from, or money tithed back to, the community of origin—often villages where inhabitants are malnourished and living in poverty without even basic healthcare.⁴²⁸

⁴²⁶ These interactions are often played out according to binary gender stereotypes—where typically the majority of men drum and the majority of women dance. When women do drum they are usually assigned the less powerful positions within the hierarchy of the ensemble (I have never observed a woman in the role of Djembefola).

⁴²⁷ This is something West African master drummer, Mamady Keita stresses the importance of. See Uschi Billmeier, and Mamady Keita. *A life for the Djembe – Traditional Rhythms of the Malinke*. (Arun – Verlag, Osststr, 1999) 43.

⁴²⁸ This is knowledge based on my own observations, while visiting the Malinké village of Sangbaralla in Guinea (West Africa).

During the period when I briefly taught traditional Malinké rhythms in Australia, I often felt uncomfortable (as a non-African) teaching West African rhythms. However, my teacher (Famoudou Konate), who is a respected elder in the Guinean Malinké community, sees imparting rhythms to Westerners (accurately, and with attention to their cultural context), as a way to ensure that traditional rhythms are not lost after his death. The way the group dynamic normally works within most West African-style group drumming classes is that the teacher functions basically as a dictator-conductor who first of all instructs, and then directs, the group. The rhythms are very tightly structured and generally no deviation or embellishment is encouraged (particularly for the novice drummer). They are also cyclical, and the same interwoven patterns are repeated over and over again, with variation coming primarily from the *djembe* soloist. Although many experience pleasure simply from the act of drumming with others, within this framework there is often little opportunity for creative input or musical self-governance. Participants must always refer to the higher authority of the instructor.

The other modalities of group drumming I have experienced exhibit similar authoritarian characteristics. These modalities include frame drumming, Brazilian samba drumming, and drum circles. Without exception, there is a leader who instructs and directs the group, closely controlling the musical parameters and the group dynamic. What all these groups have in common is the need to seek permission from, and constantly refer to, a higher authority. Again, although it may be possible to derive pleasure from these more arborescent styles of group drumming, they can at times be disempowering for the participants. Even before this current study commenced, I had begun to wonder how more rhizomatic styles of

group drumming might function. These types of groups would enable people to play together joyfully while retaining their individual musical sovereignty, and to contribute creatively and in an egalitarian fashion to the musical outcomes. This would be an *empowered collaborative* drumming—improvised in the moment, without the need to refer to a “higher” authority.

Compositional trials

My forays into group drumming were put on hold for a while after I began a music degree in 2008. There were, however, occasional opportunities to trial a variety of compositional ideas during my undergraduate study, from 2008 to 2011. Since this current research project commenced in 2012, I have continued these trials using CAPOW, and the occasional conference presentation or Western Sydney University event, as platforms to experiment with a variety of interactive and participatory approaches to musical composition.

My original proposal for the praxis element of this study outlined a compositional project that explored the interweaving of oral and notated drumming traditions through the development of a vocal language for the drum kit. I planned to create a portfolio of notated musical works for a variety of instruments.

This was my initial proposal for these musical works:

Work 1 (in 3/4 time) – 3 mins, vocal percussion (3 voices), piano

Work 2 (4/4) – 4 mins, vocal percussion (2 voices), drum kit (+1 voice), bass guitar

Work 3 (5/4) – 5 mins, vocal percussion (2 voices), drum kit (+1 voice), cello, saxophone

Work 4 (6/4) – 6 mins, drum kit (+1 voice), string quartet, trumpet

Work 5 (7/4) – 7 mins, 2 drum kits (+2 voices), string quartet, piano

Work 6 (8/4) – 8 mins, vocal percussion (1 voice), 2 drum kits (+ 2 voices), string quartet, trumpet

Work 7 (9/4) – 9 mins, vocal percussion (1 voice), 2 drum kits (+ 2 voices), string quartet, bass guitar, saxophone, piano.

Total length of combined works – 42 mins.

Performers/instruments

String quartet – consisting of violin, viola, cello, double bass

Vocalist – singer/scat vocalist/vocal percussionist

2 kit drummers – who are also able to vocalise

Piano

Saxophone

Trumpet

Bass guitar.

Technology employed

The score to be composed and performed using a combination of “Finale”,

“Max/MSP/Jitter”, and possibly Pro Tools software.

Compositional timeline

Year 1 – works 1–3 completed

Year 2 – works 4–5 completed

Year 3 – works 6–7 completed

As my research and practical experiments developed, the compositional approach was completely transformed. In the edited documentary material presented below, I provide some representative examples of the types of compositions I experimented with as the research unfolded. Rather than providing a chronology of the entire project, I have divided my work and ongoing reflections into compositional trials and installation trials. The reflections and commentary included below explain clearly how my thinking, and the work itself, developed in the direction of the final installation.

Example 1: Crossing Boundaries Conference, 19 June 2013

Journal excerpt:

I presented a conference paper at the "Crossing Boundaries in Music" conference in the performance space at WSU—Susan McClary was attending. I took along enough drums/percussion for 25 people (and there was probably around that number of people present). I asked everyone to come up to the stage to pick a percussion instrument, and then suggested they explore the instrument during my talk (presentation of paper on Cage). I also suggested that every minute or so (their own version of a minute) they pass their instrument to the person on the left of them (they were all back in their seats by now). Sounds began and I proceeded to read my paper. I was drowned out for quite a bit of the time, which I had expected—and in fact been hoping for. There seemed to be little shyness about making noise. I wonder if this was because the audience were musicians/musicologists ... and perhaps also familiar with Cage's ideas. I was delighted to see Susan McClary playing various instruments and then also proceeding to play an electronic instrument on her iPad. I got up and walked around briefly as I read my paper, and on the whole, most people seemed happy, playful and alive. Several people came up to me afterwards and thanked me—expressing their pleasure in the event. A composer who had participated (Clare Maclean) commented that she would be happy to have written the piece improvised by the group.

Example 2: Playing With Fire, June 2014

Score:

Collaborative performance activity for electro-acoustics and acoustic piano: a score composed for *Playing with Fire*

*Upon entry to the venue every audience member will be assigned a piano key with timing directions, and provided with other information that relates to the “performance”. These written instructions for the performance piece will be prepared in advance by the composer and “randomly” chosen by the individual participants upon arrival.

*Tamara Anna Cislowska will be offered a piano key in a similar fashion to the other participants, which she may play, if she desires. She will also be required to indicate (in any way she chooses) the beginning and end of the performance, and will be responsible for the piano pedals – used (or not used) at her discretion. She may also “prepare” the piano, in whatever way she wishes. This “preparation” may involve microtonal tuning, it may involve Cage’s piano preparation, it may involve something else, or it may involve nothing at all. The performance will be approx. 7 minutes in duration.

* Participating audience members will all be required on stage for the duration of the performance and will have the option of playing their assigned piano note via the onstage acoustic piano or via their own personal iPhone, iPad or other electronic device (this may require downloading a free piano app – such as “Touch Piano!”). Participants using their own devices will be invited to play them through a shared microphone on stage.

*There will be a maximum of 88 performance “directions” – if more than 88 audience members wish to participate, they will be welcome to share.

*A hard copy of the complete score (including 88 individual performance instructions for participants) will be forwarded to the event organiser.

*This may be a good piece to finish the concert with (at the discretion of the organisers).

Samples of the instructions handed to participants upon entry:

Collaborative performance activity: for electro-acoustics and acoustic piano



Performance information:

You are cordially invited, during this performance, to play the note indicated approx. 49 secs after the performance begins and then approx. every 49 secs until the performance ends (if you don't have a timing device you are welcome to use your own internal "clock" to estimate this time period). You can use the onstage acoustic piano to play your note – or your own personal electronic device (this may require downloading a free piano app – such as "touchpiano!"). If you decide to use your own device you will be required to play through a shared microphone on stage. The performance will be approximately 7 minutes in duration.

*Volume and "duration held" will be chosen by you – variation is encouraged, within the piano's limitations

*Listen attentively – not just to yourself, but to the sounds inside of and outside of the performance "group"

*Kindness towards the other performers is encouraged

Warmhearted Regards,
Sharon Williams, June 2014.

Collaborative performance activity: for electro-acoustics and acoustic piano



Performance information:

You are cordially invited, during this performance, to play the note indicated approx. 53 secs after the performance begins and then approx. every 53 secs until the performance ends (if you don't have a timing device you are welcome to use your own internal "clock" to estimate this time period). You can use the onstage acoustic piano to play your note – or your own personal electronic device (this may require downloading a free piano app – such as "touchpiano!"). If you decide to use your own device you will be required to play through a shared microphone on stage. The performance will be approximately 7 minutes in duration.

*Volume and "duration held" will be chosen by you – variation is encouraged, within the piano's limitations

*Listen attentively – not just to yourself, but to the sounds inside of and outside of the performance "group"

*Kindness towards the other performers is encouraged

Warmhearted Regards,
Sharon Williams, June 2014.

Program notes:***Collaborative performance activity: for electro-acoustics and acoustic piano***

This is a piece written for *Playing with Fire* – a concert, by pianist Tamara Cisłowska,
of new works for electro-acoustics and acoustic piano.

Upon entry to the venue every audience member will be assigned a piano key with timing directions, and provided with other information that relates to the “performance”. These written instructions for the performance piece will be prepared in advance by the composer and “randomly” chosen by the individual participants upon arrival. Participating audience members will all be required on stage for the duration of the performance and will have the option of playing their assigned piano note via the onstage acoustic piano or via their own personal iPhone, iPad or other electronic device (this may require downloading a free piano app - such as “touchpiano”). Participants using their own devices will be invited to play them through a shared microphone on stage.

Journal excerpt—post-event reflections:

Although participation is a prerequisite for this piece, it still offers only a limited opportunity for individual creative input. The performers are randomly assigned pitches to play, and also instructed when (how often) they should play them and how long the piece should continue for. However, there is complete freedom in relation to volume and also the duration that the notes are held for. It was interesting to observe the ways in which creative collaboration, and playful interaction amongst the performers was still possible within the limitations imposed. Most of the (former) audience members enthusiastically embraced the shift to a higher level of participation (than the relative “passivity” of listening to the work of others). Some participants commented on, the aesthetic beauty and spaciousness of the resultant music, and also, their enjoyment of the collaborative participatory process. This piece was included in an audio compilation of the event.

Example 3: *Music Now* conference, contemporary approaches to research

A symposium for HDR students, 30-31 August (Saturday/Sunday) 2014, Kingswood, WSU

My contribution to this event was a twenty-minute presentation consisting of a brief explanation of my ideas followed by a group activity as demonstration.

Preamble—excerpt:⁴²⁹

Composition as Sustainable Collaborative Creative Practice

As I prepared this paper I thought about what the “norms” might be, in terms of presenting a paper in a conference such as this. Because although they may be *unspoken* expectations, there are still “conventions” at play here. I have my own set of internal guidelines, and I can imagine that most of you also have some expectations of what a presentation such as this should look or sound like, and it is for this reason that most presenters today in their allotted time will have followed a similar format to each other. The content has varied widely, but the format has remained the same. In my experience, this is largely the “norm” for events of this type. What appears to be absent is a questioning and exploration of (what I will call) “process”, and an implicit acceptance of the procedures, systems, and methods at play - the means by which our experiences are constructed.

In terms of musical composition my interest is focused on questioning “process”, in itself; questioning the format and the template, rather than simply varying the content. This way of thinking presents something of a challenge to the stature of the “professional”, within the tripartite musical system of composer, performer and listener. Conventionally, this system involves a solitary composer creating a “fixed” text with instructions for a performance, which usually takes place before an often passive audience. In contrast, the type of musical composition that seems to me to be more relevant to the issues humanity needs to address in 2014, centres around the designing of “models” or “maps” for events that facilitate collaboratively created “in-the-moment” music. These designs would be ideally, non-hierarchical (that is they are open to anyone & not dependent on prior experience or the acquisition of

⁴²⁹ See Appendix 2 of this thesis for the complete preamble.

musical skills) and participant-self-determining (the participants are free to contribute their unique abilities in their own diverse ways).

With respect to some of these ideas, and rather than continuing to talk for twenty minutes, I thought it might be more useful to work with process. We can vary the template and the format of our experience as a group in this room, in the here and now. In thinking about this, I decided to plan a group activity that would serve to, in a sense, “level the room”, erasing any power structures that might pre-exist. This group activity may bring us together rather than continuing to cultivate artificial feelings of separation.

Score:

*Divide people into groups without pointing and numbering. In this event, participants will be divided into four groups (of 4–6 people) by choosing their favourite herb—parsley, sage, rosemary, or thyme. The fragrant herbs added a multi-sensory element to the event.

Group instructions:

Create a 1–3 min performance piece as a group using only your voice and your body (for example, clapping and stomping). Create an “original” composition “from scratch” as a group. You will have 5–10 mins to prepare and rehearse (if necessary). You will then perform this composition (anywhere in the room you choose) for the other participants.

Journal excerpt—post-event reflections:

In this piece participants have a high degree of autonomy, but within quite strict limitations. Participants are free, to an extent, to bring their own interpretation and imagination to the task at hand. A situation and framework is provided that offers an opportunity for collaborative “in-the-moment” musical composition and performance. It was quite encouraging to see the results that the groups came up with—particularly given such a short preparation time. However, this was no surprise to me. I have seen equally impressive results when trialling similar activities in the past with undergraduate music students, who were often grateful for the opportunity to get up out of their seats, and co-create music with their peers. In this particular instance, for a few, there seemed to be initially a reluctance to be actively involved. However, this inertia seemed to be overcome by the fun of the activity itself, and participation was, on the whole, enthusiastically embraced. I think the fear of being judged by, and lack of trust in, others in the group may have been a factor in this process, as the group was made up of a complex assortment of undergraduate and postgraduate students, teaching staff, guest lecturers, and other visitors. However, the piece functioned as a sort of leveller of pre-existing power relations between the group members, as they abandoned their usual roles and became simply humans making music together. There was lots of laughter, and four original (and very different) pieces were performed.

Example 4: CAPOW, May 2015, Kingswood, WSU***Poll5: a participatory piece for multiple humans, mobile phones and piano(s).***

This composition used *Poll Everywhere*, which is “a simple application that works well for live audiences using mobile devices like phones. People participate by visiting a fast mobile-friendly web page for the event, sending text messages, or using Twitter. Instructions are displayed on-screen. The poll that is embedded within the presentation or web page will update in real time. Advanced uses include texting comments to a presentation, texting questions to a presenter, responding via the web, and SMS interactivity in print, radio, and TV”.⁴³⁰

⁴³⁰ See Pool everywhere, “Frequently Asked questions” (Accessed 5 October 2017) <https://www.polleverywhere.com/faq#whatispe>

This is how the visual component of *Poll5* appeared during the event—with final results (see Figure 7). The instructions and graph (which updated itself in real time during the performance) was projected onto a large screen at the rear of the stage, in view of both the onstage performers and the audience-participants:

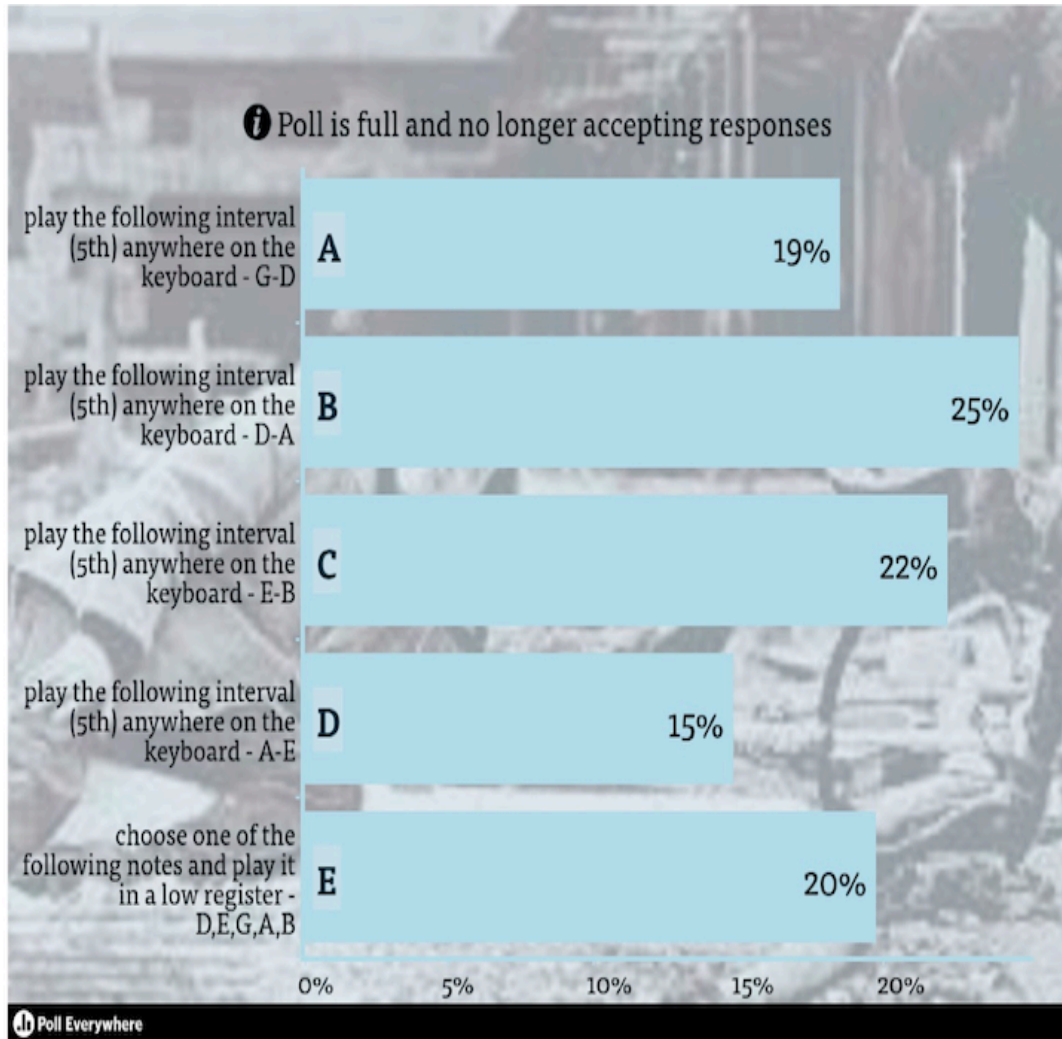


Figure 7: *Poll5* screen projection, May 2015

Five volunteer performers were called upon and shared two pianos. Audience-participants “texted in” their choices of intervals/performers. There was no limit on the number of times an individual could text. The piece was approximately three minutes long.⁴³¹

⁴³¹ See Appendix 3 of this thesis for more detailed tabled results.

Journal excerpt—post-event reflections:

This piece, although allowing some input from the audience-participants, still maintains a firm boundary between the "audience" and the voluntary "performers". However, in a sense, the audience members are collaboratively composing from (the safety of) their seats in the auditorium. They have no less autonomy than the "performers", who choose one of the intervals to perform, and from then on follow the indications of the audience members who text in their performance instructions. Although the audience decide the frequency of each of the five "event" options, the performers can, however, choose in what register of the piano to play their interval/note, and at what volume. The audience's enthusiasm for participation can be observed in the tabled results. The piece, while only three minutes long in this instance, has the potential to be explored for longer durations, and with a variety of other options, in terms of pitch and interval choices. There is also the possibility for other sound sources to be used, such as percussion, although the sustaining and resonant qualities of the piano worked well in this instance.

Preliminary installation ideas

In this section I will outline some of my ideas during the early days of this study, in relation to the development of the sound installation design. The following are typical excerpts from my journal during the first year of the project. I have underlined important links between these early ideas and the final *Public Drum Project* installation design.

Journal excerpts:

7 May 2012

The theoretical aspect of this study involves the exploration of a philosophy that is relevant to collaborative and participatory performance. My intention for the practical aspect of this project is to create an interactive/participatory (and also transdisciplinary, and trans-sensual-involving not only sound, but also vision, smell, taste, and touch) partly indeterminate performance/installation (or series of performances) for drum kit (which can mean a selection of drums/percussion either grouped together or distributed through space).

This installation should be open to both experienced and inexperienced musicians/ drummers. Will "technology" (Max/MSP in particular) be beneficial? It is not appropriate to use it simply because I can ... I think I would need a serious reason to do so (it would need to function as a useful tool). What could it offer that could not be achieved otherwise?

Should the drum kit be disassembled—broken back down into its individual “elements”? Is the idea of one person doing everything (playing many drums at once) a redundant idea?

15 May 2012

A performance piece that addresses the impossibility of separating the senses ... has connections with Deleuze's ideas. Transdisciplinary work (holistic, and “open”) resists the separation of “things” into categories. In relation to the senses (for example, seeing and hearing) some sort of illusory separation has existed, when in fact there is none. Things merge in fluid fashion, and the same is true of other dualities like woman/man, night/day, and black/white. There is no actual contradiction in seemingly disparate elements happening at the same time. They co-exist in a “field”! An apparent paradox may not be one at all. This brings to mind “happenings” ... and the idea “theatre is all around us”. Cage pointed out “theatre takes place all the time, wherever one is, and art simply facilitates persuading one this is the case”. Another idea for performance/comp:

People walk through (a replica of) the Chartre labyrinth. As they walk they pass objects, for example, drums they can strike in various ways. They may pause/play for a certain time and then continue through the labyrinth. The density of sound will depend partly on the number of participants. The performance could include the construction of the labyrinth.

31 May 2012

Is this all too hard? Should I be aiming for a more practical idealism— praxis that is economically “sustainable”? This (Cage's ideology) will not “sell”! It is not marketable, and could be seen as elitism (as Cardew suggested) in that only a select few—who think in a certain way and have certain ideologies—can appreciate and “enjoy” it. Most would not bother to listen. Even Reich's percussion music at times can sound like machines getting out of sync (constant pulsation and a sort of boring stasis through repetition) ... humans playing like machines! Why not just get a computer to play? This would make more sense. Steve Reich has created a brand and marketed it well (but oh those poor musicians who have to play it) ... Cage was not selling music ... but instead ideas ... at least some of the time ...

Is it possible to move on from Cage in such a way that the music becomes “amazing” ... and revolutionary ... what can Deleuze contribute? ... if no one wants to listen, is it still worth doing? ... what are the problems with Cage's approach ... if any ... and does Deleuze offer an answer? ... a model for participatory group drumming (using drum kit) that does not require a director or a charismatic leader (will involve designing an “environment” that enables a group experience of drumming together) ... drawing on the ideas of Cage, and Deleuze, and using Max/MSP/Jitter (if technology is indeed required). Will the final design involve technology? Will it involve all of the senses?

... Do we need a pulsation to drum together ... maybe we can move in and out of pulsation ... once in, is it possible to explore more deeply than the usual 4/4? How can we explore more complex and interesting rhythmic groupings?

Brief summary of the new ideas emerging from the journal entries above:

It seems worth briefly noting some thoughts beginning to be articulated in these early journal entries. The first underlined idea is that of disassembling the drum kit and spatially distributing its components. At this stage of the project I was already questioning the role of the drum kit in collaborative music making. It began to make more sense to break the kit up to enable people to more easily play together rather than having one person do everything. The second idea is that of abandoning the use of technology in favour of a “no-tech” approach, unless a high-tech approach proved essential in terms of making the installation more easily accessible for non-experienced musician-composers. A notion suggested in the second excerpt is the potential of moving while drumming—within a multi-sensory field, akin to a “happening”. Another important idea emerging in the final excerpt is that of enabling a group drumming experience that does not require a leader or authority figure. Finally, questions around the importance (or not) of “pulsation” within a group rhythmical experience are beginning to be explored.

Within this first year, or so, of study (invigorated by a welcome change of supervision) my ideas in relation to the practical elements of the project were evolving considerably. This can be seen in another early installation idea that was included as part of my written submission for “Confirmation of Candidature”. This performance plan,⁴³² was probably the most ambitious, and multi-sensory, example of my early installation ideas. It involved four performance installations over the course of the project, involving seven different performance “stations”. Each performance station was a multi-sensory environment. The focus was sound; however, other senses were also catered for. The plan was for performances to take place once or twice a day, morning and/or afternoon, for example 10 am–12 noon, and/or 2–4 pm, during 2013 and 2014, as follows:

2013 – stations 1 & 2 (1st semester), 3 & 4 (2nd semester)

2014 – stations 5 & 6 & 7 (1st semester), 1, 2, 3, 4, 5, 6, 7 (2nd semester)

My intention was to have the performances on the Western Sydney University (Kingswood) campus (apart from the final performance, which required a larger space). The participants were free to choose the extent of their involvement in the installation, with the possibility of “customising” the experience, in terms of designing their own combinations of multi-sensory—including musical—elements.

My role involved preparing and assembling the installations, and serving tea/coffee and light food as required. A video camera, set up to film the performance (for documentation purposes) could double as a trigger for MaxMSP/Jitter, and triple as a projected source of visual interest via Jitter (for example, with a kaleidoscope effect).

⁴³² See Appendix 4 of this thesis for the complete performance plan.

Installation trials

By the second year of the project (2013) I had abandoned the idea of using MaxMSP, and had settled on a “no-tech” approach that involved primarily “prepared” acoustic drums, hung in a public space. I began to trial this idea. My initial installation prototypes involved a relatively small (but steadily increasing) number of drums. I provide, below, a variety of styles of documentation in relation to four of these early trials, including journal entries, photographs, and post-event reflections. The first installation prototype took place at the 2013 Winter Magic Festival. The second example relates to a Blue Mountains event called the Festival of Joy. The third trial was part of an event at the Blue Mountains Rhododendron Festival. The fourth installation was created in conjunction with the Western Sydney University 25th Anniversary Concert, in May 2014, at the Playhouse Theatre, in Kingswood. I have also included a copy of a sign, containing information for participants, placed on the wall at this final installation trial.

Example 1: Winter Magic Installation with “In-Lakesh” 22 June

2013

Journal excerpt—thoughts prior to the event:

At the moment I'm working on “prepared” drums for an installation at the Blue Mountains Winter Magic Festival. The idea began via a chance meeting with a friend at WSU, who invited me to be a part of this event with the Blue Mountains artists collective “In-Lakesh”. I spoke to another member of the collective about my work, prior to attending two group meetings at the Katoomba library. The organisers seemed receptive to my ideas. I am preparing nine drums (with animal skins and decoupage) and working every day till late at night to complete the drums in time for Friday morning, when I need to begin to set them up in the space at the Uniting Church hall in Katoomba Street. I have abandoned some ideas, in relation to incorporating all of the senses, and so on ... as I need to adjust to the collaborative process and take into account the group's vision for the event ... that I have come into at a fairly late stage. They will be selling Chai and healthy snacks, and there will be musical and other events happening in the space during the day (Saturday, 22nd June). There will also be other installations and art exhibited in the space (curated by a group member). I will be setting up drums and perhaps bringing a white board, if I can find a space to set it up. I was considering the idea of incorporating scents. I am keen to go with the scents of Christopher Brosius (“I Hate Perfume”) but have not had the time or the funds to

contact him yet (he is based in New York). I also have minor concerns re. possible adverse physical reactions of some participants to "essential oils" ... although I can't imagine that would be a problem with "I Hate Perfume" ... but something to keep in mind. The "lounge" idea was also rejected by some members of the group ... although it had been encouraged previously by others. It seems carting furniture is regarded as too much hard work (and I can relate to this).

Drums:

I am transforming an old five-piece kit (that previously belonged to my son), and another four-piece kit bought on eBay for \$10.

Skins:

These have been sourced from "African Drumming Supplies" in St Kilda, Melbourne (Simon Fraser). However, Erle Bartlett's skins are better quality, and more economical, and I will definitely get all skins from him in future. I also had to buy some replacement tensioning rods from High Street Music in Penrith. They have lots of Gibraltar hardware upstairs. They also put me in touch with a drum maker/restorer called Steele Turkington/Kentville drums ... who has a FB page. He uses kangaroo skins and goatskins. He attaches them to drum hoops, and they look incredible. Today I'm going to look for more tools to make the shaving of the drumheads easier. I also need to make nine mallets. The mallet heads will be made from foam, and then covered with velvet. The mallet sticks will be made from 16mm oak dowel, in a variety of lengths. The mallets need to be relatively light, so as not to damage the goatskins.

Journal excerpt—reflections post-event:

I arrived to set up the drums at around 11 am, to find no-one at the venue. It seemed to be a very "loosely" organised event. I came back at 12 noon ... to find a few members of In-Lakesh had arrived. I proceeded to set up the drums, and had to decide, first of all, where to put them. One member was very negative from the get go. He was concerned about the drums being too loud during the performances. There ended up being a variety of types of musical performances on stage back to back all day, and no experimental music at all. Retrospectively, I think this was not the ideal venue/event

for the drum installation. A gallery space would be more suitable ... or a room with nothing else happening in it. For example, the space itself would've been perfect if it was dedicated to the installation alone ... without all the other music. The music/performances, in any case, were an impediment to conversation ... and community. What was good about the space was its "warmth". There were comfy places to sit and hot Chai. However, what I envisage for the next trial is a more active space ... not for sitting and talking ... but walking through/standing, while playing drums ... a few swings perhaps ... whiteboards, or places to write that are private and anonymous (perhaps a section discreetly screened ... or anonymous boxes to put feedback in). I still like the idea of a public whiteboard "score generation", but also appreciate that being "watched" might affect the way people write.

So ... getting back to Winter Magic ... I set up the drums with my son's help. There was some conflict between group members over the way the space should be set up. The "negative" group member, mentioned above, and another organiser, requested no mallets be used in the installation (they were concerned about the volume being "too loud". They commented that the drums ended up being louder than they were expecting). They didn't want the drums to interfere with the performances. The fact that they would consider this as an interference, rather than an opportunity for participatory involvement indicates how far apart we were philosophically/conceptually. On the day, some of the

other members of In-Lakesh were disappointed that these members had obstructed me, in terms of banning the use of mallets. One member insisted I bring the mallets after all. I complied, but for various reasons they didn't arrive till about 4.30 pm and by this time most people had left/dispersed. During the day the drums were played mostly by children, which may have been off-putting at times for the adults. I am considering designing future events primarily for adults. Children (particularly young children) have trouble, at times, getting past "ego" to work as a collective. They are often fearless and boundlessly creative but perhaps don't always have the maturity, or desire, to work with others towards a common goal. They didn't seem to be listening closely to the other drummers when they played. They were excited and passionate about the permission to drum and the pleasure in the drumming itself ... but did not move beyond this to work together. Perhaps this had something to do with the availability of two mallets per person ... rather than having a single mallet (which encourages a more spacious style of collaborative drumming) ... or something to do with the egocentricity of childhood. During this installation, several friends pointed out that people may have felt the drums were not meant to be played or touched, and suggested that a sign (giving permission to engage) might help. This would function in a similar way to a plaque on the wall at a gallery, with a brief explanation in relation to the art work/installation. It could contain my name, the name of and information about the work, and an invitation to

participate. This sign could potentially also incorporate the PhD ethics requirements.

So ... on this day (apart from quite a few children) the installation didn't get played much by adults ... these were mostly my own friends and occasionally others (mostly men) who tapped and examined, but didn't continue for long. I noticed one person taking a photo of the "Fuller" decoupage. There was a lot of good feedback from artists in terms of the visual "appeal" of the installation. I packed up at about 5.30 pm ... very tired and my body a little traumatised by the intensity of the drum making in the previous week. I will definitely try again next year, but would like to have a larger space for the complete installation. I think perhaps half of the space could be for activity and the other half for sitting comfortably and eating/drinking ... while being entertained by the installation. This may not work in terms of the drum noise interfering with the conversation and people not finding loud drumming particularly relaxing ... although with only one mallet per person, the installation would probably still be quieter than the bands at this current winter magic event. I can imagine this space with no bands ... just drums ... swings ... lounges ... food and drink ... other artworks ... places for written feedback ... whiteboards ... and so on.

Some “learnings” and ideas emerging from the journaling around this early trial:

- * One needs to be flexible and adaptable when collaborating with others
- * Permission to engage and also some type of explanation in relation to the art work/installation may need to be given to participants—perhaps via a sign at the entrance to the installation.
- * The installation may benefit from being acoustically isolated—it does not work well in conjunction with other musical events
- * A whiteboard for feedback may be unnecessary. Engagement in itself is a form of feedback.
- * Not everyone shares my philosophy and/or my passion for my own work.
- * Children seem to have a different approach to group drumming than many adults.
- * The provision of only a single mallet may be more conducive to collaborative drumming than providing one mallet for each hand—and is a practical way of creating sonic “space”.



Figure 8: Drums set up before the event commenced, Winter Magic installation, June 2013



Figure 9: Drums and potential participants within the venue, Winter Magic installation, June 2013



Figure 10: Participants engaging with the installation. Winter Magic installation, June 2013

Below are some more journal entries (written soon after the above event) that further track the development of my ideas for the praxis element of this study.

Journal excerpts:

8 July 2013

I had the idea that cymbals could be included in the installation ... although they are potentially noisy. They could be muted somehow ... or no sticks provided perhaps. The drums, however, could hang with a single mallet attached to each.

9 July

I've been spending time working on the drums. The "super blond" shellac (for sealing the decoupage) arrived. I feel very clear now on what I want to do for the installation ... 100 drums (all hanging), and cymbals (also hanging) that when swung (hard) might touch and clash into each other. The cymbals could be either spread out in space like the drums ... or clustered together in the centre ... or around the periphery. Think about placement! I will continue to acquire shells and make drums ... Primarily from goatskins and decoupage shells (with text from Cage, Deleuze, Fuller, myself, and others ... all "cut up" and fairly randomly placed ... that can function as a type of informal "score"). Participants may or may not notice (or be influenced by) the drum decoupage.

I need a place to store drums and a method of transporting them. I also need to start approaching galleries and so on, to organise space to exhibit them.

I also need to consider how to structure my observation, and need to find a method of gaining feedback and collecting data. For feedback ... possibly a private place for a whiteboard, or other ways of commenting. An anonymous box drop could work ... although I like the idea of participants being able to see other people's ideas and respond to them.

Today I have been looking at Duchamp and the "readymade" concept. My drums are, sort of, "prepared" ready-mades, but ready-mades that can be "used" ... or rather their original use has been transformed. Although they appear at first to be art "objects" ... in their usefulness they become anything but that. Imagine if someone had "used" Duchamp's urinal while it was installed (maybe someone did?). That would flip the concept and take it one step further! This is where I'm heading with my installation—a readymade that can be used within the gallery setting. Of course I'm sure it's been done before ... as is always the case ... but not (that I'm aware of) with a drum kit ... and certainly not on this scale.

10 July

With respect to my practical work, I will be taking a "participatory" approach, rather than an "interactive" approach. The difference between choosing to "participate", and inadvertently "interacting", is worth contemplating. Participation can be more of a challenge in terms of addressing one's relationship with power/authority, as one may have to forego the constant seeking of permission and approval. On the other hand "interactivity" sometimes happens without a conscience decision to participate on the part of the "interacting" human. Although, in this situation one can choose to leave, there is no incentive to "cross the line" of conventional behaviour, and in the process examine our relationship with authority. A conscious decision, and "deliberate" actions will be required for involvement in the sound installation for this project. At present this would involve hitting a drum or pushing a swinging cymbal. However, my principal supervisor claims that a swinging cymbal could "kill a small child" ... so this idea may go nowhere.

15 August

I've been thinking about the installation today and feeling positive about the way it has evolved. In itself it poses important questions ... about how we can "get on" together, and how we can work and play together. I do not have to answer these questions myself! It is enough to provide the tools and the space, for others to work together to explore

possibilities. Who is to judge in any case what works and what doesn't? If there is action ... a community action ... perhaps that is sufficient. Maybe suggesting the question (via the design) is enough ... and then hand things over to the creative intelligence of the group-mind to find solutions.

Brief summary of the new ideas emerging from the journal entries above:

The journal entries above contain some important developments in relation to the practical aspects of this project. The first entry reveals that I was beginning to consider the inclusion of metal percussion, via the use of hanging cymbals, as a way to broaden the sound pallet of the installation. However, there was some concern about the safety of such an endeavour, and also volume considerations in relation to cymbals being struck with a mallet at full force. I decided around this time to attach a single mallet to each drum via a length of string. I resolved to incorporate one hundred drums, and was starting to plan for the practical realities of such a large-scale project. I was also developing ideas around the content of the textual material for the drum decoupage, which would function as a “score” element. It seemed productive to consider where this installation might be placed in relation to the work of others—hence the speculation in relation to the “readymade” concept. I also decided at this point that the focus of the installation needed to be participatory rather than interactive. I was still contemplating a variety of methods for obtaining feedback and pondering ways of structuring my observations. Lastly, I seem to have developed, at this stage, a profound faith in the creative intelligence of the group mind, and appreciation of the important possible applications, to other fields of endeavour, of learning to work and play collaboratively and creatively together in a musical setting.

Example 2: Festival of Joy, October 2013.

Journal excerpt:

7 October 2013

I feel that it might be useful to write something in relation to my experiences at the "Festival of Joy" I attended yesterday. A friend (also one of the organisers of the event) rang late morning to invite me, and also requested that I "bring drums". I took along seven drums. After the musical performances finished (around dusk), everyone walked to the labyrinth. There were not many people still around at this time ... perhaps thirty or so. People started drumming (some using the drums I had brought along) ... others were dancing around/on the labyrinth. I started playing a kick drum. Various people expressed their desires (verbally) for the rhythm to be a certain way. For example, one wanted polyrhythms, while another wanted the rhythm to speed up. I felt some responsibility for the musical outcome. The atmosphere was a little tense. I sensed a desire, amongst some, to change things rather than accept the rhythm that was evolving. There seemed to be a lack of trust amongst the group members, and lack of faith that we could eventually arrive at a musically "interesting" place together. There was one man who was especially fascinating. He felt the need to take control and started directing the group. It was surprising to me that he would consider his intervention an improvement, in any sense of the word. In any case, it seems to me that if facilitation was really needed it could be done more subtly from within the circle and from within the

music, rather than stepping outside and beginning to tell others what to do. This revealed a lack of understanding of the processes at work (possibly through a lack of experience) and increased the group anxiety. Why would this man imagine that we needed to be directed? I think that any intervention should take place for the primary reason of growing group cohesion. His intervention, in fact, ultimately destroyed the cohesion and divided the group further. The group was interestingly divided into "factions" early on ... everyone was so excited and anxious! It may have taken a night of drumming to calm everyone down and get to something "real", but bullying facilitation contributed nothing positive towards this end. I generally feel very relaxed and "at home" when drumming in a group. In this instance however, things were different, and I left feeling frustrated. These people were really hard to play with, and it made me long to play with sensitive, listening individuals. My thoughts were along the lines of - "just slow down and listen to each other ... falling apart is sometimes necessary ... do not panic ... do not have an agenda". Perhaps I could have these sorts of things on the drum decoupage ... a sort of oblique strategy for the drum installation.

The ideas below grew out of my thoughts and reflections (discussed above) in relation to my experience at the “Festival of Joy”. These compiled ideas function as a type of “subtle” score.⁴³³

Score:

Score – for a group of people drumming together, with no-one telling anyone what to do!

- *listen ... not just to yourself ... but to the sounds inside of and outside of the group
- *stop, pause, breathe, don't be afraid to be silent and wait for inspiration/inner direction, you have all the time in the world
- *slow down (your thoughts) – be aware of any anxiety/fears, observe (with detachment) your thoughts and breathing
- *let go of any ideas or preconceptions about what the group should sound like, or about what should happen
- *trust ... each other ... and that whatever happens is ok
- *expect ... that you will fall into the “groove”
- *expect ... that magic will happen if you “let go”
- *strive for ego-lessness
- *dialogue with the dancers
- *look after and be attentive to your body and its needs ... do not injure yourself or hurt your hands
- *do not try to control or direct the group
- *be inclusive ... do not form factions or alliances within the group if this serves to exclude others
- *be kind ... expand your awareness out to encourage those tentatively traversing the perimeter
- *do not fall back on or follow old familiar patterns (rhythmic or otherwise)
- *strive to approach the experience in a fresh way ... find new group rhythms
- *be playful and mischievous
- *be courageous.

⁴³³ This ‘score’ ended up being used for the decoupage on several drums.

Example 3: Blue Mountains Rhododendron Festival, Blackheath, 2013

Journal excerpt:

Wednesday 6 November 2013

I trialled another installation—hanging some drums (ten drums, plus three cymbals) for another “In-Lakesh” event (as part of the Blue Mountains Rhododendron Festival). I found an alcove for this purpose in the grounds of Blackheath Public School (see pictures below). During the actual event I had to leave for a few hours. Apparently, during this time, the children were “going off” (in the words of a witness) on the drums. In a similar way to the Winter Magic trial, not many adults were engaging with the installation, although I noticed a few from time to time. At 7 pm I took the drums down. I couldn't find the mallets at one point. It seems that they were confiscated by the In-Lakesh “police” from time to time, when noise levels got too loud for the other performances that were taking place (on the inside and outside “stages”). It took around an hour and a half to hang the thirteen pieces. I met a man during the event who offered me 5-6 drums he needs to get rid of, which I must collect from Blackheath. I need to order more goatskins, and have decided to buy sheep shears to make shaving the drumheads quicker.



Figure 11: Drums set up before the event commenced, Blackheath, November 2013



Figure 12: Participants engaging with the installation. Blackheath, November 2013

**Example 4: WSU 25th Anniversary Concert, Playhouse Theatre, Kingswood,
May 2014.**

The next significant drum installation trial was undertaken in conjunction with a Western Sydney University anniversary concert. The images below give some indication of what the installation looked like prior to, and during, the event:



Figure 13: Drums set up before the event commenced, WSU Kingswood, May 2014



Figure 14: Participants engaging with the installation, WSU Kingswood, May 2014

24 DRUMS

This installation is composed of 24 reconstructed drums, with mallets attached. The drums are made from salvaged and recycled drum kit pieces. The drum shells have been stripped back and transformed with a decoupage of textual matter that functions as a type of informal score. The vibrating heads are constructed from feral goatskins.

You are cordially invited,

wholeheartedly permitted,

& enthusiastically encouraged...

TO PARTICIPATE

in this sound installation

in whatever way you choose.

Sharon Williams

Figure 15: Sign placed on a wall near the installation, WSU Kingswood, May 2014

The Playhouse installation, (see Figures 13 & 14), was the largest up to this point, with 24 drums in total (I had abandoned the idea of including cymbals by this stage). It was set up in the theatre foyer, and attendees to a formal concert within the theatre itself were invited to use the drums in an “opening” before and after the formal performance. A few patrons—mostly University staff and students, and their families, including some enthusiastic children—engaged with the drums in a fairly reserved fashion. However, most chatted and snacked on food and drinks provided by the university. It became obvious during this event that having mallets attached to the drums with string was not the best option (soon after, I came up with the idea of using tool clips instead).

I trialled one other event at Kingswood on September 9, 2014. This was an outdoor event, and part of Western Sydney University’s Diversity Week. I used a similar number of drums to the Playhouse event (above). They were hung under two small marquees. The event had very limited success (and hence the absence of useful documentation), due mainly to competition from recorded music emanating from a large PA system, including performances on a nearby stage for most of the day.

Mount Tomah installation

Preparation

Prior to my deciding on the Blue Mountains Botanical Gardens, Mount Tomah as the location for *Public Drum Project's* first full showing, I sent out an installation proposal to a variety of venues in 2014 and 2015.⁴³⁴

Some of the venues approached are listed below:

- *Carriageworks
- *Eveleigh Locomotive Workshops
- *Blue Mountains Cultural Centre
- *Penrith Regional Gallery and The Lewers Bequest
- *2014, 2015, 2016 Blue Mountains Winter Magic Festival
- *Woodford Academy
- *Western Sydney University
- *Campbelltown Arts Centre.

To hire an ideal space at Eveleigh Locomotive Workshops (see Figure 16) I was quoted around \$3000 *per day*. The space covered an area of approximately 100 m².



Figure 16: Photograph from site visit to Eveleigh Locomotive workshop, June 2014

⁴³⁴ See Appendix 5 of this thesis for the complete proposal.

The proposals I sent out were largely unsuccessful. The galleries and other public venues I approached were disinclined to show the installation work. I began to consider using a more unconventional space, perhaps a natural bush setting in my local area of the Blue Mountains. The challenge would be to find a space in nature that people would be prepared to visit. Using a space already frequented by people could prove complicated because of ownership issues and the need to acquire permission. After reading Kaprow,⁴³⁵ I realised that locating the drum installation “in nature” could be a workable option. I considered the Sydney Botanic Gardens, but I knew the cost would be exorbitant and compliance issues severe. The Brunet Pavilion at the Mount Tomah gardens appeared to be a viable alternative. I made an exploratory visit to assess its suitability, and it seemed perfect. There were sturdy wooden pergolas to hang the drums from, adjacent to an undercover pavilion with exposed beams. There would be a reasonable number of people passing through, particularly on a Saturday (plus those whom I would invite myself via a Facebook event page)⁴³⁶ and the cost of hiring was reasonable, which made it a possibility. At the end of September, I managed to secure the Brunet Pavilion (for \$250), for Saturday, 12 December from 9.30 am–5.30 pm (garden opening hours). I also booked the Jungle Lodge (onsite accommodation) for the Friday and Saturday night, which enabled after hours pedestrian access (approx. \$700). The cost was, in total, around \$1000 for a one-day hanging.

⁴³⁵ Kaprow, Allan, and Jeff Kelley. *Essays on the Blurring of Art and Life*. (Berkeley: University of California Press, 1993).

⁴³⁶ Mount Tomah *Public Drum Project* installation, Facebook event page link - <https://www.facebook.com/events/977889275608728/>
North Katoomba installation (*Public Drum Project* revisited) - https://www.facebook.com/events/555698414602321/?acontext=%7B%22action_history%22%3A%22null%22%7D

Although my ideal scenario was to hang the installation for at least two weeks, it made sense to take matters into my own hands, working independently, to organise my own venue and event, outside of the gallery and concert venue system. Although this limited the number of participants—in that Mount Tomah is quite a distance from the larger population of Sydney—it allowed the event to proceed and the installation to be hung. It also allowed documentation of the event in the form of photos, video recordings, and audio recordings. All of this documentation could be used for: presenting and explaining the project for final examination as part of my PhD, acquiring more venues (I had a minimum goal of at least one more showing of the installation), and the creative reworking of the audio recordings collected during the event, in the form of a collaborative CD.⁴³⁷

⁴³⁷ For a more in-depth description of practical methods employed in relation to the production of the installation event, see Appendix 6 of this thesis.

Photographs



Figure 17: Drums set up under the pergola before the event, Mount Tomah, December 2015



Figure 18: View of the drums set up along the pergola as the event commenced, Mount Tomah, December 2015



Figure 19: Final tuning in the pavilion before the event, Mount Tomah, December 2015



Figure 20: Participant engaging with the installation under the pergola, Mount Tomah, December 2015



Figure 21: Participants under the pergola, Mount Tomah, December 2015



Figure 22: Participants in the pavilion, Mount Tomah, December 2015

Drum decoupage “scores”—examples ⁴³⁸

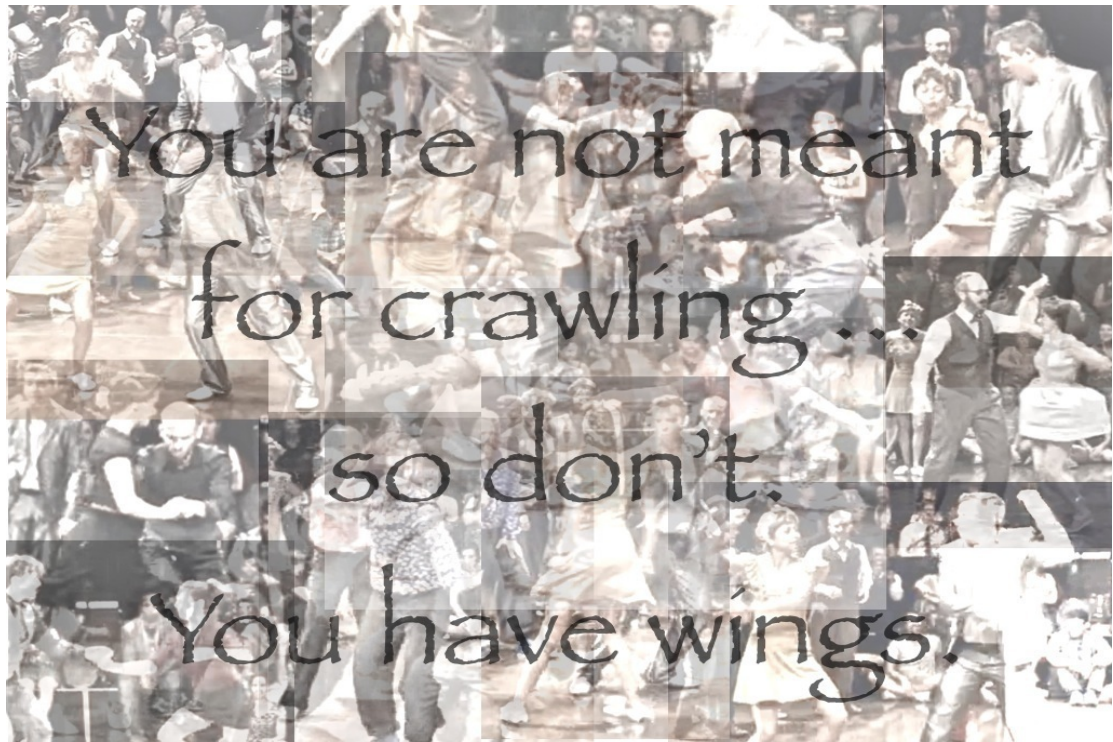


Figure 23: Drum decoupage, Title: *You are not meant for crawling*

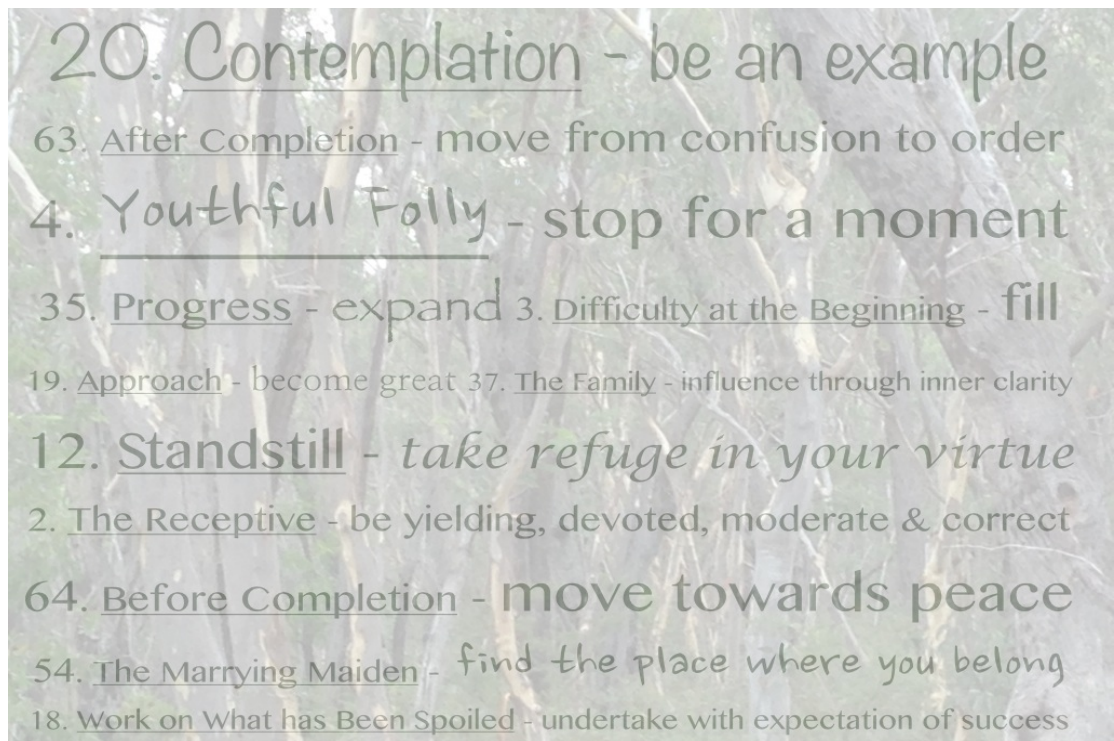


Figure 24: Drum decoupage, Title: *Contemplation*

⁴³⁸ For more examples of drum decoupage see Appendix 7 of this thesis.

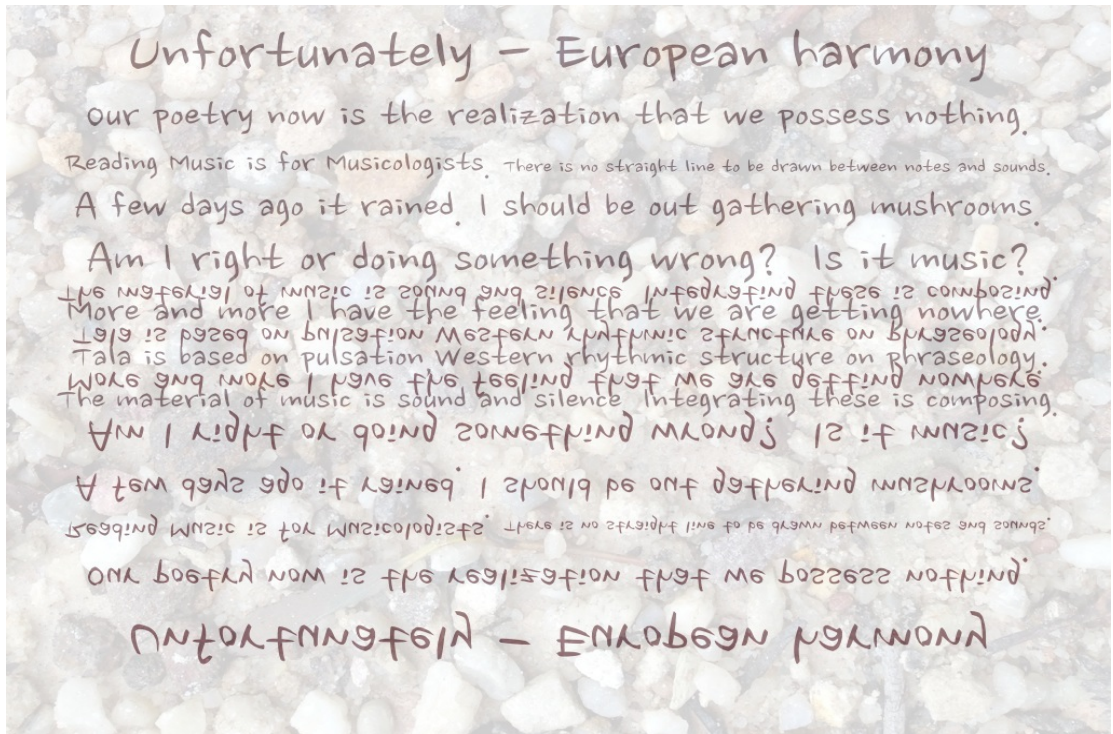


Figure 25: Drum decoupage, Title: *Unfortunately – European harmony*

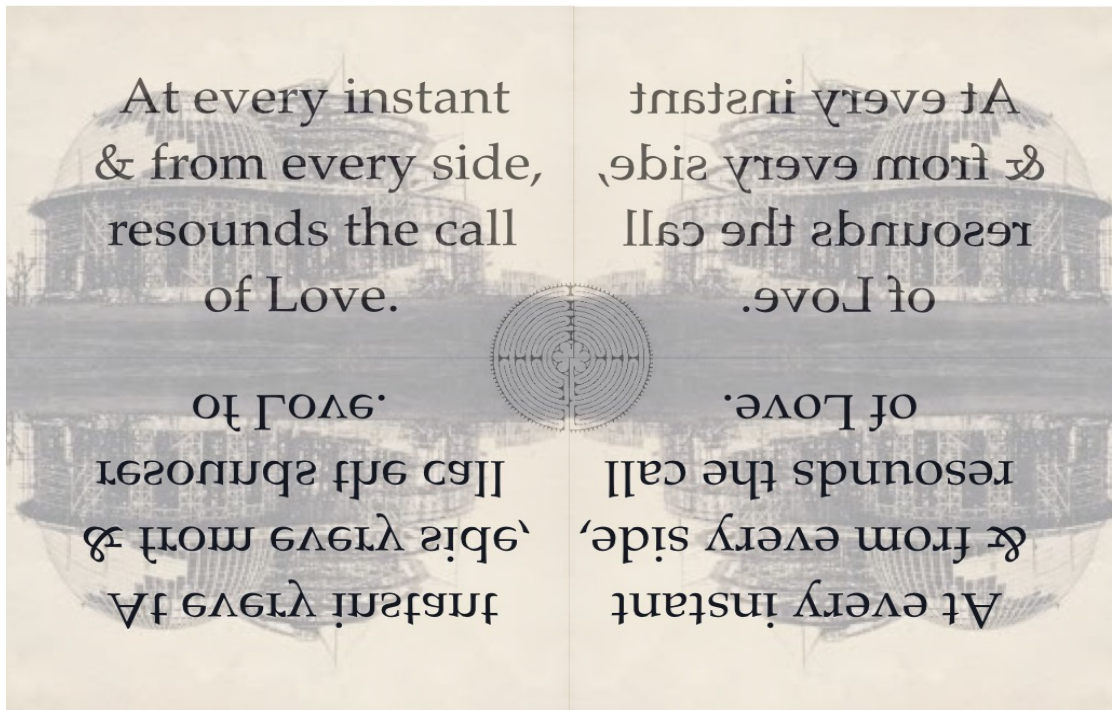


Figure 26: Drum decoupage, Title: *At every instant*

Mount Tomah signage ⁴³⁹

PUBLIC DRUM PROJECT

This installation is composed of reconstructed drums, with mallets attached. The drums are made from salvaged and recycled drum kit pieces. The drum shells have been stripped back and transformed, with a decoupage of textual matter, that functions as a type of informal score. The vibrating heads are constructed from feral goatskins.

You are cordially invited,

wholeheartedly permitted,

& enthusiastically encouraged

TO PARTICIPATE

in this sound installation

in whatever way you choose.

Sharon Williams

Figure 27: Mount Tomah installation signage, December 2015

⁴³⁹ For more research project information signage see Appendix 8 of this thesis.

Reflections

Journal (excerpts)—post-event

The discussion that follows has been roughly edited and collocated to facilitate comprehension.

1. Organisational/social/roles/participant behaviour

* Do not rely again on friends, or family, to help with the staging and curating of the event. It seems preferable (for many reasons) to use paid (and skilled) workers for transportation and rigging. For this, funds are needed, and possibly a brief induction/training process for those employed. It is difficult to stage an installation of this size without proper funding and logistical support. It was a strain, not only on my own physical and mental health, but also on that of my voluntary helpers. To make the extensive drum preparation and “bumping in” process worthwhile, the installation should, ideally, hang for as long as possible.

* People tended to move through the installation carrying the same mallets (often two—one for each hand) that they initially collected. It may be necessary for the curator/ facilitator to collect stray mallets and place them back in the drum tool clips from time to time, and also to keep an eye on things and offer help (and discussion) if required. If one is curating, it is important to not be *obviously* observing; one can be participating, writing, chatting, tuning, and so on.

*There is quite a lot of intergenerational playing. Parents and children play together, as well as partners, friends, and so on. Strangers, of different ages and from different cultures, also play together.

*People are so playful within the installation and also enjoy moving while drumming.

2. Spatial/temporal relations/musical/sonic

* It would be worthwhile trialling the installation in a higher profile space that would attract a larger number of participants.

*Because of the spatial separation, participants are sometimes creating rhythms of their own without hearing what others are playing. What one hears depends on where one is positioned. However, if one is listening from a distance one can hear the intermingling of all the rhythms together. People were creating music together without realising it. There are connections here with Cage and Cunningham's method of working, where multiplicities of events are allowed to be "together in the same place, and the same time, [while leaving] space around each art". There were random juxtapositions of events, which produced interesting "accidents". This was much more interesting (musically, structurally, texturally) than anything I could have created alone. It was complex, surprising, and outside the norms of any particular musical genre.

* Some people like to spin and swing the drums. It is an interesting way of using spatial timing—to strike the drum every time it swings toward you.

3. Design/practical considerations

*There should be at least a few *spare drums*, to use in case a drum is accidentally damaged, or a drum skin becomes flaccid, beyond immediate repair. Serious tuning is also impossible once the drums are hanging.

*It may be necessary to invest in more robust metal drum lugs, which seem to be the "weakest link" on most of the drums.

*Make extra mallets, and leave them together in a visible and easily accessible place (perhaps a large basket in the centre of the installation). Continue to attach mallets to the drums via tool clips, but accept that they may not always be re-attached when a person finishes playing.

*One participant remarked that they had never played the drums while moving before. This is why the prototyping of designs is crucial. Things happen that one cannot imagine prior to the event. The installation needed to be workshopped and experienced, to reveal its full potential.

*Damage/essential repairs consisted of several broken tool clips, a mallet whose padded end had come loose, several flaccid skins, one cracked/torn skin (possibly from the car trip), and some minor rain/dew damage from the drums being left in the pavilion overnight. Interestingly, no drum skins were broken or damaged by the participants. The decision to use softheaded mallets was most appropriate as some of the children (and adults) hit the drums vigorously with considerable force.

*It would be useful to trial the addition of a “bell stand” or metal percussion section—and/or hanging cymbals (muted—via rubber around the edges) with attached sticks (thin dowel).

*The loose rings on the unskinned bottom drumheads (of some drums) create a “buzz” sound. This can be utilised to create additional timbral interest if desired, or alternatively can be easily silenced.

* The drums should not only sound “good” (diversely and uniquely) but also offer aesthetic visual interest and variety.

4. Future

- * Documenting each installation “outing” via audio and video recording is essential.
- * Utilise participants’ personal documentation/data collection by offering a website or Facebook page where people can upload their photographs or video footage. Find a way for people who have enjoyed the installation to share their experiences afterwards and connect with others.
- * The installation may be enhanced in some circumstances by drum sales, drum making workshops, and artist talks.
- * The installation could be hired out for conferences, team building and other large events, primarily via the use of a designated website.

Outcomes

The practical creative task for this study was to research what types of musical compositions would best facilitate participatory, collaborative music making. The main aim of the Mount Tomah installation was not to *say* anything, or *show* anything, or convey a particular meaning. Instead, as a *participatory* event, the installation offered an *experience*—with its primary feature being the opportunity to explore musical collaboration. To facilitate this experience it was necessary to create an environment conducive to group music making—one where individuals were enabled to play and experiment. To the extent that it is possible to gauge the success of such a dynamic and complex creative event, the efficacy of the evolving design was demonstrated largely by the enthusiastic involvement of the participating individuals. This joyful collective participation was witnessed by the researcher throughout the installation and can be observed in the accompanying video footage and photographs. It can also be *heard* in the collaborative re-working of the audio

recordings. This collaborative audio CD also does not aim to *say* anything. While the composers worked with the audio data recorded during the installation event in their own unique ways, what the listener apprehends is open to individual interpretation. My aim has been to encourage the varied assemblages of composers/performers/listeners (and readers) involved in this project, to freely form their own creative rhizomatic connections with its multiplicity of practical elements. Rather than passively apprehending a “communication”, those involved were enabled to participate, to collaborate, and to learn through their own experiences.

Creative data analysis

The primary practical compositional method employed for this study is the creative task of sound installation design. The second compositional method utilises the diverse contributions of eight composers, creatively reworking the recorded sound material—generated during the *Public Drum Project* installation at Mount Tomah—to produce a collaborative audio CD. This functions as a method of documenting, and also as a method of analysing, the audio data recorded during the event. The content generated by participants in these installation recordings includes not only drumming, but also a variety of other sounds—some generated by the participants, and some part of the sonic milieu of the surrounding environment. A fresh rendering of this sound *performance* could be regarded as a valid strategy for handling audio data. This approach provides opportunities to explore a variety of methods of sorting and organising the recorded sound. The compositional process is one that commonly seeks to find a way to organise sonic material through the creation of themes and patterns. Conventional qualitative methods of handling research data often take a similar approach.⁴⁴⁰

I came to the realisation, fairly late in this project, that the creative analysis of the audio data would benefit from a collaborative approach.⁴⁴¹ For this reason, I drew on the creative input of other composers to explore what the “group mind” could come up with when presented with such a challenge. My request to the participating

⁴⁴⁰ Patricia Leavy, *Method Meets Art: Arts-based Research Practice*. Second ed. (Kindle edition, 2015) 130.

⁴⁴¹ I also came to the relatively late decision to provide two short DVDs, as additional explanatory documentation in relation to the project (primarily for examination purposes). One was prepared by a professional videographer and the other involved excerpts collected and put together (partly using chance procedures) by myself.

composers was that they work with the audio data in whatever way they chose. This directive was left deliberately open to different interpretations. For example, it seemed perfectly acceptable for a composer to simply draw inspiration from the audio, without having to use the actual sound files in their final piece—if this was their preferred approach. In any case, the eight composers had varying levels of interaction with, and knowledge of, the project and its underlying philosophy. Three of the composers (Ian Stevenson, Michael Sanders, and myself) actually attended the Mount Tomah event, while the others were initially approached through a variety of online channels afterwards. The composers also had varying levels of interaction with, and knowledge of, each other. Four of the composers I have never met in person myself, as most of the relevant communication, and the exchange of audio files, took place online. There was a diversity of approaches towards the project, my position of perceived authority, and the concomitant limitations and freedoms offered. The primary limitation was to restrict the length of the final composition (an audio file was requested) to approximately six minutes. This overall approach to data analysis may appear to be a radically disconnected one, in the sense that the collaborators are primarily working alone and have limited real-time interaction with each other. However, the personal sovereignty this encourages, enables a wide variety of interpretations and approaches. This meant I needed to let go of any expectations or hopes that the composers fall in line with my own participatory and collaborative approach to composition. My expectation instead was that it would be useful to observe what emerged from this style of analysis.

As Vincs points out "while it may be impossible to entirely divorce the notion of analysis from the notion of interpretation, once analysis is understood as a process of

desire, it can never again be viewed purely as a representation or exposition of something else”.⁴⁴² It is worth reiterating this idea that analysis (viewed as creative action) does not have to “represent” something else but can instead be a dynamic creative work in its own right. The creative analysis of the audio data for this project could be regarded as a rhizomatic style of analysis, in that it interacts “laterally” with—that is, forms a non-hierarchical relationship with—the sound installation itself, without attempting to simplistically interpret or explain it. The idea of a complex and fluid relationship between the two events is in accord with Deleuze and Guattari’s suggestion that the rhizomatic work of art does not *represent* the world but, instead, “forms a rhizome *with* the world”.⁴⁴³ This approach functions as a way of forming connections between the praxis element of the project and the “event” of analysis, without insisting that one should be subservient to the other. Drawing on eight composers (rather than just myself) increases the number of connections and relationships that will form within the collaborative process—as Deleuze and Guattari point out, “the laws of combination ... increase in number as the multiplicity grows”.⁴⁴⁴ It could be that the larger the number of composers, the greater the potential for bringing new knowledge to light.

⁴⁴² Vincs, “Rhizome/Myzone”, 108.

⁴⁴³ Deleuze and Guattari, *Thousand Plateaus*, 11.

⁴⁴⁴ *Ibid.*, 8.

Journal excerpts

I have included below two brief journal excerpts that relate to the development of my ideas in relation to the audio CD.

17 September 2013

I've just realised that the data collection can be primarily auditory! The creative re-working of the recorded audio data (using ProTools software) can function as a type of "analysis". I will produce an audio CD (drawing on "re-invented" data from the group "performance") ... rather than trying to analyse things visually (through video recordings). I will record the event using a Zoom H4n field recorder and then apply (amongst other methods) random selection procedures to the resultant audio data. This collection of audio data in the form of a sound recording will enable a creative analysis in the form of an audio composition. This is a way of analysing and representing the data that may be in many ways deeper (draw on Cage here and his philosophy behind the use of chance procedures) than many of the more conventional academic approaches to data analysis.

December 2016

I have now decided to make a collaborative audio CD. The new plan is to have approx. 10 tracks in total, each created by a different composer (including myself). This

activity will function as a sort of collaborative creative data analysis, in relation to the installations. Each track will be approx. 6 minutes in length—which will result in an hour of music altogether. I will provide the composers with audio data recorded during the Mt Tomah installation. The composers can work with this material in whatever way they choose ... and will need to write a brief explanatory note in relation to their work. I plan to start work on this aspect of the project in early February 2017, and would like it to be completed by the end of May. This allows a month to prepare everything for final submission.

Audio CD—track information

The results of the collaborative creative reworking of the audio data recorded during the Mount Tomah installation are outlined below. In this section, each of the composers has provided a title and a brief explanatory note in relation to their audio contribution. The aim is to offer insight into the creative process of each participant. The sound files themselves have been compiled into an audio CD that forms part of the accompanying material for the overall submission.

Track 1

Title: *Drops*

Composer: Hanli S. Botha

The piece was created through aural analysis and deep listening, a week in advance before the work was recorded. I focussed on the sounds and silences I heard around me at the time and considered sound entities, which would flow with the shapes created by the drumming sequences. The clarinet and string ensemble sounds were chosen to fall as drops into silence. A graph was drawn to indicate in which direction the sound would move, either in an opposite or similar direction. Chromatics, thirds and fourths were used to create a combination of dissonant and tonal sound entities. Placement of the clarinet and strings were swapped in order to place emphasis on various colours and shapes created in the piece. Creating the work is based on my own study and exploration of sound and silence and how aural analysis provides deeper insight into texture, timbre and depth in sound. I allowed the rhythm of my body to choose where the sounds are placed. It means that deviation from the graphic score is audible and creates a sense of unpredictability and curiosity.

Hanli S. Botha.

Track 2

Title: *Sepharad*

Composers: Janice Carter Slater and Kirk Kadish

It was a real delight to be involved with Sharon's PhD project! The drumming that she recorded was infectiously exuberant, filled with a primal, communal joy and an engaging youthful innocence. I used a simple one-band equaliser on the drum track to add some brightness and presence to it and then ran the track thru a digital reverb to simulate being in a larger room. Our mutual friend, Janice Slater, contributed two tracks, one a digitally treated vocal track, the other a similarly treated plucked string track, both of which share the primal quality of Sharon's track. I added an electronic drone track, which modulates over time and hopefully enhances the mood of the piece. Beyond that, I put the entire mix through a stereo widening effect, which enhances the sense of space experienced by the listener.

Kirk Kadish, on behalf of Janice Slater and Arterial Flow.

Track 3

Title: *The Ability Drum Project*

Composer: Paul McEvoy

Inspired by the Public Drum Project and in the spirit of making drumming part of the landscape I have created the Ability Drum Project. The foundation of the project is the belief that music and drumming should be accessible to everyone, in part to foster a free exchange of fun, thoughts and emotions. With a background in music therapy and a passion for grassroots music making I took my drums to a day program for people with a disability but also they are people with ability and passions of their own. There we shared in making music and this piece is the result. We used a "no

mistakes” improvisational drum circle method as taught and shared by Arthur Hull in his Village Drum Circles facilitation course, which I have attended. By getting “into groove” naturally we were then able to break for solos giving each person a chance to express their own spirit and importantly for the group to appreciate each member individually and for what we make up together.

Paul McEvoy.

Track 4

Title: *Dream Tide 2*

Composer: Michael Sanders

Sometimes I approach making art and music quite formally. My other approach is to make impulsive marks and then try to make sense of these by extension and refinement. That is how I have approached this piece; with playful spirit and no preconceived end.

I decided to take the sound files that Sharon had given me and use them as my primary material. I have manipulated portions of the files in Logic. I have sped them up and slowed them down, I have added effects. These treated and transformed files constitute the majority of the sounds heard in the piece. I have added vocals and whistling, and treated them. There are also some fragments of synthesiser sound. As I mixed the piece I found myself making waves of sound—I don’t know why, but it seemed right at the time.

Michael Sanders

Track 5**Title:** *Bell Weaving***Composer:** Julia Seeholzer

After signing on to this project, I kept a little piece of my mind sectioned off for an almost-subconscious and constant brainstorming session. I knew I wanted to do a sound collage, but had no further direction. In March of this year, I visited Berlin for a music conference, and spent much of my time walking between lodgings and the conference itself. While I was walking home one evening, church bells began to ring out (as they often do). I was struck by how beautifully the seemingly-endless tolling accompanied an equally-endless web of bird calls. I stopped to record this duet, thinking it would end after a minute or so. The bells and birds, however, saw fit to continue for over five minutes, much to my delight. Realizing that I had a substantial base with which to work, I immediately thought that weaving this recording with modified audio taken from Sharon's project would bring a striking collage together.

Julia Seeholzer

Track 6**Title:** *“Cut The Butter” - MC Kleenex***Composer:** Corin Shearston

I'm a 20-year-old journalist, drummer and radio DJ residing in the jungle lands of North Katoomba. Being a hip-hop addict and an avant-garde music fanatic led to the frightening creation of my rap alias MC Kleenex, while attending Katoomba High School in 2014. Flamboyant, unapologetic, and often decked out in Mambo boxers over trackies, a homemade DEVO t-shirt and a bike helmet, MC Kleenex's aim is to subvert rap within an inch of its life; an attempt to “weird-up” our local scene. What

is now known as “Cut The Butter” morphed through two different genres before becoming experimental hip-hop: “crunk”, a heavy, bass-centric club style, and “house” - electronic dance music. Recycling my previous slower loops from these styles, I pieced a structure together, over which I spat me rhymes. I slotted in the most rhythmic drum samples from Sharon's installation to complement the main groove, along with some warped background sounds from the installation. There's still a heavy emphasis on bass, but now there's a heady use of effects too. My voice in the last bit was recorded in the bush at the back of my house. All sounds done DIY on GarageBand on a clapped-out MacBook Air that I spilt tea in the keyboard of. Hope u dig it, or at least find it amusing.

Corin Shearston

Track 7

Title: *100 Drums*

Composer: Ian Stevenson

This piece explores the decomposition of the individual drummer as a participant in a larger drumming event. The creative process started by abstracting the perceptual capacities of an individual listener through the application of a generalised model of the perceptual features of the sound environment. This model was applied to the documentary audio recordings of the Public Drum Project, supplied by Sharon Williams, using the concatenative synthesis technique. This process disrupts the spatial and temporal organisation of the events documented in the recording and similarly disorganises the causal agency of the individual participants, creating a new sense of “ensemble”. This dissolution of the individual into the ensemble seemed to emerge organically from my subjective analysis of the recordings.

Ian Stevenson, May 2017

Track 8**Title:** *Random Drums (recomposed)***Composer:** Sharon Williams

For this track, I decided to rework a piece I created around 30 years previously using a TASCAM reel-to-reel 8 track recorder, on ½-inch tape. This piece was recorded using analogue tape-based multi-tracking. It has been converted from cassette tape to a digital audio file and in the process slightly recomposed. This seemed to me the perfect choice for my own track as in a sense the discoveries I made in the process of composing the original *Random Drums* “sowed the seeds” that have, over time, blossomed into the Mount Tomah installation. The source for the drum sounds on the track was an Alesis HR-16 drum machine. The placement of each sound was decided using chance procedures and each sound was then played manually (one track at a time) by myself onto the recording tape. The piece includes intermittent vocals and also ambient sounds (traffic and so on) from my surrounding environment—recorded in Redfern, Sydney in the early 80s. As the 8 tracks filled up it was necessary to “bounce” tracks to create space. I also used a delay unit to create the fast fading repetitions that can be heard on the track—but I cannot remember which device I used, as it was so long ago. I do remember at one point I had the whole piece mapped out on a very large piece of grid-paper—which is no longer in my possession.

Sharon Williams

Reflections on the creative data analysis

The benefits of collaboration have been discussed throughout this thesis. In terms of the collaborative audio data analysis, the wide variety of compositional outcomes that emerged from this style of analysis highlights again the benefits of embracing the rich complexity, not only of diverse ways of listening, but also of very different ways of approaching creative work. The contributors could be regarded as a rhizomatic *pack* of composers (in the Deleuzian sense), where “each member is alone even in the company of others ... each takes care of [themselves] at the same time as participating in the band”.⁴⁴⁵ The members were self-governing within the group—sometimes on the periphery, sometimes in the centre, but never under the overcoding control of a leader—most having never met either myself or each other in person. An authoritarian insistence that the composers follow closely the participatory collaborative methods utilised in my own installation work, or an attempt to evaluate and analyse the final compositions according to my own subjective qualitative judgement was never my intention. The CD created through the collaborative creative process (it could be termed a *musical* analysis) was not designed to function primarily as a *representation* of the installation event or my own compositional philosophy. Instead, it could be described as emerging from *rhizomatic interactions* amongst a variety of elements within the overall project. As Deleuze and Guattari point out “mimicry is a very bad concept, since it relies on binary logic to describe phenomena of an entirely different nature”.⁴⁴⁶ This may have been an issue, for example, if I had attempted to represent the audio data solely through a written analysis. The collaborative creative analysis is in a sense closer to a

⁴⁴⁵ Deleuze and Guattari, *Thousand Plateaus*, 33.

⁴⁴⁶ *Ibid.*, 11.

mapping than a tracing, fostering “connections between fields”.⁴⁴⁷ It is an analysis in which the reader/listener is not confronted with a literary attempt to represent the installation and the recorded data, but is instead enabled to form a multiplicity of rhizomatic connections with the various aspects of the overall project, primarily through their own unique listening processes. It is an analysis that exists rhizomatically (as Deleuze and Guattari suggest) “between things”,⁴⁴⁸ and it is potentially a way of establishing further connections and egalitarian relationships.

⁴⁴⁷ Deleuze and Guattari, *Thousand Plateaus*, 12.

⁴⁴⁸ *Ibid.*, 25.

Future works

Public Drum Project revisited

Public Drum Project was again prototyped in June 2016, in North Katoomba during the weekend of the Blue Mountains Winter Magic Festival, with some minor adjustments. Having failed to gain official inclusion in the festival, I decided to create my own event on the other side of town. A local businessman offered the use of his (approximately 200 m²) warehouse for the weekend. I joined forces with another woman (a local artist/musician) to make this happen. Apart from the drum installation we had several people exhibiting their artworks, food and drink available, a cosy slow combustion fire, lounges and other comfortable seating, projections of 16mm movies and photographs, and a blackboard with chalk available for writing and drawing. We held this event over the Saturday and Sunday of the weekend, from 10 am to 5 pm. On the Saturday, the event was very sparsely attended, but on the Sunday, in the afternoon, we had around thirty people drumming together within the installation. The sounds emanating from the installation were incredible at times, as the participants fell into (and out of) rhythmical entrainment. I had been a little concerned about possible issues with volume within an indoor venue, but this did not seem to be a problem for participants. Setting up the installation indoors (and having access to the space for a whole week) made the process of bumping in and out much easier and less stressful than the Mount Tomah event. I have included pictures (see Figures 28 & 29) to give some idea of what the event looked like.



Figure 28: Participants engaging with the North Katoomba installation, June 2016



Figure 29: Participants within the North Katoomba installation, June 2016

Prepared piano project

Drawing on the design methods, and the principles of participation and collaboration, employed for the *Public Drum Project* installation, my plan is that my next project will be a “prepared” and de-tuned piano installation. This will involve (at least) ten upright pianos in a public space. Extensive experimentation and research will be needed. Detuning, and other preparations, could prevent participants from falling back into old skills and habits, and limiting beliefs in relation to their musical ability. Novices will be encouraged to participate. The pianos themselves will be partially dismantled—with the soundboard exposed to create visual interest for the participants. I need to do more research into Cage’s piano preparations—outlined in his score for *Sonatas and Interludes*.⁴⁴⁹ I plan to experiment with Cage’s methods and devices on an upright piano, and then extend these explorations, using a variety of objects, to create something new. I have begun experimenting with various objects within an old upright piano (see Figure 30).



Figure 30: Piano soundboard with preparations, 2017

⁴⁴⁹ Composed between 1946 and 1948. Premiered in Black Mountain, N.C., April 6, 1948. Published by Peters Edition EP 6755. For more information see http://johncage.org/pp/John-Cage-Work-Detail.cfm?work_ID=188

Reflections on praxis

The separation of praxis and theory, a strategy used extensively throughout this thesis, is designed to function as a helpful communication tool. In actuality however, this division can only ever be vaguely defined, as living processes transform over time, making the content of each category difficult to pin down. The separation can appear at times to be an arbitrary construction and—like any practice of categorisation—should not be taken too seriously.

The outcomes in relation to the more practical aspects of this project encompass much more than just written reflections and analysis in relation to my own experiences and observations. Although this reflection and analysis are *part* of the results, the creative work is, in itself, a demonstration or presentation of the results. It is crucial to this project to understand that, in relation to praxis, the results are manifested primarily within the work itself. These praxis results include the Mount Tomah drum installation (and its precursors), and the collaborative creative analysis of audio data recorded during that event. The collaborative analysis was not planned at the outset of the project, and evolved out of the ongoing theoretical explorations and practical prototyping. As the researcher, I am also, in an autoethnographic sense, a “result”, as my own evolution over the course of the project has impacted and formed a multiplicity of connections with both praxis and theory. This evolution could also be viewed as an important outcome. The ideas for future works presented above indicate that the results of the research are in fact an ongoing process rather than a fixed and finalised product.

Recapitulation

Main themes in relation to outcomes

The focus of this research project was the exploration of designs for musical composition that enable participation and collaboration. The importance of *participation* and *collaboration* to contemporary models of composition has been examined from a variety of perspectives. My aim in the first part of this section is to briefly highlight connections between the main themes discussed within this thesis and the research outcomes.

The “studies in participation and collaboration” section focused on an exploration of collaborative and participatory ways of working, in connection with the ideas of Cage, Deleuze and Guattari and Fuller. This exploration raised the theme of narcissism, and in the process uncovered unexpected relationships between this topic and other elements of the research project. In a sense this theme initially surfaced within the autoethnographic aspects of the study, manifesting as the result of a harrowing process of personal evolution over the course of the project. However, once the theme emerged, its multifarious significance to the overall study was undeniable, particularly in terms of the potentially deleterious impact of narcissistic influences on creative collaboration.

This section also discussed rhythm, and considered its connections with the ideas of Fuller, Cage, and Deleuze and Guattari. The phenomenon of “entrainment” and the benefits of rhythm-focused group activities were also explored. Based on my research (including personal observation and the process of collaborative creative audio data analysis) it does appear that rhythm—both non-pulsed cohabitation in

time and entrained pulsating rhythm—can be a useful tool for enabling participation in collaborative music making, particularly for inexperienced musician-composers.

There are connections between the predominantly experimental approach to the research methodology employed in this project, and Cage’s use of the word “experimental” as descriptive of “an act the outcome of which is unknown”.⁴⁵⁰ An experimental, flexible methodological approach has allowed for the emergence of new methods and unexpected outcomes—such as the decision to create a collaborative analysis of the audio data in the later stages of the project, and the emergence of the theme of narcissism. Other related outcomes throughout the course of the project include the constantly evolving sound installation design, and fresh conceptual insights in relation to collaborative musical composition.

The themes of participation and collaboration were further examined in the “exploring praxis” section. The aim was to examine styles of composition that, in varying degrees, embraced these ways of working. This necessitated a theoretical study of participatory experimental music and of more “mainstream” experimental music, and a consideration of the modes of thought that characterise Western art music. From this emerged a contrast between arboreal and rhizomatic modes of composition, as characterised, respectively, by the top-down hierarchical models common in Western art music and the more open inclusive forms of participatory experimental works.

⁴⁵⁰ John Cage. *Silence*, 13.

This component of the thesis also included a consideration of the role of the drum kit in realising collaborative participatory composition. The history of the drum kit, as well as the extension and re-thinking of its purpose, was explored. The more practical aspects of this project, involving the material reconstruction of the individual drums that customarily make up the kit, and their spatial dispersion within the sound installation, were outlined. Based on my personal observations, the drum kit preparations and spatial deconstruction employed within the installation may have contributed to the ability of certain individuals to participate and collaborate. Furthermore, the focus on simple one-handed percussion playing appeared to simplify and improve accessibility to the systems of musical composition and performance for those involved.

The “Public Drum Project” section of the thesis focused on the more practical elements of the study, exploring the application of the concepts of participation and collaboration to musical composition through the design of compositional prototypes. This included a discussion of the compositional work carried out over the course of this project and also a consideration of my related experiences and research prior to its official commencement. The primary praxis elements of the project were the prototyping of sound installation designs and the subsequent collaborative creative analysis of audio data recorded during the Mount Tomah event.

This section also attempted to explain *what happened*, and explored the variety of *results* generated by the overall project. The results themselves have, at times, been presented in a somewhat unconventional style. The use of a creative and collaborative method of analysis, in terms of the audio data, could be viewed as a

relatively experimental approach to data analysis. However, drawing on the diverse analytical techniques and compositional viewpoints offered by those involved has provided the advantage of a wide variety of creative outcomes. If I had proceeded to work through this process alone—in line with my initial plan—the process of audio data analysis may have lacked the richness and complexity offered by multiple viewpoints. I could never have imagined this outcome at the time of the project's commencement. It is important to also note that the outcomes of the praxis aspect of the project could be viewed as having manifested within the final practical work itself, and also within its process of evolution over the course of the project.

This research project began *within the researcher* long before its official inception in 2012. My role as a researcher has been a transdisciplinary one, involving both theoretical/conceptual and creative/practice-based research. Over the course of the project, both the practical and the conceptual aspects of the study have not only influenced my inner landscape, but have also been impacted in an autoethnographic manner by my own personal evolution. The multifarious elements that make up the assemblage of the overall project are interpenetrative and mutually adaptive.

Working within the particular theory/practice nexus of this study has resulted in a variety of new rhizomatic assemblages that relate to participatory and collaborative musical composition. Outcomes may continue to manifest long after the conclusion of the study—many outside of the researcher's sphere of awareness—as a multiplicity of connections within the many ongoing praxis and theoretical aspects of the project continue to form. My hope is that the participants involved (including the “readers”) have formed their own creative assemblages as a result of their unique

connections with the research project—assemblages that will also continue to evolve over time.

Final reflections

The more conceptually oriented work within this study not only functioned as data gathering, but also offered opportunities to creatively analyse the data, and in the process uncover some unexpected outcomes. Although the formal writing up of one's work has long been considered an essential communicative aspect of many types of research, it is also worth considering the act of writing as an important creative, and productive, "sense-making" method in itself. The process of writing this thesis has revealed an assorted menagerie of ideas, connections and relationships that I was previously unaware of. Richards maintains that writing can be a useful tool for analysis in qualitative research. She points out that "as you write you see new possibilities, loopholes, contradictions, surprises. Writing uncovers such things, a major contribution for the researcher seeking to discover explanations".⁴⁵¹ A theme that has continued to surface within this overall study—emerging from the more conceptual/theoretical aspects and also from within my own experience—is the potentially deleterious impact of narcissistic practices on participation and collaboration. This is a theme that has become quite personal and painfully relevant, and for this reason my writing in these final reflections may present at times as primarily an expression of my own subjective reality. It seems important to the overall thesis to include this subjective writing regardless, as I believe it is potentially useful and relevant, data.

Deleuze and Guattari's two models—the rhizomatic and the arborescent—shed some light on the differences between situations that embody multiple lateral connections (where power is relatively evenly distributed) and events that rely predominantly on

⁴⁵¹ Richards, *Handling Qualitative Data*, 50.

a more hierarchical approach. The narcissistically inclined individual (readily aligned with the arborescent model) cannot gain traction in equitable environments. It is also my personal experience that many narcissists like to “monologue”, and prefer a compliant and attentive audience when doing so. This is comparable to the way some performance practices function within the field of Western art music, and indeed within many other arenas of music composition and performance. Here I refer to events that rely on relatively passive spectating and/or the material consumption of the “artist’s” work. In these scenarios the listener has no voice and is treated as inherently less valuable than the performer. It is important to note that a true *monologue* (from the Greek *monologos*, which means *speaking alone*) at no point incorporates a “taking turns” scenario where the listener eventually has a chance to speak and share their ideas. It is worth reiterating Schafer’s claim that “the association of noise and power has never really been broken in the human imagination”,⁴⁵² and also Attali’s suggestion that taking back control of noisemaking is a way of challenging power.⁴⁵³ He claims that “we are all condemned to silence—unless we create our own relation with the world”.⁴⁵⁴ It is also worth remembering that historically it has been, and still is, those in power who have permission to make noise.⁴⁵⁵ Many Western art music practices can be easily aligned with the monologue, and accordingly with the concept of narcissism. This musical arena often exhibits more characteristics of an arboreal model than a rhizomatic one. It has been

⁴⁵² Schafer, *Tuning of the World*, 76.

⁴⁵³ Attali, *Noise*, 132.

⁴⁵⁴ *Ibid.*, 132-134.

⁴⁵⁵ Schafer, *Tuning of the World*, 76.

claimed its very existence is due to the desire to create an “aesthetic hierarchy”⁴⁵⁶ for the economic benefit of a wealthy minority.

When musical composition enables collaborative participation, it aligns predominantly with the non-hierarchical rhizomatic model proposed by Deleuze and Guattari. Everyone involved in this more equitable style of multifarious connection is allowed to contribute in whatever way they choose; furthermore, the diversity of their unique contributions is considered valuable. To an extent, the belief that the intervention of a higher authority is necessary for people to be able to work productively together indicates a loss of confidence in the ability of individuals to self-govern. Moreover, it has been my own personal and professional experience that those in positions of authority (ironically), sometimes seem to have issues with basic self-governance, and their motives are sometimes less than altruistic. Moreover, they sometimes lack the necessary functional skills to enable them to carry out their duties successfully. Within a more hierarchical arborescent model, the multiplicity of connections formed by more rhizomatic styles of relating are eroded, and with them the benefits of group intelligence. Having people connecting and working harmoniously together does not serve the individual whose primary motivation is self-aggrandisement, as it undermines their authority.

My intention is not to demonise those who wish to engage with conventional composition and performance practices, as I am aware that it is possible to derive great pleasure and satisfaction within many forms of musical expression, including the Western art music tradition. However, musical arenas can be encumbered with

⁴⁵⁶ Von Glahn and Broyles. "Art music." *Grove Music Online*, 2016.

customs and conventions,⁴⁵⁷ which have an adverse effect on the ability of individuals to participate and collaborate musically with others. My own experiences of passive musical consumption (as a spectator) have frequently left me wondering whether there may be alternative ways of approaching composition and performance in contemporary times. Personally, I can find no justification for expecting a majority to sit back and remain silent while a minority holds sway, even if the minority happens to possess altruistic intent. If this practice were viewed within a social or political milieu (rather than a predominantly musical one) its dangers would perhaps be more obvious. Audiences usually pay to listen to others (performers/composers) express themselves; however, in many ways it makes more sense to pay those who are patiently and attentively listening. Again, it is my personal observation that at many musical events the people having the “best time” seem to be the performers.

My own solution has been the installation design that is prototyped throughout the course of this study, where everyone involved has a chance to participate and collaborate. The aim has been to design a sound installation that provides opportunities for participants to experiment freely without judgement from a higher authority. This necessitated the creation of an environment without the sort of special privileges, and opportunities to wield power, that are attractive to those who are more narcissistically inclined—curtailing their tendency to control and silence others. If the ability to responsibly self-govern is mislaid, learning to rely on one’s own good sense and one’s own accumulated data, rather than the second-hand views of others, is no easy task. To collaborate effectively we also need to be capable of embracing difference—of appreciating the diverse contributions of others and allowing space

⁴⁵⁷ See the “Western art music” section of this thesis, p. 74.

for all involved to “safely explore and learn about the world without having their efforts thwarted”.⁴⁵⁸ The behaviour of individuals, and groups, in the absence of the influence of narcissistic individuals or narcissistic practices, has been observed within this study to be fully “engaged”, and productively collaborative. In light of the outcomes of this study it seems worthwhile to continue exploring compositional designs that value and respect all human beings, equally esteem their creative contributions, and believe them to be capable of holistic participation in collaborative music making. Such compositional designs may have the potential to function as exemplars for participation and social collaboration in other fields of creative enquiry.

⁴⁵⁸ Fuller, "Time Present", 132.

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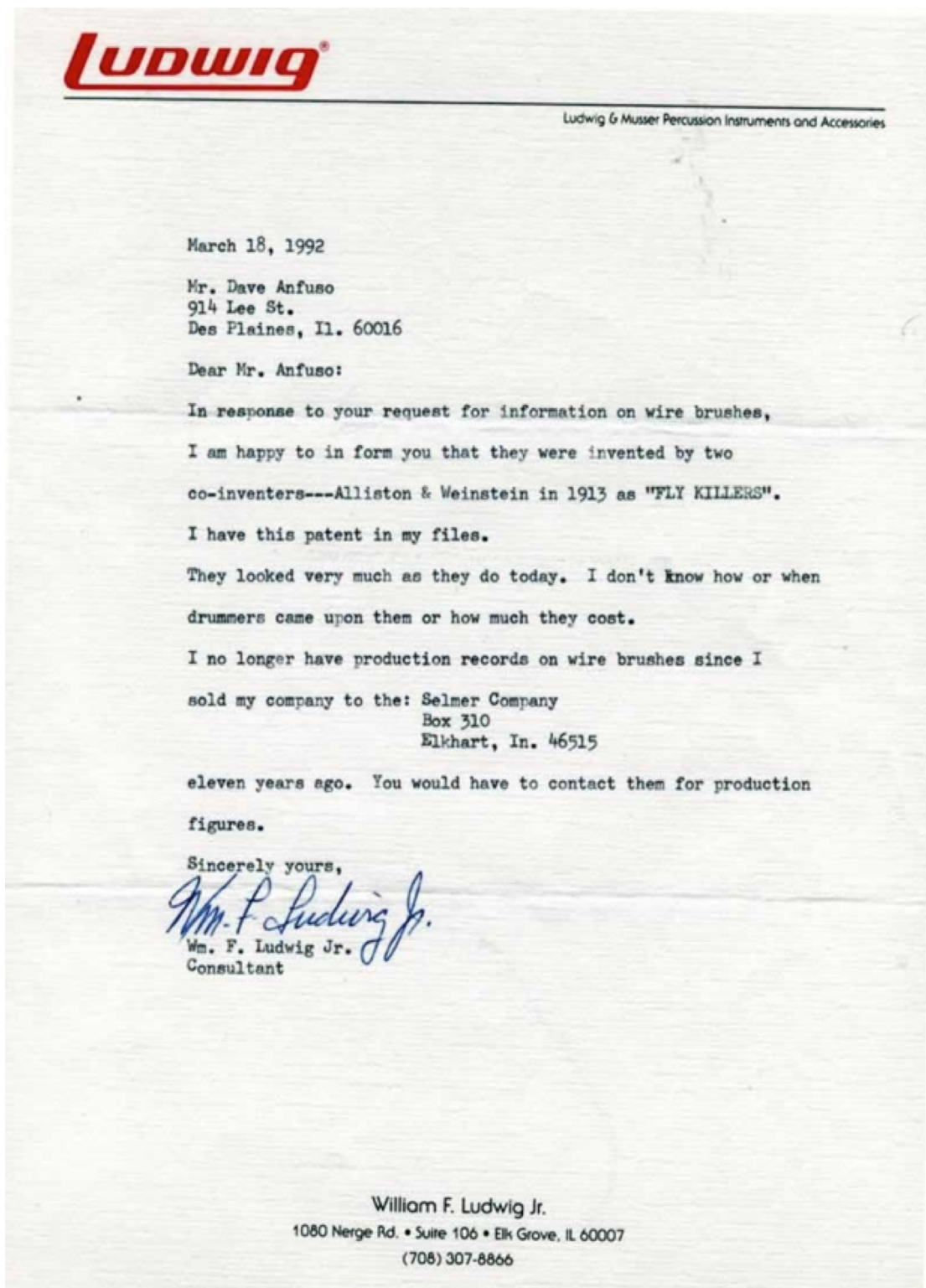
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Appendices

Appendix 1: Letter from W.F. Ludwig.....	228
Appendix 2: “Composition as Sustainable Collaborative Creative Practice”	229
Appendix 3: <i>Poll5</i> : tabled results, WSU Kingswood, May 2015	233
Appendix 4: Early performance plan, 2012.....	236
Appendix 5: <i>Public Drum Project</i> installation proposal.....	242
Appendix 6: In-depth description of the practical methods employed for the Mount Tomah event.....	249
Appendix 7: Drum decoupage examples	262
Appendix 8: Research project information signage.....	266
Appendix 9: Ideas for the future – journal excerpt.....	267

Appendix 1: Letter from W.F. Ludwig



Appendix 2: “Composition as Sustainable Collaborative Creative Practice”

This is the complete version of a paper presented at the Music Now conference, at WSU Kingswood, Sydney, Australia, in 2014. My contribution to this event consisted of this introductory explanation of my ideas, followed by a group activity as demonstration.

Preamble:

As I prepared this paper I thought about what the ‘norms’ might be, in terms of presenting a paper in a conference such as this. Because although they may be *unspoken* expectations, there are still ‘conventions’ at play here. I have my own set of internal guidelines, and I can imagine that most of you also have some expectations of what a presentation such as this should look or sound like, and it is for this reason that most presenters today in their allotted time will have followed a similar format to each other. The content has varied widely, but the format has remained the same. In my experience this is largely the ‘norm’ for events of this type. What appears to be absent is a questioning and exploration of (what I will call) ‘process’, and an implicit acceptance of the procedures, systems, and methods at play - the means by which our experiences are constructed. The danger of unquestioned acceptance of ‘normal’ process is that often these tacit protocols can then be used against our humanity, in ways that bolster already existing power structures; for example, through limiting our participation and creating hierarchies that cultivate feelings of disconnection and keep us separate from each other. I am not convinced that anything useful can come about through continuing to focus on (what I will call)

‘content variation’. Although content is infinitely variable and allows room for individual expression and creativity, it could be regarded as part of a hierarchical system that has become somewhat redundant.

In terms of musical composition my interest is focused on questioning ‘process’, in itself; questioning the format and the template, rather than simply varying the content. This way of thinking presents something of a challenge to the stature of the ‘professional’, within the tripartite musical system of composer, performer and listener. Conventionally, this system involves a solitary composer creating a ‘fixed’ text with instructions for a performance, which usually takes place before an often passive audience. In contrast, the type of musical composition that seems to me to be more relevant to the issues humanity needs to address in 2014, centres around the designing of ‘models’ or ‘maps’ for events that facilitate collaboratively created ‘in-the-moment’ music. These designs would be ideally, non-hierarchical (that is they are open to anyone & not dependent on prior experience or the acquisition of musical skills) and participant-self-determining (the participants are free to contribute their unique abilities in their own diverse ways). These compositional designs need to accommodate flux—any lively events that involve humans thrive on constant motion, and unexpected movements.

Social events can be pregnant with expectations, and are often mediated by social norms, conventional processes, hierarchies, and authority figures. These power structures keep everything in place, and everyone in their place. In many social situations, where it may seem that there is no external compulsion to behave in a certain way—no visible external authority—behaviour is still often quite

conventional. If one steps too far out of line, things can become difficult. A part of us knows this and our internal authority kicks in to keep us safe and to keep things running smoothly. This has been discussed by philosophers such as Gramsci and Foucault and is sometimes termed “common sense”.

In what may appear, at first, to be a fairly progressive setting such as the one we are in now, our internal ‘authority’ is still keeping us ‘in check’, reminding us to follow the social norms in the interest of self-preservation, and social cohesion. Most of us would prefer to avoid the danger of public humiliation that could ensue if we step a little outside of what we all implicitly and unspokenly have decided is the social norm for this moment. Stepping outside of this is what the French post-structuralist philosopher Deleuze may have termed a *line of flight*. It can take a great deal of emotional courage.

With respect to some of these ideas, and rather than continuing to talk for twenty minutes, I thought it might be more useful to work with process. We can vary the template and the format of our experience as a group in this room, in the here and now. In thinking about this, I decided to plan a group activity that would serve to, in a sense, ‘level the room’, erasing any power structures that might pre-exist. This group activity may bring us together rather than continuing to cultivate artificial feelings of separation.

Research has shown that we learn least through only listening, and most through *doing* (through *experiencing*). An idea (which I will flag now) that I would love us to have an experience of is how wonderful it can be to work and create music together

cooperatively and collaboratively. However, this may take a little courage initially and perhaps also require a willingness to step a little outside of the usual social norms in this situation.

The ideas that the roles of composer, performer and audience need to be kept separate are just *ideas*, that have been transformed into external structures. These structures are now taken for granted by many in the world of Western Art Music, and accepted as common sense (even though these distinct roles are in fact less than 500 years old and peculiar to the Western world). We are all composers, all musicians, and all listeners. We can be all of these things at once, and we can also move amongst and through these roles in diverse ways. We must remember, however, that the categories themselves are just made up ideas, which have become fixed and static structures within the arena of Western Art Music.

Appendix 3: *Poll5*: tabled results, WSU Kingswood, May 2015

These are the tabled results for *Poll5*:

Summary

Response	Count
play the following interval (5th) anywhere on the keyboard - D-A	20
play the following interval (5th) anywhere on the keyboard - E-B	18
choose one of the following notes and play it in a low register - D,E,G,A,B	16
play the following interval (5th) anywhere on the keyboard - G-D	15
play the following interval (5th) anywhere on the keyboard - A-E	12
Total	81

How people responded	Sent to	Count
Text (AU)	+61 427 541 357	81

Individual Responses

[Change time zone](#)

Response	Via	Received at
play the following interval (5th) anywhere on the keyboard - G-D	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - G-D	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - A-E	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - G-D	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - G-D	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:43 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:43 PM

Response	Via	Received at
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:41 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - G-D	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:41 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:41 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:41 PM
choose one of the following notes and play it in a low register - D,E,G,A,B	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - D-A	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - A-E	Text (AU)	May 28, 2015, 09:41 PM
play the following interval (5th) anywhere on the keyboard - E-B	Text (AU)	May 28, 2015, 09:41 PM

Appendix 4: Early performance plan, 2012

This is the complete version of an early performance plan (created during 2012) for a multi-sensory installation.

I am planning four performance installations over the course of this project, involving seven performance ‘stations’. Performances would take place once or twice in a day, morning and/or afternoon, for example 10am-12, and/or 2-4pm, during 2013 and 2014, as follows:

2013 - stations 1& 2 (1st semester), 3 & 4 (2nd semester)

2014 - stations 5 & 6 & 7 (1st semester), final performance (2nd semester) 1, 2, 3, 4, 5, 6, 7.

It would be ideal to have performances on the Western Sydney University (Kingswood) campus (apart from the final performance, which will require a larger space). This final performance could take place, onstage in a performance venue or, in a gallery setting.

The performances will include the possibility of comfortably ‘watching’ or ‘listening’ only, the option to participate more fully, the option of simply relaxing/resting if desired, and the possibility of participating in *some* of the sensory experiences but not all. The participants will be free to choose the extent of their involvement in the installation.

Each performance ‘station’ is a multi-sensory environment (for play—individual and/or communal) containing: perfume/scents, visual projections, video camera, food (no cooking required), comfortable seating (or lying), a drum or cymbal and one stick (per station), laptop (one per station, with a simple ‘user-friendly’ Max UI) and the possibility of users ‘connecting’ with others in a variety of ways. For this reason, laptops (and drums) will need to be ‘mobile’. The focus will be sound, however, other senses will also be catered for.

Individual actions that will impact on the system include:

1. Movement - triggering MaxMSP software
2. Sounding the drums/metal (acoustic sounds, and also the possibility of these sounds triggering MaxMSP—including the option of utilising a ‘common pulse’, which would enable the syncing of different rhythmic cycles)
3. Eating, Scenting, Lounging
4. Other(s).

There will be the possibility of participants ‘customising’ the experience, in terms of designing their own combinations of sense and musical elements. I will set up the individual stations but many of the elements within the stations will be ‘mobile’.

Therefore, initial settings will be nothing more than suggestions. Participants will be able to choose from a collection of scents/visuals/food/locations/rhythmic cycles/MaxMSP ‘patches’, and so on, and combine these in their own unique ways.

People will be permitted to bring objects of their own into the performance, including musical instruments, food, scents and so on.

Some examples of possible initial ‘settings’ are below:

Performance station 1: Semester 1, 2013 (with station 2)

- *Rhythmic cycle - (spatial interest via Max), no cycle, absence of pulsation unless generated by participants.
- *Drum - hi hats and one small felt-headed mallet - possibility of prior ‘preparation’ of hats for volume reduction.
- *Scents - Russian caravan tea/black cherry/vanilla/espresso coffee/dirt
- *Visuals - inspired by contemporary dance/B&W double exposures/navy blue, black, cherry, lighting via several small lamps (no overhead lighting).
- *Textures/furniture - velvet chairs or couch (dark)
- *Food - dark chocolate, dried cherries, Russian caravan tea or espresso coffee
- *other ideas - Latvia, physics

Performance station 2: Semester 1, 2013 (with station 1)

- *Rhythmic cycle (triggered via Max) - 1 (undifferentiated pulsation).
- *Drum - crash cymbal and one small child-size chopstick for playing.
- *Scents - snow/lime/coconut
- *Textures - long ‘hung’ pieces of transparent light-coloured fabric, wind (fan on low setting), soft and light-coloured furniture (couch or chairs)
- *Visuals - flowing/milk/water/ocean/river, lighting - filtered light from above
- *Food - pineapple and coconut juice, granola, pistachios, white chocolate
- *other ideas - language/conversational sound thru MaxMSP (via performance)

Performance station 3: Semester 2, 2013 (with station 4)

- *Rhythmic cycle (via Max) - 2 (and multiples)
- *Drum - kick drum (dampened) and one timpani mallet for playing
- *Scents - earth/garden/bush/camp fire/burning Eucalyptus
- *Textures/furniture - wood, wooden bench/stools or funky 60's retro
- *Visuals - brown and green
- *Food - roasted seeds, peanut butter cups, salted caramels, dandelion coffee
- *other ideas - vocal microphone into MaxMSP

Performance station 4: Semester 2, 2013 (with station 3)

- *Rhythmic cycle (via Max) - 3 (and multiples)
- *Drum - snare drum and metal brush for playing
- *Scents - leather, flannel flowers, sweat
- *Textures/furniture - old leather couch or chairs
- *Visual - red/purple/gold/pastel green, tightly edited images, floor lamps
- *Food - pomegranate juice, gold leaf chocolates, peppermint tea

Performance station 5: Semester 1, 2014 (with stations 6 & 7)

- *Rhythmic cycle (via Max) - 4 (and multiples)
- *Drum - high tom (goat skin) and small chopstick for playing
- *Scents - sweet tobacco/metal/mauve roses
- *Textures/furniture - corduroy, grey chairs/couch, muted vintage florals, mirrors.
- *Food - earl grey tea, coffee, coffee chocolates, lavender chocolates.
- *Visual - precision, maths, data, lanterns

Performance station 6: Semester 1, 2014 (with stations 5 & 7)

- *Rhythmic cycle (via Max) - 5 (and multiples)
- *Drum - mid tom (goatskin) and feather for playing
- *Scents - amber, citrus
- *Textures/furniture - floor cushions and rugs
- *Food - elderflower cordial, fruit tea, passionfruit truffles, grissini
- *Visual - yellow, sunflowers, warm lighting via large table lamps

Performance station 7: Semester 1, 2014 (with stations 5 & 6)

- *Rhythmic cycle (via Max) - no cycle, absence of pulsation unless generated by participants
- *Drum - low tom (calfskin) and felt-headed mallet for playing
- *Scents - dust/mushrooms/musk/wet dog
- *Textures/furniture - turf/grass
- *Food - chai, chilli chocolate
- *Visual - beige fabric, hessian
- *Other ideas - chanting and stomping

My role would involve preparing and assembling the installations, and serving tea/coffee and 'light' food as required. A video camera, set up to film the performance (for documentation purposes) could double as a trigger for MaxMSP/Jitter, and triple as a projected source of visual interest via Jitter (for example, with a kaleidoscope effect).

Equipment needed:

*laptop(s) with Max software

*amplification/means of getting acoustic sounds into MaxMSP, and at least four speakers

*drum kit (re-skinning of some drums required)

*drum sticks of varying types and head textures (I will provide but require funds)

*goat skins, for drums (I provide and apply, but require funds)

*video camera with fire-wire.

*each performance will require a room/performance-space on campus for one day per semester.

Funds will be required for:

Food

Scents

A variety of other objects - for example, furniture and lamps - hired, borrowed or bought second-hand.

Final performance venue hire

Appendix 5: *Public Drum Project* installation proposal

Public Drum Project

Artist/Composer

Sharon Williams

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NSW Australia

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Biography

Sharon Williams holds a Bachelor of Music with Honours (1st class) and is currently completing doctoral research at the University of Western Sydney. Her PhD is a joint theoretical and practical/creative project. The focus of the theoretical component involves examining the work of John Cage, Deleuze and Guattari, and visionary designer R. Buckminster Fuller, with the intention of finding ways to apply their ideas to creative arts practice. The practical component of her research project involves exploring designs for sound installations that facilitate collaborative music-making. Sharon is currently employed as a casual academic at the University of Western Sydney, in the School of Humanities and Communication Arts.

Curriculum Vitae

Sharon Williams

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Born 1963, Sydney, Australia

Solo Exhibitions

*Drum installation, Blissbeat, 'In Lak'esh' and Blackheath Area
Neighbourhood Centre Community Event, at Blackheath Primary
School, October 2013.

*Drum installation, UWS 25th Anniversary Concert, Playhouse
Theatre, Kingswood, May 2014

Selected Group Exhibitions

*Drum installation, Chai Temple, 'In Lak'esh' Community Event, at
Blue Mountains Winter Magic Festival, June 2013

Performances/Conference presentations

*Presentation at Cage 101 - Past, Present, Future.

Conference in Tanjong Malim, Malaysia, August 2013.

*Presentation and participatory group performance at the
Crossing Boundaries in Music Postgraduate Conference,
University of Western Sydney, Kingswood, June 2013.

*Presentation at Interventions and Intersections - Research on
Communication, Culture, and Society,

University of Western Sydney, Parramatta, June 2013.

*Participatory Group Performance, Festival of Joy,

Community Event, Blue Mountains Community Gardens, October 2013.

Grants/Prizes/Awards

Australian Postgraduate Award 2012 - 2015

University of Western Sydney Top-up award 2012 - 2015

Bachelor of Music with Honours (First Class), University Medal - 2011

Publications

Article, *Malaysian Music Journal*, 2014 – “Uncaged: John Cage and
conceptual approaches to participatory music-making”

Artist's Statement

Rather than exploring the more traditional role of the solitary composer working alone, the focus of my work has become the exploration of 'musical composition' as a 'community event'. This has led to an interest in exploring sound installation designs that encourage participatory music-making. This is an inclusive approach that encourages individual and group creativity, facilitating movement and interpenetration within the traditionally rigid, 'tripartite' musical system, of composer, performer and audience. Why not define composition as the act of creating an environment, that enables collaborative musical experimentation? 'Composing', could involve 'preparing' a space, and furnishing it with musical 'toys'.

My current project involves the 'hanging' of 'reconstructed' drums (salvaged/recycled old drum kits, with mallets attached), in a public space. These are the 'toys' which the participants will be given permission to play with, 'as they wish'. The type of play I am suggesting, is creative free-play. This is the type of play a young child engages in while learning about the world and social relationships. This play—which could also be viewed as 'serious play', or 'playful work'—does not require instructions from an external higher authority. It has the potential to function as dynamic, collaborative 'in the moment' musical composition at its most exciting.

It seems to me to be a matter of urgency that we learn to work creatively together (for the good of all humanity, as R. Buckminster Fuller pointed out, more than forty years ago), and this is what I hope to enable with my installation designs. These compositional designs can be viewed as ‘models’ or ‘maps’ for the facilitation of social cooperation. Given a conducive environment, and the right tools, humans can create together, in ways that they could never have ‘individually’ imagined. An individual does not need to have all the ‘answers’. It may be enough to simply pose the questions and allow cooperative creative group intelligence to unfold.

When an audience is transformed into participants, aesthetic considerations, that are often hinged upon economic realities, are removed. This allows more freedom, for learning and experimentation. It can be an inclusive process, which celebrates diversity.

Installation Proposal – Public Drum Project

This installation involves reconstructed drums, with mallets attached, hanging in a public space. The space would need to be either indoors; or outdoors in a weatherproof area. The drums are made from salvaged and recycled drum kit pieces. The drum shells have been stripped back and transformed with a decoupage of textual matter, that functions as a type of informal score. The vibrating heads are constructed from feral goatskins, which give a warm and inviting sound when the drums are struck, and also provide visual and tactile interest. The drums are suspended from above and will require a sturdy ceiling support system for this purpose.

The following support material is available:

- *Flyer with information on the work and artist bio
- *Artist/composer talk
- *Experimental drumming workshop

The full installation (approx. 100 drums) ideally requires a space of around 100 m², as it is important that there is room for the participants to move freely amongst the hanging drums. However, the installation can be adapted, and scaled down, to suit smaller venues. The sonic impact the installation may have on adjoining spaces needs to be taken into account when assessing the suitability of your venue for this work.

The full version of Public Drum Project will be available from September 2014. Smaller versions are available from June 2014.

Appendix 6: In-depth description of the practical methods employed for the Mount Tomah event

Drum preparation prior to the installation event

Most of the drum skins used in the installation were sourced from Erle Bartlett (a Bodhran maker and longtime supplier of goatskins for West African drummers in the Blue Mountains and Sydney region). According to Erle, these skins were from feral goats, collected from a local abattoir. I used a combination of hairy skins (the mohair goats, in particular, are incredibly soft and furry, and create a ‘warm’ sounding drum) and hairless skins. Apparently Erle ‘de-hairs’ the skins using a lime bath. I bought the skins for \$30 each. The skin purchases were mostly funded by Western Sydney University. Most of the other supplies I self-funded, including all of the drum kit shells. These were predominantly bought from a Blacktown drum maker, who I found on Gumtree. He buys cheap kits and then makes traditional Lebanese drums out of the larger kit pieces (primarily the kick drum shells). Most of the shells were \$10 each, so in total they cost around \$1000.

Drum shell preparation - tasks in (roughly) chronological order

**unscrew tensioning rods and remove rings and skins.*

**remove plastic skins from rings using a large sharp knife.*

**treat rings for rust by, sanding back rust, painting with ‘gal met’ rust treatment, spray painting with a matt chrome.* In the beginning I didn’t bother with rust proofing, but over time realised that it was essential for many of the drums. It was time consuming and expensive (for the spray paint), but meant the drums were rust free, and looked a lot better. I also treated any tensioning rods that were very rusty by dropping them into a ‘gal met’ solution.

**remove all metal fittings from the drums.* I initially removed all the fittings by hand, moving on to using a drill, and then finally a cordless screwdriver. The cordless screwdriver was a revelation, in that it was lighter than a drill and hence considerably easier to hold and manage over long periods of time. I discovered, (through bitter experience), that many of the metal lugs were the weakest link in the drums. They were usually the first thing to break, particularly when trying to tension the drums tightly enough, when tuning up the hairy skins. Some of the drums (because I ran out of time) ended up being only skinned on one side. There were skins leftover which I will use to complete skinning before subsequent installations. Some of the weakest lugs could also be replaced at some stage before another showing.

**once all the fittings are dismantled, take the wrapping off* (usually eased off with a chisel). Removing the wrapping was usually fairly quick, although, there were cases where the wrap was so heavily glued that it took a lot of chiseling to get it off (perhaps 10% of the drums). I made many practical innovations, in relation to the dismantling process, over the course of the project. For example, as I took apart the later drums, I would collect all the fittings for each drum in its own bag and make sure it was placed on the ground inside the empty drum shells. Keeping all the rods, lugs, screws, rings, and so on, with the appropriate shell was something that needed to be constantly attended to, and I found better ways to do this as the project progressed. The first fifty drums, I made over the course of the first three years of my candidacy. The last fifty drums, I made over the course of a few months, towards the end of the fourth year of the project (2015). Once I had booked the installation space at Mount Tomah for late December (and finished teaching for the year in October) I focused on drum-making full time. I do not want to ever have to make so many drums again without assistance. Although I enjoy drum making, to make them on

such a large scale is challenging, and requires serious (ninja level) self-discipline and organisation. However, I did find ways to set up ‘production lines’, and I think this made things more efficient. For example, towards the end of the project I was making twenty drums at a time. I would take apart twenty drums, rust proof all of the rings, and so on. At the start I was completing one drum at a time. This was often more fun, and in many ways easier psychologically, but a slower and less efficient process.

**once the wrap has been removed, check the shells for damage, mould and so on, and clean them up via hand sanding if necessary.* For most of the drum shells it was necessary to do some sanding. Because of the glueing of the wrap and the poor quality of the wood (layers of thin veneer glued together) there was a lot of splintering, and layers of the veneer would come off with the wrap. However, I managed to salvage most of the shells. The fittings sometimes broke or fell apart and I would need to search for spares. They were not always a perfect match, but they were functional.

**Begin thinking about ideas/text/scores/images and so on to use for the decoupage to cover the shells.* This brings up issues and ideas, around the concept of a score. I was always thinking about the decoupage as a type of score, and imagining what type of text might facilitate the best group drumming experience. Rather than the traditional score that gives direct instructions for what to play, my miniature ‘scores’ were geared towards helping people to find their own unique ‘approach’ to the experience of playing with others. Feeling able, and welcome, to participate, may be enough in itself. For example, I used a variety of text, such as, for example, “play me”, “be kind”, and the word “dance” layered over images of dancers. There were many phases and styles of decoupage text, over the four years or so of preparation. The text

was prepared primarily on my laptop (using various software applications—towards the end I found *Keynote* particularly useful, because it allowed me to layer text and images), and then printed on my home (A4 only) printer. Earlier on I had used the WSU printer to create larger (A3) sheets, used mainly for the kick drums.

**Apply the decoupage.* For this I used a slightly diluted multi-purpose craft glue. To start out I would put sheets of newspaper down to protect the table top, and then apply glue to the decoupage paper with a rag. Initially I had been working on the floor and applying the glue with a paintbrush (over time I seemed to find quicker ways to do things and this was one example). I also found out that wearing thin latex gloves was a good idea during this process. I would apply the glue to the paper, layer it onto the shells and firm it down. The wrong consistency of glue could cause bubbling and so on. It was important not to make it too thin, but too thin was not so good either (and more expensive).

**Let the decoupage dry completely (usually a day) before starting the shellacking process.* I originally used the standard colour of shellac. After applying several coats this gave a warm golden red/brown colour. The purpose of the shellac was to protect the shells (and the decoupage) with a non-toxic, and water resistant, protective layer. I ended up preferring a shellac colour called “super blond”. I found this online from a company in Melbourne, and had it posted to the mountains. Shellac comes in crackly crystal fragments, which need to be dissolved in methylated spirits. Too much methylated spirits and you end up having to apply too many coats, too little and you have a dense ‘gluggy’ mix. I could generally judge the correct proportions by the end of the process without having to measure. As the mixture dissolves you have to agitate a lot to prevent it clumping. It needs around twenty-four hours to properly mix together (after a lot of agitation). I spread this mixture as evenly as possible over

the drum decoupage. Again, I used gloves, and lots of newspaper under the drums. It dried fairly quickly, and it was easy to do two or three coats in the one day if needed. I found two or three coats was usually sufficient, but it did depend on the viscosity of the shellac mixture. Initially I had done this with a paintbrush, but discovered that it was much quicker to use a rag.

Skinning

I found in relation to the *hairy* skins that the most efficient method was to place the drum rings on top of the laid-out skins, and then use a ‘Stanley’ knife to roughly cut the skins to size while still dry. I would get either one or two heads out of each skin, depending on its size. I needed to leave enough skin, around the edges of the rings, to have something to grip on to during the skinning process. I eventually found it much easier to roughly shear the skins (using sheep shears), before soaking. At the beginning of the project I had used a razor blade to shave the skin once it had dried on the drum, before moving on to dog-clippers, which quickly blunted and were fairly useless. With sheep clippers, I could shave a skin in a few minutes (with a razor blade this would have taken an hour). The clippers left a fine layer of hair, but this actually created a lovely warm-sounding skin. I had initially used a bath tub to soak the skins but towards the end of the project I had progressed to a children’s plastic (shell shaped) sandpit. It was the perfect size and shape to soak at least 10 skins at a time. I could do this outdoors, filling the plastic shell with water from a garden hose.

The hairless skins were always a lot quicker and easier than the hairy ones. I would cut them roughly to shape before or after soaking and then after skinning trim the edges to size with a sharp knife. Another issue with both types of skins was that

sometimes they were too thick to bring the first, and/or second, ring down over the skin. These drums were not designed for thick goatskins. They can easily handle a *thin* goatskin, but a thick skin could be problematic. The rings and the lugs for the tensioning screws/rods ended up cracking or breaking if excessive force was used. It all worked best when the rings were fairly roomy in relation to the size of the shells. For some drums, however, quite a bit of pushing and pulling and hammering around the edges of the rings with a rubber mallet was needed, to bring the rings down far enough for the tensioning screws to be able to be threaded in. Once I had put all the screws in by hand, I would often then go around and do a quick burst on each screw with the cordless screwdriver. Before tightening I always made sure that the skin was pulled through (and not caught up under the rings) as tightly as possible. Often, I would then roll the drum around on its side tightening each screw and checking that the rings were level and correctly aligned around the edge of the drum. Then, if it was a sunny day I would put the drums out in the sun to dry, or if cold, around the slow combustion fire. Once the drums were completely dry they would usually need a second tune, and often several subsequent tunings over time. Before the installation, I went through and examined each of the one hundred drums in turn, tuning and conducting any small repairs. Before attaching a second skin, I would also check whether I needed to attach a mallet tool clip or not.

Mallet making

The mallets were made from 16mm dowel, which I initially sawed by hand into a variety of lengths—shorter for the smaller drums and longer for the bass drums. The final 70 were cut with an electric saw by a local builder and the ends rounded off with a belt sander. I then rubbed a layer of shellac over all of them. The soft padded

ends were made from a circle of black felt glued onto a larger circle of pink velvet. This padding was then glued onto the end of the dowel sticks, and wrapped tightly with sisal twine. These worked remarkably well in the installation. Only one mallet was damaged, when the material came off the end of the stick, and no drum skins were damaged by the mallets. A soft padded mallet head is crucial when striking goatskins. They (the skins and the mallets) withstood a good thrashing from some participants.

Initially I attached the mallets to the drums via a piece of twine. I drilled holes through the end of the mallet handles and threaded cord through this, as a way of attaching them to the drums. I observed, during early small-scale trials of the installation, that this was clumsy and limiting for the participants. It interfered with their movement when drumming and they could not remove the mallet from the drum. I decided to use tool clips instead, which the mallets could be slipped in and out of readily, and which I could easily attach to the sides of the shells. Unfortunately they did break occasionally—either in transit, or as a result of someone yanking a mallet in or out of them too roughly. It might be worth checking if a more robust version can be found. Another innovation I discovered was that drum shell holes, commonly used for fittings when attaching toms to a kick drum, could be utilised for mallets. The mallets sit easily into these holes with the mallet heads poking out. This is a slightly easier and quicker option for participants than extracting the mallet from a tool clip, so whenever there was a hole (and fittings) available in a drum, I decided to leave it that way. However, I did not think of this option until I was working on the last 50 or so drums. It is interesting that I probably would not have even thought of this idea if I had not prototyped the design and observed participants interacting and

drumming in the installation. During the Mount Tomah installation, the mallets ended up all over the place. However, I don't necessarily see this as a 'negative'. People were grabbing one or two mallets and then moving around with them. Sometimes they returned them to the relevant drum. Sometimes they didn't put them back on the drum they came from, but instead left them in a pile somewhere. This is why I think it would be useful to have a mallet collecting curator, and basket of mallets, somewhere highly visible. At one stage, I noticed (when some of the first visible mallets had been moved) upon entering the installation, people asked (each other), "where's the sticks?"

Workspace notes

*Leura

My home in Leura, was a challenging environment, in many ways, in which to work. For most of my time there, I shared the space with two teenagers. Communal space was often used for drum making. There was goat hair everywhere and often smelly goatskins soaking in the bathtub. At that time, I also had no table to work on. Working on the floor was probably not the best thing for my body. It was difficult.

*Werrington campus WSU

After a trial of the installation at a Kingswood WSU event, I stored the drums (thirty at the time) in a room at the back of the Playhouse theatre for a year or so. This was a much better environment than my garage at the time, which was damp and dusty. I was offered a shared workroom at Werrington campus and I moved the remainder of my shells and drum-making supplies into the space, with the plan to work there one or two days per week. This did not work out so well and I never managed to use the space. I had initially spent several days re-organising, vacuuming, dusting, mopping, and tidying the space, only to arrive the next week to begin work and find that

someone had come in, used the space, and left it in a mess. I realised that sharing a space was not necessarily a great option. It was also quite hot there in summer, with no air-conditioning, and just too far from home. I also became quite busy with teaching work and did not have the time or the incentive to go down and hang out there for a day (which seemed necessary to make the two-hour round-trip worthwhile). I also did not have a venue or a definite date at that stage, which at times made me question the usefulness of the time and work needed to realise the practical aspects of the project. My supervisors had pointed out several times that one hundred drums were not actually a necessity, and that maybe fifty would be enough. However, although I was tempted to settle for less, I felt that one hundred drums were necessary (as a minimum), not only for visual impact, but also to facilitate easier entrainment amongst the participants.

*Bullaburra

Although initially it seemed impossible to find space to work on the drums in my new home in Bullaburra, after around six months I felt that it was necessary, and could see no other way to get them finished. There was little to no room for drums in the garage, so I decided to use the top floor of the house (see Figure 4). It was not ideal but I could think of no other option. Eventually, I was able to stack the finished drums in the garage, while my drum-making tools, and the drums I was currently working on, were all upstairs. The still to be dis-assembled shells I left downstairs. As the installation neared and I became a little more frantic, I began to care less and less about the state of the house and my impact on its cleanliness. I went from trying to work exclusively upstairs, to using the dining table downstairs to pull apart and skin the drums. In any case it was impossible to work on the drums upstairs on a hot

day ... and there were quite a few of those. Working on the dining table, with its huge window looking over the garden was a really nice place to work in any case.

Rope used for suspending the drums

The rope used for hanging the drums from the pergolas and Brunet pavilion at Mount Tomah was 6mm cotton sash cord, cut into 5m lengths. The ends were prevented from fraying by dipping them into shellac. I bought rope initially in a local hardware store, but the last 350m I bought from an online supplier. Cutting the rope into 70 x 5m lengths (two days before the installation) was another slightly gruelling task, but by this point I was used to 'pushing through' and managed to complete it in one 2hr sitting. This rope is soft, white, and flexible, which looks good with the drums. It is obviously easier to work with (and knot) than wire, and less prickly than jute or sisal.

Facebook page⁴⁵⁹

I decided to create an event page on Facebook, not only to let my friends and acquaintances know about the installation but also to alert any potentially interested members of the general public. I opened the page to the public rather than making it a private event (as I had done with events in the past). I also thought that people might hear about the event and find it interesting, even if they could not come or were interstate or overseas. I found that people 'shared' the event without prompting. I also shared the event on several group pages. Encouragement and enthusiasm from friends, and also from strangers buoyed me up prior to, during and after the event. It

⁴⁵⁹ Mount Tomah *Public Drum Project* installation, Facebook event page link - <https://www.facebook.com/events/977889275608728/>
North Katoomba installation (*Public Drum Project* revisited) - https://www.facebook.com/events/555698414602321/?acontext=%7B%22action_history%22%3A%22null%22%7D

gave me a lot of energy and renewed hope in relation to the *Public Drum Project*. I always had faith in the validity of the project and thought that the idea was conceptually ‘sound’, but it was encouraging to get positive feedback from participants.

Site preparation and transportation of drums

Four people ‘bumped in’ at the installation site, and three ‘bumped out’ (although we briefly had a few extra volunteers). I managed to get most of the drums in a 1.5 tonne hi ace van (\$300 rental for the two days - plus \$200 bond). The rest of the drums travelled to the venue in a small trailer; however, I realised when packing up the drums, that with more efficient packing the van would suffice. I used lots of blankets and sheets between the drums as padding, which ensured there was very little damage done in the process.

When arriving at the venue on the Friday afternoon (day prior to the installation)

- * Unloaded and placed the drums in position
- * Hung the ropes
- * Tied a loop on each rope
- * Attached the drums and mallets
- * Fine tuned the placement and staggered the heights of the drums for aesthetic interest and accessibility, adjusting the angles and swapping drums where necessary
- * Tuning check
- * Covered the pergola drums with plastic bags - taped down in case of inclement weather

Prior to the installation on the Saturday morning (the event opened at 10am)

- * Took the plastic bags off

- * More tuning was needed, as the drums had cooled down overnight
- * Set up three sandwich-board signs, with invitations to participate and information about the project
- * Removed all personal effects from the site
- * Began documenting, via video, audio, and still photography

The event

It was heartening to observe people playing with such passion and pure pleasure during the Mount Tomah event. It was a marvellous thing to behold people enthusiastically interacting with each other and the drums. It made all of the extensive preparation seem worthwhile. It had been difficult to explain the project, in its entirety, to others. The installation needed to be seen in operation to be fully understood. Ultimately, I regard the Mount Tomah event as ‘successful’, because people entered the installation and joyfully participated (and collaborated), and I view *participation and collaboration*, in themselves, as the primary indicators of good installation design. I have a variety of documentation in relation to the event, including video footage, photographs, and most importantly audio recordings.

Packing up on the day of the event

Once interest had dwindled (around 5pm) we began to pack up by, first of all, unknitting the rope suspending the drums. We then stacked the drums under cover in the pavilion. My helpers pulled the ropes down onto the ground or left them hanging. The ropes could be easily pulled down without a ladder by pulling on the end with the loop first (which we left knotted). I went around and collected the rope, coiling and securing each, one by one, to prevent tangling, and then placed them in a large

plastic tub. It took quite a while for myself and my two assistants to pull everything down. Once all the drums were piled in the centre of the pavilion we tried to cover them with a tarp we had brought in case of rain. The tarp unfortunately only covered half of the drums and the mist was beginning to roll in, as well as light rain. We could not load the drums into the van immediately because vehicle access was not possible until the park re-opened in the morning, which meant they would have to survive in the pavilion overnight. When I came back in the morning, the drums that had been uncovered were very damp and soggy. Even the ones that had been covered were a bit flaccid and damp. I was quite concerned about this and thought most of them probably would not recover, but with a few days of scorching sun and warmth they were all fine. On the Saturday night after we had packed up, I was so exhausted that I could barely hobble back to the jungle lodge. I was aching all over and mentally and emotionally drained.

Post event

After the event, I responded to messages from participants on Facebook, 'friended' interested participants, and also put photos and video footage on the Facebook event page. I decided to register Public Drum Project as a business name, and I now have an ABN. I also registered the domain names publicdrumproject.com and publicdrumproject.com.au. Time also needed to be spent on drying the drums, and packing away all the drums, tools, and equipment.

IF SUCCESS OR FAILURE

of this planet & of human beings

depended on how I am & what I do ...

HOW WOULD I BE?

WHAT WOULD I DO?

WHAT WOULD I DO?

HOW WOULD I BE?

depended on how I am & what I do ...

of this planet & of human beings

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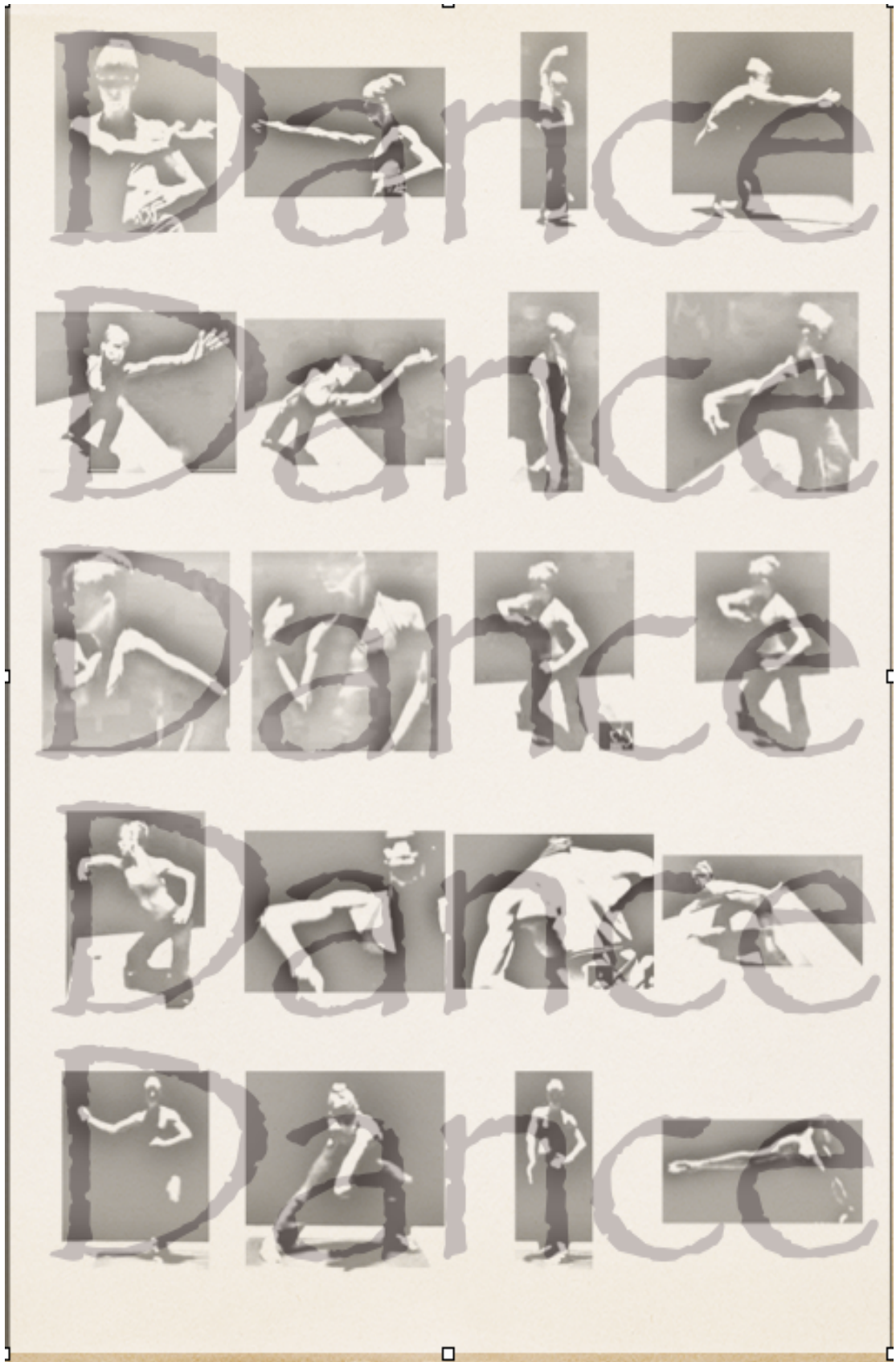
depended on how I am & what I do ...

of this planet & of human beings

IF SUCCESS OR FAILURE

BY

RICHARD BUCHHEINSTER FULLER





Appendix 8: Research project information signage

Research project information

Musical composition as a sustainable and collaborative creative practice: assembling a conceptual framework and generating designs for participatory music-making.

You are invited to participate in a study conducted by Sharon Williams, Ph.D. Candidate, under the supervision of Dr Ian Stevenson, Dr Clare Maclean, and Dr Maria Angel, School of Humanities and Communication Arts, University of Western Sydney.

The purpose of this study is to explore designs that facilitate collaborative music-making.

As part of this study, any sounds that you create while participating in the installation may be documented via an audio recording. This material may be re-used in the development of future work.

All aspects of the study, including any results, will be confidential and participation is entirely voluntary.

You are not obliged to be involved, and if you do participate, you can withdraw at any time without reason or consequence.

You can tell other people about the study by providing them with the chief investigator's contact details.

CONSENT

By engaging with the installation you are giving your consent to participate in the research as described above.

When you have read this information, Sharon Williams will be able to discuss it with you further if you have any questions. If you would like to know more at any stage, please feel free to contact Ian Stevenson, ph 612 4736 0497 or the researcher via email on s.williams@uws.edu.au

This study has been approved by the University of Western Sydney Human Research Ethics Committee.

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the office of research services on: Ph. 612 4736 0229 Fax 612 4736 0013 or email humanethics@uws.edu.au

Appendix 9: Ideas for the future – journal excerpt

Journal excerpt

* *Drum-making workshops could function as a way to get more drums made and/or as a way to make a living. This could make a 1000 drum project a reality.*

* *Participants could make one drum to take home and one to gift to a future installation. This could happen over a few days at a festival/workshop. A minimum of three days of good weather would be needed to allow time for decoupage, shellac and skins to dry.*

* *Another option would be to make drums over the course of a month (for example every Sunday morning, followed by a communal lunch). I could charge for my time and materials, or participants could make an extra drum to 'gift' to future installations. People would get to take home a drum and the knowledge of how to make more if they desired. If drums were primarily being 'gifted' then I would need some sort of funding, to cover my time/living expenses. Participants would need to pay for materials for their own drum in either case. I would need shells (old kits), tools (tuning keys, cordless drivers, drills, chisels, mallets, screwdrivers, small hammers, and so on), glue, shellac, (people would bring their own paper/text for decoupage), goatskins, sheep shears, and lots of spare parts (lugs, tensioning rods/screws, and so on). We would also need a place to work together. If drums were being made at a festival then shelter and power would be required.*