

A PROCESS OF BECOMING

A Process of Becoming:

**A Musical Enquiry into Process-Relational Philosophy
through Autoethnographical and Zoomusicological Means.**

Volume 2

Exegesis and Appendices

Robert W. B. Burrell

Bachelor of Music (Composition) with distinction,

Queensland Conservatorium Griffith University

Brisbane, Queensland.

Queensland Conservatorium

Arts, Education and Law

Griffith University.

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Abstract

This folio and exegesis represent the findings of a practice-based inquiry into process-relational philosophy, autoethnography and zoomusicology. Beginning in early 2010 and continuing through to mid 2012 it has been my personal goal to create a substantial body of new musical compositions that addresses the dual ambitions of a practice-based inquiry into a deep comprehension of process-relational philosophy and the development of new modes of making music. The philosophical stimulus reflects a desire to bring the personal and professional together; to observe, through an autoethnographical methodology, the process of becoming in action in my own family, and then to incorporate musical stimuli from the natural world as a lateral thinking provocateur, what de Bono (1991) calls a 'Po' (p.15). I sought to create new musical works in the western notation system, as well as in the mixed media of electro-acoustics and live performance, and finally through pure electro-acoustics.

The folio and exegesis present what has been explored, uncovered, researched and learned and thence developed through this inquiry into the Whiteheadian notions of 'process and reality' and the philosophical insights of the 'process of becoming'. The evolution and maturation of my language and syntax of composition is presented in the folio of music. Further explanation and evidence is addressed in the exegesis, specifically in Chapters 5 through to 8. Chapter 7 of the exegesis presents a critical analysis of selected movements from the greater works created during the research and responds to the literature, which informs the philosophical investigation of process-relational philosophy. Literature in this exegesis also includes examples of landmark works in the mediums selected for composition.

Keywords: Autoethnography, avian, becoming, birdcalls, birdsong, Cobb, John B., composition, computer music technology, digital audio workstation, digital signal processors, Dorrien, G., ecology, ecological soundscapes, electro-acoustic music, Ellis, C., Greison, E., Grey Butcherbird, Griffin, D R., Hartshorne, Charles., Keller, C., Mesle, C. Robert., mode of limited transposition, musique concrete, ornithological, orchestration, practice as research, practice lead research, Pied Butcherbird, phenomenology, philosophy, process-relational philosophy, Process theology, post-modern, post-structural, quintal harmony, Rothenberg, D., song-birds, soundscapes, synchronicity, transcription, trans-territorial, Weiman, Henry., Whitehead, Alfred North., zoomusicology.

Statement of Authenticity

The work contained in this folio and exegesis (volumes 1 and 2) is that of Robert W B Burrell and has not previously been submitted for an award at any other higher educational institute. To the best of my knowledge and belief, no material previously published or written by another person has been included except where due reference is made in the exegesis. Selected material drawn from this exegesis that is the original work of the author has been previously published in a selection of conference proceedings throughout the course of completing this work.

Robert W B Burrell, 2013.

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Chapter 1. Introduction

Such music, he said. I'm not religious, but if I were I would say it was like a glimpse into the mind of God. Perhaps it was and I ought to be religious. I have to keep reminding myself that they didn't create the music; they only created the instrument which could read the score. And the score was life itself. (Adams, 2001, p. 240)

Within a variety of contexts, I have sought to express my evolving philosophical worldview through musical composition. For over thirty years I have been creating functional and utilitarian music; for education, church and community; for choirs, established ensembles and mixed consorts. Through my own yearning for meaning, I have explored a philosophical and changing relationship with the world and with my role as a creator of functional music. When I commenced my postgraduate studies in 2010, the concept of investigating the theories of process-relational philosophy and documenting their application to my journey through a musical dialogue excited me. I wanted to explore the application of my extended philosophical investigations to the mode of musical composition. Process is such an obvious occurrence that I thought that documenting this and using it to inform an investigation, would be unique. "It requires a very unusual mind to undertake the analysis of the obvious", observes Whitehead (2006), a pioneer in process philosophy.

This folio of music and exegesis therefore concentrates on process-relational philosophy and in particular the concept of 'becoming', through a practice-based investigation. A caveat needs to be established that this process of becoming is primarily

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that which is expressed in the tenants of process-relational thought over those of the postmodernist French philosophers Deleuze and Guattari, whose becoming concepts are more towards deterritorialization and inter-species connections (1987). There are inter-species elements in this research that are Deleuzian in nature. Such as where a birdcall becomes an audio recording which in turn becomes a notated transcription, which becomes a melodic motif in a composition. However, this expression of becoming is not to be confused with the ‘coming into being’ of process-relational thought.

The realization of the findings of the philosophical research is expressed through the medium of musical composition. The compositions themselves are significant in that they track the process of the emerging compositional voice. Though the music and mediums change during the process, and though the compositional voice retains its qualities of ‘inner stillness’, autoethnographical elements as musical ingredients, philosophical sense of ‘value’ and a traditional score-based musical craftsmanship, there is a clear line of process from a conservative conventional expression to a wider sense of the autoethnographical in that it moves away from the siblings to the environmental and ornithological finally arriving at the reinvention of the electroacoustic through traditional score concepts.

Therefore this exegesis is secondary to the primary documents, which are the findings as presented in the musical scores and recordings. Copies of these musical works and compact disc recordings are therefore presented first, followed by the Exegesis and, then the Appendices.

The practice was autoethnographical in the application of the theory of process-relational philosophy. The questions centered on whether practice-based research would

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uncover a degree of truth as to whether process philosophy is an appropriate post-modern, post-structuralist stance.

The methods used in the writing of these works and the relationship of the works to the research are discussed in Chapter 6 of the exegesis, and the critical analysis of selected movements is in Chapter 7. The evolution of the development of the practice-based research, the findings, and literature read and the musical scores analyzed, are presented in context throughout the exegesis.

Chapter 2. Process-Relational Philosophy

One thing we have learned in our contemporary world is that while we can speak for ourselves and define what is true for us, we cannot do it for everyone and for all time because we are forever limited by the relativity of our own culture, worldview and knowledge. The grand old days of universal truths are gone ... (Webb, 2007, p. 210).

This chapter presents some of the core doctrines of process-relational philosophy, and the thinking of its main exponents. Process-relational philosophy attempts to elucidate the developmental nature of reality, with an emphasis on becoming rather than being: The complex and dynamic interplay of permanence and flux as evidenced in our lives and in the universe. All things flow and there is nothing more certain than change. However, in this flow is a need for a unifying factor, as Epperly (2011) posits, flux requires “something permanent to provide a sense of confidence that our actions truly matter in the scheme of things” (p. 8). Process-relational philosophy endeavours to reconcile flow with permanence. The theory attempts to

... integrate and reconcile the diverse facets of human experience (i.e. ethical, religious, aesthetic, and scientific intuitions) into one coherent explanatory scheme. The most common applications of process thought are in the fields of philosophy and theology. However, process has also found a meaningful foothold in many other discussions, including ecology, economics, physics, biology, education,

psychology, feminism, and cultural studies. (“The Centre for Process Studies”, 2007, para. 2)

The core doctrines of process philosophy as simplified by Griffin (2001) are:

- The integration of moral, aesthetic, and religious intuitions with the most general doctrines of the sciences into a self-consistent world-view as one of the central tasks of philosophy in our time.
- Hard-core commonsense notions as the ultimate test of the adequacy of a philosophical position.
- Whitehead’s nonsensationist doctrine of perception, according to which sensory perception is a secondary mode of perception, being derivative from a more fundamental, nonsensory ‘prehension’.
- Panexperientialism with organizational duality, according to which all true individuals – as distinct from societies - have at least some iota of experience and spontaneity (self-determination).
- All enduring individuals are serially ordered societies of momentary ‘occasions of experience’.
- All actual entities have internal and external relations.
- The Whiteheadian version of naturalistic theism, according to which a Divine Actuality acts variably but never supernaturally in the world.

- Doubly Dipolar Theism.
- The distinction between verbal statements (sentences) and propositions and between both of these and propositional feelings. (p. 5-7)

Process-relational philosophy is usually associated with the metaphysical theory developed by Alfred North-Whitehead (1861-1947), an English mathematician and philosopher. Whitehead was prolific, writing on algebra, logic, and foundations of mathematics as well as the philosophy of science, physics, metaphysics, and education. As an academic, he supervised the doctoral dissertations of Bertrand Russell and Willard Van Orman Quine, thus providing a significant influence to their work in logic and analytical philosophy. The epochal *Principia Mathematica*,¹ co-authored with Russell demonstrates his prodigious knowledge in a number of spheres. In his philosophy, Dorrien (2006) explains that Whitehead,

Like Heidegger, ... took immediate human experience as his point of departure, in his case as a panexperientialist. Whitehead taught that perceiving, valuing, and remembering are structural clues to the interpretation of experience and that feeling is the essential clue to being. He was also an emergent evolutionist and dynamic organicist in the tradition of the French Philosopher Henri Bergson ... Whitehead rejected the mechanistic view of nature ... Things are complexes of motions that possess within themselves their own principle of motion ... evolution contains a

¹ A three-volume work on the foundations of mathematics and published in 1910, 1912, and 1913. It is an attempt to derive all mathematical truths from a well-defined set of axioms and inference rules in symbolic logic.

nisus (striving) towards higher levels of novel emergence, and each entity is related to all others in a living organismic universe. (p. 62)

If as the quotation indicates: Perception, value and memory are insights into experience and feelings; and experience and feelings are the structure of being, and if everything is interrelated and striving towards higher new expressions, then, this investigation is the application of that philosophy to the creation of new music.

This *process of becoming* is therefore about creating new artistic expressions out of the recent and reiterated past, as well as the artist-creator becoming a better artisan. Dorrien (2006) explains that Whitehead first presented the coming-into-being concept in his major work *Process and Reality*,

The fundamental units of reality are ‘actual entities’ or ‘actual occasions’ that realize some value and pass out of existence in the process of being succeeded by similar entities. ... Building on Leibniz’s relation of ‘perception’ to ‘apperception’ he [Whitehead] coined the term ‘prehension’ to designate the process by which an actual entity grasps another entity as an object of its experience. The coming-into-being of the subject must be accounted for, and all actual entities are simultaneously the subject that experiences and the ‘superject’ of its experience. *Process and Reality* developed a temporalist panexperiential theory of reality. (p. 63)

This exegesis is about the coming-into-being that is not isolated, but interrelated to the musician/creator bringing the subject into existence and the subject’s impact on the creator; the experience of the artist making the music, and the music making the artist. The process of becoming that is the higher novel emergence of both the music and the musician.

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Because Whitehead was a mathematician, he brought his analytical logic to his metaphysical philosophy. Thus, when he wrote about metaphysics and used the term God, he thought in terms of value. Herstein (2007) points this out in his article:

[Whitehead] argued that, “The purpose of God is the attainment of value in the temporal world,’ and ‘Value is inherent in actuality itself” (RM 100). Whitehead’s use of the word ‘God’ in the foregoing invites a wide range of habitual assumptions about his meaning, most, if not all, of which will probably be mistaken. The key element for Whitehead is value. God, like arithmetic, is discussed in terms of something which has a purpose. On the other hand, value is like being religious in that it is inherent. It is something that is rather than something that is used. (The Metaphysical works, para. 7)

In this investigation, the process of becoming conception of reality is imbued with the notion that there is a non-theistic yet ‘something other’ dynamic contributing to the forward thrust of the universe. The philosophy also aligns with the second law of thermal dynamics (the arrow of time), evolution, and concepts of process. It posits that there is a force in the creative now that presents an initial aim towards which things either respond, or not. In this sense, there is the potentiality for a world where:

Every actual entity, whether of a human mind or an electron, begins with an experience of the past world and also an experience of those possibilities relevant to its own becoming ... While the role of God is partly one of helping to create an ordered cosmos, it is also to generate novelty and to enable self-creativity. Hence, God’s activity gives rise to the Heisenberg uncertainty principle in quantum physics, to life understood as the capacity for significantly novel responses to the world. (Mesle, 2008, p. 103)

“As a primordial reality, [writes Dorrien (2006) quoting Whitehead] ‘God is the unlimited conceptual realization of the absolute wealth of potentiality’ ...” (p. 64).

This investigation is practice-based research that applies an understanding of the postmodern, process-relational philosophy through an autoethnographical investigation documented as a musical work: A personal observation of the process of my siblings’ becoming, in terms of their initial origins in a restrictive religious environment. Interwoven into this research is the hypothesis that autoethnographical observations will influence the creative task in a positive manner to stimulate a higher level of musical expression as part of the process of becoming. It is an investigation into becoming a better composer, through externally sourced sounds and methods as a stimulus to the creation of music of a new entity. That the use of ornithological and ecological data to create music has resulted in an emergent ‘voice’, different to pre-candidature material.

The intention is to “give rise to a concept of creativity as a state or process of growth” (Greirson, 2009, p. 18) through introducing a provocative: An external stimulus to break one out of their rut and to approach a task from a different angle. De Bono (1991) has written about the logic of provocation to create a “different way of looking at the same thing”, (p. 282) a lateral approach to problem solving. “A provocation ... lies outside our normal experience patterns. We are forced to leave those patterns ... to a new pattern and so create a new idea” (p. 15). The new patterns in this investigation derive from the autoethnographical observations, birdcalls and the application of process-relational philosophy.

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The autoethnography was used to create a set of musical variations on a theme, where each individual in the cohort had a work created that spoke to the observations made, in an artistic manner. The ornithological and ecological sounds were to function as the initial stimulus, the raw data used to derive the information required to create new musical works with a neoteric edge.

This chapter has shown that the focus of this investigation is the application of process-relational philosophy to the concept of creativity as a process of growth. It demonstrates that all reality is in process and that an underlying dynamic contributes to the forward thrust of all creation. If this is true, then my being active in the creation of new knowledge in the form of new music should result in my compositional voice developing beyond what it was at the start of the candidature. There should be a newly emergent voice evident in the music.

Figure 2.1 displays a diagram of the thinkers and literature encountered and studied that contribute to process-relational philosophy. For the sake of simplicity, such a flow chart omits other important contributors (that were encountered and read in the literature) such as Kierkegaard, Heidegger, Newton, Spinoza, and theologians Loomer and Tillach.

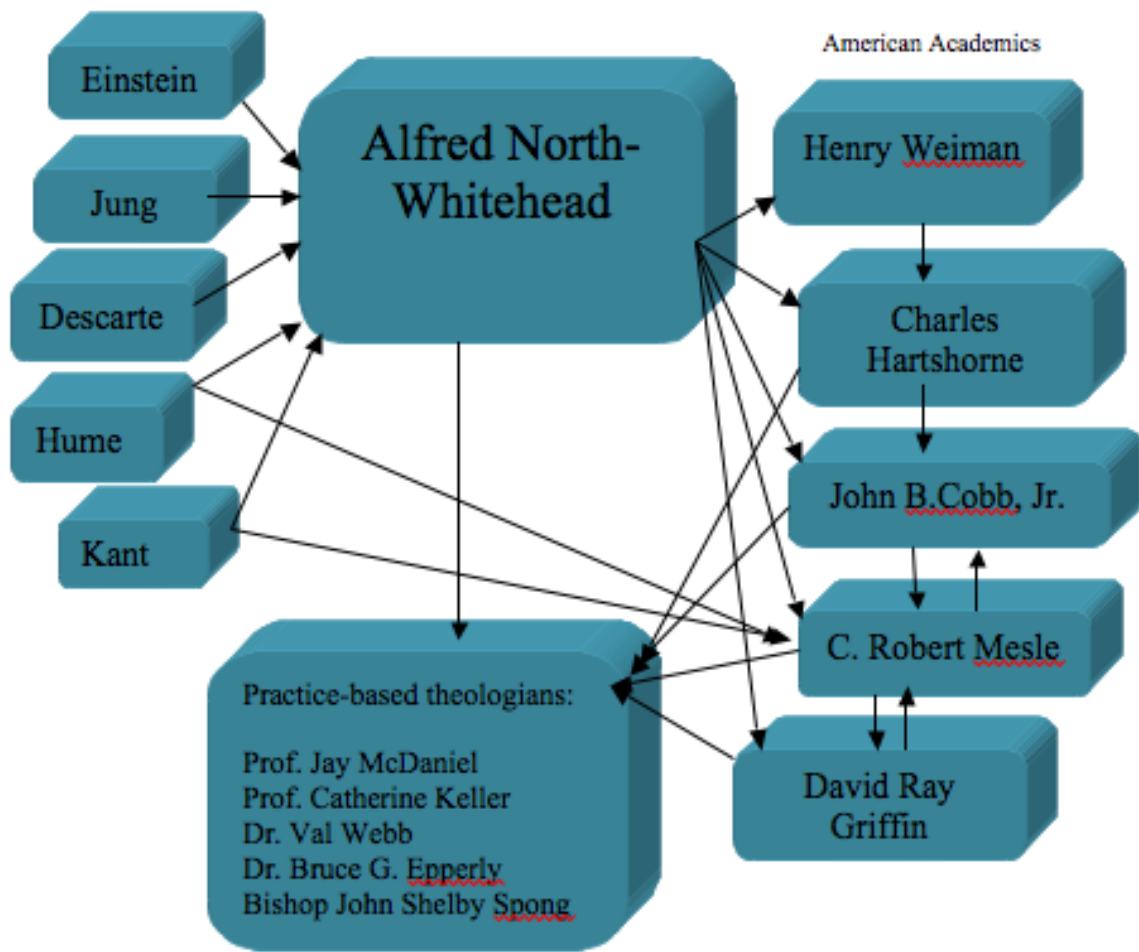


Figure 2.1. *Simplistic diagram of contributors to process thought.*

Chapter 3. Autoethnography.

The focus of this chapter is a validation of autoethnographical research and how it applies to this investigation. I will link this methodology to the ethnography and the psychological problems experienced by individuals in restrictive religious groups, and this exegesis will show how the music composed is an authentic and authoritative commentary on the group's process of becoming. This is what Ellis (1997) advocates quoting Jackson (1989, p. 17) in her argument: "Our understanding of others can only proceed from within our own experience, and this experience involves our personalities and histories as much as our field research" (p. 123).

The autoethnographical investigation is a narrative that proceeds from a qualitative and subjective experience of my ethnographic family. As a composer, music is the most appropriate medium in which to record my findings, as Bartleet and Ellis (2009) explain:

This is how music and method come together in their goals: Autoethnography with its roots in systematic ethnographic methods reaches for feeling, evocation, and embodiment in its narrative presentation, and what it asks of the reader. Music provides an exemplar for how to do that. Music has both feet in the creative arts, in feeling and evocation. As it reaches now for a way to explore itself and add the personal to the professional, it turns to autoethnography to pave the way (p. 13).

In my autoethnographical investigation, the subject and the object intertwine. I am the anthropologist who is also part of the ethnography. As an integral part of the group's

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relationships, I bring a depth of cognitive authority to the experiences of the family and the individuals in the group:

As mentioned previously, the intention was that this task would benefit my developing compositional voice, by stimulating me to create in genres that I had not previously engaged in. As Greirson (2009) observes:

If one is to undertake creative work there is an implication of new appearances as a fundamental characteristic of the process. This might mean inflecting the old with innovative characteristics or expressions, discovering new relationships, or working through practical action to invent ... imagine an idea ... sound or performance (p. 18).

The intention included the hope that this new music would bring understanding to the philosophical process of becoming as witnessed in my family. The focus and questions behind the autoethnographical investigation were:

- How were the individuals of my cohort affected by their foundational heritage of Christian fundamentalist absolutism?
- What emotional and psychological outcomes resulted from their awareness that their heritage did not equip them to live in a secular relativistic postmodern society?

These questions were fundamental to understanding the dislocation and trauma of becoming something other than their fundamentalist, evangelical, Pentecostal, apocalyptic and Christian heritage. This upbringing isolated them from the wider community, rejected mainstream culture and questioned the truth of any cognition that was outside their

particular faith position. The psychotherapist Jim Moyers (1999) in *Psychological Issues of Former Members of Restrictive Religious Groups*, an article posted on the website earthlink.net, discusses the damage of emerging from such a group:

Many, especially those who had been intensely involved with their religion, experience what has been called the "shattered faith syndrome" (Yao, 1987).

Having lost faith in what was once a primary source of meaning and guidance, the former believer feels lost and overwhelmed ... Estrangement from the community of believers, the focus of social life within many such groups, will compound the sense of isolation and despair that often comes with the loss of one's faith.

The psychological effects of membership in a restrictive religious group can persist long after the outward severing of ties. Ex-members may experience a chronic sense of dissatisfaction coupled with difficulties in finding new sources of meaning and direction. Authoritarian groups encourage the distrust of one's own judgment. Many former members despair in being unable to recapture the certainty that came with unquestioning acceptance of the group's teachings. Fundamentalist doctrines often emphasize human imperfection, maintaining that there is no possibility for doing good without the assistance of divine grace which alone can render an individual acceptable to God. Belief that pride in oneself is sinful may be internalized as a persistently negative self-image. Sexual inhibitions, compulsions, frustrations, and guilt tend to linger long after negative beliefs about sex have been consciously rejected. Having been taught to regard every impulse as potentially evil, the former believer may have little capacity for spontaneity and lack viable means for genuine self-expression. Conditioned distrust of the world outside the community of

believers coupled with the experience of disillusionment with teachings that once seemed infallible can present a serious obstacle to joining any group or making lasting commitments (para. 2-3).

These dysfunctions are present to some degree in the subject group. Only two of the cohort have sustained lasting relationships with their original partners. Some have had addictions and substance abuse problems, while others have been attracted to a religious cult.² Some have sought professional help while others have not (to date) been able to come to terms with perceived character defects –a possible residual of their guilt-laden apocalyptic belief system. Though all members of the group are highly functional, in a behavioral sense, and at different levels, various family members have struggled with manic depression, bi-polar disorder, adult ADHD as well as control and boundary issues.

This autoethnography conveys some understanding of this trauma and its impact on these individuals as well as responding to the unique strengths and qualities that enabled them to rise from this difficult background. There is also a desire to express an admiration for their determination and fortitude; to acknowledge those who have come to terms with reality, and those who have not and to be a witness to their lives as seen through the lens of process thought. The other intention was that the autoethnography and the music creation would come together, that my developing craft would enable me to represent my kin with sensitivity and insight, that the use of this close source (as the inspiration for the music) would bring greater truthfulness to the process of investigation. As Knight (2009) observes:

² Two of the family were swept into the Logos Foundation Cult. One of these two explains the escapist side of this cult as being akin to the escape achieved through drug abuse.

Moving closer to the source of your inspiration. Removing obstacles, psychological and technical so you can speak through the music with your own voice, and so that your culture and social environment can also find a way of speaking through your music (p. 73).

The form Theme and Variations was chosen to allow each individual to be represented artistically. The work utilizes a simple folksong as its theme. There is a movement depicting each sibling as well as a final movement that brings together all the themes variations. There are two ‘behind-the-scenes’ movements that represent the parents. Though these two movements are not included in the overall work, they are referred to and quoted from in the variations. In this way the genes of the parents are exhibited in the offspring.

Authenticity of representation was ensured through feedback and adjustment to the documentation. All of the living³ members of the family except for one (due to difficulty in location) listened to and commented on all of the musical sketches. This was to gauge their response and check the accuracy of the personifications. It became apparent in the early stages that the observer’s conclusions sometimes differed to those of the subject’s self-perception. In one particular case the subject rejected a *Mazurka* (deemed accurate by the majority of those who heard the work). The subject thought that a *Mazurka* was too shallow and that a *Fugue* might better convey the complexities of their personality. Consequently, several fugal sketches can be seen in Figure 3.1. A *Slow Blues* movement depicting another, which others in the family thought appropriate, but the subject thought represented

³

The patriarch is deceased.

a phase of their life that they had left behind. This required me to up-date my observations and to make conclusions about the cohort that represented them inclusively, showing what they could not see, but what others in the cohort and I perceived.

This process facilitated a large amount of re-composition, including abandonment of many movements and the total re-construction of others. The *Passacaglia* movement was re-crafted the most. This process is discussed in greater depth in Chapter 7.

It was important to have this feedback from the group while explaining how I came to represent my observations. This diminished the vulnerability of making personal conclusions with which the subjects might have disagreed. As Behar (1996) states:

Nothing is stranger than this business of humans observing humans in order to write about them ... [It is] the most fascinating, bizarre, disturbing, and necessary form of witnessing left to us ... As a mode of knowing that depends on the particular relationship formed by a particular anthropologist with a particular set of people in a particular time and place, anthropology has always been vexed about the question of vulnerability (p. 5).

As vulnerable as my conclusion may be, they are not the product of a quick and hasty investigation. Both formally and informally, I have been at this task for most of my 56 years. Behar (1996) explains that one needs to be immersed in the cohort being studied if the knowledge, the knowing is to be authoritative. She cites Devereux's suggestion that "thirty years" (p. 6) should be the goal of any inquiry involving humans observing humans. In this investigation the duration of involvement and observation exceeded the above recommendation.

These observations documented as a musical score, *Orchestral Variations on a Famiglia Theme*, and a digital recording of this work is in the folio. Also a detailed analysis of one of the movements is included in Chapter 7. Though this work represents the initial stages of the investigation, they clearly evidence a growing sophistication and change of artistic voice, especially when one compares the first movement, the *Jig*, to the penultimate, the *Etude*.

This chapter has validated autoethnography as a method of investigation. It has shown that this method, offers a compelling and credible contribution to the wealth of anthropological knowledge. It has shown that the documentation of these observations in a musical form creates an opportunity for a flexible, discerning and subtle representation. It has shown that the philosophical stance of process thought can permeate every aspect of this research and the musical creation at the heart of it.

Chapter 4. Ornithological and Ecological Soundscapes.

In this chapter I will explain why I have used the calls of birds as a stimulus to create new music, and I will account for the presence of other ecologically sourced sounds in the scores and recordings. I will discuss the recording of the ornithological data and its transcription into western music notation, comparing it with the work of French composer Olivier Messiaen. I will disclose how new music was derived from the transcripts and I will introduce and demonstrate some of the digital signal processors (DSP)⁴ that were used in the process. The chapter will also explain synchronicity and the panentheism of process-relation philosophy as well as explaining how process thought supports the use of ornithological data.

Given the subject matter, abstract representations can be insightful:

The air was full of music. So full it seemed there was room for nothing else. And each particle of air seemed to have its own music, so that as Richard moved his head he heard a new and different music, though the new and different music fitted quite perfectly with the music that lay beside it in the air (Adams, 2001, p. 231).

As a musician and lover of ornithology, there are times when the air is full of music. Birdcalls have fascinated me for most of my musical life and sometimes, when in a sub-tropical forest, I have been surrounded by birdsong to the extent that, when I moved my

⁴ Commonly called 'plug-ins' in popular music studios.

head I heard a new and different music, fitting perfectly with the music that lay beside it in the air. This complex layering of heterophony intrigued me and I dreamt of somehow capturing it and rendering it into my musical voice. I am not alone, as birdsong has long held the fascination of many composers as well as being a realm of investigation across other spheres of endeavour, as Taylor, H. (2011) observes:

The study of birdsong, like that of the origins of music, resides outside the hands of musicologists, composers and performers. The field of behavioral neurobiology, bioacoustics, biomusicology, cognitive neuroscience, ethological zoosemiotics, evolutionary aesthetics, and biological anthropology are just some of the hybrid domains in which the biological basis of music in humans and/or birds is investigated. Clearly, not all can be cast as music, ‘music’, or even proto-music, let alone that that is where the origins of music may lie. Nevertheless, birds have been muses to composers throughout the ages (p. 1).

I began my investigation into this muse by collecting field recordings of various birdsongs and in particular, the heterophonic textures created when multiple birdcalls occur in apparent synchronicity. A H4 Zoom handheld stereo digital recorder was used to record the birdcalls before transcribing some of these recordings into western notation. New music and orchestral textures created from these transcriptions, attempted to emulate the ornithological and ecological soundscapes encountered. The intention was that the process of recording, transcribing and creating would contribute to the exploration into process thought and the concepts of becoming, as previously defined in this exegesis.

A demonstration of the complexity of the task of transcription is evident in Figure 4.1 where the writing has been lowered by two octaves from the original call to place it within the range of the treble clef and normal instrumentation.



Figure 4.1. Transcription of Willy Wagtail call. Note the presence of multiple simultaneous notes.

Transcribing the recordings and the consequent analysis of this data resulted in a greater awareness of the sophistication of this music. This knowledge, when isolated and absorbed, became integrated into my artistic emergent ‘voice’ and added to the process of becoming.

Not all transcriptions were used in the music created for this research. The utilized transcriptions are listed in Appendix A. This was a slow and painstaking task because most did not sit comfortably in the western tonal harmonic and melodic system, or conform to common practice western notation. Many birdcalls were performed with such virtuosic dexterity and speed that it was extremely challenging to capture them and transcribe them

into notation. Thus, there was always some degree of doubt as to the accuracy of the transcriptions. Trills, shakes, slides, clicks and guttural sounds that were outside the standard repertoire of ornamentations (mordents and trills) added yet another dimension to the complexity of the task. Many calls were at the extreme high end of human aural perception, several octaves above what would be playable on orchestral instruments. Some of the more lyrical songbirds, such as the Pied Butcherbird were able to produce more than 1 tone simultaneously (figure 4.2) and this created a challenge in discerning the dominant tone from the secondary. Some secondary tones were higher in pitch than the louder, more dominant tone, as in the upper-partial of a fundamental tone (figure 7.33).

Consequently, the decision was made to render some of the transcriptions of birdsongs in a slower tempo and lower pitch. This was justified by arguing that since the birds are so small relative to humans, that this process would bring the birdsong into the sphere of our everyday musical experience. O'Donnell (2004) quotes Olivier Messiaen, the famous composer and transcriber of birdcalls relating the difficulties of the task:

The bird ... sings in extremely quick tempi which are absolutely impossible for our instruments; I am therefore obliged to transcribe the song at a slower tempo. In addition, this rapidity is allied to an extreme acuteness, the bird being able to sing in excessively high registers which are inaccessible to our instruments; I transcribe the song, therefore, 1, 2, 3 and even 4 octaves lower. And that is not all: for the same reasons, I am obliged to suppress the very small intervals which our instruments cannot play (para. 1).

Figure 4.2 is an example found on the website *Olivier Messiaen.org* (Fallon, 2007.) where Messiaen realizes the birdcall with more than one note sounding at a time.

Cardinal, spectrogram and *Oiseaux exotiques*, pp. 8–9

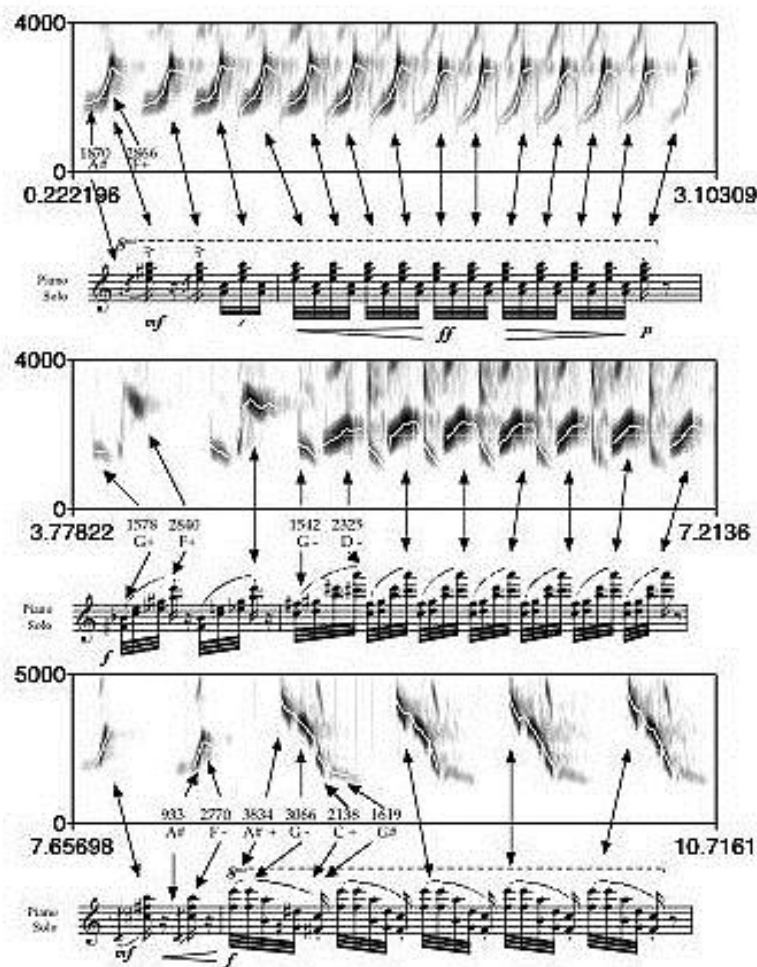


Figure 4.2. Example of Messiaen's transcription of the Cardinal's call. This illustration is from. 'The Recording of Realism in Bird Style'. In C. Dingle & N. Simeon.(Eds.) Olivier Messiaen: Music, Art and Literature. P 122. Retrieved from "Birdsong in Messiaen's *Oiseaux Exotiques*", Copyright 2007 by Robert Fallon. Used with permission.

Taylor, H., (2011) translates Messiaen's own words in which I detect a hint of doubt about the transcription process; "listened at length to the Australian bird songs and even tried to notate them" (p. 9).

I did not have access to a spectrograph but in any case felt that it was limiting in its representation concerning pitch and duration against meter. Consequently, I purchased the computer software program 'Transcribe' and although it was designed for musicians to determine what other musicians were performing on recordings (for which a score was not available), it was of great help in allowing me to understand the recorded birdcall.

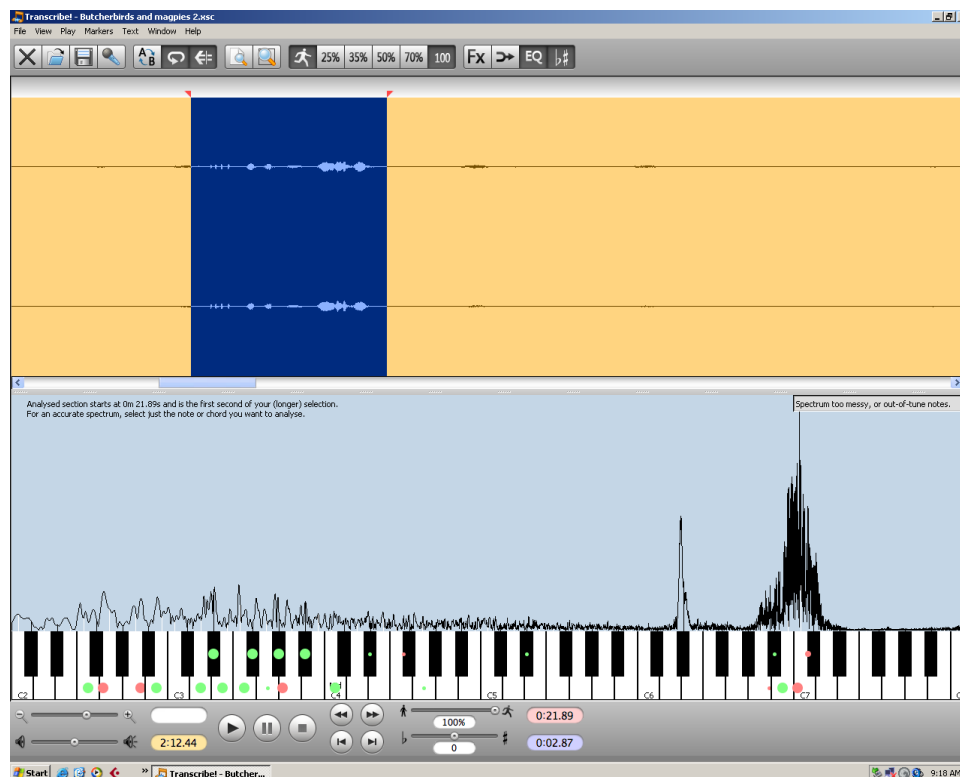


Figure 4.3. Example of birdcall in the program Transcribe.

The program allowed slowing of the performance without altering the pitch and the entering of possible meter indicators (hit points) to assist in determining the rhythm of the excerpts. As indicated in Figure 4.3, the program also allowed me to ascertain the approximate pitch of the calls. A number of pitches and overtones are present; the green dots (over the keyboard) indicate an in-tune note and the red dots, notes that are either sharp or flat. This extract (blocked area) clearly shows the plethora of notes and polarity and range within the small example.

During the investigation, research uncovered the book *Why Birds Sing; A Journey into the Mystery of Bird Song* by David Rothenberg (2005), a professor of philosophy at the New Jersey Institute of Technology. Rothenberg's work validated my subject matter and choice of methods. A composer and jazz clarinetist, Rothenberg has released a CD of his improvising in 'real time' and direct interaction with birds as they sing. As a philosopher, he intuitively touches on many aspects of inquiry that the process philosophers also engage in. What is human knowing? Is human consciousness the only analytical consciousness? To what degree do all things have experiences? These questions are directly linked to points IV and VII of the list of process-relational philosophy doctrines, as presented in Chapter 2.

Rothenberg certainly embraces the idea that birds may sing purely for the experience of making music:

What fascinates me most about this question is how it illuminates the disparities among the many human ways of knowing. Information does not really touch experience. ... Birds certainly sing to find love [a mate] and to find home [territorial boundaries], but these reasonable purposes do not deny joy. If science is

to comprehend happiness, then it should employ the skills of musicians and poets, who have used different human abilities to find meaning in the natural world (p. XI).

Rothenberg's speculations about the experience of the bird to exercise its freewill to call purely for the joy of calling (besides its tasks of territorial establishment and procreative attraction) are significant. This view aligns with the Whiteheadian view of experience and feeling, his panexperientialist notion that allows for a degree of self-determination (human or otherwise) that reflects an underlying order in all things; a rising towards beauty and greater sophistication. Within the context of a discussion on the upward trend of the evolutionary process, Griffin (2001) argues the Whiteheadian case, which purports that value implies order and order is towards aesthetics:

... the laws of physics, as he [Whitehead] understands them, reflect an aim toward value [Griffin quotes Whitehead] "All order is therefore aesthetic order" (RM 101). The laws of physics reflect the fact that the endurance of individuals such as electrons, atoms, and molecules involves the repetition and intensification of a certain kind of value "The endurance of things has its significance in the self-retention of that which imposes itself as a definite attainment for its own sake"... "What is inexorable in God, is valuation as an aim towards 'order': and 'order' means society permissive of actualities with patterned intensity of feeling arising from adjusted contrasts" (PR 244) God's aim ... is at the aim of the creation of societies that give birth to higher-level actualities capable of greater intrinsic value ... "the purpose of God in the attainment of value is in a sense a creative purpose" (RM 100) (p. 182).

The call of a bird has value. It has aesthetics and though it may have a function, as Rothenberg (2005) suggests, sometimes it may be just for the joy of it too. He notes that Immanuel Kant remarks on birdsong in his manual of aesthetics, *The Critique of Judgment*, questioning why this genre has such beauty, and why does it create a transcendental outcome:

Why, wondered the great rationalist, do we never tire of listening to the simple melodies of birds, whereas if a human were to take two or three notes and repeat them endlessly, we would soon get fed up with it? Bird song, Kant decided, was not really beautiful, but sublime ... He surmised there is something most powerful about the pull of nature's shapes and sounds; they are wild, irregular, bold, shocking and able to take us somewhere far beyond our merely human arts (p. 11).

This attraction may account for the presence of birdsong in music over the millennia. The early English song *Sommer is a cumin' in* employs word-painting for the text, 'loudy sing cookoo' and through rhythm and inverted intervals, imitates the call of the cuckoo. Vivaldi makes instrumental references to birds in *Spring* from the *The Four Seasons*, Mozart in *The Magic Flute* and Beethoven in his 6th Symphony *The Pastoral*.

The great French composer, organist and mystic, Messiaen is the musician most associated with ornithology. Burrell⁵ (2008) in his blog page says of Messiaen:

Birds are forever flitting in and out of his musical textures, in the flutes, in the percussion, in the winds. Sometimes, as in his orchestral work *Réveil des oiseaux*, or in his massive piano compilation *Catalogue d'oiseaux*, birdsongs constitute the

⁵ C. Burrell, no relation to the author.

essential musical material. He was serious about birds. “They are our desire for light, for stars, for rainbows, and for jubilant songs,” he said, and he believed that their calls were a music that manifested the music inherent in creation.” (p. 1)

To the process philosopher, “The music inherent in creation” is part and parcel of the process of becoming. As Whitehead said shortly before his death in December of 1947:

God is in the world, or nowhere, creating continually in us and around us. The creative principle is everywhere, in animate and so-called inanimate matter, in the ether, water, earth, [and] human hearts. But this creation is a creative process, and the process is itself the actuality (In Epperly, 2011, p. 12).

The intention of this research is to ‘be in’ this actuality, to consciously engage in the process of creativity and to evidence the process of becoming in my own music making.

For a period of time synchronicity became a subject of the investigation. Sometimes the complexity of the multitudinous and layered birdcalls created a side effect of its own. A type of metamusic, what Gann (2002) describes as the “unintended acoustic details that arose (or were perceived) as a side effect of strictly carried out processes” (p. 302) often encountered in the work of the minimalist composer Reich. This led to wondering about synchronicity and birdcalls, where two or more happenings occur together in a meaningful way. The Swiss psychologist Carl Jung first described the term and concept. He suggested that synchronistic events might reveal an underlying pattern. The Oxford dictionary describes synchronicity as “the simultaneous occurrence of events which appear significantly related but have no discernable causal connection” (2013). It was an observation that gave evidence to his concepts of archetypes and the collective unconscious

and implied a governing dynamic, a possible manifestation of parallel events. Zabriskie (2001) documents the discussions Jung had with the physicists Albert Einstein and Wolfgang Pauli, about “the observable and the unknown” (p. xxviii) and the possibilities of “synchronicity as a parallelism of events that cannot be explained” (p.xxx). These discussions contributed to Jung’s beliefs on the concepts of a deeper order evident on the world. These concepts influenced Cobb and Griffin to integrate them into process philosophy and theological debate (Kling, 2011).

Excited by the notion of synchronicity, I placed digital recordings of a single birdcall in a sequencing program and began to layer them on top of one another, until there were no more tracks left in the sequencing window. I then re-recorded this all down to 1 track and layered this track against itself. Soon I had dozens and dozens of the one-birdcall singing against itself. The result was unsatisfactory, a grey wash of indistinct sound.

I continued to layer them and to build up the complexity till finally there emerged a pulsating rhythm resulting from some notes being more dynamic in volume than others. Though mildly interesting, the end effect was not deemed to be musically important and a possible distraction from the main thrust of the investigation. Figure 4.4 is a screenshot of the multilayered tracks of the call of the White-breasted Honeyeater, recorded at Birdsville, Far Western Queensland.

A PROCESS OF BECOMING

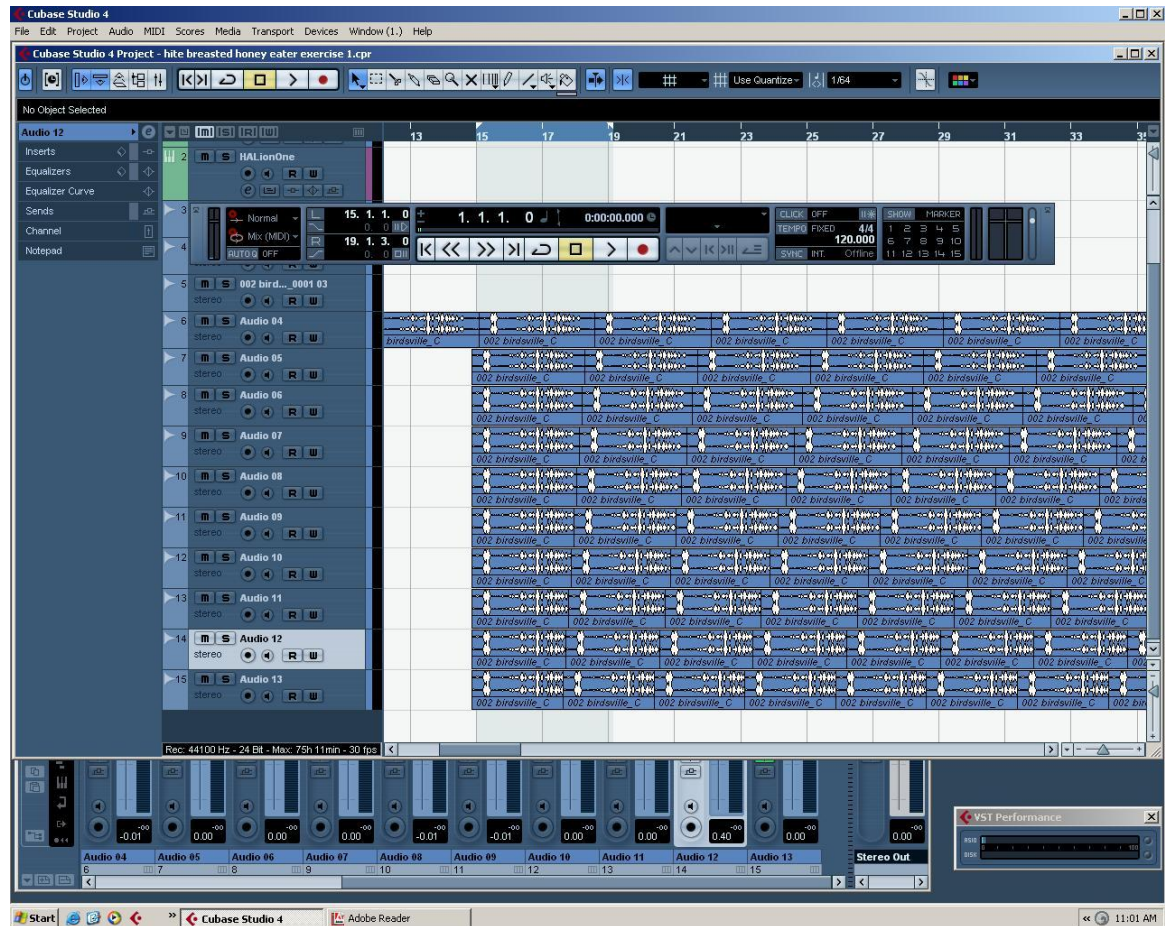


Figure 4.4. Screenshot of the program Cubase Studio. This figure shows the multiple layered tracks of the one-birdcall.

Investigating synchronicity proved a mistake, intriguing though the concept was and the hope of uncovering an expression of a greater something that brings order in the universe. To attempt an organized synchronistic event as evidence of an underlying order was a contradiction. I could not confirm the positions of the process thinker's God, whom "is the subjective unity of the universe – a vast and open mind" (McDaniel, 2000, p. 154) and their doctrines of panentheism (Griffin, 2001, p. 140) and panexperientialism (p. 355)

in this manner. It was a delusion. I realized I was trying to play God. I could not order events to create a spontaneous non-ordered event.

I viewed this error as a remnant of my own controlling fundamentalist upbringing, where God was a power-on-tap. I suspected that I still desired a link to the supernatural, which was mine to tap into, and empower my music through this discovery. This line of thinking was in conflict with the process philosopher's doctrine of a non-interventionist concept of God. Consequently, I deliberately stopped pursuing this line of investigation. If I were to return to this area, it would be to explore the meta-music, the unintended acoustic side effects.

If process thought has a vestige of truth in it, then the 'deeper order' is active in the creative present and I need only to be actively creative and open to new things, responding to the lure towards greater complexity and aesthetics for there to be an opportunity for the process of the philosophy to occur. As Whitehead stated, "Insofar as man partakes of this creative process does he partake of the divine, of God, and that participation is his immortality ... his true destiny as a co-creator of the universe" (Epperly, 2011, p. 12).

This statement is at the core of this investigation. As simple and uncomplicated as it seems, it is not an easy thing to accomplish. Being actively engaged in the present is more allusive than one tends to realize. It is easier to ruminate about the past or to worry about the future than it is to be active in the present. In my life I am aware that I have wasted much valuable time in the delusions of reliving the past with a superior outcome or dreaming of a future that requires no effort to achieve success. This may be a common enough failing, but it is a failing that distracts one from being actively creative in the

present where the ‘action’ actually occurs: Where the dynamic for change happens, where the process of becoming is.

I returned to focus on collecting field recordings, and using the transcriptions to create new musical works. I viewed this process as being the investigation and the investigation as being the process of becoming. I hoped that the birdcall motifs isolated in the transcriptions would become the motifs of larger works, the germination of greater music writing. I entered the experiment by composing for orchestral instruments in an orderly and deliberate manner. Beginning with the woodwind, followed by the brass, percussion and the strings I composed chamber and symphonic works for instrumental ‘families’, a Woodwind Quintet, a Brass Quintet and so on. These works are included in the folio and audio recordings of the same are on CD 2. A critical analysis of selected movements from these works is in Chapter 7.

During this part of the investigation and whilst I was working on instrumental compositions, I was introduced to the music and work of the instrumentalist, composer and zoomusicologist, Dr. Hollis Taylor, who has made a study of the Australian Pied Butcherbird and its appropriation by music composers. I contacted her and we exchanged recordings and compositions as well as works in progress. She was very encouraging and I was greatly heartened by her enthusiasm and interest in my music. She had a particular interest in the call of the Pied Butcherbird and had composed a work for String Quartet, *Bird-esk* that employed this bird’s motifs and rhythms as the inspirational source material. In an article for the *Journal of Music Research Online*, Taylor, H. (2011) describes the work of various composers who have specifically utilized the call of the Pied Butcherbird:

“ Henry Tate, Hugh Dixon, David Lumsdaine, Don Harper, Olivier Messiaen, Ivan Kinny, Freddie Hill, Charles Bodman Rae, Elaine Barkin, John Rogers, Mark de Brito, Ron Nagorcka, Emily Doolittle, Mark Hanson, Brett Dean, Michael Hannon and Hollis Taylor”.

I was also using this species' call extensively and it features in the *Brass Quintet*, *Becoming* for Solo Violin and Butcherbird and the *Serenade for Strings*, so it was exciting to find other living Australian composers, some of whom I knew, also being inspired by this muse. I aurally analyzed John Rodger's works for recorder, *Butcherbird*, *Jackie Winter and Friends* and *The Magpie* and listened extensively to the two CD's of David Lumsdaine's *Australian Soundscapes. Bird-esk* for String Quartet by Hollis Taylor was aurally observed but not analyzed.

Taylor introduced me to the Zoomusicology website which is maintained by the *Muséum National d'Histoire Naturelle*, Paris. As a consequence of Taylor's introduction and input, I am now listed on this site's page of Zoomusicologists, along with an excerpt from my *Brass Quintet*. The link to the webpage is given here as well as in the references:
http://www.zoomusicology.com/Site_1/Zo%C3%B6musicology.html

Robert Fallon's website dedicated to the music of Olivier Messiaen (Fallon, 2007.) provided access to resources where I was able to download spectrograph images, transcriptions and recordings and to make comparisons between the recorded birdsong, the spectrograph and Messiaen's transcriptions of the same.

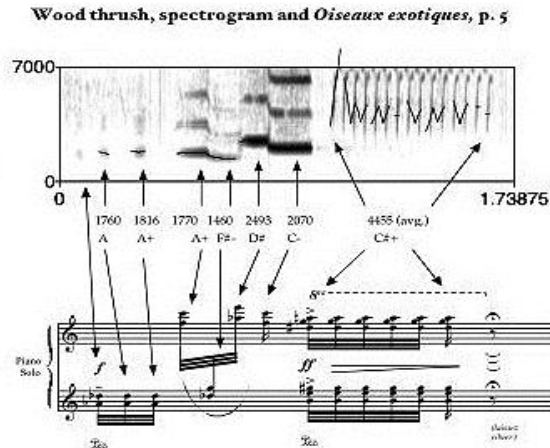


Figure 4.5. Spectrograph image and Messiaen's transcription. From. *The Recording of Realism in Bird Style*. In C. Dingle & N. Simeon.(Eds) *Olivier Messiaen: Music, Art and Literature*. P 122. Retrieved from "Birdsong in Messiaen's *Oiseaux Exotiques*".

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It was encouraging to find myself facing the same struggles and doubts that Messiaen had also faced and to realize that I was not alone in taking birdsong and using it as a creative stimulus and starting point for my investigation, an application of the philosophical understanding of the process of becoming and my own emerging compositional voice.

Confident in the transcriptions I had made, I then moved to using the transcriptions to isolate motifs with the intention of these being thematic material for the construction of larger works. These works are discussed in detail in Chapter 6 and an analysis of a movement from each is given in Chapter 7. For the purpose of continuity, the following extract from my journal entries (Burrell, 2011) on the analysis of the first movement of the *Brass Quintet* is given. The opening motif of the movement is altered from the original transcription.

Pied Butcherbird



The first large changes occur on the third and fourth beats where the glissando and grace note are removed. The leap of a rather sharp augmented fourth in the second measure is replaced with a leap of a fifth, from the dominant to the supertonic, resolving downward to the tonic. This is also an echo of the descending slurred figure of the first measure. The florid passage notated with a trill sign that leads into the descending demisemiquavers. This is all transposed down from the A flat to B flat (remembering that the trumpets are scored up a tone).

Trumpet opening of Brass Quintet.



The second trumpet adds presence to the unison notes, harmonic strength to the octaves, sixths, fifths and thirds whilst supplying a reference point against which the dissonance can sound and resolve (Burrell, 2011).

A PROCESS OF BECOMING

This chapter has demonstrated the validity of collecting field recordings as hard data and the worth of transcribing the same: how the manipulation of the musical motifs identified in the transcriptions is used to create new works for instrumental ensembles, and how the recordings, transcriptions and new works represent a thorough investigation into the application of process philosophy. The chapter has presented how the call of a bird is a bona fide expression of the bird's existence, experience and mind; that the bird's call is a contribution to the reality of the universe; that this sound is a worthy expression of creation's process of becoming, and can be used again in another process as part of my own process of becoming a composer with a new-emergent voice.

Chapter 5. Electro-acoustic Music and the Emergent Voice.

In this chapter I will expound the transition from a purely instrumental and vocal composer to that of the newly emergent voice of a combination of electro-acoustic and orchestral composition. I will discuss my personal doubts and fears, and how I overcame these suspicions through the application of process-relational philosophy.

After the orchestral variations on a theme, and as an act of discipline and focus, I methodically worked through the instruments of the orchestra creating works derived from ornithological material for woodwind, brass, percussion and string ensembles. Having completed this aspect of the investigation I turned to rendering works in an electro-acoustic genre.

Previous to this research, in the mid 1990s as part of my work in secondary education and also privately I had engaged in music technology. Beginning with the Steinberg range of products (Cubase Score and Cubase VST) and later including the Finalé notation and sequencing software, I created midi file performances of my own compositions and arrangements as well as notated scores for ensembles and choirs.

In 2001, I attempted to introduce myself to digital signal processing (DSP) and purchased Cubase Studio and Reason/Ableton Live. I struggled with this change from midi to VST and did not succeed in creating anything of worth, nor did I master the required techniques.

In 2007, with a change to another school, I was introduced to SonyAcid, a user-friendly sample and loop-based program. I was suspicious of its immediate results, finding that although students could achieve an end product of very high standard, they had very

little theoretical comprehension of the musical elements used to construct the samples and loops. It seemed to me that the program allowed the students to create a layered musical event without knowing what music really consisted of. It was not composition proper; it was ‘drop and drag’ musical montages. For example, students could identify a drumming sample, but did not know if it was in quadruple or triple meter. Some students could not discern whether they were hearing a drum kit or an Indian tabla. At a surface level they could identify style, but they could not identify the snare drum from the floor tom. They were not capable of creating their own loops and samples.

Wanting to build on the students’ positive response to their apparent success in this program and the quality of production in the end product, using the program I taught myself how to manipulate digital data. I used the confines of the program’s loops to teach my students harmony, rhythm pattern and meter identification, motif development, and rudimentary counterpoint. I also began to integrate musique concrete methodologies into the curriculum. This was the beginning of my electro-acoustic investigation.

When I began my postgraduate studies, I reverted to the certainty of notated music, despite my principal advisor being a noted electro-acoustic composer. I did experiment in the medium, in the afore-mentioned attempts at synchronicity and created a few small works in SonyAcid8 as examples of musique concrete with a birdcall as the source material.⁶ However, it was not until late 2011 that I purchased the digital audio workstation (DAW) program ProTools9 and began to work within a DAW using digital signal processors (DSP) in earnest.

⁶ See Red Wattlebird in appendix B

A PROCESS OF BECOMING

This reluctant departure from orchestral instruments to digital data was gradual and commenced with works that were a combination of the two. The feeling of easy and contentment with the medium did not occur till early 2012.

The process of ‘letting go’ of the familiar ground of notation and orchestration and venturing into the new ground of digital manipulation was emotionally and intellectually challenging. I was afraid of losing my compositional voice. I was afraid of failing. I questioned the validity of the medium. When another composer -whom I respected- labeled the genre as a case of ‘The Emperor’s New Clothes’, I found myself nodding in agreement. Did the cut and paste, the stretch and twist, the morphing and phasing of the digital data really stand up beside traditional compositional devices? Could the sending of a signal through a processor to alter its sound and presence be compared to the dovetailing of orchestral timbres? Could the techniques be aurally discerned and visually analyzed? How did one create modulation, episodic material, polyphony, sequences, inversions, augmentations and ornamentations?

Doubts dogged me. Though I had used the genre in my teaching, deep in my psyche I still did not believe that it was music proper. I did not want to be another creator of seemingly endless soundscapes of slowly unfolding layered musical events. These barriers of fear and doubt became a personal struggle and at one point I thought that my best option was to change advisors; to move over to a composer and tutor with instrumental emphasis. Eventually, I chose rather to trust in the process and enter into an act of faith; to see what would happen if I persevered with the medium. I viewed it as a ‘letting go to gain’, a ‘dying to grow’, a ‘denial of self’ so that a ‘new self’ might emerge, in short a process of

becoming something ‘other than’ what I currently was. My sense of being out of my depth and feeling uncomfortable remained.

Cautiously I created the work *An Ear to Hear* for solo flute, designing the work to be performed live, to a backing soundscape (CD 2 Track 22). In essence, this was a work that could be performed with the soundscape or without it, and as such was not a true work of the electro-acoustic genre. During the creation of this work I analyzed *Syrinx* by Debussy and listened to a recording of a performance of this flute solo work with a soundscape accompaniment that was posted on the website ‘The Music of Nature’ that is maintained by Lang Elliot. Elliot (2001) explains that he planned to bring together a flautist and a soundscape at a *Nature and Music Festival*:

I’ve been invited to participate in a “Nature and Music Festival” in mid-February in Wheeling WV, sponsored by the Oglebay Institute and the Wheeling Symphony Orchestra. I will be giving a talk entitled “The Music of Nature: Soundscape Recordings as Art Forms.” I’m also hoping to collaborate with the Orchestra, or select musicians, to do a mix or two of music with the sounds of nature.

One idea is to pair up with a flautist who would perform Claude Debussy’s *Syrinx*, which I believe was inspired by nature. The piece was originally called “*Flûte de Pan*”—a sad and evocative tune that Pan (the god of forests and fields) plays on his pipe just before his death. My choice for the background is *Thrush Hollow*, featured in an earlier post. This springtime soundscape from North Carolina features a bubbling brook and the songs of two distant Wood Thrushes. I think it mixes very well with the flute solo: (2011)

Listening to this mix I knew that I could do a similar thing but with an instrumental work of my own. Elliot (2011) opened his work by establishing the soundscape and creating a setting that encourages the listener to imagine the scene; the brook bubbles, the thrush calls and one can relax into the aural landscape. The flute enters, and one can feel that one is sharing the space with a kindred spirit, where the music of the flute expresses one's inner feelings in a manner that is unable to voiced. I thought that this was an attractive use of electro-acoustic material and live performance, a worthy start to my investigation in this genre. I initiate my composition with a mode of limited transposition (semitone, tone, semitone; semitone, tone, semitone; semitone, tone, semitone) that I had uncovered when composing the orchestral variations, and used in the *Contemplation* movement of the *Orchestral Variations on a Famiglia Theme*. Figure 5.1 shows the mode of limited transposition.

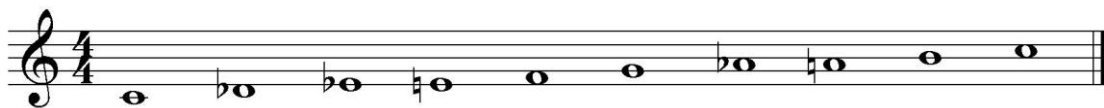


Figure 5.1. Mode of limited transposition

The initial audio of twittering forest birds employed some editing and signal processing to create a stereo image and to filter ambient background noise. The flute work was then composed, placed in the DAW, then the editing of the flute composition and the electro-acoustic recording were brought together.

In summary the melodic material was a mix of the mode and elements of various birdcalls. The development of the melodic material from the birdsongs was influenced by

the electro-acoustic support. This is discussed in some detail in the critical analysis in Chapter 7.

This aspect of the investigation required me to bring my instrumental composition skills to the medium of electro-acoustic music. The soundscape and the flute work were created separately, before being brought together in the DAW. The flute motifs were subsequently fragmented moved them in relation to the soundscape, and the soundscape reinforced where more presence was required. This work proved to be a worthy investigation and showed to me that there was a potential for more development in this medium and that I need not be afraid of losing my voice in this style of composition. The Greirson (2009) quote is therefore worth repeating:

If one is to undertake creative work there is an implication of new appearances as a fundamental characteristic of the process. This might mean inflecting the old with innovative characteristics or expressions, discovering new relationships, or working through practical action to invent ... imagine an idea ... sound or performance (p. 18).

A much more challenging task arose, a work for solo violin that interacted in live performance with the calls of a Pied Butcherbird. Conceptually the birdcall would sound and the violin would respond in imitation and development. This work titled *Becoming*, would develop into a contrapuntal texture of enhanced and altered birdcalls in duet with the violin (CD 2 Track 23).

Building on the skills gained in *An Ear to Hear*, I composed a supporting accompaniment, a soundscape of small birds twittering, over which I entered the

Butcherbird's calls. I placed this audio file in the notation program Finalè. Against the audio recording I crafted a series of violin responses. It was at this juncture that several challenging questions arose:

- a) How much literalism can there be in the violin response to the birdcall? How much exact imitation? How much pitch alteration to accommodate the human ear? What musical meter should I set the response in, keeping in mind that the audio is not in any meter?
- b) How much subconscious and conscious evolution and derivation (inversion, retrograde and retrograde inversion, intervallic and rhythmical diminutions and augmentations, sequences, countermelodies and other western art music compositional devices) to allow?
- c) How much abstract and purely artistic license to employ (superimposing tonality and/or modes and scales, superimposing perceptions and emotional responses as subjective artistic expressions)? Finally,
- d) How much of a farrago, a medley and synthesis of the elements and techniques of A, B and C are appropriate and possible?

It is difficult to answer these questions or to summarize this aspect of the investigation. There were no clear-cut, easily discernible answers. In effect, the product is the answer. The investigation embodied the search for a suitable dialogue or process that incorporated birdcall into the composition as well as allowing it to be interpreted as a source. There were aspects of musique concrete as well as the metamorphosis of what grew from it: a living in symbiosis. Running parallel to this was the effect of the duet and how

the musical structure was unfolding. The struggle was apparent in my journal entries at this time; summarized here:

The one cannot be created outside the context of the other. The written response must be placed beside the initial call and the two compared. Is it right? Does it make musical sense? Do I like it? Is it idiosyncratic to the instrument? Is a particular birdcall ornament best represented with a trill or a mordent? Are those quick notes best realized as spiccato? That melancholic intervallic motif; how many times can I repeat it and exploit it before the human ear tires of hearing it? This is one of the more taxing areas of the research where much testing and experimentation, writing and listening, discarding and re-writing is undertaken (Burrell 2011).

The audio recording of the birdcall itself was very complex, as Australian composer David Lumsdaine (1996) has observed about this particular avian species:

The Pied Butcherbird is a virtuoso of composition and improvisation: the song develops ... through varied repetition ... [and] it articulates the harmonic course of its song with microtonal inflexions, or places of cadence with a bird's equivalent of tremolandi and flutter-tonguing. ("*Australian Sound Scapes* CD")

Once again the investigative process was entered into: The questions of literalness, evolution and derivation, abstraction and artistic license, and how much of a synthesis of the elements and techniques mentioned was efficacious. Then there were the factors and tools of the DSP, and the various filters. There was the use of an equalizer, to reduce unwanted frequencies and noise, as well as enhancing others. There was the creation of a stereo image through panning and placement. There were the elastic properties which allow

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the audio to be stretched or compressed to adjust its place in the mix, or to alter the duration of a pitch. There was the use of reverb to create ambience and presence in the performance. Then there was the fragmentation of the events to create stuttering effects and echoes. All of these techniques added to the layers of complexity, which did not come after the first two had been completed, but had to be considered, included and polished alongside the other elements.

A screenshot of the DAW showing the various tracks and the interplay between the audio of the birdcall and the MIDI of the solo violin is provided in Figure 5.2. I found the midi function in the DSP to be very limiting and difficult to use and consequently the entire notation work as completed in Finalè.

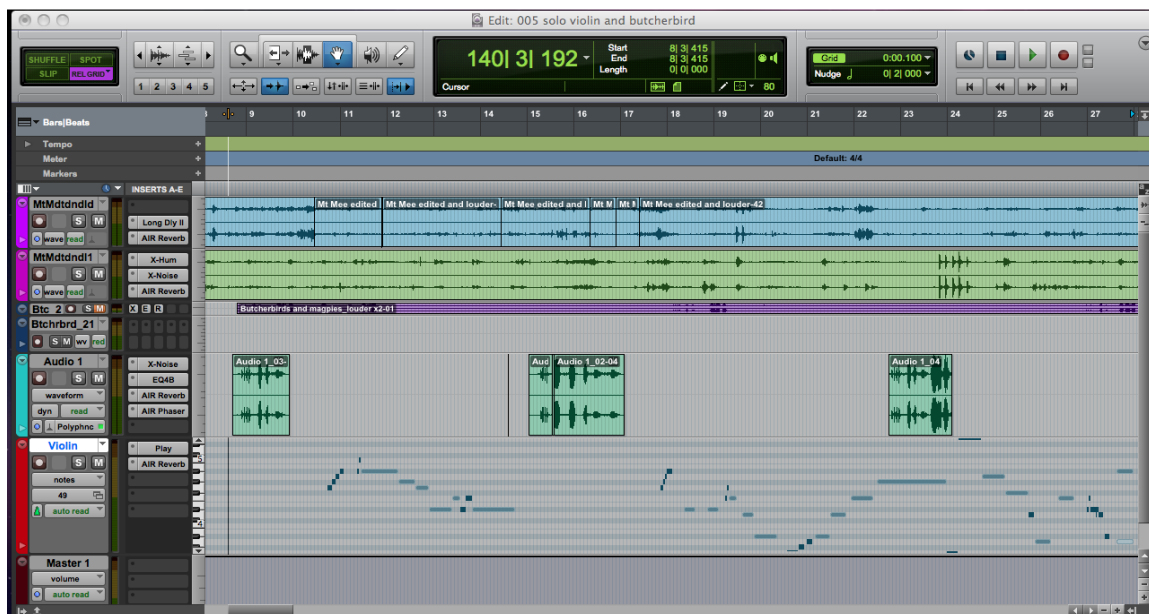


Figure 5.2. A copy of the DAW window for An Ear to Hear. Tracks 1 & 2 Soundscape of twittering forest birds. Track 3 Butcherbird reference track from which excerpts are taken. Tracks 4 & 5 birdcall motifs. Track 6 midi track of solo violin.

Moving pitches and combinations of intervallic groupings, altering rhythms and creating augmentations created new possibilities but new difficulties as well. Every time the audio was changed, I had to hold in my mind what the violin would do in response and interplay. Transferring the audio to the notation program and realizing the violin part, would initiate more sophisticated inventions and I found myself moving between audio and notation programs, in a time-consuming, labour-intensive whirl of creativity. It was hard work, but exciting; difficult but enthralling, because in it I perceived an emerging new voice: the active process of becoming something other than what I had been initially. The score for *Becoming* and the audio file is in the folio and on CD 2 Track 23. This work is analyzed Chapter 7.

Once I entered into the creative process, I felt held back by my limited knowledge of the software, and I had trouble getting the DAW and DSPs to do what I could hear internally. The Internet proved helpful. My investigations brought me to Hip Hop artists who used the same DAW (ProTools9). These generous individuals shared their knowledge of the software freely through videos posted on YouTube. The rhetoric was consistent with the genre and amusing at times, but the content was practical and easy to understand.

During this time of struggle and personal growth, I presented a paper at the Griffith University Cultural Research Postgraduate Symposium on the Gold Coast. There I met Steve Reinthal, composer and lecturer in digital music technology (particularly ProTools) at the Griffith Film School. We decided to collaborate and entered the *Tropfest* film score competition. I was not used to working collaboratively with another composer, however our specializations were mutually complementary. Steve brought technological studio recording prowess to the tasks whereas I brought the orchestral timbres and harmonic and

contrapuntal depth. Through this collaborative endeavour, I was able to overcome many of my fears and lack of knowledge. He showed me how to manipulate the audio data and through this process I realized I could take an orchestrated piece, something I had created, and process this orchestration to create a new sound and enhanced expression. He liked the way I thought about musical happenings and how I wanted to create overlapping contrapuntal textures using the audio data; how I could take a small musical event and develop it in an organic manner to create a greater expression of the original idea. It was very exciting to hear a new possibility, a new orchestral timbre, a new augmentation, a new polyphony. The process of becoming had turned a corner.

The subsequent works created in this genre were a further departure from the control of notation. In the *Becoming II* series of compositions, I created a soundscape of less-distinctive birdcalls and other ecological sounds, all recorded in the dead of night. Over this, I placed the pre-dawn callings of a lone Grey Butcherbird. To this calling of the Butcherbird, I improvised a piano response that did not enter into an interplay or imitation, but rather complemented the overall texture. This piano improvisation was influenced by the music of sacred minimalist composer Arvo Pärt, particularly his works *Für Alina* and *Spiegel im Spiegel*. I had analyzed and performed *Für Alina* and the influence of this work is apparent in the piano improvisation in *Becoming II*. Consequently, the piano improvisation is non-rhythmic, in a 2-part texture with mild dissonances. Figure 5.3 shows the sketch for the piano improvisation.



Figure 5.3. Sketch for piano improvisation for *Becoming II*.

I invited other musicians to improvise a response to the audio of the soundscape, Butcherbird call and piano improvisation. In a day-long recording session, my advisor and I recorded a classical clarinetist, a traditional erhu (Chinese violin) player, an operatic soprano, an acoustic steel-string blues and urban-folk guitarist, and an avante garde jazz saxophonist. They were recorded in separate takes and on separate tracks, with the intention that I would place their improvisations in the DAW, subjecting them to its inherent capabilities, manipulations and the influence of DSPs. These were then edited and the order of events changed and generally experimented with.

Some of the improvisations (such as the first take of the clarinetist) were deemed to be of such high quality that they were not altered at all. In contrast the saxophonist's improvisations provided some experimental responses, which included seemingly random

events, including extraneous sounds from hand-held percussion instruments. These were layered on top of each other to create a very original and complicated contrasting movement within the cycle of works. The soprano vocalizations were placed together with the erhu, and the tension between the two differing cultural traditions and styles helped to fashion a movement that was the most individualistic work that I had ever created.

Through this investigative process it became clear that I was working in a vastly new place and compositional voice. I was no longer the originator of the source material, but the manipulator of the elements. A parallel might be drawn between the poet working through text to create emotive response and the visual artist working with already mixed colours, blending them to portray another. Words and paints already exist functioning as descriptors and fragments of language and primary colours. The poet and the artist blend, and brush these materials to create a new artistic outcome. I was fashioning the musical improvisations to say something other than their original. Like Gavin Bryars' early electro-acoustic work *Jesus' Blood*,⁷ I was changing their context and place. I was remolding their original colours and statements to make new observations and vistas.

I re-crafted the supporting soundscape and birdcall. In some of the movements I removed the piano improvisation; more contextual alterations and outcomes. This was like painting the same landscape at different times of the day when the light has a changed hue. The growth from the straightforward, traditional theme and variations, to this sophisticated synthesis of electro-acoustic manipulation of sound sources; with improvisational input is evidence of the developing craft of my compositional skill and the overall process of

⁷ Where the recording of a tramps' singing is looped to create a greater work for strings, brass and percussion.

becoming. The suite of works *Becoming II*, is on CD 3 Tracks 1 – 3, and one movement from it is analyzed in Chapter 7.

The final works of the investigation are absolute electro-acoustic music (CD 3 Tracks 4 – 6). Recordings made in the district of Gilgandra, New South Wales (at the cemetery where my father is buried, and on my cousin's nearby property, and at the Flora and Fauna Reserve) were used to create a suite of three movements. These works contain instrumental orchestration (used as a source material),⁸ birdsong and musique concrete examples, layered in a polyphonic texture against a backdrop of ecological soundscapes; and recorded voices of family members morphed into unrecognizable rumblings, used to initiate chordal harmonies. These final movements exhibit all my craft and investigation, the orchestral skill and contrapuntal tendencies, the harmonic knowledge and melodic lyricism, the autoethnographical observations and the comprehension of process-relational philosophy. One of these movements is analyzed in detail in Chapter 7.

This chapter has demonstrated my transition from a purely instrumental and vocal composer to one who can synthesis that tradition as well as the electro-acoustic genre into a new personal and individualistic expression.

⁸

Fed through DSPs to stretch their rhythms and to alter the timbres.

Chapter 6. Methods of Writing and their Relation to this Research

In this chapter, I will list the methods of writing, briefly discussing each separate work and their place in the investigation. Citing examples by other composers I will justify the use of theme and variations as a method of conveying the observations of the autoethnography, and link this specifically to the Enigma Variations of English composer, Sir Edward Elgar. I will elucidate the link between autoethnographical observations, external stimuli (in this case birdcalls) and the notions of becoming as presented in process-relational philosophy. I will justify the existence of each musical work and show its place in the investigation.

The primary outcome in this investigation was the creation of new musical works. To that end, there was also the collection of hard data⁹ in the form of ornithological and ecological audio recordings and the transcriptions of particular birdcalls. In support of the compositions; an exegesis expounds the theoretical support for the research, and a critical analysis of some of the musical movements from the larger musical works. The music research consisted of the following:

- Orchestral variations on a theme.
- Ornithological recordings and transcriptions.

⁹

The term hard data here represents untreated original field recordings.

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- Chamber music works for orchestral instruments derived from birdcall motifs.
- A choral song cycle that employed ornithological influences as well as concepts of process philosophy.
- Concert band and saxophone orchestral works incorporating birdcall motifs.
- Works composed for live performance and electro-acoustic works derived from birdcall motifs and incorporating ecological soundscapes.
- Electro-acoustic and musique concrete works using birdcalls, ecological soundscapes and pre-recorded improvisations.

A brief description of each musical work with the justification for its inclusion is given below.

The Orchestral Variations on a Theme.

The investigation into the process of becoming, the development of a compositional style and voice, began by composing a set of orchestral variations on a theme. This work reflexively and creatively responded, in a subjective and autoethnographical manner, to each sibling in the researcher's family, of which there are six brothers and one sister. The intention of this task was to aid in the process of "self-making", as Greirson (2009) explains:

Implicit in the processes or events of knowing are inevitable reflections on processes of self-making through creative actions and activities as one is mediated by, and opens up to one's research process to the point that one becomes a subject (p. 18).

The theme was crafted as a simple, one verse, folksong, that any parent might sing to a toddler. The primary content of each variation is derived from this original folksong material. There are two 'behind-the-scenes' variations (chorales) that represent the parents. These are quoted and referred to in the variations. There is no variation representing the author, as he is present in all the works. There is a grand finalé movement, bringing all the variations together and shedding more autoethnographical insights on the whole through the interplay and relationship of each variation to the others (Folio and CD 1).

Justification for Theme and Variations as a compositional form.

Theme and Variations has existed as a form in various permutations for many centuries. Composers struggling to compose works longer than a simple song began to repeat the verses with ornamentations and differing accompaniments, as clearly seen in John Bulls *The King's Hunting Jig*. Similarities can be drawn with the way early jazz musicians used what is referred to as 'chorus form', to take a short chorus and 'string it out' by engaging each ensemble performer as the principal improviser for each repeat/variation until a final chorus of collective improvisation.

Renaissance composer Palestrina's famous *Missa Papae Marcelli* is a work in which the major movements are built on a simple motif of the notes G-C-B-A-G first heard

in the bass part of the *Kyrie*. In this vocal masterpiece, complex complementary melodies encircle the motif and thus a larger work evolves from a simple idea.

Elizabethan composer William Byrd created an advanced work in this genre for the virginal from the secular tune *The Carman's Whistle*. "Byrd's variations are remarkable not only for their intrinsic qualities, but also as rare examples of melodic treatment in those early days, when composers were more inclined to notice the bass than the tune." (Grove, 1948, Vol.5, p. 441).

Bach's *Goldberg Variations*, a set of 30 on a theme, is significant for Bach's employment of the harmony implied by the melody, and by using the melody as a bass line, crafting 30 variations from this derivation. A quodlibet, worked into the last variation, exhibits the complexity of Bach's skills. This is where more than one melody is woven into the fabric of the regular material. Bach cites two popular tunes of his day, *I haven't been with you for such a long time* and *Cabbage and Turnips*. This is evidence of Bach's lighter, more secular side. "The effect [of a quodlibet] is generally humorous – sometimes even sacrilegious when popular or bawdy tunes are combined with others of a religious nature (Kennan, 1972, p. 273)."

Many composers have contributed significantly to variation form. Good examples are the Basso Ostinato or 'ground bass' in Pachelbel's *Canon in D*, the *Passacaglia in C minor* for organ by J. S. Bach and Sibelius's *Pastorale* for solo piano, Purcell's '*Lament*' from *Dido and Aeneas* and '*Soldier's violin*' by Stravinsky from *The Soldier's Tale*. Similarly there is the reinvention of the 'ground bass' in the hands of African-American jazz musicians into a twelve-bar walking bass pattern over which performers improvise;

and the liberal interpretation of the same technique in Schoenberg's *Nacht* from *Pierrot Lunaire*.

Based on a short theme, Aaron Copland's *Piano Variations* begin with an unusual twist in that the second movement is the theme and the first is the first variation. Copland (1939) explains that "The idea was to present the listener with a more striking version of the theme first, which seemed more in keeping with the generally dynamic character of the composition as a whole" (p. 133). It is worth mentioning that my own variations do not state the original folksong at the start, but commence with the first variation.

As part of the research of this form, an in-depth analysis of the St Paul's Suite by Gustav Holst was undertaken (Appendix B). In this work, Holst utilizes folksong as source material, creating variants with this material to craft instrumental movements of greater length and artistic expression. The following extract is from this analysis. The figure references in this extract apply only to the rehearsal numbers in the Holst score. A copy of which can be accessed at: [http://japanese.imslp.info/files/imglnks/usimg/3/37/IMSLP21160-PMLP48902-Holst - St. Paul's Suite.pdf](http://japanese.imslp.info/files/imglnks/usimg/3/37/IMSLP21160-PMLP48902-Holst_-_St_Paul's_Suite.pdf)

The analysis evidences the manner in which Holst varies his original source material to create a larger work:

Repetition, development and variation. Repetition is used extensively throughout the first movement. Development and extension material is usually the result of repetition of a segment or motif from a theme or a variant on a whole phrase of a theme.

The first subject is repeated immediately without any change except to harmonize it [the theme]. It is repeated again but this time an octave higher and the compound triple section is on G and not D as before. This is then developed through repetition to create a modulation by repeating the block chord sequence and moving it down by step.

The motif of the third bar of the first subject is employed throughout the movement and each repeat is altered by placing it at a differing starting point (from E to D to A and extensively from Bb). In Figure 2 it becomes a type of accompaniment figure.

Before the second subject is sounded a motif of downward leaping intervals, a fifth and a sixth (see Ex.8) which then becomes a fifth and a fourth is employed to complete this modulation. This effectively heralds in the second subject and is a strong unifying element in this work.

The second subject first sounded at [rehearsal] Figure 3 is repeated up an octave at Figure 4 with the stated motif repeating itself to create an accompaniment figure and more internal unity.

Figure 5 opens the Development and is made of the second subject treated in augmentation, first as dotted minims then as dotted crotchets. The small motif from the first subject also keeps emerging here. Figure 6 is constructed out of the latter half of the first subject with the triple meter removed and the lilting rhythm of the triplet quavers altered into duplets. This reverts to its original rhythm to move the movement towards the Recapitulation. Typical to a recapitulation much material is repeated though the duplets reappear in Figure 8 and the second subject remains in its

augmented state except time it is in simple duple time before it returns proper at Figure 9. The movement ends with repetitions of the chord of B flat maj7 as the dissonance before the final resolution. (Burrell, 2010. Appendix B)

Australian composer, Elena Kats-Chernin has created a set of variations for solo piano called *Variations in a Serious Black Dress*. The Australian Music Center (AMC) describes the work as follows:

This piece is conceived as a set of variations on two contrasting themes-both stated successively at the very beginning. Theme 1 is a melody employing a limited number of pitches. Theme 2 follows as a cycle of 13 chords with A minor as the harmonic centre. These chords incidentally also build the basis of “Chamber of Horrors” for harp solo. In the first two variations these elements are treated simultaneously, whereas starting from the third they get more and more detached from one another. The means of varying the material are derived from aspects of rhythm, register and texture, while the melodic/harmonic shape remains static almost throughout. (Kats-Chernin, 1998)

Another 49 Australian composers have works listed under the form ‘variations’ in the AMC catalogue, including Peter Sculthorpe’s *Beethoven Variations* for Orchestra and optional didjeridu, Larry Sitsky’s *Canonic Variations*, as well as variations by Ann Carr-Boyd, Colin Brumby, John Gilfedder, Julian Yu, Michael Hannon, George Dreyfus, and Mary Mageau. This illustrates that it remains a form that is attractive to composers and appeals to their sense of craft. The form allows the composer to utilize all the elements and

imagination available to them, enabling new and novel treatments. The form allows them the ability to demonstrate, as Mozart did with *Twinkle Twinkle Little Star*, what they can do with a simple tune.

Important to this dissertation is the autoethnographical shift that Edward Elgar brought to the idiom. His *Enigma Variations* are not crafted purely to show what the composer can do, but rather as a medium to convey an autoethnographical insight. As Ainsley (1995) explains:

One evening when Elgar was relaxing after dinner, idly playing the piano, his wife remarked “That’s a good tune.” Surprised, Elgar said, “Is it? Well Powell would have done this ... and Nevinson this. ...” Thus, after a tiring day teaching the violin, a great work was born (p. 103).

Warburton (1963) observes in her *Analysis of Musical Classics*, that Elgar’s works prior to the *Enigma Variations* were “just like dozens of others” at the end of the nineteenth century. “Then, around 1899, something happened to Elgar, because the ‘*Enigma*’ *Variations*, produced in 1899, and the ‘*Dream of Gerontius*’, produced in 1900, are inspired works of genius” (p. 314).

Warburton implies that it might have been a spiritual experience, as a result of reading Cardinal Newman’s poem *Gerontius*, on the same page, speculating as to whether it was “something that happened in his private life”. Certainly, something must have occurred, as the musical works prior to these were not of the same standard of inspired excellence.

The speculation pertinent to this investigation is whether this act of autoethnography (capturing characteristics of his friend's personalities) allowed Elgar to enter into a creative action that aligns with the notions of process philosophy. A process of becoming that enabled him to move to greater sophistication and aesthetics; a higher level of artistic expression, thus lifting him from an ego-centered focus of 'showing what he can do with a tune' to a place where he, as a participant observer, created an artistic work that reflected his knowledge of the other participants. This is most evident in the movement *Nimrod*, where Elgar clearly displays his warmth and affection for this identity and also perfectly portrays his premature death. Nimrod died before he reached his full potential and Elgar ends this movement by building to a grand and final restatement of the theme, only to die away to a pianissimo.

The objective of this research was to achieve a similar outcome, using my close and long-standing comprehension of my siblings, as a stimulus to create a new musical work, and that this autoethnographical work might evidence process-relational philosophy in action in my own process of becoming.

Like Elgar I wanted to portray my observations, the characteristics I saw in my siblings. Like Copland I wanted to begin with a variation and not the theme. Like Bach and Holst I wanted to weave into the variations other folksongs and influences, creating both anthropological and musical counterpoints. Like Schoenberg I wanted to treat old forms (Passacaglia) with a fresh voice.

During this task, the analysis of the compositional style and works of other composers was undertaken. For some of these works, both scores and recordings were

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available, and for others there were recordings only. Therefore some analysis was aided by the score and was therefore more in-depth than those where there was only an aural record to work with. The following list is not exhaustive but represents some of the more prominent artists and works.

- Gustav Holst's *St Paul's Suite*
- Toru Takemitsu's *Textures, Spirit Garden, Litany, Requiem for Strings*
- Somie Satoh's *Mantra* and *Stabat Mater, Violin Concerto*
- Satoshi Tanaka's *Levitation*
- Ross Edwards's *Rain Dance*
- Richard Mills's *Aeolian Caprices, Soundscapes for Percussion and Orchestra*
- Carl Vine's *Bagatelle No. 3* and *Symphony No. 5*
- Astor Piazzolla's *Oblivion, Libertango, Milonga Del Angel, Adios Nonino*
- Ennio Morricone's *Giuseppe Tornatore Suite, The Mission*
- Igor Stravinsky's *Petrouchka* and *The Rite of Spring*
- Bela Bartok's *Six Dances in Bulgarian Rhythm* and *Music for Strings Instruments, Percussion and Celeste*
- Edward Elgar's *Variations for Orchestra*
- Benjamin Britten's *Variations and Fugue on a Theme of Purcell*
- Stamatis and Manolis Makris's *Improvisations on Hijaz Scale*
- Tadashi Tajima's *Shakuhachi Performance Techniques*
- George Crumb's *Ancient Voices of Children.*

Ornithological Recordings and Transcriptions

Working in the field, the majority of recordings were made in the following locations:

- South East Queensland
- Suburban Brisbane
- Wynnum-Manly Foreshore
- Brisbane State Forest and Mt Mee
- Northern Rivers Region of New South Wales and the Richmond Range National Park.
- Far Western Regions of Queensland, including Birdsville and the Diamantina Lakes National Park
- Robinson Gorge in the Queensland Central Plateau Region
- Gilgandra district in the Mid-Western Region of New South Wales

The main focus was to record particular species of birdcall as well as the heterophonic textures that occur when multiple calls sound together, one over the other. Many of the birdcalls were transcribed into traditional western music notation (Appendix A).

As mentioned in Chapter 4, these transcriptions were used to derive melodic motifs, and rhythmic and harmonic material, that was subsequently employed in the construction of new musical works. They also served to immerse myself in ornithological sounds and textures so that they would resurface both consciously and unconsciously when composing. This was understood to be part of the practice that would contribute to the new emergent voice that was the anticipated outcome of the research.

The link between the birdcall motifs and the derivative works is described in detail in the analysis contained in the Chapter 7. Some motifs were simply quoted, whilst others were subjected to the various mutations, permutations, transformations, and metamorphosis that composers usually employ. The following examples shows how a motif derived from the call of a Willy Wagtail has been altered and developed. The original transcript is in the key of C major.

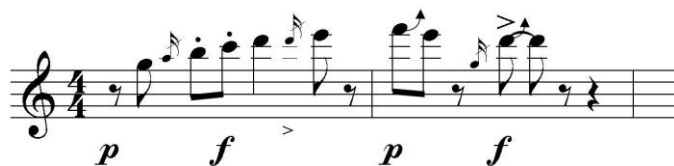
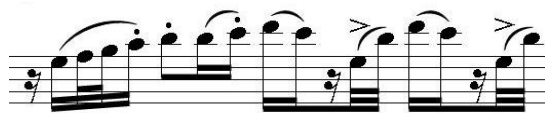


Figure 6.1. Excerpt from a transcription of a Willy Wagtail call.



In this mutation the grace notes appear in the upward scalar run that ends with a two note semi-tonal descending figure. Two notes derived from the outer edges of the scalar run (E flat and B flat) are re-sounded before repeating the semi-tonal descending figure, prior to the last intervallic leap. By incorporating rhythmic diminution the whole motif is brought into one measure.

Chamber Music Works for Orchestral Instruments Derived from Birdcall Motifs.

The chamber music works for orchestral instruments were the next logical step in developing my craft after the completion of the orchestral variations on a theme. I viewed this methodical approach to working through all the instruments of the orchestra (in idiosyncratic ensembles) as a necessary requirement to the process of becoming a better composer. I also viewed this process as being the investigation and the investigation as being the process of becoming. I hoped that the birdcall motifs isolated in the transcriptions would become the ingredients of larger works. I entered into the experiment by composing for the instruments of the orchestra in an orderly and deliberate manner, beginning with the woodwind and working through the brass and percussion to the strings. These works are discussed briefly in the following sub-chapters. The musical scores and audio recordings are in the folio and on CD 2.

The Woodwind Quintet.

This is a three-movement work for flute, oboe, clarinet, horn and bassoon. The first movement is primarily derived from a motif isolated from a transcription of the call of a Willy Wagtail. There is a clear minimalist middle section, which was inspired in part by *Incantations* by Ross Edwards,¹⁰ which uses a derivative series of notes extracted from the chatter of the White-breasted Honeyeater. This middle section attempts to layer similar ornithological motifs to emulate the multiple simultaneous birdcalls that are common in the forest. This was the first attempt at an ornithological heterophony. This minimalist texture was recreated in a similar way for the later saxophone ensemble work.

The middle movement is a chorale and whilst not directly derivative of a particular ornithological source, it exhibits many of the syncopated and additive rhythms that were encountered when making the transcriptions. Thus the immersion in the ornithological research began to surface semi-subconsciously in this movement. The final movement is a rondo and is analyzed in-depth in Chapter 7. (The music score and recordings are in the folio on pages 106 – 132, and on CD 2 Tracks 1 – 3)

The Brass Quintet.

A four-movement work for brass quintet created from transcriptions of birdcalls. The two fast outer-movements employ the calls of the Grey Butcherbird and the Pied

¹⁰ Performed during colloquium of RHD students, 2011, by Lunaire Collective, Woodwind Quintet.

Butcherbird. These movements are essentially tonal, exploiting the idiosyncratic clarion nature of the brass instruments to depict the Butcherbird's motifs.

The middle movement *Dappled Light* features calls recorded in the mangroves along the foreshore of Wynnum and the *Fantasia* attempts to emulate the heterophonic texture of multiple 'Eastern Whipbird' calls; with their distinctive long sustained tone that ends with a sharp upwards leap, answered by another in the opposite direction giving the characteristic 'whip' sound. The female often responding with a 'choo, choo' in quick succession. These inner movements draw their harmonic progressions from the chromatic lines of the birdcall motifs within a polyphonic texture. The first movement of this work is analyzed in detail in Chapter 7. (The music score and recordings are in the folio on pages 133 – 187, and on CD 2 Tracks 4 -7)

Various Small Works for Mixed Percussion.

A number of pieces for mixed percussion were created. The work *Red Wattlebird* for xylophone and marimba began as an exercise in the musique concrete genre using the motifs from the call of the Red Wattlebird. This call has a percussive quality with distinctly differing motifs. The musique concrete study was sequenced and processed in the program SonyAcid 8. The work stands alone, however, it was only experimental and much of the breakthrough in the manipulation of the elements in 'loop' form was then transferred to the orchestral writing. This is the first instance of the crossover from the manipulation of the source material in a DAW to a method of composing for traditional instruments.

Grey Butcherbird for xylophone and marimba is derived from a recording of a Grey Butcherbird. This piece is the first to employ an accompaniment not derived from the call.

This accompaniment, which is in the marimba, uses the mode of limited transposition¹¹ uncovered in the research undertaken when composing the orchestral variations on a theme. The third work is a sketch integrating the motifs of the Magpie. It is composed for a mixed consort of percussion instruments and introduces non-pitched elements into the aural texture. (The music score is in the folio on pages 188 – 210, and on CD 2 Tracks 8 - 10)

Choral Song Cycle.

The chorale song cycle was created during the Christmas holiday break of 2010/2011 serving as a creative project to maintain the impetus of the investigation through this ‘down time’, and also to set text, influenced by the developing comprehension of process-relational philosophy and its emphasis on ecological responsibility.

The first movement *I Saw a Miracle* is an artistic response to the beauty of nature. Within the text is an implication of the concepts of panentheism¹² as expressed by the process theologian, Hartshorne (Mesle, 1993, p. 137). Desiring a bright opening movement I recalled William Walton’s *Jubilate Deo*, Stanton’s *Festive Gloria* and similar works that I encountered whilst a member of the Conservatorium Singers, led by Dr. Roy Wales in 1983-1986. Further to this I brought my own experience of the last 30 years of conducting choral ensembles and composing for choirs. Influenced by Britten’s choral style and some American composers (Barber, Althouse, Huff) there is poly-chordal and added-note harmonies that are approached by conjunct movement. The middle section of this

¹¹ See Figure 5.1, Chapter 5.

¹² Everything is in the divine and the divine is in everything and yet is more than everything.

movement employs a motif derived from a birdcall rhythmically augmented and placed in simple canonic polyphony, against an additive rhythm in the piano. The third section asks the choir members to produce body percussion to accompany the singing and the piano falls silent for some bars before rumbling in the lower register like the low rumbling in Debussy's *The Sunken Cathedral*. The composition ends on a poly-chord of G minor and F major in the vein of the British school of choral polytonality such as Britten's *Concorde*.

The second movement, *Dying to Grow* captures the juxtaposition that is part of a spiritual journey, where the subjugation of the ego is required. Consistent with most religious philosophies, this act of self-denial is deemed to be the garden-bed from which new life emerges. The work also explores the concept of the earth being a sealed-bubble in which all atoms are contained and thus move from constituting one being (what process thought refers to as a society of processes) to another being or state. There is also the implied living-on of the contributions to the collective sub-conscious. This piece, like the first, is imbued with musical influences gathered over a number of years. The opening canonic texture is derived from a study of the Elizabethan Madrigal techniques of Weelkes, Wilbey and Morley, and my developing approach to dissonant homophonic sections through conjunct movement. Chord-clusters in the piano accompaniment are reminiscent of Britten's *A Ceremony of Carols*, whilst long sustained passages of choral textures floating above a rolling semi-minimalist accompaniment are similar to Randall Thompson's *Choose Something Like a Star*. The movement concludes with a poly-chord,¹³ evoking some of the more open chordal harmonies that Copland used in *Appalachian Spring*.

¹³

Quintal in lower half and quartal in upper half.

The third movement, *Gentle Rain*, continues the adoration of aspects of the natural world, and the symbiotic nature of the interlocking inter-relational aspects of the ecology of the planet. This is conveyed in the artistic and minimalist text ‘Gentle rain, caress the leaves’. This text attempts to convey the notion that plant life-forms are sustained by the falling condensation of water particles from the atmosphere, and the relationship between the two are captured in the artistic and descriptive use of the word ‘caress’, implying a caring relationship. Because the text is minimalist, the form of music utilizes a liberal interpretation of the study of modal counterpoint and the renaissance genre of sacred-vocal polyphony that was applied to the short texts of the liturgy, such as the ‘Kyrie’. Relevant examples include Byrd’s *O Sacrum Convivium* and Palestrina’s *Kyrie* from the *Missa Papae Marcelli*. The deliberate choice to imitate renaissance sacred music supports the feelings of adoration of nature for its own sake, and as a ‘Cathedral for worship’. This floating polyphony is balanced by a phasing two-measure piano accompaniment that continually repeats (unaltered from beginning to end) creating a pseudo tonal-centre through which the voices float and modulate. This in effect brings together the very old minimalistic polyphony of Palestrina with the relatively new minimalistic polyphony of Riley.

The fourth movement, *Who is the greatest Influence* is a return to the autoethnography of the orchestral variations on a theme and is about the commitment of a mother to a child, through the child’s process of becoming a fully functioning adult. This text is a sonnet, written for my mother. This movement employs musical devices derived from the ornithological source material in the form of tone-clusters, glissandos, slides, derivative bird-motif quotes, and fast chromatic descents. In this work, the ornithological

and the autoethnographical components of the research are synthesized. The movement is analyzed in depth in Chapter 7.

The fifth movement, *The Dawn* is a bright work designed to balance the opening movement and attempts to convey the process philosophical concept of the ‘present-moment’ being the ultimate ‘true reality’. This pan-experientialism of the ‘now’ grows out of the past and contributes to the future. This movement evidences a synthesis of process theory, adoration of the known world and ornithological source material. Like the first movement, it is influenced by my own developing choral writing skills, the English school of choral composition, (as evidenced in Britten’s *A Ceremony of Carols*) and by the American composers and jazz arrangers Randall Thompson, Eric Whitacre, and Robert Edgerton. Constant enharmonic modulations with bright and percussive piano accompaniment (reflecting Gospel and rock pianistic styles), this work is simple and direct. The texture is mostly homophonic and the tonality straightforward with some added-note chords. (This music score is in the folio on pages 211 – 237, and on CD 2 Tracks 11 - 15)

The String Serenade.

This is a traditional four-movement design with a slow movement and a dance/scherzo movement placed between two fast movements. As part of the investigation and prior to writing this composition, I immersed myself in the medium of string writing and their performance characteristics. Among the works I studied are the fast-movement from Sibelius’ *Third Symphony in C Minor* (it is interesting to note how the slow movement of my *String Serenade* modulates to B minor, like the Sibelius work does at

Figure 3)¹⁴ and the Barber *Adagio for Strings*. I also studied the Bruch, Mendelssohn and Elgar concertos for violin and orchestra and Bartok's *Music for String Instruments, Percussion and Celesta*. The fruit of the previously-mentioned analysis of the Holst *St Paul's Suite* is also apparent in some (deliberate naïve folk-like dance sounds and textures) sections of the first movement.

This *First Movement* is a liberal interpretation of a traditional sonata form. It features the call of the Grey Butcherbird. The melodic material was derived from one of the fast, vibrant motifs of this avian species, recorded in Morningside, Brisbane. Within the movement are reflections of the Sibelius work in the juxtapositions of sections of orchestra performing slow moving material (created through rhythmic augmentation) against the established frenetic material.

The *Slow Movement* (using a more lyrical motif of the same bird species) is a work in homage to Samuel Barber and his *Adagio for Strings*. The Barber work was analyzed, and listened to extensively. Barber's contribution to this movement is acknowledged in numerous examples from the single note opening through to the nature of the 'lush' timbre of the harmonic voicing. The divisi doublings of the string voices and the 'circle-of-fifths' harmonic progressions which herald the final and middle cadences.

The *Scherzo* is a light and humorous play on a combination of various birdcall features such as mordents and chromatic neighbour notes. Oscillating between pizzicato and bowed techniques, this composition looks and sounds easy. However it is a difficult

¹⁴ Score can be viewed at: http://conquest.imslp.info/files/imglnks/usimg/d/d3/IMSLP15920-Sibelius_-_Symphony_No.3__Op.52__orch._score_.pdf

work to realize, not only because of its quirky timing, but also because of its intended sense of lightness, ease and humour.

The final movement, the *Rondo*, is chromatic in nature and draws its chromaticism from the notes of the Grey Butcherbird motif employed in the work. Bartok's *Music for String Instruments, Percussion and Celesta* also influences the chromatic nature of the harmony. The motif is the source of all the harmonic implications, and therefore the work is more contrapuntal in its harmonic conception. This technique of linear-derived harmony proved to be highly effective and is also employed in the final movement of the woodwind quintet. (The music score is in the folio on pages 238 – 321, and on CD 2 Tracks 16 - 19)

The Concert Band and Saxophone Works.

I was asked by Ralph Hultgren, conductor of various concert bands and orchestras to compose a work for concert band, with a promise to perform the work at a concert in October 2011. Knowing him to be a music publisher, I wanted to impress so I composed a 'large showy' work based on the palindrome Glenelg. Glenelg is a street name near the Queensland Conservatorium and I cross this street to get to the campus. Noticing that the word was a palindrome and that the notes G and E were present in the word; I superimposed the pentatonic scale of 'C' over the word and arrived at the 'L' being the note A. The 'N' then had to be a 'naught' or 'nothing' and hence became a silence, a musical rest. From this short and restrictive starting point, I composed the work, incorporated ornithological material purely as added orchestral colour. (The music score for *Glenelge* is in the folio and on CD 2 Track 20)

Robinson Gorge, a composition for saxophone orchestra, was commissioned by Diana Tolmie for the Queensland Saxophone Orchestra to take to the 2012 Edinburgh Festival and the 2012 International Society for Music Education Conference, held in Greece. In consultation with Ms. Tolmie it was agreed that this work was to be designed as a 'stand alone' work as well as being performed to an electro-acoustic ornithological soundscape. This allowed for more flexibility in performance.

Working from aural transcriptions made at Robinson Gorge, Queensland, I created a work that was contrapuntal and loosely based on a fugal form. A traditional subject, counter-subject and free components are present as well as episodic modulations and strettii. However, there is a contrasting 'B' section that is not fugal, but which develops some of the counter-subject and free material as accompaniment figures.

Whilst working on *Robinson Gorge*, back in suburban Brisbane, a Grey Butcherbird called from the antenna of the neighbouring house. I immediately transcribed the call, working it into the middle of the piece. This is a good example of the interrelatedness and panexperientialism of all things. The bird, for reasons it may or may not know, calls. A momentary experience; perhaps it sounds its territory. I happen to hear its calling; I happen to be composing music using birdcalls; this is my territory. A trans-territoriality has occurred. I capture the bird by integrating its call into the music. The bird (and its call, its place in everything) has now become a motif in a musical work. The bird (its call and consciousness) now exists as a series of graphical symbols on a manuscript. It becomes another entity when realized as a performance. Bird-becomes-call-becomes-notes on a page-becomes a living performance, in a different terrain under different circumstances. The musician becomes the bird, the bird the musician. A process of processes as a part of

reality has occurred. Trans-territorial, interrelated shared experiences of the ‘now’. Multiple intelligences leaping the gap between each other, like the synapses of the mind. Chaos theory, where order rises out of random events, shared cognition occurs (panentheism), and this process results in an involution towards greater sophistication, which is the Whiteheadian concept of the process of reality (The music score is in folio on pages 322 – 340, and the audio recording on CD 2 Track 21).

As I was composing, I would occasionally place the score, as a midi file, into a DAW to align it with the ornithological soundscape (and the soundscape to the score), so that the two developed together. This work displays a development of the minimalistic techniques first arrived at in first movement of the woodwind. *Robinson Gorge* has been performed in England, Scotland and Greece by the Queensland Saxophone Orchestra and Diana Tolmie informs me that it was well received in all of its performances. The work was recorded by the orchestra and released on the album ‘Australian Made 2012’¹⁵. As a direct result of these overseas performances the PARMA recording group¹⁶ have contacted me and a contract has been signed to record the *Serenade for Strings* with the Moravian Orchestra.

¹⁵ <http://www.amazon.co.uk/Robinson-Gorge/dp/B00BUWE6WK>

¹⁶ <http://www.parmarecordings.com/>

Live Performance Works of Mixed Instrumental and Electro-acoustic Works Derived from Birdcall Motifs and Incorporating Ecological Soundscapes.

An Ear to Hear for solo flute and soundscape, and *Becoming* for solo violin, Pied Butcherbird and Soundscape, have already been discussed extensively in Chapter 5.

An Ear to Hear was premiered at the Logan City Hyper-dome Library by Dr. Karen Lonsdale and performed again by Simone Maurer at the November concert of 2011 ‘Birds of a Feather’.¹⁷ A video of the latter performance can be viewed at the following link:

<http://www.youtube.com/watch?v=xS0UdVHB3RI>

Becoming was the first composition to have a direct interplay between the instrumentalist and the recorded bird, and is an important milestone in this research. This piece clearly displays the integration of idiosyncratic instrumental writing prowess with the manipulation of the ornithological recording in a DAW to create a ‘real time’ duet between the bird and the instrumentalist. At the time of creation, *Becoming* was the best evidence to-date of the anticipated outcomes from the research. This work was the subject of a paper presented at the CreateWorld 2011 Apple University Consortium Conference held in Brisbane. This peer-reviewed paper is available from the AUC website:

<http://auc.edu.au/createworld/sessions/>

¹⁷ ‘Birds of a Feather’ was the public concert of the works for chamber ensembles and the early electro-acoustic music held at the Griffith University South Bank Campus, Brisbane in November of 2011.

Becoming was premiered at the November concert of 2011 (Birds of a Feather) by Melonie O'Sullivan, and a video of the performance of this work can be viewed at the following link: <http://www.youtube.com/watch?v=Tl0kV7-phuo>

Electro-acoustic and Musique Concrete Works using Birdcalls, Ecological Soundscapes and Pre-recorded Improvisations.

Electro-acoustic and musique concrete works which use birdcalls, ecological soundscapes and pre-recorded improvisations are discussed in Chapter 5 and the majority of this sub-chapter is a derived summary of that discussion.

This part of the investigation illustrates the further departure from the author's control of the music through notation. *The Becoming II* series of compositions use soundscapes (recorded in the dead of night), a Grey Butcherbird's pre-dawn calls and an improvised piano response. Invited musicians (clarinet, erhu, soprano, steel-string guitar, jazz saxophone) recorded improvisations to the audio of the soundscape, butcherbird call and piano improvisation. As I explain in Chapter 5:

Some of the improvisations (such as the first take of the clarinetist) were deemed to be of such high quality that they were not altered at all. In contrast the saxophonist's improvisations provided some experimental responses, which included seemingly random events, including extraneous sounds from hand-held percussion instruments. These were layered on top of each other to create a very original and complicated contrasting movement within the cycle of works. The soprano vocalizations were placed together with

the erhu, and the tension between the two differing cultural traditions and styles helped to fashion a movement that was the most individualistic work that I had ever created.

Through this investigative process it became clear that I was working in a vastly new place and compositional voice. I was no longer the originator of the source material, but the manipulator of the elements. A parallel might be drawn between the poet working through text to create emotive response and the visual artist working with already mixed colours, blending them to portray another. Words and paints already exist functioning as descriptors and fragments of language and primary colours. The poet and the artist blend, and brush these materials to create a new artistic outcome. I was fashioning the musical improvisations to say something other than their original. Like Gavin Bryars' early electro-acoustic work *Jesus' Blood*,¹⁸ I was changing their context and place. I was remolding their original colours and statements to make new observations and vistas.

I re-crafted the supporting soundscape and birdcall. In some of the movements I removed the piano improvisation; more contextual alterations and outcomes. This was like painting the same landscape at different times of the day when the light has a changed hue. (CD 3 Tracks 1 – 3).

The final compositions of the investigation were totally electro-acoustic music. Recordings made in the district of Gilgandra, New South Wales were used to create a suite of three movements. These final works exhibit instrumental orchestrations -altered through DSP manipulation, birdsongs and examples of musique concrete texture (used to initiate harmonies). These latter pieces contain all my craft and investigation, the orchestral skill

¹⁸ Where the recording of a tramps' singing is looped to create a greater work for strings, brass and percussion.

and contrapuntal tendencies, the harmonic knowledge and melodic lyricism, the autoethnographical observations and the applied comprehension of process-relational philosophy. (CD 3 Tracks 4 – 6).

This chapter has demonstrated the breadth of the investigation and the quantity of works created. It has justified the methods of writing and tied them to process-relational philosophy and its notions of the process of becoming. The validity of each avenue of investigation has been justified and it has shown where the observations of the autoethnographical methodology have been documented. The next chapter will reveal the depth and quality of the work. It will present large passages of descriptions of what occurs in the music and why it is so. How the musical elements have been manipulated to achieve the research outcomes. Though analysis is not always the most riveting reading, the author asks the reader to remember that every passage of descriptive material represents the trial and error, experimentation, development and honing of the music which documents the findings.

Chapter 7. Selected Movements, Analysis and Critical Reflection

In this chapter, I will take selected movements from the greater works and deconstruct their elements to expose the analytical thinking behind the creative process. I will show how the manipulation of the musical elements created the melodic, harmonic and rhythmical components of the works, and I will evidence how the application of process-relational philosophy and the observations of the autoethnography are realized. The extensive descriptive passages of this chapter serve the function of pointing to the depth and breath of the research. How, through practice-lead enquiry the conclusions were arrived at and how they were documented in musical form.

In order to show that the work has not been done in isolation I will also present the comments and feedback from the performers of the works as well as those of visiting artists of renown. I will also discuss and justify any changes made resulting from the post-performance review.

Critical Analysis: Second Movement from the *Orchestral Variations on a Famiglia Theme*

(The music score for this movement is on pages 16 – 28 of the folio and the audio recording is on CD 1 Track 2)

The *Passacaglia* is in the key of B minor, the relative minor of the preceding movement, the *Jig*. This eliminates the need for connecting segues. It is in triple time and at the slow tempo marking of crotchet equals 56 (*larghetto*).

The melodic material of the *Passacaglia* is a distillation of the original folksong theme. The initial intervals (the steps to and from the mediant) remain, but the leap to the tonic is removed. The rhythm is altered to a series of crotchets superimposed over both measures 1 and 2 of the *Passacaglia*. Thus, the opening phrase of the folksong (Figure 7.1) becomes the sequential melody of the *Passacaglia* (Figure 7.2).

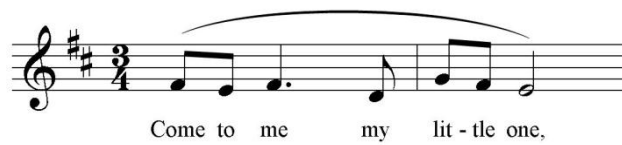


Figure 7.1. The first phrase of the folksong theme



Figure 7.2. The first phrase of the first melody of the Passacaglia.

These opening bars, treated sequentially, replace the folksong's second phrase with its modulation to the dominant. The third phrase of the folksong has the distinctive triadic descent preceded by the leap of a sixth, shown in Figure 7.3.

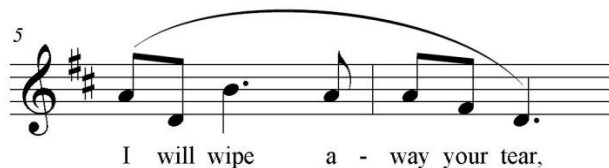


Figure 7.3. The third phrase of the folksong theme.

For the next phrase of the *Passacaglia* the leap of the sixth and the triadic arpeggio, are melded together, by inverting the triad (of the folksong) and leaping from the fifth degree of B minor (F#) straight to the third (D), skipping the tonic (B) and returning to the note of departure, thus incorporating the interval of the sixth into the previously triadic

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movement. Figure 7.4, shows this distillation of the third phrase (of the folksong) into a three-note figure.

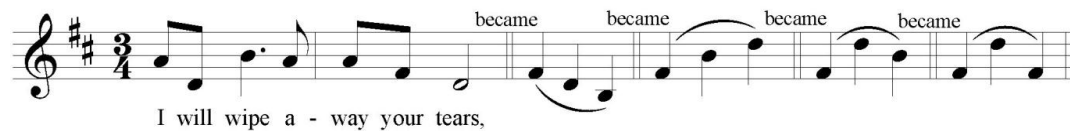


Figure 7.4. Showing process philosophy in action. This example shows the distillation of the folksong phrase as well as process philosophy in action.

This evolution by derivation, where one thing comes out of another is a musical realization of the concepts of the Whiteheadian notions of process and reality and my own investigation into the process of becoming.

This example demonstrates the distillation of the folksong phrase as well as process philosophy in action. Sequential treatment of the leap of a sixth, creates a complementary second half of the eight-measure phrase. This movement brings the melody to the tonic.

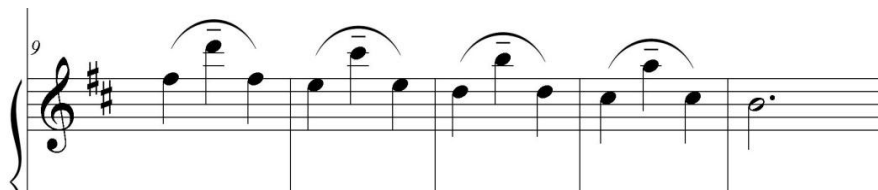


Figure 7.5. Showing the third phrase of the first melody of the Passacaglia.

The accompaniment to the melodic material performs a funereal pulse. Placed in the lower strings there is a mild dissonance (suspensions) present in almost every measure. Figure 7.6 demonstrates the accompaniment to the melody with its harmonic progression.

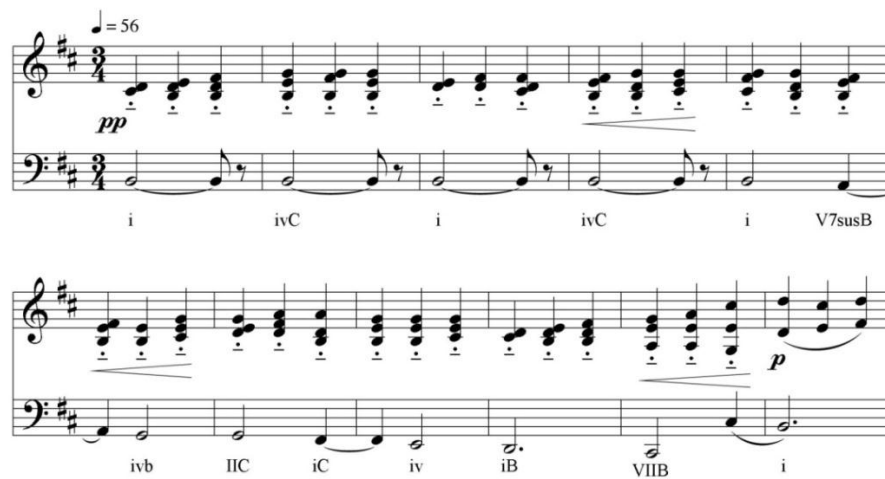


Figure 7.6. The accompaniment to the first melody, given here in short score.

Written into the bass line is a cross-rhythm, influencing the harmonic rhythm, against which the melody holds its rigid triple time. The melody is 8 bars long, whilst the harmonic progression is ten. When the melody arrives back on the tonic, the bass line is on the mediant and has yet to continue its stepwise movement down to the tonic. This takes another two measures, creating a natural and inevitable harmonic extension to the cadence, and preparing the listener for the return of the melody.

After this cadence a syncopated countermelody, melded to incorporate the Japanese *Hirojoshi* scale (Malm, 2000), a minor pentatonic scale used in the Japanese folksong

*Sakura*¹⁹ enters the work. The countermelody employs this scale to prepare the listener for the Asian sounding folk-tune that occurs later in the movement. This adjustment to the countermelody was made after the Asian folk-tune was introduced into the work. An entry from my journal explains, “At this creative junction it was realized that the first countermelody should be re-crafted to conform to this same scale, thus preparing the ear for when the folk-tune would enter.” (2010) The melody and its countermelody are given in Figure 7.7.



Figure 7.7. The countermelody (in the lower voice).

In keeping with the form of a passacaglia, another countermelody enters. The oboe, realizes the main theme (supported by the clarinets and bassoons) and the harp performs both countermelodies (with support from the strings). Figure 7.8 shows the melody in the oboe with the two countermelodies in the harp.

¹⁹ This scale is different to the pentatonic minor scale of la, doh, re, me soh. It is a hemitonic scale of la, ti, doh, me, fah.



Figure 7.8. *Melody and countermelodies.*

An A pedal note is a feature of the second countermelody. As the seventh degree of the scale of the key, the A brings tension to the second half of this repeat of the thematic material, thus assisting in the forward thrust of the work.

The next presentation of the theme has the melody in the lower voice of the harp with the first countermelody above it. The previous A pedal note, is answered with a high B pedal note in the strings, and the orchestral texture is thinned by the removal of the woodwind from the harmonic progression.

A large gong heralds the next presentation of the theme. This time the main theme is subservient to the sounding of a new melody using the *Hirojoshi* scale and set in an asymmetric quintuple meter. The background influences of this new melody were the autoethnographical observations of this sibling's Asian interests (studied Mandarin and worked in Korea) and my attendance to the 'Encounters' festival of 2010 at QCGU. The following extract from my personal journal of the time tracks this process.

Another shift. This time the result of attending the ‘Encounters’ concerts and seminars that had been held at the Con. These were about the cross-fertilization of Australian and Chinese Art music. In one of the discussions with the composers Larry Sisky, Julian Yu and Jack Body, the subject of using folk music from other cultures was touched on. Julian, being of Chinese descent spoke of how he used them in his works. Larry of Jewish descent, but born in China, spoke about how he used Chinese folk-tunes and integrated them into his material. Jack spoke about his musicological studies of Chinese folk music and how it filtered into his music expression.

The character that this movement is to portray had lived and worked as a teacher in Asia. He studied Mandarin and spoke some Korean. He had many friends who were Chinese and Korean. With care, an Asian sounding folk-tune could be integrated into this variation.

An analysis made some years ago of the Ross Edwards work *Rain Dance* that predominantly the *Hirojoshi* scale came to mind. This scale consists of the notes A, B, C, E and F. As an exercise and response to the work by Ross Edwards, a number of small piano pieces in a similar style and using this same scale had been composed. The opening motif of one of these exercises was taken and worked to craft a folk melody that sounded oriental and would ‘sit’ with the theme. (Burrell, 2010)

This new melody, performed by the flute, oboe and harp, (see Figure 7.9) employs short repeated phrases. This orchestration highlights the oriental flavour of this folk-tune.

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The main theme and the second countermelody, remain in triple time and the folk-tune floats against this in its separate time signature creating a mild entropic cross-rhythm.



Figure 7.9. *Pentatonic minor folk-tune and cross-rhythm.*

The choice to use an asymmetrical meter came from a recollection of an analysis I had made of *Blackamoor* from Stravinsky's ballet, *Petrouchka*, where he had set a Russian folksong in five beat phrases. Following his lead resulted in my Asian folk-tune floating above and seemingly independent of the triple meter. This was the last complete sounding of the main theme as the presence of the Asian folk-tune, passing from the woodwind to the harp, takes over and concludes the movement. A final harmony sounds; an unresolved suspended fourth on the tonic.

The *Passacaglia* is a through-composed structure, designed to unfold from beginning to end. There were many problems encountered in the sketches. Unlike a fugue, with episodes to create transitions and extension material, this form, used here in its strict canonic sense, is reliant on the skill of constructing melodies upon melodies and layering them in such a fashion as to maintain the interest of the listener.

The following journal extract (hence the informal nature of the text) from the time, outlines some of the work that came before this movement was completed; the

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compositional devices and structures which were explored, and the cumulative development of the creative cognition and influences which assisted that process.

The *Passacaglia* began as a Neo-Baroque work where ‘The Theme’ would be used as a ground bass. Over this would be layered, one voice at a time a series of complementary melodic lines in much the same manner as the well known Pachelbel’s *Canon in D Major*.

Passacaglia

Robert Burrell

$\text{♩} = 86$

5

9

13

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Placing the theme in a triple metre and using the syncopated tenor voice of the chorale as a kick off for the first countermelody the work began with the two sounding together.

A third voice was added in fourth species counterpoint. Here too I chose to keep the syncopations that occurred at the bar lines. A fourth voice enters at bar 18. This voice moves in contrast to the alto and tenor voices with very little syncopation. Like the theme, it incorporates long notes, and is an attempt to create a voice that is floating above the business of the lower voices; a free spirit of its own (though part of the whole). The hemiola towards the final cadence assists in this feel.

The image displays three systems of musical notation for a piece titled 'A Process of Becoming'. Each system consists of a grand staff with a treble and bass clef. The key signature is three flats (B-flat, E-flat, A-flat). The first system starts at measure 17, the second at measure 21, and the third at measure 25. The music features a complex interplay of voices, with the right hand often playing a more active, syncopated melody while the left hand provides a more stable, harmonic foundation. The third system concludes with a hemiola and a final cadence marked by a double bar line and repeat dots.

This is a good work, the contrapuntal structure sound. Though Baroque in design, the result did not sound as such.

The movement was reworked many times. It was recreated as a chaconne (up to 6 times) and this work grew into something else which became the variation called *A Round*. This last work along with the *Chaconne* and original *Passacaglia* were all discarded. These pieces are of good quality, unified, pleasant. So, what makes them unsuitable? They have nothing to say. (Burrell, 2010)

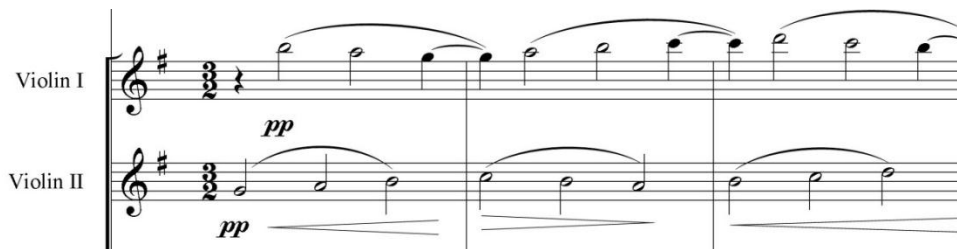
This struggle to achieve a higher degree of sophistication is consistent with process-relational philosophy's notion of the 'initial aim'. "Whitehead's term for this influence in every event is the *initial subjective aim* ... which is its overall aim or purpose during its moment of subjective immediacy." (Griffin, 2001, p. 146) That is, that in the active moment there is a desire, a dynamic; a striving that presents the moment with an opportunity to respond to the 'lure' towards greater aesthetics. The notion of 'freewill' allows for a non-response, or a partial response; however in these journal extracts there is evidence of a striving towards a greater response. Not only does it have to be better and more sophisticated, but it also has to embody a neoteric quality. The journal entry continues:

Attempts were made where the whole was placed in retrograde. Various orchestral timbres, all brass, strings and treble voice choir were tested. Just strings.

A breakthrough occurred at a time when there were no instruments or the computer to test ideas on. It was a purely cognitive exercise. When mulling through the work, in the mind, a shift in concept was conceived. Small though it was, this began a new series of sketches. (Burrell, 2010)

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The shift was to not have a 'ground bass'. Instead the thematic material would be given to a higher voice and then taken down a voice with each repetition till it become the bass. A new series of sketches along this line were begun.



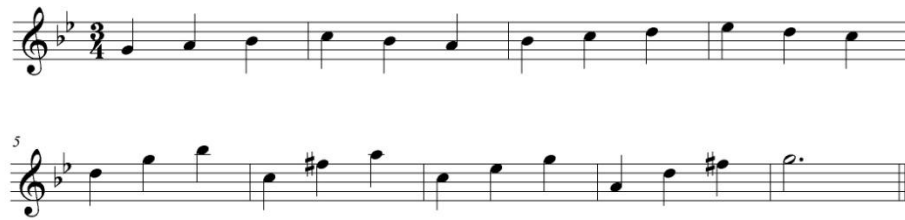
On Thursday the 13th May 2010, after working 10 ½ hours straight and creating a fully orchestrated work for string orchestra and brass -to bring out the cantabile nature of the final melodic line- it was felt that an end product had been achieved.

More cognitive consideration made in the solitude of the night concluded that whilst the work was much improved; it had not yet 'found its voice'. In my mind I began to play with ideas. What if the tonality was changed from major to minor? What if the thematic elements were distilled and diminished till it was simpler, yet still recognizable.

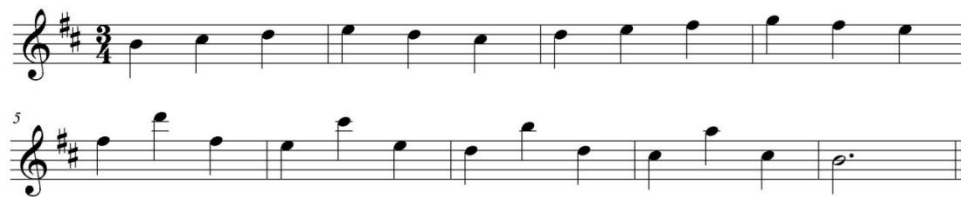
Another shift. What if the featured triadic descending leaps of the third phrase were inverted so that it would ascend -soh, doh, me- instead of descending -soh, me, doh? How would this sound in the relative minor? More internal singing. At rest, in bed, composing. Now, there's an oxymoron!

What if this inverted triadic motif was treated sequentially? Could it replace the fourth phrase and still arrive back at the tonic?

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In the light of morn, another shift of thought. Abandon the idea of the work being a purely polyphonic work and add some accompaniment to the sounding of the theme. At the piano (when the inverted motif was played), a further possible development was realized: not sound the tonic note of the motif, but to leap from the fifth degree to the higher third and then return to the fifth degree. This would give me a leap and return of the emotive sixth interval.



It worked! Treated sequentially it was even better! Set it in the key of B minor, so that it could follow the *Jig* without the need for an interlinking passage.

The crafting of an orchestral version began.

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Harp
 Violin I
 Violin II
 Viola
 Cello
 Contrabass

$\text{♩} = 56$
ppp
pp
ppp
pp
ppp
pp

The thematic material is set as single notes in the harp (optional piano) and with very simple string accompaniment. The syncopated counter-melody is retained and placed in the other hand of the harp.

p
mp (Bring out lower voice)

Another complementary rising secondary countermelody that refuses to arrive on the tonic, but sits on the seventh, creating a dissonant pedal note effect is added. Given to the second violins it also introduces the woodwind section preceded by a sustained horn note (Burrell, 2010).

Hp
 Vln. I
 Vln. II

mp
mp
p

Criticism and Reflection on the ‘Orchestral Variations on a Famiglia Theme’.

The *Orchestral Variations on a Famiglia Theme* is a well-crafted and substantial body of work for the initial stages of the investigation. The whole composition is thirty minutes in duration. It exhibits skill in orchestration, thematic development and derivation, manipulation of the compositional elements of harmony, rhythm, texture, mood and place. The work encompasses many forms and structures and evidences a personal openness to multiple influences and the willingness to experiment. The autoethnographical component, though subjective, was tested for response against its representatives in the ethnographic group and the philosophical comprehension that supports the premise of the research is aptly applied.

A possible weakness is the length and orchestral combination. Orchestrated for a small orchestra it is contrary to the repertoire this type of ensemble usually performs and unsuitable for performance by a large orchestra. I submitted the composition to the Queensland Youth Orchestra, however their orchestra required a larger scoring to suit their forces. The work was passed on to the QYO II. The conductor of the QYO II contacted me and asked me to re-orchestrate it for larger forces. This I did, totally re-working the *Tango* and building up other movements. I sent a copy of the original to the Darwin Symphony Orchestra, directed by Dr. Leif Sundstrup, and they asked for a re-orchestrated version of the *Tango* movement. I contacted and sent copies to The Derwent Symphony Orchestra, the SBS Youth Orchestra, The Tasmanian Symphony Orchestra and the Brisbane Regional Youth Orchestra. Though these ensembles have not performance the piece to date, this may

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be due to scheduling restrictions or -in the case of the amateur orchestras- their conductors realizing that their players are not technically advanced enough to rise to the requirements of the piece in the few hours that they rehearse each week.

The whole concept could be revisited and reinvented. If revisited, it could be reduced to fewer movements, or re-orchestrated to be performable by a chamber group, or even two pianos. If reinvented, which is the preferred option, then the orchestral audio files could be placed in a DAW and incorporated with audio recordings of the voices of the ethnographical cohort; their responses to the music and the research. This would be a completely new work and it would be a closer and more authoritative autoethnographical response.

Critical Analysis: Third Movement from the *Woodwind Quintet*.

Third movement: *Rondo*. The score for this movement is on pages 122 - 132 of the folio and the audio is on CD 2, track 3.

The *Rondo* is based on ornithological recordings made at The Diamantina Lakes National Park in the channel country of Far Western Queensland. The ornithological recordings were very faint and difficult to capture as single isolated calls of individuals.

The more commonly sighted birds included the Black Kite, the Little Eagle, the Swamp Harrier, the Whiskered tern, the Caspian tern, the Gull-billed tern and the Silver Gull. The Greenshank and Marsh Sandpiper, the Pied Pelican and the Eurasian Coot, Purple Swamp-hen and all manner of duck. The Pallid Cuckoo (with its characteristic sad descending chromatic scale), Cuckoo Shrike, White-breasted Honeyeater, Jacky Winters and the Hooded Robin, Willy Wagtails, Grey Shrike-thrush, and members of the swallow family. Many other birds were also heard but not sighted.

Verbal feedback at the confirmation of the research proposal from the assessors advised that I should not get bogged down in the exact transcriptions of the birdcalls, but rather to use these as stimuli to create works derived from them in a more transformative state. Accepting this advice, I transcribed these recordings not as isolated calls but in community.

The resultant transcription is a busy texture (see figure 7.10).

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8va

Little eagle

p

pp

pp

Black kite

mf

mf

p

8va

pp

mf

small bird, possibly Western Gerygone

ppp

3

5

3

swamp harrier

p

Flutter

pp

crow

8va

pp

mf

pp

Water bird

mf

8va

mf

pp

3

5

3

3

p

8va

p

Figure 7.10. Transcription of multiple birdcalls recorded at Diamantina Lake National Park.

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The woodwind movement opens with a clarion call (derived from the call of the Little Eagle) in the horn, echoed in the flute two octaves above and then the oboe in the octave between. Here the call is spread through three different instruments, exploiting their differing timbres.

Rondo

Score Diamantina Lakes Robert Burell

The musical score is for a woodwind quintet, specifically the third movement, 'Rondo'. It is composed by Robert Burell and is titled 'Diamantina Lakes'. The score is written for five instruments: Flute, Oboe, Clarinet in Bb, Horn in F, and Bassoon. The key signature is two flats (Bb and Eb) and the time signature is 2/4. The score is divided into two systems. The first system shows the initial call in the Horn in F (mp), followed by the Flute (mp) and Oboe (p). The second system continues the call with the Flute (p), Oboe (pp), Clarinet in Bb (p), Horn in F (pp), and Bassoon (p). The score includes dynamic markings (mp, p, pp, ppp) and articulation marks (accents, slurs).

Figure 7.11. Opening statement of the woodwind quintet, third movement.

The bassoon sounds another ornithological fragment (the Swamp Harrier) and the clarinet yet another. Over this the flute and oboe state material derived from the bassoon and clarinet fragments, presented in canon and inversion of each other (a transformative state derived from the original birdcall as Dr. Cronin had suggested). The flute in measure 5 states a small descending chromatic scale, which is characteristic of so many of the smaller birds in this region, especially the Pallid Cuckoo, Thorn-bill and those of the Wren families. Though the work begins with a direct quote from a transcription, within two beats the music has begun a transformation to embrace and express elements of other calls.

This opening material maintains its contrapuntal texture and at measure 16 the flute states the trill-like melodic motif of the Western Gerygone. This call would naturally be two octaves higher than this presentation, and the choice to place it so low was one of contrast and aesthetics. The clarinet immediately imitates this statement, to portray the ‘presence’ of another bird of the same family, responding to the call. The overlapping is deliberate and implies a canonical influence.

This texture continues until measure 23 where a homophonic progression of harmony creates a cadence. The mode of limited transposition (Figure 5.1) influences these harmonies. Commencing on A flat, it consists of Ab, A, B, C, Db, Eb, E, F, G and is the repeated pattern of semitone, tone, semitone, repeated 3 times and is given in Figure 7.12.



Figure 7.12. *Mode of limited transposition with an A flat final.*

This cadence is given in Figure 7.13

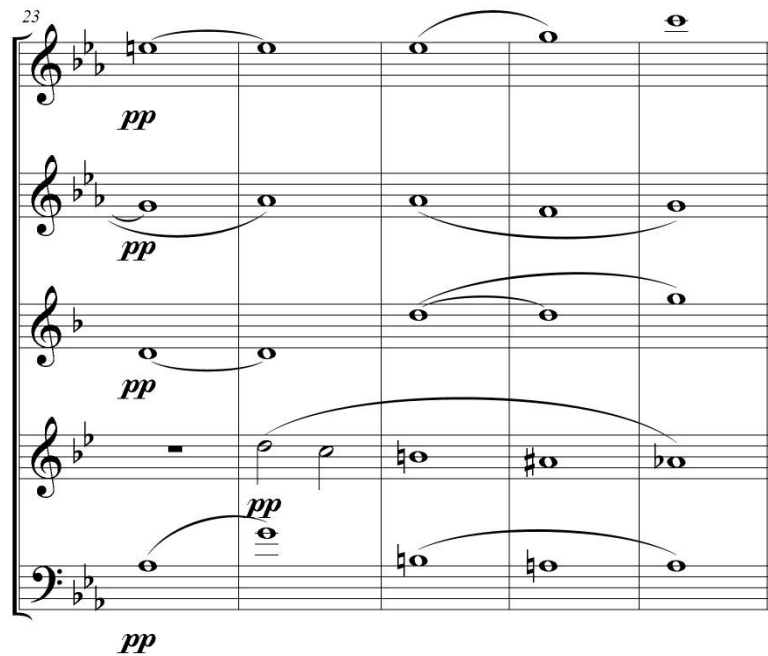


Figure 7.13. *Homophonic cadence* using the mode of limited transposition.

My sketches indicate that this cadence began in a simpler form, without any chromaticism in the first chord. The influence of the mode of limited transposition was not employed until the second chord, as seen in Figure 7.14

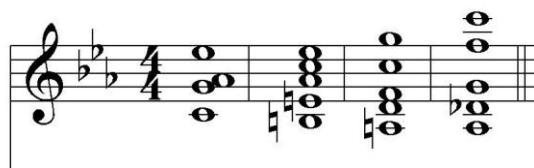


Figure 7.14. Harmonic progression from the sketches.

By the time I had orchestrated this cadential section, adding some voice movement and superimposing the mode to influence the harmony right from the start of the progression, it became the cadence shown in Figure 7.13, given here in short score. See Figure 7.15.

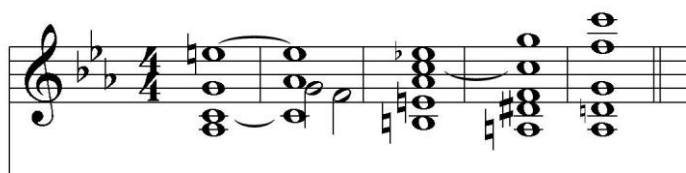


Figure 7.15. Short score of cadential chord progression

More chromatic and exploiting the descending augmented fourths in the lower voices (which move in contrary motion to the upper voices), this cadence announces the end of the ‘A’ section.

The bassoon, performing the small chromatic descending figure first sounded in the clarinet at measure 3 initiates the ‘B’ section. The flute and clarinet interplay with overlapping trilling figures, taken from measures 16 - 17 to function as an accompaniment to the lyrical melody of the oboe. This melody, derived from measures 4 and 10 of the

transcription, is the same source material used in the fourth movement of the *Choral Song Cycle*.



Figure 7.16. Motifs that contribute to the oboe solo in section 'B' of the 'Rondo'.

Transposed up a compound third²⁰ and rhythmically augmented, the two fragments combine to form one statement. The grace notes and glissando have been notated into the melody. The latter half of the second fragment has been rhythmically altered with the inclusion of diminution and syncopations. The reiterated final note indicates a cadence and incorporates more syncopation into the statement (e.g. Figure 7.17).

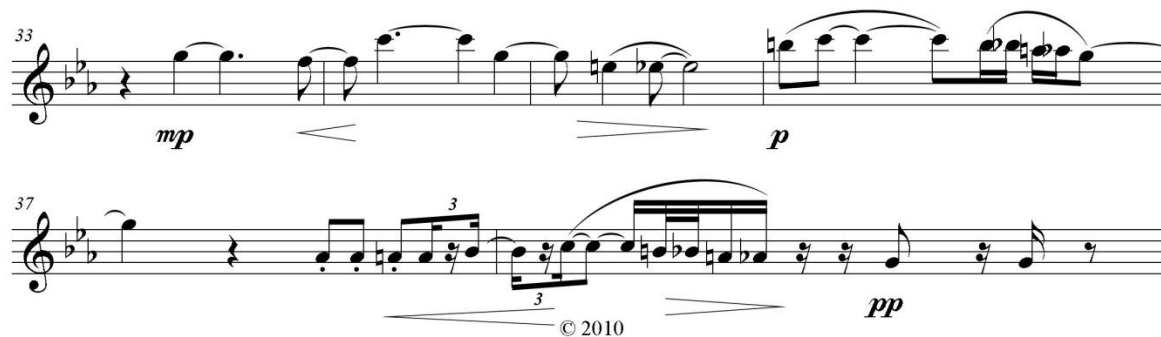


Figure 7.17. The oboe melody of the B section

²⁰ It should be remembered that the transcription has been dropped from the original recording by up to two octaves in the first place.

Underlying this, the bassoon and horn harmonized in thirds sound a chromatic descending line, a transformation of the first motif of the bassoon.

These measures (40 – 44) were first conceived as a linking passage that introduced the flute melody. Here the semiquavers have been stretched out to dotted minims, and tied across the bar lines to create rhythmic ambiguity. As the work progressed, it was realized that this could be brought forward and worked in under the oboe solo to prepare the ear for the linking passage and to create internal unity. Its derivation consists of a repeat at measure 30, then again in 32. Here (at 32) the rhythm is augmented to notes of longer duration. By measure 35, what was originally semiquavers, are now dotted minims.²¹

The flute's melodic entrance begins with what was the final section of the oboe's melody. This statement is developed through augmentation and repetition, and uses a chromatic scale to rise to a sustained note under which the clarinet echoes the final motif of the oboe solo. Along with the thinner texture, this contributes to the sense of cadence and signals the end of the 'B' section.

A repeat of the 'A' section occurs which has been made more succinct with the early arrival of the harmonic progression that heralds this section's close. In addition, the oboe performs a 'left over' of the trilling material that sits within the chords of this cadence.

The 'C' section opens with the upper voices in contrary motion. The former descending chromatic figure that permeates the movements is placed under a descending

²¹ More evidence of the transformation of the ornithological material were one thing becomes another in process.

triadic figure, a metamorphosis of the chromatic figure, transformed through interval augmentation. Over the next four measures, this pattern is repeated and developed.

Underneath this developing pattern the clarinet sounds an ornithologically derived motif (measures 6 – 11) taken from the ‘water bird’ transcription shown Figure 7.36. Figure 7.18. shows this motif.

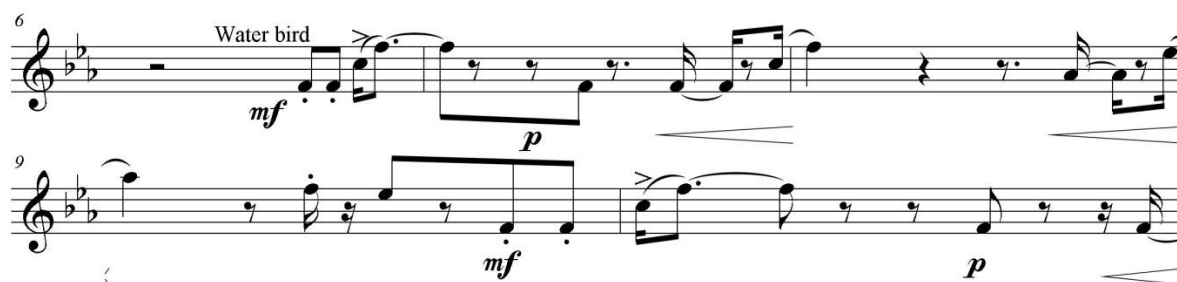


Figure 7.18. Transcription of heard but unsighted water bird. Probably a member of the crane family.

Built on an ascending leap of a fifth and subsequently the octave, it is a strong melodic motif. Starting on a beat, incorporating syncopation, the strengths of this motif and exploitation of its elements helped to achieve the traditionally contrasting mood of the ‘C’ section.

This motif (Figure 7.18) in the clarinet, is supported by close harmonies in the bassoon and horn (in the jazz style of big band harmonic riffs), that is derived from the stated mode of limited transposition, thus, giving it a dissonant edge that opposes the tonal clarity of the strong fifth and octave relationship. This is repeated and developed through sequential movement and exploitation of highly rhythmic syncopations. This developing rhythmic complexity provides forward motion into a state of instability, with where the

texture sounds as if the music is starting to unravel. This rising tension through rhythmic transformation is resolved when all voices come together on the repeated semiquavers in measures 75 - 77.

The 'A' section returns with greater truncation than the first repeat. The bassoon sounds its call and the section promptly arrives at its characteristic harmonic cadence. This time the clarinet performs the trilling figure and the oboe -placed up high on the G- extends beyond the cadence, moving seamlessly into a repeat of its melody from the 'B' section.

A truncated 'B' section is restated. The flute plays an incomplete statement prior to the 'A' sections return, followed by four bars of the 'C' section -complete with its rhythmic instability- that resolves for the final cadence.

Throughout this work there is evidence of the application of process-relational philosophy. The coming-into-being of a new entity from previous entities is at the core of this philosophy. Dorrien (2006) explains that Whitehead first presented the coming-into-being concept in his major work *Process and Reality*:

The fundamental units of reality are 'actual entities' or 'actual occasions' that realize some value and pass out of existence in the process of being succeeded by similar entities ... Building on Leibniz's relation of 'perception' to 'apperception' he [Whitehead] coined the term 'prehension' to designate the process by which an actual entity grasps another entity as an object of its experience. The coming-into-being of the subject must be accounted for, and all actual entities are simultaneously the subject that experiences and the 'superject' of its experience.

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Process and Reality developed a temporalist panexperiential theory of reality (p. 63).

Therefore, like *Robinson Gorge*, in this composition the entities of the birds and the entities of their calls are historic actual occasions of reality. The author (an entity) has experienced these actual entities, the birds and their calls; has recorded them and transcribed them, (more entities) and has used them to create new music, yet another entity. The performance of the music will be another expression of the theory of temporalist panexperientialism.

In the case of a performance, the existence of an actual entity in the form of a musical score will be grasped by another entity (the performer), and will be transformed into another state; that of a living performance experience. This performance will be another existence, and will be temporarily experienced by the audience before passing out of existence in that form and perhaps only to remain as echoes of the memory in the consciousness of the listener.

The permutations and metamorphosis of the birdcall motifs in the consciousness of the author is yet another expression of the value of the actual occasions of the birdcalls passing out of their original existence in the process of being succeeded by another type of existence.

Criticism and Personal Reflection on the ‘Woodwind Quintet’.

The *Woodwind Quintet* was premiered at the concert *Birds of a Feather* in November 2011 in the Ian Hanger Recital Hall, QCGU, South Bank, Brisbane. Performed by the members of The Lunaire Collective,²² it was well received and their performance can be viewed at the following link: <http://www.youtube.com/watch?v=Zs8wqzCJE94>

This ensemble asked if they could include the quintet in their repertoire for 2012, but requested that I rewrite the second movement *The Chorale* to give the horn more opportunity to breathe, and to reconsider the phrasing markings. They also asked me to re-score the minimalist middle section of the first movement *Dance of the Willy Wagtail* to secure the rhythmical impetus visually, thus ensuring a confident rendition. I responded to these requests and made the adjustments. These were the only suggestions given by the performers and the work was well received in the concert. The same ensemble performed the work again in Brisbane on the 5th of October 2012.

The composition shows a developed degree of compositional sophistication. The transcendental transformation of the ornithological source materials to an idiosyncratic form that suits the ensemble is convincingly achieved. It displays melodic, harmonic and rhythmic development with effective polyphonic and homophonic textures, sound structure, contrasting sections and internal unity. The timbres of individual instruments are explored

²² The Lunaire Collective is a virtuosic and innovative chamber music ensemble featuring some of Queensland’s top musicians. They include Hayley Radke, Eve Newsome, Rianne Wilschut, Lauren Manuel and David Mitchell.

in addition to their orchestral combinations making this piece a suitable chamber music work. The greatest indicator of its worth is the inclusion of the composition into the repertoire of The Lunaire Collective's 2012 season.

This composition is a clear example of the realization of the Whiteheadian notions of process and reality and of the philosophical concepts of becoming.

Critical Analysis of First Movement of the Brass Quintet.

First movement: *Butcherbird*. The score begins on pages 133 - 147 of the folio and the audio is on CD 2, track 4.

This work is derived from a motif of a Pied Butcherbird that visits our home in Morningside, Brisbane: (Figure 7.19)



Figure 7.19. Transcription of Pied Butcherbird motif.

When I commenced the sketches for this movement I began with a slower introduction, taken from another motif that these birds commonly employ, that of a rising fifth performed in a syncopated manner. (Figure 7.20).

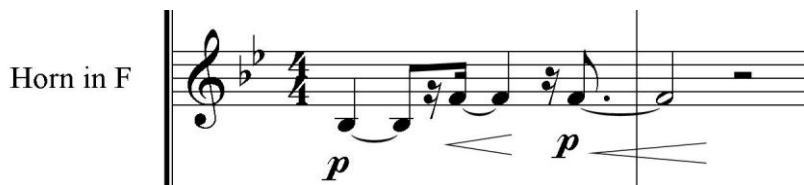


Figure 7.20. Original opening motif of the brass quintet.

I surrounded this interval with ambient sounds created by the performers blowing air through their instruments without sounding an actual tone. A developmental section followed, leading towards the first sounding of the motif given in 7.19. This occurred in the 23th measure, as can be seen in the quote in Figure 7.21



Figure 7.21. Excerpt of culled introduction.

This introductory material, though interesting, was culled, to begin the work with an exciting main motif in the trumpets, harmonized and echoed in the lower voices. The antiphonal nature of the opening displays the influence of renaissance composer Giovanni Gabrieli (as in his *Sonata XIII*), and my exposure to the repertoire of the Brass Band genre.²³

The opening motif of the movement is an altered form of the original transcription.

²³

Director Mackay City Brass Band 1988 - 1990



Figure 7.22. Original transcription of Pied Butcherbird motif.

The first alterations occur on the third and fourth beats where the glissando and grace note are removed. The leap of an augmented fourth in the second measure is replaced with a leap of a fifth, from the dominant to the supertonic, resolving downward to the tonic. The trill is notated with a trill sign that leads into the descending demisemiquavers. This is all transposed down from the A flat to F.²⁴ The opening statement of the trumpets is provided below.



Figure 7.23. Opening statement of the trumpets.

The second trumpet adds weight to the unison notes, harmonic strength to the octaves, sixths, fifths and thirds, whilst supplying a reference point against which the dissonance can sound and resolve. The addition of the second trumpet came about partly because I found that when I was transcribing the birdcalls, the harmonics within any given note were so pronounced that sometimes it was difficult to decide what was the more

²⁴

Allowing for transposition of the Bb instrument.

important pitch, and what was the fundamental. When transcribing the recorded data, I used various shaped note heads to clearly indicate the secondary pitch present in a motif. Figure 7.24 is an excerpt from the transcription of the Grey Butcherbird in which the harmonics are represented as triangular shaped notes. Of interest is the proximity of the other notes/partial.



Figure 7.24. Transcript of birdcall showing secondary notes with differing shaped note-heads.

The challenge of deciphering the most important note is compounded by the fact that songbirds like the Butcherbird have a syrinx,²⁵ which can comprise of up to five different ‘elastic like’ vibrating muscles (Pieplow, 2009). This means that they are able to produce more than one note at a time and can use some muscles to support a tone with sympathetic harmonies. The following spectrogram and discussion is a paraphrased extract from the Earbirding.com website, where the ability of songbird to produce multiple tones simultaneously is discussed.

²⁵

The vocal organ of birds situated near the bifurcation of the trachea into the bronchi.

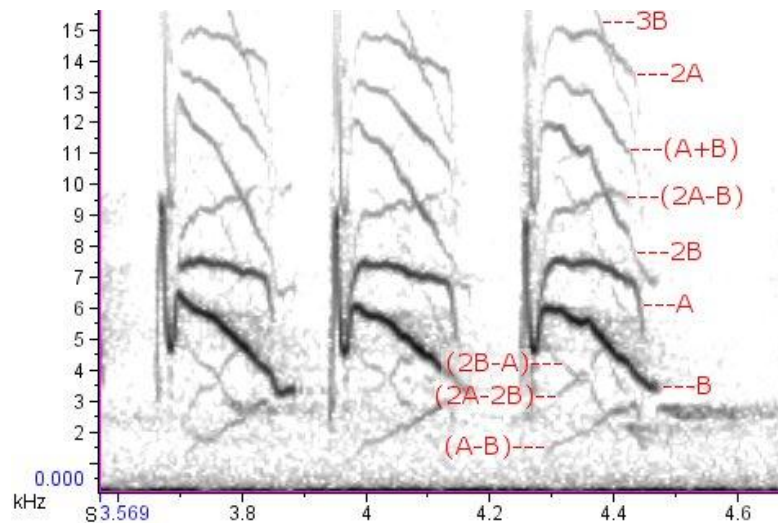


Figure 7.25. Spectrogram of song-bird call. Retrieved from 'Polyphony' earbirding.com, Copyright 2009 by Pieplow.

As the Pieplow explains:

The spectrogram indicates the elaborate nature of the fundamentals and partials; clearly seen in the discordant patterns, some crossing each other. This complex pattern is comprised of three different kinds of partials:

1. Fundamental frequencies (two);
2. Harmonics of the fundamentals (three are visible here); and
3. Heterodyne frequencies (all the rest of the traces).

The heterodyne frequencies are evidence of a fundamental concept of polyphony: when two sound waves mix, they combine to form additional sounds at frequencies equal to the sum of the original frequencies and the difference between them. The mix of frequencies A and B, in addition to the original sounds, results in heterodyne

frequencies A+B and A-B. If A and B have multiple harmonics apiece, then things get complicated, because there are lots of frequencies to add and subtract. (Pieplow, 2009, para.8)

The harmonics and partials incorporated into the opening statement of the trumpets is immediately echoed by the horn and trombone in antiphony.²⁶ When the trumpets restate the opening motif, the tuba enters extending the middle C rhythmical motif of the trombone, completing the triad of F major. This leads naturally to a harmonic progression in the next measure with the trombone stepping up to the D and the tuba down to a B flat, establishing a tonic to subdominant progression. See Figure 7.26:



Figure 7.26. Harmonic progression of brass quintet opening.

²⁶

Though there is a trill in the trumpets the trombone was not given the trill to simplify the performance.

These opening measures created a quasi-baroque fanfare, which to my reckoning was deemed to be the most inevitable consequence of the motif and therefore the most musical.

The next entry of the trumpet's motif was adjusted to fit the harmonic progression (assisted by the horn part being a variant composed from the echoing material). In measures 8 - 9 the horn has evolved away from a simple echo to a canonical imitation that supports the harmonic flow, whilst sounding elements from the motif.

At measure 11 the trombone joins the horn in canonic imitation with the tuba (in measure 12) sounding the opening notes of the motif, except that at every sounding the last note is a tone higher thus pushing the texture forward. Over this tuba material, the trumpets play the motif in canon (displaced by 1 beat). This counterpoint has a cumulative thrust that pushes the music to an anticipated cadential point around measure 15, which is denied. The horn begins another motif, common to the Pied Butcherbirds; that of an octave leap followed by a semi-tonal descent. This forges through the expected cadence and the trumpets are given a rising sequential figure (based on the trill of the original birdcall motif), and the trombone and tuba cascade away with a descending figure derived from the first three notes of the same motif.

This transformed three-note figure²⁷ when performed back to back, with an accent on the first note, creates a cross-rhythm which implies a compound duple time. This can be seen in the lower bass part (Figure 7.27) where the dotted vertical lines indicate the implied compound meter.

²⁷ Quaver, semiquaver rest, semiquaver and staccato quaver.

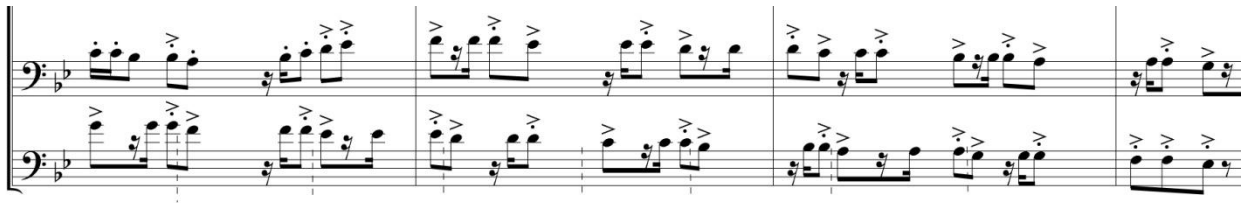


Figure 7.27. *Cross-rhythm of compound duple against quadruple time.*

The cross-rhythm adds excitement to the overall texture. The trumpets rise to a very high B flat and the tuba initiates a demisemiquaver descending figure (derived from the end of the trill of the opening motif) which is then taken up by the other voices in turn, each remaining on the arrival pitch, thus contributing to a chord. The trumpet extends the scalar run rising to an even higher pitch. All the voices sound a quintal chord with C as its fundamental; placed in an inversion with G as the lowest tone to create a tonally ambiguous chord that is coloured by the pentatonic scale. As Persichetti (1962) explains in his text on *Twentieth Century Harmony*:

Five note chords by perfect fourths [fifths in this instance]²⁸ have a pentatonic flavour. The five-note form contains all the steps of the diatonic pentatonic scale. Chords by perfect fourths are ambiguous in that, like all chords built by equidistant intervals, any member can function as the root. The difference of this rootless harmony to tonality places the burden of key verification upon the voice with the most distinct melodic line. (p. 94)

In this case, the first trumpet has the most distinct melodic line.

An extension to the 'A' section creates a transition to the contrasting middle section. This extension is a metamorphosis of the trill of the opening motif. The trill has evolved

²⁸

Inverted fourths result in quintal harmony. What applies to quartal chords applies to quintal chords.

into a pattern where the first pitch is repeated three times before moving to the neighbour note. This pattern is repeated three times, before the characteristic descending semiquaver scalic run to a long note (an influence left over from the previous few measures). See

Figure 7.28

Figure 7.28. Material developed from the trill of the opening motif.

This begins in secundal harmony in the lower voices. The seconds give way to parallel fifths, and this is treated in an antiphonal manner²⁹ by the upper three voices, which have quartal harmonies. This is expanded over the next few measures to imply a harmonic progression like that of the opening of the ‘A’ section.³⁰ This only lasts for four measures before a return to the material that preceded the cadence is re-sounded to lead into the contrasting ‘Chorale’ middle section.

²⁹ This results in strong internal unity within the structure of the movement.

³⁰ More internal unity through implied cross-referencing.

This ‘Chorale’ section is slower and marked as crotchet equals 96, opening in the subdominant of E flat. The link from the previous section is created through two held tones, a G in the horn and a B flat in the trumpet, implying a G minor tonality. When the tuba enters with an E flat the modulation is established.

The horn performs a slow and lyrical melody, an augmentation of the demisemiquaver-descending figure that concludes the trill of the opening statement of the ‘A’ section (demisemiquavers become crotchets). This stretching of the duration of the derived material and the context of the slower tempo, transforms this small fragment into a more transcendental and ethereal melody. Figure 7.29 is a reduced score of this ‘B’ section.³¹

Figure 7.29 is a short score for the B section of a brass quintet. The score is written in 4/4 time with a tempo marking of 96 (crotchet). The key signature has two flats (B-flat and E-flat). The score is divided into two systems, with the second system starting at measure 6. The instruments are Trumpet 1, Horn, Trombone, Tuba, and Trumpet 2. The Horn part is a melodic line starting on G4 and descending. The Trombone and Tuba parts provide harmonic support with sustained notes. The Trumpet 2 part features triangular note heads. Chord symbols are provided below the Trombone and Tuba staves: Eb, F7/Eb, Bb/Eb, Eb, Bb2/D, Cm/D, Dm7/C, Bb7, Gm7, F, F2 sus4, and F2.

Figure 7.29. Short score of B section of brass quintet.

31

The Horn is in the alto voice; the second Trumpet as triangular note-heads.

As in the woodwind quintet, the horn's melody in the 'B' section displays the Whiteheadian notions of process and reality; where actual occasions of reality have become other occasions of reality. A new entity has emerged from the recent reiterated past, a new actuality has evolved.

The horn melody continues its transformation through rhythmical alterations, tied notes and intervallic augmentation. The trombone (written in the tenor voice in Figure 7.26) and the first trumpet employ inverted versions of the horn melody. The trombone also contributes to the horn melody through an exact quote, which functions as an extension to the final melodic line of the horn. The tuba line is influenced by the melody and descends by step in semibreves, before the leap of a fourth downwards. This inter-relational inter-play of all the voices is a process-relational philosophical expression of the notions of the inter-relatedness of all events and entities. The philosophy posits that everything is in relation to each other, as Catherine Keller³² (2008) explains:

In the dense matrix of relatedness ... creative newness is not disconnection, but new connection. Transcendence does not belong to a lone spirit soaring free of the creation and all of its constrained, chaotic creatureliness, but to a flow of spirit within the open-ended creation. Transcendence is the transformation of power within the process of creative, influent interrelation (p.106).

The voice leading of this simple tertiary harmony moves mostly by step to progress to the quintal chord built on a low F, implying an arrival on the dominant. The added notes

³²

Professor of Constructive Theology, Drew University, New Jersey.

A PROCESS OF BECOMING

are mostly a result of contrapuntal movement. The prepared suspensions with resolutions are a feature of this section and contribute to the chorale-like mood. The texture therefore is polyphonic, thus complementing the contrast with the homophony of the preceding material.

The link back to the 'A' section is through the extension material of measure 30. This linking passage continues the quintal harmony of the final cadence of the chorale and the second trumpet rises to a high F, which is then passed to the first trumpet. The process whereby this new material is derived from the previous descending line at the conclusion of the trill of the opening motif is yet more evidence of this work being infused with process-relational theory.

Measures 57 – 62, are presented as a series of suspended dissonances with resolutions. Stripping away the suspensions and orchestral voicing, the melody (shared by the trumpets), is simply a sequence of upward steps (of a tone) followed by a descent of a third. A variation (of the descending figure) created by the introduction of 'escape notes' into the descending line. This same device and technique of spreading the melody across more than one instrument recurs in another guise in the middle, as well as part of the codetta of the final movement. The notes of the melody are given to each player in succession, thus they are spread through the voices and combine to create the harmony. This is another example of process-relational philosophies notions of the inter-relatedness of all things. The horizontal movement arrives at and creates a vertical implication. A new melodic and harmonic entity grows out of a recent actuality, a coming-into-being of a new entity.

The highly rhythmical quintal/quartal pulsating chords of the lower voices, with scalar runs in the tuba, accompanies the melodic metamorphosis and the whole pushes the music to a quartal chord (D, G, C, F, B flat) voiced with the C in the bass. This chord implies a dominant cadence in F and heralds the return of the 'A' section.

The repeat of the 'A' section material is essentially the same until the codetta at measure 84. The extension material is followed by rising leaps of a fourth (in rhythmical retrograde to the opening motif's dotted quaver then semiquaver) with contrary motion between the upper and lower voices all leading to a trilled dominant chord before the work ends on the tonic chord.

The Criticism by the Performers and Peter Luff.

The first movement of the *Brass Quintet* was performed in a practical session of the Research Higher Degree candidates Colloquium.³³ *The Boys of Brass*, led by Greg Aitkin³⁴ gave the work its first airing and then the music was critiqued by the Senior Lecturer and Head of Brass at the QCGU, Peter Luff.

Luff advised that the work was at the extremes of register and technical prowess and as such, it "could only be realized by very proficient performers". He expressed delight in its overall coloration and dynamism, but questioned why there was a slower middle section. He asked, "Why have you stopped the momentum of the piece? Why did you not let it run

³³ The Colloquium meets every week at the Griffith University Conservatorium's South Bank Campus, Brisbane.
³⁴ Brass lecturer, trombonist and conductor, Griffith Conservatorium.

through to the end?” I justified the change of tempo and feel, by explaining my desire to have a contrasting middle section. Luff clearly would have liked the energy to be maintained throughout. He asked the performers if they encountered any difficulties with the work. The first trumpet complained about the high notes, but conceded that they were playable. The first trumpet also expressed that he would prefer the trills to be more specific, indicating the he was not always sure on which note to trill. Luff advised that I might like to consider taking the work down a major second, but warned that this would alter its tone. The horn player complained about the difficulty of realizing the octave leaps in the latter section of the work. I explained that they were derived from the call of the Butcherbird, and he conceded that though difficult, they should remain, to maintain the integrity of the composition. Luff advised that a good trombone player is able to perform a trill between the middle C and neighbouring D, and that this might be preferable in the antiphonal texture of measure 4.

The performers expressed their liking for the work and felt that it was of merit. Luff was excited by it and asked for a copy, as he would like to have it performed.

Bruce Jellyman, the director of *Brass Wanganui*, New Zealand, asked for the work to be re-orchestrated in treble clef for the instruments of the Brass Band genre (B flat cornets, E flat tenor horn, trombone and E flat tuba), promising a performance, or a read through. A re-orchestrated version was sent it to New Zealand.

I believe that the work, though difficult, was a worthy investigation. It effectively realized the ornithological source material into music and it demonstrates the philosophical stance of the process of becoming both in the inter-relational inter-play of the melodic

polyphony and in my own unfolding growth as a composer. The effective idiosyncratic instrumental writing and the voicing of the timbres are well realized as is the harmonic language and motivic variations and organic metamorphosis.

Critical Analysis: Fourth Movement from the Choral Song Cycle

Fourth Movement: *Who is the Greatest Influence*. The score for this work is on pages 227 - 234 of the folio and the audio on CD 2 track 14.

This movement is the only unaccompanied work of the choral song cycle. The text is an autoethnographical sonnet extolling the nurture of motherhood, its contribution to the young and their process of becoming an adult. The poem is given below.

‘Who is the Greatest Influence’

*Who is the greatest influence
Upon the tender tree?
Is it the wind that blows outside
Or those that nourish thee?*

*Surely hopes are blown away
As leaves are in a storm
Though cold the wind, the roots reach down
To where the soil is warm*

*And thus sustained the young endure
To know the seasons end
And learn to know when love is pure
And brokenness doth mend*

Who is the mother of this shoot?

Who held him up till he took root?

Robert Burrell (1986)

The opening melodic line (spread through the staggered entries) requires each new voice to continue the melody and contribute to a cluster of secundal harmony. The technique of spreading the melodic line over multiple voices, and the whole contributing to an unfolding harmonic progression, is one that I first noticed in the *Prelude Number One* from *The Well Tempered Clavichord* by J. S. Bach. I have integrated this technique into my style to create contemporary harmonic textures, through traditional and conservative ‘voice leading’ procedures. Added to the craft is the concept of process-relational philosophy, which argues the total interrelatedness of all things and the Whiteheadian notion of ‘prehension’, where the present grows out of the recent, reiterated past. In this musical example the vertical harmonies grow out of the horizontal lines of the melody; both belong to each other and are the product of each other.

Once all voices have entered, the harmony quickly opens through stepwise contrary motion, to a complex chord consisting of a low E flat with a ninth, an eleventh, and fourteenth.

Amateur choristers may have difficulty with harmonies that stretch the tonal repertoire and the dissonances are more successfully rendered if approached through this conjunct movement.

The resolution to this dissonant chord is achieved in measure four, with a partial release of the tension by emphasizing the pitch of F. The high F is held by the sopranos, and re-enforced by a small motif derived from birdsong, and repeated through the lower

voices. The F is added to, by the inclusion of a G and E flat, thus altering the harmony. This combination of tones, if they were in ‘close-voice’ would be a secundal cluster, but opened and spread (as they are here) they take the sting out of the dissonance and almost imply a tertiary harmony with an added colour note. The opening measures are shown in Figure 7.30.

The musical score for 'Who is the Greatest Influence' shows the opening six measures for four voices. The tempo is marked as 72. The lyrics are: 'Who is the great-est in-flu-ence up - on the tend-er tree?'. The music features dynamic markings (mf, f, fp, pp, p) and articulation (accents, slurs). The time signature changes from 3/4 to 2/4 to 4/4 and back to 3/4.

Figure 7.30. Opening six measures of ‘Who is the Greatest Influence’.

The choral style of composition and my cautious approach to dissonance, is influenced by my own experiences with choral composition and with my involvement in performances of choral repertoire whilst a member of the Queensland Conservatorium Singers. The repository performed ranged from renaissance masters to living composers. Included were works by Pretorius, Morley, and Byrd; Bach, Bruckner and Mendelssohn; and more contemporary composers such as Tippett, Britten and Bernstein as well as living Australian composers such as Leek, Buchanan and myself. Formally and informally, these works were analyzed and absorbed. Some of the compositional techniques that have become part of my own voice, and that I can identify as being present in this work are:

- The overlapping of parts (as in measure four of the above example, where the tenors overlap the altos) encountered in a composition performed at a conference workshop given by the Australian National Choral Association, at St Lucia in 2004. I do not recall the composer, but I remember the effect as being novel and beautiful, so it has emerged in my own music.
- The use of percussive, non-singing sounds, as in the ‘Sss’ extension to the text ‘*wind blows*’ is the influence of Stephen Leek, as in his work, *Once Upon a Mountain*, a type of contemporary word-painting and onomatopoeia synthesis.
- The use of vocalizations on ‘closed tones’ (such as the drone in measures 30-35, see to Figure 7.32) similar to those used by Sarah Hopkins in her work, *Past Life Memories*.
- Pérotin’s³⁵ technique of mixing meters and having canons at differing rhythmic diminutions can be clearly seen in the polyphony of the measures 11-21 and in the extract in Figure 7.33
- Elizabethan madrigal word-painting of the text ‘*the roots reach down*’ similar to Weelkes’ setting of the word ‘descending’ in his madrigal *As Vesta was Descending*.
- Declamatory *fortissimo* homophonic sections of contrasting texture, as in measures 45 through to 49 are similar to Bruckner’s contrasts in *Christus Factus Est*. Even

35

Of the twelfth century Notre Dame School composers.

the resolution to a soft dynamic suspended fourth resolving to a minor triad is reminiscent of his style.

An eclectic synthesis of widely drawn influences have contributed to my choral compositional style, which remains conservative in sound even when incorporating modern techniques. Birdsong is also present as in the motif used to set the text ‘and thus sustained the young endure’. Figure 7.31 shows an extract of the transcription of birdcalls recorded at The Diamantina Lakes National Park used in this work.



Figure 7.31. Extract of birdcall used in ‘Who has the Greatest Influence’.

Again, the twelfth century Notre Dame School of polyphony is clear. A drone in the bass supports the birdsong source material (see Figure 7.31) in the soprano and tenor parts. The latter have a rhythmic and intervallic augmentation derived from the soprano part. A more complex texture is crafted through the imitation of the soprano motif in the alto voice, which concludes with another birdsong-derived motif of descending chromaticism. See figure 7.32.

Figure 7.32. Extract showing the influence of the Notre Dame School of Polyphony.

Measures 11 – 21 reflects this school of polyphony. The section is built from a simple canon, first presented in the basses with accompanying harmonies in the tenor and soprano voices. Figure 7.33 shows the original motif.



Figure 7.33. Original motif of the canonic section.

This melody features a change in meter from compound duple to triple and back again as it repeats. The upper voices do not stay in common triple time and the altos, who enter at measure fourteen and imitate in rhythmic augmentation and hemiola (see Figure 7.34) with notes of twice the duration of the original.



Figure 7.34. Rhythmic augmentation and hemiola of the melody given in Figure 7.13.

The augmented alto melody is similarly imitated and developed in the sopranos, with syncopation and notes of even longer duration, starting at measure fifteen (see Figure 7.35).

14 *mp*

ly, Sure - ly hopes are blown a - way, as leaves are in a

mp

Sure - ly hopes are blown a way as leaves are in a storm,

mp

8 blown a - way, Sure - ly hopes are blown a - way, as leaves are in a storm,

mp

storm, Blown a-way, blown a - way, blown a - way, blown a - way, Sure-ly hopes are blown a-way, as

Figure 7.35. Soprano melody, a further development of previous material.

The tenor line states the main melody of the canon at measure 16 and the basses are released from their accompanying role to restate the melody at 19. This section alters the mood of the work from its modern harmonies and contrasts it with quasi-medieval and renaissance polyphony.

The polyphonic section moves the work to a cadence followed by glissandos and quartal harmonies before the word painting of the text ‘roots reach down’ and more aurally ambiguous harmony. The chord in measure 29 is a quintal chord of E flat and B flat with an F placed in the bass, creating a flattened seventh dissonance.

The dissonance is resolved as the tenors move to the D and the male voices (now humming the last consonant of the text, an ‘Mmm’) accompany the melodic material of the female voices. The basses divide and perform a drone, and the tenor performs a descending line derived from the soprano’s melodic material of the descending C, B, A, G.

Figure 7.36. *Canonic imitation over a drone.*

The short chromatic figure in the alto is the completion of the birdcall. The slur and clear timing of this alto figure deters it from becoming a glissando and from being performed in the Baroque style of separating the notes with a burst of air.

This section comes to rest on a rich quintal harmony built on the low F (Figure 7.36). A fragmentation of the text on an echoing effect using quintal harmony follows, to which is added an E flat, (see alto voice in Figure 7.37) thus creating an inversion and the presence of fourths to the farrago.

36 *mp* *mp* *mp* 3

to-oo oo know-oh oh sea - son's end, ___

to-oo oo know-oh oh sea - son's end, ___

to-oo know-oh the

to-oo know-oh the

Figure 7.37. Quintal harmony and text fragmentation.

The work continues to build to a climax using onomatopoeia to exploit the word ‘brokenness’, and loud dynamics and polytonality, before resolving to a G minor chord. The piece ends with the same musical material from the opening question of the text. On this occasion it is repeated because the text includes two questions, ‘Who is the mother of this shoot? Who held him up till he took root?’ The closing harmony is the same as that of the opening few measures, but here it seems less dissonant and sits as a hesitant and inconclusive sub-median cadence.

The workshop with Roland Peelman

Roland Peelman, Belgian musician and choral conductor, critiqued this movement from the Choral Song Cycle in a composition workshop, when he was an artist in residence

at the QCGU in 2011. Peelman expressed concern over the large leap of the soprano voices (measures 7-8), explaining that this would not be a pleasant sound. I stated that I was not seeking a pleasant sound and had deliberately written the part to achieve a dramatic effect. Peelman queried whether the rising alto glissando (measures 9-10) would be heard under the sopranos descending glissando. I agreed, but felt that it still contributed to the overall desired effect of using ambiguous pitch techniques. He expressed concern over the alto's descending chromatic motif of measure 33 and felt that the performers might need clearer instructions on how this was to be realized, as some might try to sing each tone in the Baroque style. I believed that I had given enough information in the notation and that the slur should counter this interpretation. Peelman appreciated the polyphonic writing indicating that it was musical and to his liking. He also liked the open fifths and echo effects of measures 35 – 36 and felt that should I rewrite the work, I might like to make more use of this device. He believed that it was probably more difficult for me to set the text as I was 'too close' to it and suggested that I emotionally remove myself more, and treat it with a more liberal interpretation.

Personal reflections on the 'Choral Song Cycle'.

This work was appropriate for this stage of the investigation. It evidences the continuing application of process-relation philosophy and autoethnography. The writing is carefully crafted, approachable and performable, and the piano accompaniment is idiosyncratically natural. Julie Christianson (OA), conductor of The Birralelee Voices asked if I could re-write the movement *Gentle Rain* for treble voices in four parts, indicating that

she hoped to perform it in the future. Kim Scott (who has just returned from completing postgraduate studies in America) used the movement *I Saw a Miracle Today* in a choral conducting master-class in America. The well-known and respected choral conductors Emily Cox, George Torbay and Alison Rogers have all asked for copies of the cycle.

Critical Analysis: Second Movement of the *Serenade for Strings*.

Over the four movements of the *Serenade for Strings* the immersion in the external stimuli of birdsong, autoethnographical observations and the notions of process-relational philosophy allowed these influences to consolidate my emerging compositional voice. The hypothetical questions of whether incorporating birdsong into my craft might result in better music, and whether writing music on a regular basis might result in better writing, were blurred and lost to the consciousness whilst I was within immersed in the creative act. Rubidge (2004) explains:

Both hypothesis- and discovery-led [practice-led] research are important modes of research artistic practice in the arts, and may even make an appearance in a single project. This frequently happens when, during the process of discovery-based research, tentative hypotheses (for want of a better term) are formulated as a result of insights gained through the open-ended practical experimentation. However, because the arts are concerned with the possibilities to which questions give rise, as much as with proving those hypotheses, it is likely that further tentative questions will be raised by the testing procedure and the process started over again. (para 23)

In the *Serenade for Strings* this testing of the hypotheses created problems and questions that, when answered formed more problems and questions, as the process of the music composition unfolded. Birdcalls, various composers and studied works all contributed to the whole task.

Second Movement: *Slow Movement*. The score for this movement begins on pages 279 - 288 of the folio and the audio is on CD 2, track 17.

Larghetto, crotchet equals 60. This is the slow movement that follows a fast and showy first movement and is designed to create contrast and a relaxation of the tension established in the opening movement. The work employs a motif taken from the call of a Grey Butcherbird.

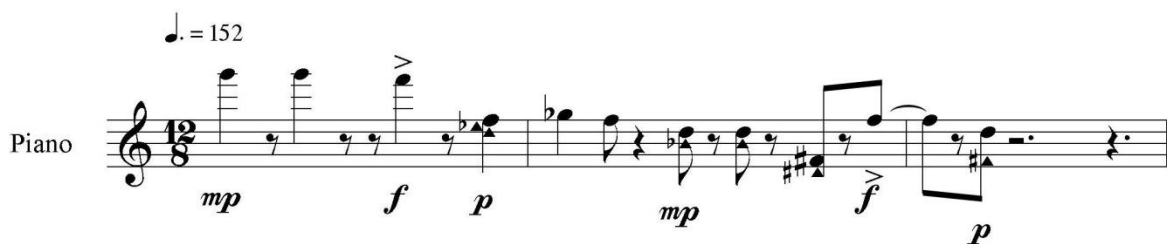


Figure 7.38. Transcription of a motif of a Grey Butcherbird.

This bird regularly calls his motif in the vicinity of my home and it is a call to which I am personally drawn. Placing the motif in the key of D major and adjusting its register I brought forward the mediant of the scale from the latter half of the motif and placed it after the third note, breaking the octave leap of the original. Notes four, five and six of the transcription, which feature a chromatic neighbour note, were also altered to avoid the chromaticism. The large range of the original is condensed by substituting the

mediant (D in the original) with the dominant and the chromatic dominant (F sharp) with the tonic before returning to the original's distinctive leap from dominant to mediant. See Figure 7.39



Figure 7.39. The birdcall motif altered and placed in the key of D major

The rhythm is removed from compound quadruple meter and superimposed into simple quadruple meter, but the implied syncopation is retained by incorporating triplets into the first two notes and ties across the bar lines. The placing of the motif onto the second pulse of the measure is a result of realizing that the accompanying harmony moves whilst the mediant is still sounding and so it seemed natural to place it where the harmonic rhythm would naturally occur.

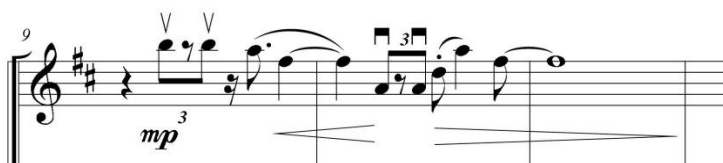


Figure 7.40. Syncopation and tie across the bar line.

The dynamic extremes were tamed and evened out by utilizing a crescendo and diminuendo, as well as incorporating the performance characteristics of bowing technique

and slurs. The motif, though substantially altered, is still readily and aurally recognizable. My neighbour (a non-musician) recognized the call immediately upon hearing the composition.

When working the alterations of the motif to make it sit more comfortably in tonality I was concerned that there would be loss of character; however, these doubts were reconciled by the investigation being supported by the notions of process-relational philosophy which posits the creation of new actualities growing out of the recent past.

During the transformation of this motif into its new form, a study of the slow movement of Samuel Barber's opus 11, *Adagio for Strings* was undertaken. It was observed that the cellos and the second violins were divided, and at times a seven-voice harmony was achieved allowing for the use of full added-note-triadic harmonies with compound intervals.³⁶ The accompaniment moved slowly employing long sustained notes that did not distract from the simple melodic material. The analysis and deconstruction uncovered the curiously strange harmonic progression that links the middle section to the return of the opening material (rehearsal figure 5 of the score), as a circle of fifths harmonic progression, albeit orchestrated and voiced in a novel manner. Barber's circle of fifths chord progress is discussed in further detail later in this chapter (Figure 7.45). I incorporated this progression into my own composition to acknowledge my respect for the Barber work. This act is another expression of process-relational philosophy's doctrine of 'prehension'. In *Re-enchantment without Supernaturalism*, David Griffin (2001) explains the term and use of the word:

³⁶

Sevenths, ninths, elevenths and thirteenth.

prehension ... is derived from the Latin *prehensio*, from *prehendere*, meaning ‘to seize’. More common ... is the adjective *prehensile*, as in ‘a prehensile tail.’ Also common ... is the term *apprehension*, which suggests a conscious grasp of something. In using *prehension* without the *ap*, Whitehead meant to indicate a grasp that could be either conscious or unconscious. ... Although he continued to use the term [perception] in the phrase ‘perception in the mode of causal efficacy’ to point to a kind of perception that is not sensory and is usually not conscious, the term *prehension* emphasizes the fact that something more fundamental than conscious sensory perception is intended The term *prehension* ... indicates that the perceiver actually incorporates aspects of the perceived thing into its own constitution. (p. 79)

Allowing for prehension, I began the orchestral voicing and the Barber influenced harmony with a D major 9th chord in first inversion. This was followed by a G quintal chord (G, D, A, E, B). The movement from one chord to the other was made as smooth as possible through voice leading and employing suspensions. This voice leading resulted in a descending line in the upper voice of the second violins as can be seen in Figure 7.41.

Figure 7.39. The voicing of an early sketch of the opening of the Slow Movement.

The first violins enter on an inversion of the fourth, fifth and sixth notes of the original Butcherbird transcription (F, G flat, F; refer to Figure 7.35). The violas preempt this with their first three notes A, to B and back again, which is in turn mirrored by the upper cello voice's D to E and back, and the cello is mirrored in the second violin's lower voices D to C sharp and back (refer to Figure 7.38). Process-relational philosophy's notions of the total inter-relatedness of all things are evident in these opening measures.

This introduction was re-written many times. By 10th of May 2011, there were seven different versions, and within these were many other smaller adjustments and experiments. One of the crucial decisions was to start with a single E note in the violins and then to bring in the other voices. What made this decision difficult was that the Barber work also starts with a single note and I was concerned that the reference was too close to

the original. At first, the E was only in the second violins and the other voices entered on the third pulse. This was then altered to have the first violins double it then move to the B on the fourth pulse. In these decisions the bass did not enter till the next measure with its F sharp. This was then altered and an E was placed in both the bass and the cello as in Figure 7.42.



Figure 7.40. Sketch of opening section of *Serenade for Strings*.

The bass had always been an octave lower than this, but in the attempts to lighten the texture, it was determined that by removing the divisi from the cellos and bringing the bass up an octave, a similar aural effect was achieved with a lighter feel.

The seventh sketch had given the first violins more work, now leaping from the low E up an octave and then descending by syncopated stepwise motion to the B of the chord, which is now conceived as a quintal chord built from the D in the cellos, and placed over an F sharp in the bass. See Figure 7.43

The musical score is for five staves in 4/4 time, key of D major. The first staff (Violin I) starts with a *pp* dynamic, leaping from E2 to E4 in measure 1, then descending stepwise to B4 in measure 5. The second staff (Violin II) starts with a *pp* dynamic, moving stepwise from E4 to B4 in measure 5. The third staff (Viola) starts with a *pp* dynamic, moving stepwise from E4 to B4 in measure 5. The fourth staff (Cello) starts with a *pp* dynamic, moving stepwise from E4 to B4 in measure 5. The fifth staff (Bass) starts with a *pp* dynamic, moving stepwise from E4 to B4 in measure 5. The score includes dynamic markings *pp* and *p*, and a 'Divisi' marking in measure 4. A 'V' marking is present in measure 3.

Figure 7.41. Opening of the seventh sketch of the *Serenade for Strings*.

This new opening still allowed for the melodic line (in the second violins) to sing through the polyphony of the texture and to move the music to the cadential point at measure 5 and then onto the next cadence at measure 10. Note that in the example above, the seconds rise to a B in measure 6. This was later altered to a repeated A, followed by two steps down to the F sharp. The intention was to keep the integrity of the first violin line as the held B clouded the harmonic texture. Another change to the second violin part was the addition of an anacrusis bar with only the second violins on the E. This was a slightly

different return to previous ideas, contributing to the singularity of the separate voices in the violins.

Another change was the inclusion of further intervallic movement in the bass. In previous sketches the basses had limited movement between the F sharp and the following G (see Figure 7.41). This was only broken by a step up to the A at the more important cadence in measure 18, which represented the end of the first 'A' section, before being repeated again. Through trial and error, increased movement was achieved, without compromising the unfolding harmonic progression that had been established in previous sketches. From this point the basses rose by step all the way to a high C sharp that sits in conflict with the D of the cellos in measure 6, before descending to the E. This practice-based research and investigation clearly expresses the tenants of process-relational philosophy in action. The resultant opening measures grew incrementally and cumulatively from the investigative task and the act of creation, a process of an entity becoming an actuality, out of the reiterated recent past: a new creation, coming-out-of and replacing the old.

It was at this juncture that the altered motif of the Grey Butcherbird was presented in full, but by sketch seven, this too had changed. The decision to break the motif up and to present it in fragments was the result of three factors.

1. The realization that the motif was of insufficient interest to sustain a whole work without change.

2. The recurrence (within the vicinity of the house) of a living Butcherbird, calling its motifs with the inclusion of variations (fragmentation and addition), and this new performance led me to greater experimentation.

3. The repeated playing of the motif in my psyche³⁷ away from any instrument. This allowed the motif to evolve without the constraints of instrumental technique and performance ability.

The most important of these three (with regards to the research) is the second where there is the exchange of consciousness between the bird and the author: another example of the total inter-relatedness of all reality.

In measures 19-20 there is a little interplay between the cellos and the second violins before fragments of the motif are played. Finally the motif is presented in a more complete state, starting in measure 23 (Figure 7.44).

Larghetto ♩ = 60

The musical score for the first violin consists of five staves, numbered 1 through 24. The tempo is marked 'Larghetto' with a quarter note equal to 60 beats per minute. The key signature has one sharp (F#) and the time signature is 4/4. The score shows the fragmentation of a motif into various rhythmic and dynamic patterns. Dynamics include *pp*, *p*, *mp*, *mf*, and *f*. Rhythmic markings include triplets and slurs.

Figure 7.42. Fragmentation of the motif to form the melodic material of the first violins.

³⁷

Often semi-consciously.

In the transitional material that heralds the ‘B’ section, there is a reference to the motif in the second violins. Also present are the modulatory chords establishing a new tonal center. These chords are the reference to Barber’s *Adagio for Strings*, which employs a similar progression to link the middle section to the return of the opening material. Similar to Barber these chords are a circle of fifths progression: C major 9th, in first inversion moving to F major 9 with added sixth, which can be written as a major 13th chord. Then B flat (with added notes) in first inversion to E flat 9, then - allowing for suspensions and passing notes - to D major. The E flat chord is a tritone substitution of the dominant seventh chord (A^{7th}). A hemiola is employed to create both interest and ambiguity. Figure 7.45 shows the circle of fifths progression and the use of the hemiola in its traditional ‘early music’ placement, prior to a cadence.

The musical score for Figure 7.43 is a string quartet in D major, starting at bar 30. The progression begins in bar 31 with a C major 9th chord in first inversion (F-A-C-E-G) in the second violin. The progression continues through a series of chords: F major 9 with added sixth (C-F-A-C-E-G) in the first violin, B-flat major 9 (F-A-Bb-D-F) in the viola, and E-flat major 9 (Bb-D-F-A-Bb) in the cello. The final chord is D major (F-A-C-E) in the double bass. The dynamics range from piano (p) to fortissimo (f). A hemiola is indicated by a double bar line and a fermata over the final D major chord in bar 34.

Figure 7.43. Circle of fifths harmonic progress starting in the second measure (bar 31).

To maintain the momentum of the work (once the tonal centre of D major was established), the D becomes the bass note of an E minor 7th chord in the next measure (the bar before the double bar in Figure 7.42). This modulatory passage implies a change of tonality to A major but, the absence of the raised seventh (the G sharp), means that this is effectively based on the Mixolydian mode on A. Tonal ambiguity results, created by the use of a mode that was too closely related to the major key.

It was not until the critical analysis of the work was entered into my journal that the comprehension of weakness in this section of the composition became clear. This highlights the strength of this side of the research that is mostly unseen in the final presentation of materials. The act of writing about the work in another medium (that is, in lingual text) was necessary to distance the creator from the creation. To step outside the intuitive continuum of analysis as part of, and imbedded in, the act of music composition. Once writing about the work in this removed place, observations were made that were previously clouded by the compositional process. Gabora (2002) refers to this act of ‘distancing’ in the creative process in her paper on *Cognitive Mechanisms Underlying the Creative Process* as ‘brainstorming’ and suggests the artist must “temporarily 'loosen' one's internal model of reality, weaken inter-concept relationships so as to allow new insights to more readily percolate through and exert the needed revolutionary impact. One becomes receptive to new ways of perceiving” (Chapter 4, Para. 3).



Figure 7.44. The original weak modulatory passage¹.

Changes were therefore made to strengthen the modulation. The bass line was rewritten from the C sharp rising to the D (Figure 7.46), and was made to descend to the final, the A (Figure 7.47). Further changes became necessary in the inner parts. The motif in the second violin line (derived from the original birdcall) was placed in a lower register and treated sequentially, the violas given a variant of the same on a low A that was taken up by the first violins (Figure 7.47)



Figure 7.47. The final iteration of the passage (with preceding bar).

In this manner the harmony evolved from tertiary to the more ambiguous quintal harmony built on the A of the bass line (as seen in the third measure of Figure 7.47).

The first part of the 'B' section is an anti-climax. The preceding passage builds to this section, the aural expectation is for something grand, and the anticlimax is achieved through denying this expectation. Instead, the work diminishes in dynamic and in material with a brief motif derived from the first few notes of the birdcall (Figure 7.48).

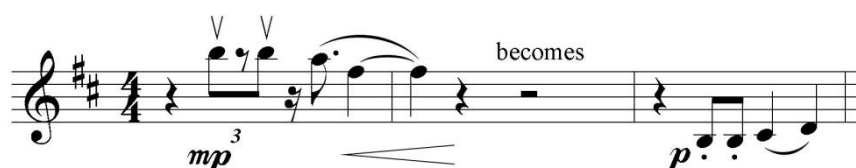


Figure 7.45. The relationship between the original motif and the derived one played by the second violins (Figure 7.47).

The triplet figure has been altered to become even quavers and the downward leap of a third between the fourth and fifth notes of the original, has now been inverted and diminished to a second. The syncopation has been removed. Despite these changes the motif remains aurally discernible as belonging to the original. This was first placed in the second violins and answered by the cello, however, it was felt that a rhythm needed to occur on the second pulse of the first measure of this section (because the motif in the A section is first sounded on the second pulse) hence the violas make reference to it. The motif fragment is treated sequentially; rising through the next 8 measures to a high D (realized in the first violins) and echoed in the cello, then the viola. The bass also imitates the rising second, to create a line that rises to the A before descending in contrary motion to the upper voices. An interplay between the first violins and the celli on repeated A notes

contributes to the building energy of these measures. The rising motivic fragment in the second violins, echoed in the violas and the repeated notes, contribute to the final arrival of a climax which is realized when the first violins utilize the triplet figure from the bird motif and employ it to ascend to the high D (Figure 7.46). This becomes a high pedal point against which the second violins step in and out of dissonance (minor seconds and thirds). The triplets of the first violins establish an implied compound time, a reference to the original transcription of the birdcall (in compound quadruple time). A new key is established, that of the relative minor of D major, B minor (Figure 7.49)



Figure 7.46. Showing the modulation to B minor and the cellos' entry.

The feature of the 'B' section is the cello melody which is the birdcall motif transmogrified into a lyrical bel canto style.



Figure 7.47. The relationship of the cello solo to the original motif.

The triplets have been replaced with even quavers; the downward leap augmented to a seventh. The two even quavers become three (a remnant of the triplet) on the same pitch. The leap downward of a third is the augmented inversion of the descent of a second between notes two and three of the original motif.³⁸ The transmutation is continued with an escape note applied to the repeat of the three quavers; and the leap upwards (from the A to the high E and then back to a third), is a reference to the last three notes of the original motif. This is developed by referring to the three-quaver rhythm again (with the inclusion of another downward leap of a third) to arrive at the dotted crotchet G (a suspended dissonance resolving to the F sharp). A note of anticipation (of the F sharp) followed by a reference to the opening quavers and the solo comes to a close on an E, another suspended tone and in conflict to the low B and F sharp of the bass. The viola pizzicato is a descending mode of limited transposition, contributing to the restlessness and imperfection of the cadence thus the ear expects the restatement of the solo, but this time it is realized with more subtle alterations and development. After the repeated solo the violas restate the mode (see: Figure 7.51) and the section closes on a B minor 9th chord that is voiced to accentuate the quintal relationship of the B, F sharp and C sharp.

³⁸

Also influenced by the motivic fragment of the second 000's material. See Fig. 48.

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Figure 7.48. Excerpt showing the mode of limited transposition in the viola and the transitional passage into the repeat of the 'A' section

This 8 measure section (last 8 of Figure 7.51) that precedes the return of the 'A' section material was originally an exact replication of the opening material of the work. It was then pared away, re-orchestrated and re-voiced to a more open texture; however, it retains a similar quality, preparing the ear for the return of the 'A' section (Figure 7.52).

Figure 7.49. The return of the 'A' section with a viola solo and development to the first violin melody.

The final 'A' section, though cleared of much of the divisi of the former, is a repeat of the latter half of the previous 'A' section material. The melodic motif is subtly embroidered with some of the fragmentation removed. The first violins ascend to a high E (Figure 7.53) as the second violins divide and the circle of fifths modulatory passage is restated, minus the hemiola. The ascending cello line is taken over and extended by the viola, until all voices arrive on a quintal chord built on the D. Figure 7.53 shows the closing measures. Again there is the use of a tritone substitution of the dominant seventh chord in the fourth measure of Figure 7.53 where an augmented E flat major 7th(13th) chord (EbM7(13) #5) replaces the A 7th of the progression.

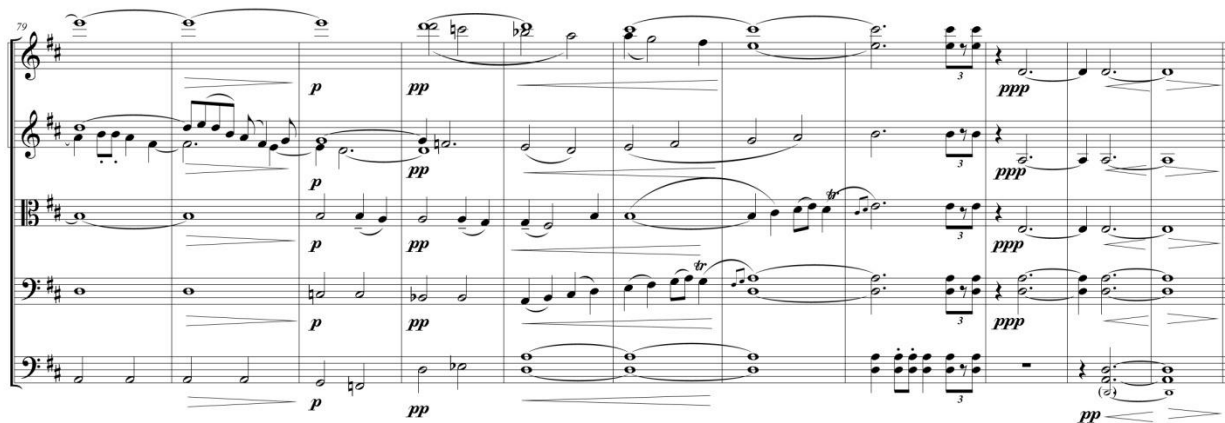


Figure 7.50. Closing measures of the Serenade for Strings.

The composition concludes with an open D neutral chord with the added colour note of an E, and a short rhythmical reference to the even quavers and their triplet origins,. Note the time allowance for at least one bass to de-tune their low E string to a D.

Personal Criticism and Reflection on the String Serenade

The *Serenade for Strings* was the last of the instrumental compositions. All subsequent works involved electro-acoustics. The music displays the most idiosyncratic string writing to this point in the research.

In classic four-movement design, the work is conservative in form and structure (with the exception of the second movement), yet essentially modern in sound, for example (Figure 7.54). This excerpt shows phasing of melodic material (lower voices and violins), use of microtonal inflection (bass line), rapid timbral change, and a large range of dynamics.

The musical score for the opening passage of the first movement of the *Serenade for Strings* is presented in a five-staff format. The top two staves are for Violin I and Violin II, the middle staff is for Viola, and the bottom two staves are for Violoncello and Double Bass. The tempo is marked 'Largo' with a quarter note equal to 60 beats. The key signature has one sharp (F#). The score includes various dynamic markings such as *pp*, *p*, *mf*, *f*, and *fp*. It also features performance instructions like 'Div.' (divisi), 'Unis.' (unison), 'pizz.' (pizzicato), and 'arco' (arco). The music shows complex phasing and microtonal inflection, particularly in the lower voices and bass line.

Figure 7.51. Opening passage of first movement from the *Serenade for Strings*.

Each movement incorporates birdcall motifs and the textures of many of the passages, simulates the heterophonic nature of multiple birdcalls sounding simultaneously, for example Figures 7.54 and 7.55. The second example demonstrates percussive drum-like effects achieved through tapping the body of the bass instrument.

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Figure 7.52. Use of multiple birdcall motifs



Figure 7.53. Birdcall derived texture. Note the use of percussion in bass line (ditto tap sullo stru.).

The first movement is a loose interpretation of sonata form, the second a typical slow movement, the third a whimsical scherzo and the fourth a rondo.

There are effective contrasts between the movements and the *Scherzo* is particularly light-hearted. There are passages of challenging rhythmical vitality, most evident in the *Scherzo*. The *Rondo* has a bright harmonic presence and forward drive, cohesive structure and displays a characteristic of my voice, an energetic positivism and love of life. The final

cadence is deliberately inconclusive, reflecting the premise of process thought epitomized in the common maxim ‘life goes on’.

The work has developed craftsmanship techniques, idiosyncratic writing (Figure 7.57) and reflects the tenants of process-relational philosophy, and in particular the notion of a process of becoming, that is the aim of the investigation. The counterpoint is developed, the harmony (both consonant and dissonant) is managed and the melodic material of the birdcalls, integrates into the work in a natural and inevitable manner.



Figure 7.54. Examples of idiosyncratic writing for strings.

This composition demonstrates the results of the investigation where I, by immersing myself in the provocative worlds of birdsong, autoethnographical observations and the notions of process-relational philosophy, have allowed these influences to enable my latent compositional voice to sound. The gaps have been closed that may not have happened had the research not been undertaken. Writing about the concepts of emergence and the relationship between events and mental phenomena Barratt and Bolt (2007) observe that:

Central to the work of such thinkers is the theory of emergent evolution which asserts that as systems develop, their material configurations become more complex ... [and] that, once a certain critical level of complexity is reached in any system, genuinely novel properties –those that have never been instantiated before– emerge (p. 6).

The finest indication of the quality of this composition has been the signing of a contract with Parma Recordings to record the *Serenade for Strings* with the Morovian orchestra.

Critical Analysis: *An Ear to Hear*, for Solo Flute and Electro-acoustic Soundscape.

An Ear to Hear. The score for this work is on pages 341 and 342 of the folio and the audio is on CD 2, track 22.

This work was the result of several influences. The first, those of my principal advisor, who suggested writing music that incorporated both acoustic instruments and computer-manipulated sound files. I had been reluctant to do this as I viewed the genre as ‘old fashioned’, and associated with the 1960s (though tape loops were the medium of that era), and, most importantly, I believed it reflected an inability to compose. The struggle with this medium has already been discussed in Chapter 5. In summary I was reluctant to let go of the known and move into the unknown. Change is challenging and uncomfortable, and consequently I questioned the worth of the genre over the skills in orchestral writing that I had invested in.

The second influence was that of my subscription to the Internet site ‘The Music of Nature’ (www.musicofnature.org). This site posted a soundscape recording of birdcalls over, which was placed a performance of Debussy’s *Syrinx* for solo flute. Listening to this mix of acoustic and pre-recorded material, I was moved and believed that I could do something similar.

The third factor was the collection of recordings that I had made, where many birds were twittering and calling over each other and to isolate one bird (to transpose it) proved too difficult. The resultant heterophonic texture, however, was very pleasing and I did want to create something with this.

A fourth influence was the continuing fascination with the previously mentioned mode of limited transposition. The mode (repeated here for continuity) is a simple order of four tones repeated three times till the octave is arrived at. The order is semitone, tone, semitone (C, Db, Eb, E) then repeated by stepping away from the last tone a semitone (E, F, G, Ab) thence (Ab, A, B, C).



Figure 7.55. *Mode of limited transposition.*

These intervals result in a nine-note scale (ten including the octave). It features two thirds and two sixths. This creates an exotic and ambiguous quality as a melody slips

effortlessly from a major to minor modality, in addition to which, the final has a leading tone and supertonic, which are a semitone away. The mode has only three transpositions.

At the outset, *An Ear to Hear* was designed to function as a stand-alone piece as well as one with a soundscape accompaniment. Therefore, the flute part was composed first in notation (in Finalé), then ‘floated’ over the digital recording (in ProTools). Adjustments were made to both the soundscape and the flute part so that they formed a more syncretic texture. The notated flute part was converted to a .wav file and in the DAW it was fragmented into motifs and phrases, which were moved and placed in relation to the soundscape. The soundscape was also fragmented with sections doubled and repeated and some thickened to draw attention to a particular ‘call’ present in the source recording. The flute audio was returned to the notation program and re-written to allow for the movement of the phrases and motifs. Once this was finalized, it was again ‘floated’ over the soundscape in the DAW to check that everything worked together. Finally, some small adjustments were made to the soundscape.

The flute initially states the mode with C as the final (Figure 7.59). The rhythm of the opening motif moves from a quintuplet to a sextuplet whilst the performer is instructed to slow-down (*ritardando*) from the original tempo. Along with the performance instruction of *con rubato*, this contributes to the music’s liberation from the strictness of the meter.

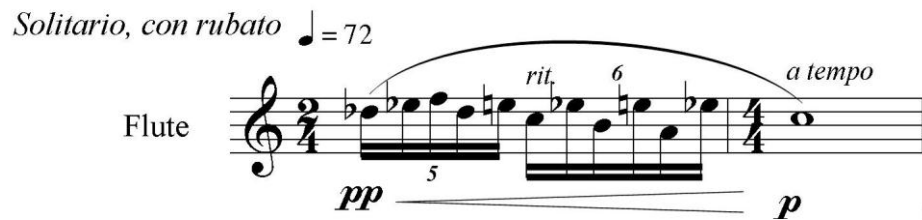


Figure 7.56. Opening statement of 'An Ear to Hear'.

The mood requires a sense of solitude in a forest landscape, thus the *solitario* instruction. The melodic material is extended and developed through ornamentation and repetition similar to some Japanese Honkyoku performance characteristics where the player explores single notes for fine shadings of dynamics and inflected pitches, as in the work *Spirit-Presence* by Bruce Crossman.

A new motif is introduced at measure 7 (Figure 7.60) and imitating an element of the call of the Swamp Harrier as recorded at the Diamantina Lakes National Park. This birdcall-derived material is shown in Figure 7.60.



Figure 7.57. Birdcall derived melodic material in 'An Ear to Hear'.

The next section (Figure 7.61) is derived from the call of the Pied Butcherbird, which often performs a distinctive leap of an octave, sometimes perfect, often somewhat

flat and other times a clear major seventh. On occasions it will sound the octave and follow it with the seventh, and still others times it will leap the major seventh to step down to the flattened seventh.



Figure 7.58. Material derived from the call of the Pied Butcherbird.

In measure 19, a fermata on the ornamented G sharp creates a new tonal center. A new section commences with a re-statement of the opening motif lowered by a semitone, and moving the music moves to the mode on B flat, with its feature notes of C sharp and E sharp.

In measure 27, the work returns briefly to the original mode and the music develops through fragmentation until measures 35-37 where the B becomes the final.



Figure 7.59. Development through fragmentation

A Monteverdi inspired cadence (at measure 39) of repeated notes, re-establishes the original mode and final.

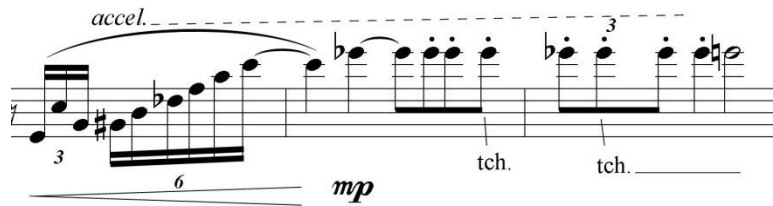


Figure 7.60. Monteverdi-esque cadence in 'An Ear to Hear'.

The performer tongues a 'tch' on two of the notes to create timbral difference and in imitation of the percussive elements of some birdcalls.

In the next measure, the mode is transposed to C sharp, and in 43, a slowly accelerating 'turning figure' is introduced. This is the beginning of the final section and features material derived from the general characteristics of birdcalls encountered during the research.



Figure 7.61. Birdcall derived accelerating turning figure.

This change of modal center lasts a few measures and the original C final is re-established in measure 46. A cascading descent follows, though the mode and the new 'turning figure' of measure 43 is restated, this time in the original, starting on the G and ending with a contrasting rise.

The final cadence is an echo of the previous cadence of measure 39, this time two octaves below, in the warm and sensuous timbre of this instrument. (CD 2 Track 22).

Personal reflection and criticism of 'An Ear to Hear'.

Dr. Karen Lonsdale (who premiered the work and also gave it its Malaysian premiere) thought it of merit. She particularly commented on how comfortably it sat within the technical capacity of the instrument, advising that it was very playable and a welcome addition to the repertoire. Simone Maurer, who performed the work at the November concert of 2011, thought it a suitable work and asked if she could present it at a flute conference. Simone's performance of the work can be viewed on YouTube at the following web address: <http://www.youtube.com/watch?v=xS0UdVHB3RI>

I feel the work achieved my goal in bringing together live music and prepared audio soundscapes. I felt it avoided the mediocrity of some 'new-age' music through its application of the mode of limited transposition and the growing sophistication of the compositional development. It evidences the supporting philosophy of process thought and it employs ornithological and ecological sourced material both in audio format and in the written music.

I believe it embodies the three main elements of the investigation, the development of my own compositional voice and proficiency, the use of external stimuli and the fundamentals of process-relational philosophy. In all three the process of becoming is evident.

Critical Analysis of *Becoming* for Solo Violin and Pied Butcherbird

Becoming. The score for this work begins on page 388 of the folio and the audio is on CD 2, track 23.

Becoming opens with a soundscape of forest birds, over which a Pied Butcherbird call sounds a motif adjusted in a DAW to lengthen the duration of each note slightly. The solo violin responds with a more lyrically developed imitation of the call. The bird calls again, though this time the manipulation is greater with echoes and more acoustic ‘space’ created using reverb.

The violin response is lengthened with ornaments and inversions. Against and through this development of the motivic material, the bird’s call is strategically placed and a duet is established, with the now busy violin part. Figure 7.65 is a screenshot of the DAW with the first two tracks (1 & 2) being the forest birds, the Pied Butcherbird (Audio 1) and both the midi track of the violin (Violin) and an audio of the same (Violin Audio).

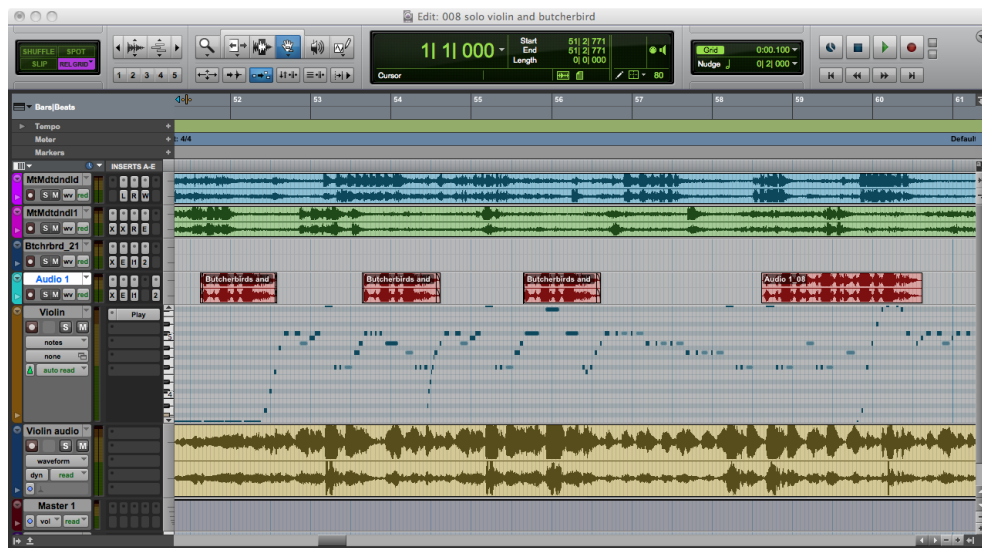


Figure 7.62. Screen shot of DAW showing the duet of the birdcall and the violin.

The violin responds to elements of the Butcherbird call and to elements from the accompanying soundscape; blending the accompaniment and the Butcherbird calls together into a coherent synthesis, bringing the opening section to a cadence at the 1 minute 40 second mark.

The 'B' section is fast with a lively interaction between the bird and the instrumentalist. The DAW is used to manipulate the birdcall to de-construct and re-assemble the motifs. Sequential movement is created along with modulation, fragmentation and repetition, to maintain a constancy of presence that is not part of the bird's normal collection of motif development. The manipulation of the birdcall is in constant inter-relationship with the violin and the violin with the birdcall. The task of creating this duet proved to be arduous, time consuming and intellectually challenging. I found I had to move constantly from one medium to another, from the written score to the DAW. Placing the violin score alongside the bird recording and adjusting it to respond, thinking of a new

possibility for the bird recording as a response to the violin, and adjusting the recording, which then required the score to be adjusted. Herein lies another example of the application of the process of becoming. The linear narrative of the composer has dissolved into a pendulum of creativity and response. Carter (2007) writes about this:

The condition of invention –the state of being that allows a state of becoming to emerge-is a perception, or recognition, of the ambiguity of appearances. Invention begins when what signifies exceeds its signification-when what means one thing ... discloses other possibilities. The ambiguity noticed at this time is the excess of materiality that resists semiotic distillation, the supplement of matter that haunts communication. It is ... the sound 'in-between' in musical composition. ... In general, a double movement occurs, of decontextualisation in which the found elements are rendered strange, and of recontextualisation, in which new families of association and structures of meaning are established. This double movement characterizes any conceptual advance.... The distinction of practice based research is to mediate this process materially, allowing the unpredictable and differential situation to influence what is found. (p. 15-16)

The altered audio stimulated new ideas for the violin, so the task of interlacing the two voices grew in complexity in an exponential manner. Figure 7.66 is a screenshot of the work in progress in the Finalé program. The top line (crotchets) indicates the placement of the beat; the middle line the audio of the birdcall, and the stave is the violin part. This extract is from the beginning of the return of the 'A' section. The bird has just sounded a complicated and percussive clarion call (with lower partials) and the violin responds in imitation.

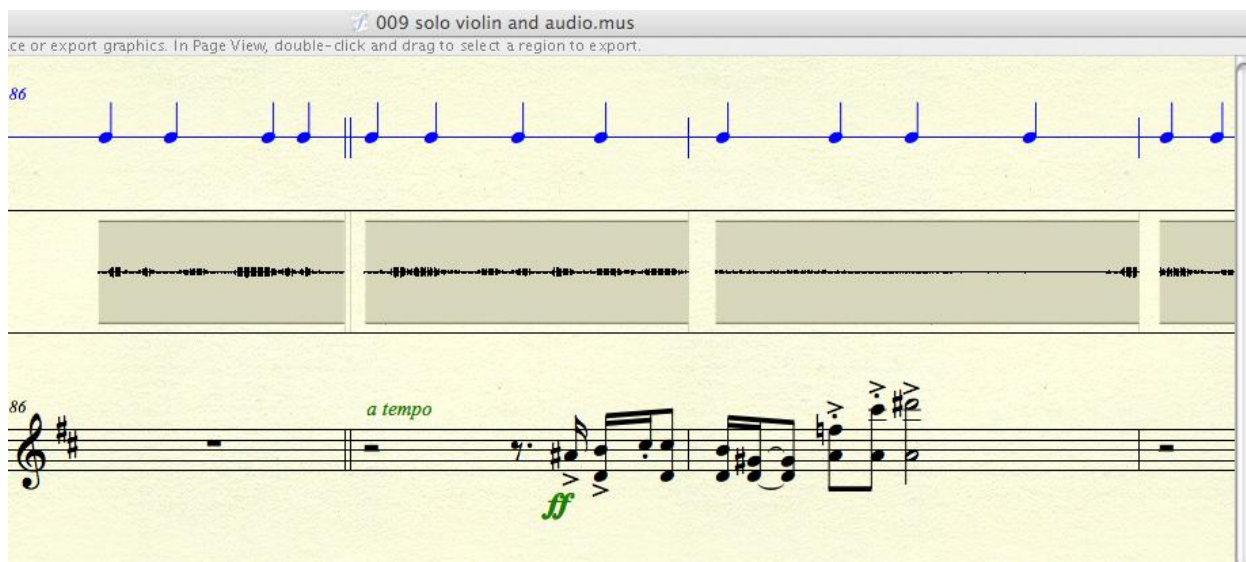


Figure 7.63. The audio and the notation in the Finalé program.

This process was simultaneously exciting and tedious. It seemed to be the pinnacle of what I had been researching. A place where a stimulus other than my own mind, was placed and manipulated in the ‘present real moment’ and in this ‘time and space’, my mind and creative response, was ‘lured’ to places not already experienced. “A double movement occurs, of decontextualisation in which the found elements are rendered strange, and of recontextualisation, in which new families of association and structures of meaning are established” (Carter, 2007. p 15). It seemed to be the clearest example of the philosophy that underpinned the investigation. The tedium and time-consuming element reminded me of the scenario of a research scientist meticulously writing notes on every experiment so as the track the evolution of the hoped-for discovery.

There is an extension to the ‘B’ section (at the 3 minute mark), where the birdcall is the dominant melody, with the violin responding with melodic and harmonic material. This leads to a developed repeat of the ‘A’ section. The repeated ‘A’ section is more lyrical and

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emotive, with fragments of the accompanying soundscape coming to the fore in the mix and the violin melding with these, as well as the Butcherbird. Some virtuosic violin passages (see Figure 7.67) in a more cadenza style with florid runs and dramatic double-stops bring the music to the poignant final bars and cadence.

The image displays a musical score for a violin part, spanning measures 124 to 144. The notation is in treble clef with a key signature of two flats (B-flat and E-flat). The score includes various dynamic markings: *p* (piano), *pp* (pianissimo), *f* (forte), *mf* (mezzo-forte), and *mp* (mezzo-piano). Performance instructions include 'call' (indicated by a fermata-like symbol), 'freely* till 129', and 'freely' (indicated by a wavy line). The score features several slurs, including a large one covering measures 127-130, and a '6' indicating a sextuplet in measure 127. Measure 129 is marked 'freely* till 129' and 'freely'. The score concludes with a double bar line at measure 144. A footnote at the bottom states: '* Not strictly in time'.

Figure 7.64. Page 6 of the violin part of 'Becoming'.

Personal criticism and reflection of Becoming

Becoming builds on the developing evidence of a new and emergent compositional voice. It represents a shift away from purely instrumental works to a merging of the audio

recordings and the live performer. The quality and depth of the manipulation of the audio source data in the digital processors and workstation is the most sophisticated to date, and the instrumental writing is the most advanced in the portfolio. It is therefore safe to conclude that the combination of live performer and prepared audio represent a clear example of the fruit of the investigation coming-into-being.

The work was premiered at the November 2011 concert by Melonie O'Sullivan. A video of the live performance can be heard and viewed on the Internet at:

<http://www.youtube.com/watch?v=TI0kV7-phuo>

Critical Analysis of *Becoming II*

Over the span of a week, a Grey Butcherbird began calling a series pre-dawn motifs. I recorded a twenty-minute continuous sequence. The birdcall was a repeated short motif of a few notes with occasional variations.

On a previous occasion, at 3 in the morning, I had recorded a chorus of frogs. These were in two groups on either side of a road. Present also was the gurgle of water running along the roadside gutter. One group would set up a chorus and the other would respond creating a slow oscillating antiphony. An impressive stereo-image resulted from the recording of the frogs, divided by the road. I chose this recording to support the Grey Butcherbird because they were both from a similar time of the day.

Placed in the DAW I began to trim the Butcherbird's calls to remove some of the similar material and emphasize the variation material, because I intended the work to be of 5 minutes duration.

I sketched a piano accompaniment to the birdcall, in the style of Estonian composer and sacred minimalist Arvo Pärt. I had been listening to and analyzing his works *Für Alina* and *Speigel im Spiegel*. I performed the former. Pärt's simplicity of sound, openness of texture and rhythmical freedom was what I wanted in a response to the call of the Grey Butcherbird.

Becoming 2

Score Sketch for piano improvisation Robert Burrell

Slow and tranquil $\text{♩} = 54$

Piano *p*

Ped. *p*

4

Lento $\text{♩} = 30$

7

10

Figure 7.65. Extract of piano sketch for improvisation.

Having made the sketch, I sequenced an improvisation of the sketch into the DAW. This improvisation featured two-part harmony in minor ninths and major sevenths interspersed with sections of rolling broken chords performed across two voices. The birdcalls were in E flat and the piano improvisation was realized in the same key.

With all parts combined within the DAW, and using DSPs I set about refining the quality of the sound, removing unwanted background noises, creating more presence and reverb and taking parts of the improvisation and setting them against itself to create a mild cross-rhythmic and entropic effect.

Other musicians were engaged to improvise a response to the birdcall, piano response and supporting soundscape. A classical clarinetist, traditional erhu player, folk and blues acoustic-steel guitarist, avant garde jazz saxophonist and an operatic soprano all contributed. Over the course of a day, each musician made at least two responses to the birdcall.

The saxophonist rendered many takes as he had brought an array of small hand-held percussion instruments that he utilized in his improvisations. He also played his instrument unconventionally, creating breathing sounds, placing objects within it and shaking the saxophone to create a rattle effect. He performed key clicks, played the mouthpiece alone and struck his instrument to achieve small metallic bell-like sounds. His contributions initially dumbfounded me. What would I do with them? They were the last files that I approached in this suite and they pushed me to a whole new approach to the work resulting in a very effective contrasting movement.

All the improvisations were recorded on separate tracks, free of the other material. This allowed me to edit them freely; to move phrases about, to take a virtuosic run, copy it, alter its pitch and paste it to itself, thus creating an 'extended florid passage'. In one example I took a harmonic performed by the guitar, made several copies, altered their pitches and created a passage of melodic-harmonics. In another example, I took a particularly emotive and lyrical clarinet phrase, one performed as part of her closing statement, copied it and places it at the start, to establish the 'opening mood'. Doing this brought greater internal unity and formal structure to the work that was not achieved in the live improvisation. I was also able to merge two differing 'takes' from differing artists and set them together as a duet, though they were in different modes and traditions.

Becoming II with Erhu and Soprano

This movement employs the improvisations of two very different instruments and performances and exploits the tension created by merging them together. The audio of this work is on CD 3 Track 3.

For this movement I went back to the very beginning creating a new supporting soundscape from some frogs and a Butcherbird, but starting afresh and 'placing' them in a different manner and position. The first thing I added was the sound of dripping water. This was recorded at Jerusalem Creek in the Bundjalung National Park where I had canoed along a waterway to an overhanging embankment, where water was dripping onto the surface of the creek. The overhang created a natural reverberation, producing a 'real' stereo-image and presence. To this, I added the call of a Wattlebird, the antiphonal frogs

and selected motifs of the Butcherbird call. As the work grew, I extended the soundscape from 5 minutes to almost 8. At a later stage a gaggle of White-breasted Honeyeaters was introduced to the work to thicken the texture at the 4 ½ minute mark.

The first entry of the Butcherbird was altered. Originally it consisted of five notes, repeating the first two notes, and then stretching the five to extend its duration developed this motif. Figure 7.65 shows a transcription of the original call and a transcription with the approximate alteration as a result of editing in the DAW. In this example the call is in its original key. The pitch alteration was made to accommodate the erhu, which was performed in F minor.³⁹



Figure 7.66. Alteration to Butcherbird call through DAW manipulation.

Immediately after this, the erhu enters with a rising fifth. This entry was stretched and repeated. Figure 7.70 shows the DAW at the 25 second mark where the erhu (bottom track) enters as a response to the Butcherbird (marked 'Grey BB'). In descending order the tracks are:

1. Dripping water
2. Wattlebird recording

³⁹

There is an echo of the last measure of 7.65 in the movement that is not notated here.

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3. Nil
4. Frogs
5. Frogs
6. Butcherbird
7. Erhu

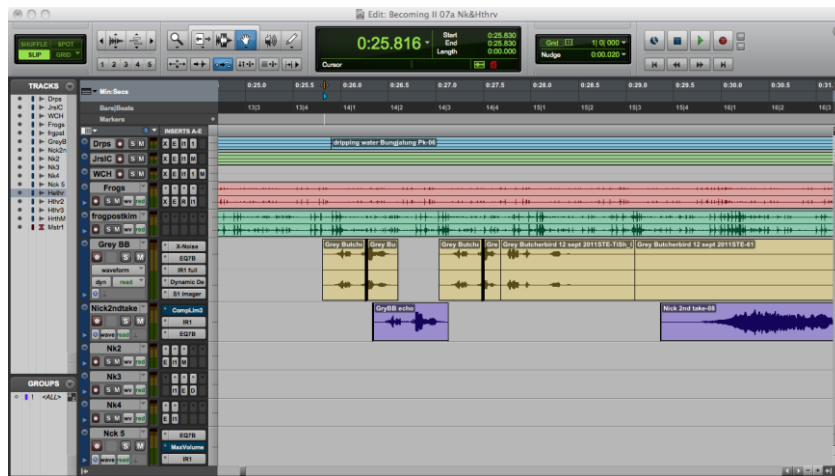


Figure 7.67. The entry of erhu in the DAW (track 7).

The birdcall is repeated and married to another motif. The erhu sounds again and the improvisation continues uninterrupted with the addition of the calls of a Willy Wagtail commenting in the background texture. Figure 7.71 demonstrates the degree to which the erhu part was cut and married together to extend and develop its material.

A PROCESS OF BECOMING

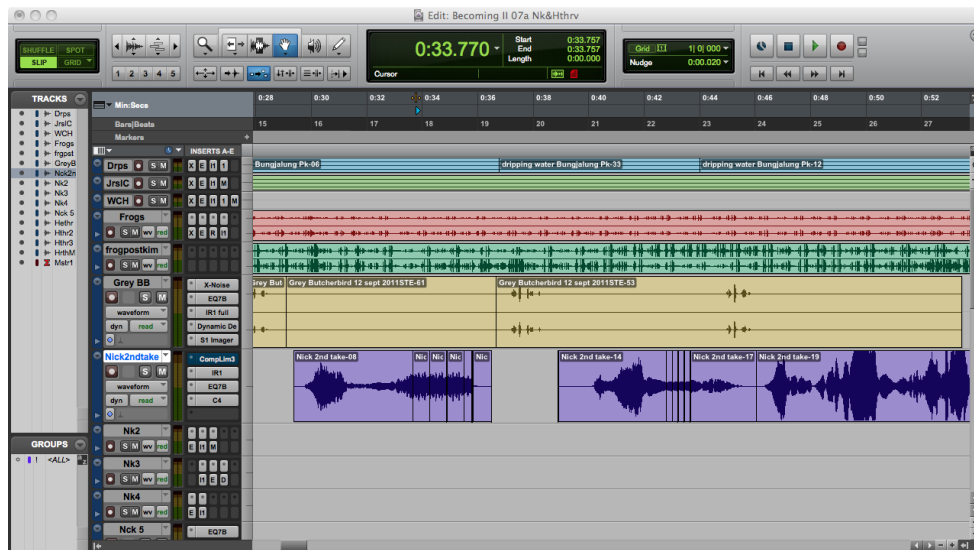


Figure 7.68. The cut and paste of the erhu material.

The call of a Wattlebird is added to the whole texture as the duet of the Butcherbird call and the erhu continues until about the 2-minute mark, where the soprano enters the mix. These soprano entries contain pitch alteration to achieve a canon at the fourth.

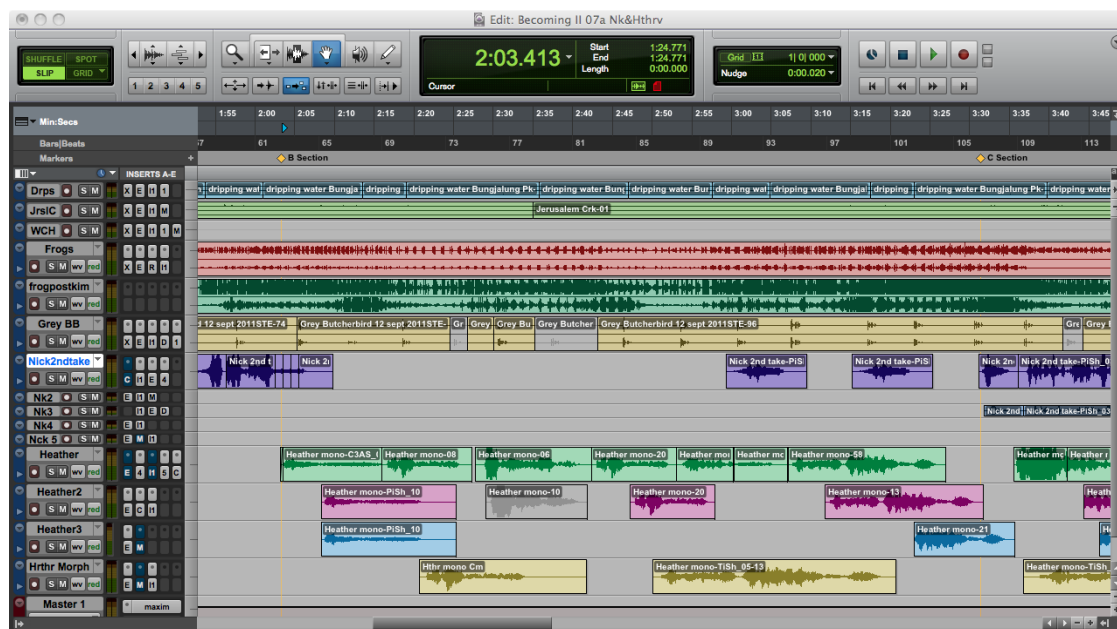


Figure 7.69. The soprano entries. These are the bottom four tracks in the DAW.

The lowest track has its signals sent to a morphoder⁴⁰ to create a drone on a low C, with octave and compound fifth above (Figure 7.72). The timbre of the drone is a ‘WarmPad’ preset and the pitch is lowered an octave.



Figure 7.70. The morphoder used to create a drone.

At this juncture, because the soprano and erhu were recorded separately (with differing tonalities) I had to transcribe each improvisation (to manuscript) to ensure that the separate voices complemented each other. I found that working in traditional notation allowed me to see more clearly the polyphony and the treatment of the linear derived harmonies. Figure 7.74 shows the opening sections of the erhu part as a transcription.

⁴¹ Morphoder Waves Platinum ‘Plug-in’ Collection



Figure 7.71. An excerpt from the erhu transcription

The soprano voice is allowed to develop and establish its tonality and style. The erhu contains fragmented phrases that have been selected from the improvisations to suit and complement the voice. This section develops for just over a minute before the voice performs a series of harmonic chords to create a cadence. Selecting a long tone from the vocal improvisations, copying it to 3 tracks, then altering the pitches of those tracks to create a triad, resulted these vocal chords.

Working in this manner allowed my previous knowledge base to be applied to this genre of music making. I believe this to be an important point, the application of traditional compositional skills of counterpoint and harmony, melodic development and derivation

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allows my electro-acoustic voice to carry a distinctiveness of character that differentiates it from other composers in this field. This supports aspects of the process of becoming, as defined in this thesis, where new knowledge emerges out of the ‘relevant and reiterated past’ to create a new entity.

There is mild tension established within the structure of the work, similar to a classical sonata form with its contrasts between themes and keys, in this work it is the two differing timbres and styles, and traditions. The erhu improvisations were dominated by the traditional Chinese folksong genre and are in the key of F minor, whereas the soprano’s singing (vocalization) is in the key of C minor. The bird is in E flat throughout.

The soprano is momentarily quiet, and the erhu returns with a contrapuntal series of canonic entries, accompanied by a drone from the soprano. Figure 7.75 shows the section at the 4 ½ four and a half-minute mark with the canonic entries of the erhu.

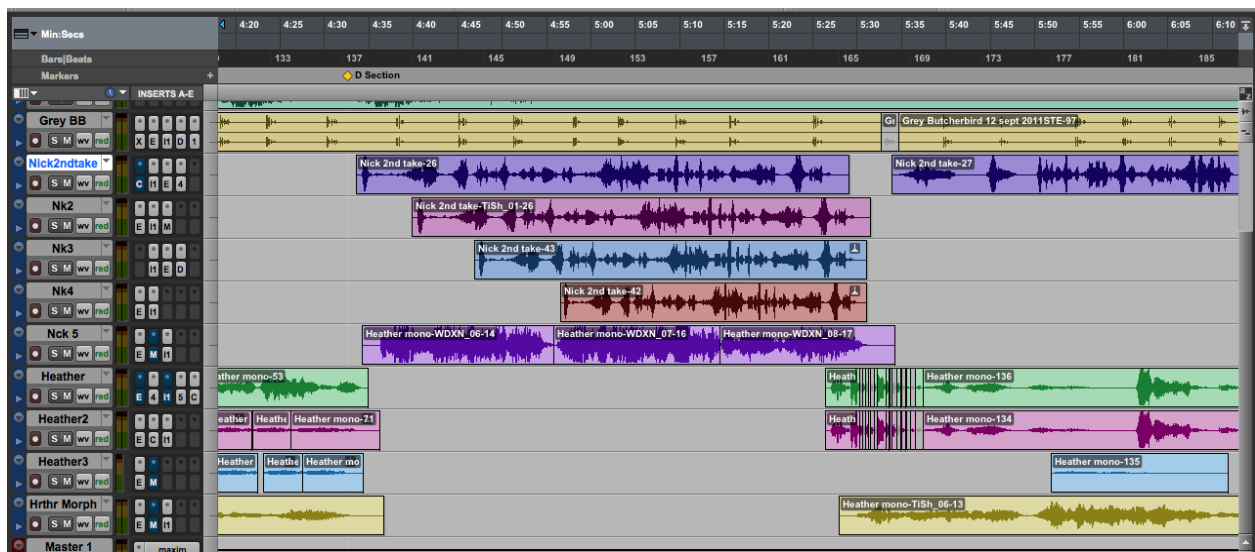


Figure 7.72. *Canonic entries of erhu with vocal drone*

After the erhu polyphony the soprano returns with the erhu in duet (Figure 7.75, track 2 –‘Nick2ndtake’). At this juncture the erhu had to be transposed to the key of the voice. This was difficult to achieve without losing too much of the timbral quality of the instrument. After many attempts, it was successfully rendered.

Here the soprano part is cut and spread across several tracks and two of these are used to create a sharp panning effect where the voice leaps from far left to right and back again. A ‘close up’ of the cutting of the tracks to create this effect is given in Figure 7.76. Note that one track sounds against the muted (grey) section of the other track. This simple technique was one that I gained from the YouTube postings of the Hip Hop artists that use this same program.

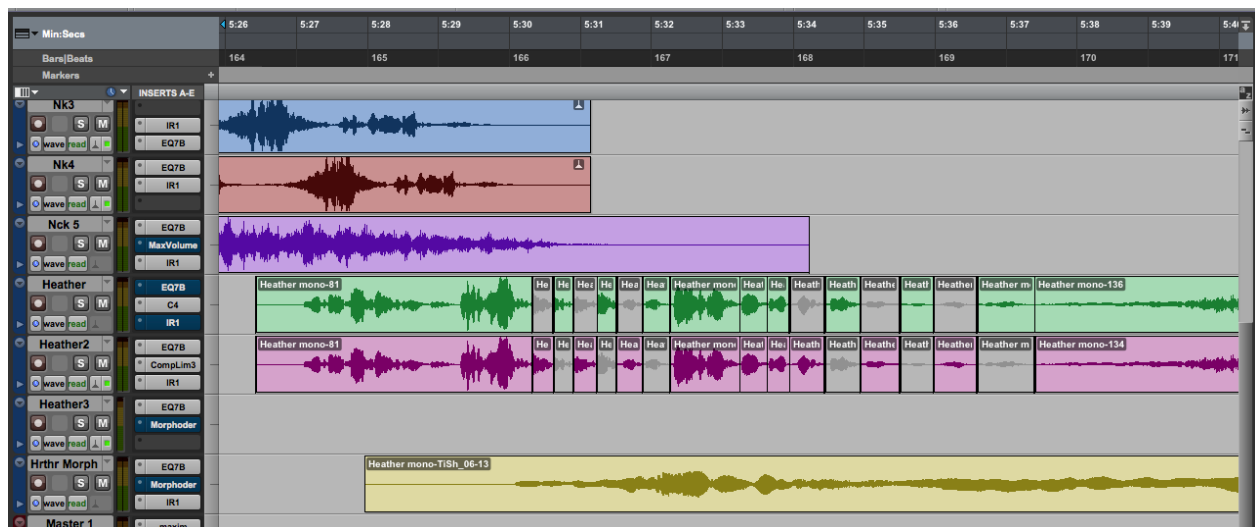


Figure 7.73. The soprano part cut and spread to create a panning effect.

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The erhu and voice duet, interspersed with solos continues flowed by a final erhu comment before the end of the movement, where the soprano performs chords (Approx. 7:15 minutes), this time on a glissando. These chords required much trial and error to render convincingly; to make them sound as if there are really three voices sliding together. The chord is shown in Figure 7.77:

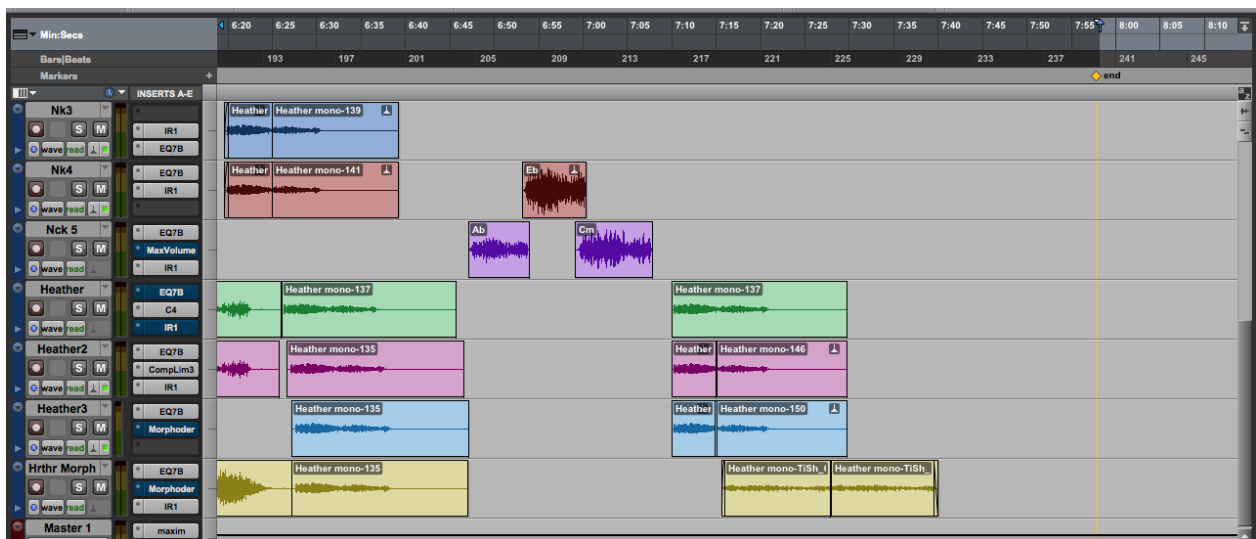


Figure 7.74. Chords in the soprano parts supported by morphed drone (bottom track).

The last seconds of the work return to the opening soundscape of dripping water and frogs with a final comment from the Wattlebird. The arch of the movement is complete.

Criticism and personal reflections on Becoming II with Erhu and Soprano

This movement was premiered in March at the 2012 QCGU *Mutech*⁴¹ *Underground Concert Series*, an electro-acoustic concert shared with PhD student Leah Barclay. The movement was the last work for the evening and received a warm response. To say that everyone who has listened to this movement has responded in a positive manner is to understate their reactions. The usual response is that they sit there quietly for a few moments, then take a breath and begin to say how moved they were.

This work has a presence and quality that holds the listener's attention. It comprises tonal tensions and a mixture of cultures and timbres that intrigues the intellect. It has a structure that unfolds inevitably and harmonies that work effectively.

It consolidates ornithological and ecological sound sources with those of the improvisations of other musicians (treated as an equal sound source) and the whole is combined into a unified presentation. This work evidences a clear progression from works created at the start of the investigation. Placed beside the *Jig* of the *Orchestral Variations on a Famiglia Theme* it seems to come from a different composer. Similarly, it differs greatly from the *Woodwind or Brass Quintets*, is vastly different to the *Serenade for Strings*. The work is notably different to other electro-acoustic compositional styles such as some the work of Leah Barclay, Trevor Wishart and Denis Smalley whose sound continuum relies more on spectromorphology (Wishart, 1996) where the unfolding

⁴¹ MuTech is short for Music Technology.

timbral sonorities are used to convey what where traditionally the realms of modulation (as moving to another key) and of orchestration. *Becoming II* with Erhu and soprano creates timbral change, modulation and internal structure through conventional and traditional score-based procedures that are then treated unconventionally and electro-acoustically. This is process-relational philosophy incarnate, the evidence of a new and emerging voice in my compositions and a reinvention of electro-acoustical composition procedures. This data represents evidence of new knowledge and the proof of process-relational philosophy in action.

Critical Analysis of *The Old Man's Grave* from the Gilgandra Suite

The Old Man's Grave. Track 6 of CD 3.

This suite of three movements is a return to autoethnography (as a compositional stimuli) as well as the application of process-relational theory. I travelled to Gilgandra in mid Western New South Wales, to the cemetery where my father is buried. Over 2 days I made various recordings at this location. On the first day at the cemetery I captured various birdcalls, White-breasted Honeyeaters, Gallahs, Lorikeets, Willy Wagtails and the rumblings of an afternoon storm. With the onset of unfavorable weather, I relocated to my cousin's nearby farming property, continuing to record the rain on a tin roof, various unsighted birds chirping in a Willow tree and the voices of my cousin and eldest brother in conversation about the weather. The next day I returned to Gilgandra and visited the Flora and Fauna Reserve just north of this rural town. Here I recorded a distant call of a Pied

Butcherbird as well as other unsighted birds, the buzzing of insects, and various musique concrete sounds from a fence and gate.

I discovered that when I placed my recording device (Zoom H4) on the wooden fence post and then ‘plucked’ the fence wire, the recorded mix of the external sound and the sound that traveled through the post were intriguing. Often when I did this effect ‘fence-plucking’, it set a bird calling in response, probably as a warning or territorial call. All these recorded effects were utilized in this series of works.

The movement *The Old Man’s Grave* opens with the various birdcalls made at the grave of my father and through this texture is sounded the distinct call of the Pied Butcherbird. This Butcherbird call had to be edited considerably to bring it from a far-away sound to a more resonant and close-up presence. In doing so, the call took on another timbre becoming more haunting and filled with romanticism. I had employed volume-enhancing DSP to bring the call to the foreground and a dynamic filter to reduce the background noise, an equalizer to give more ‘air’ and sonority to the call as well as a reverb to enhance the presence, then finally a delay (CD 3 Track 6).

After this birdcall an oboe and a clarinet perform an arrangement of an excerpt from Handel’s Aria *I Know That My Redeemer Liveth* from *Messiah*. The excerpt is the section where the vocalist sings the text, ‘And though worms destroy this body, yet in my flesh shall I see God’, which is a paraphrase from the book of Job (19:26). Figure 7.78 is an excerpt of this work in short score.

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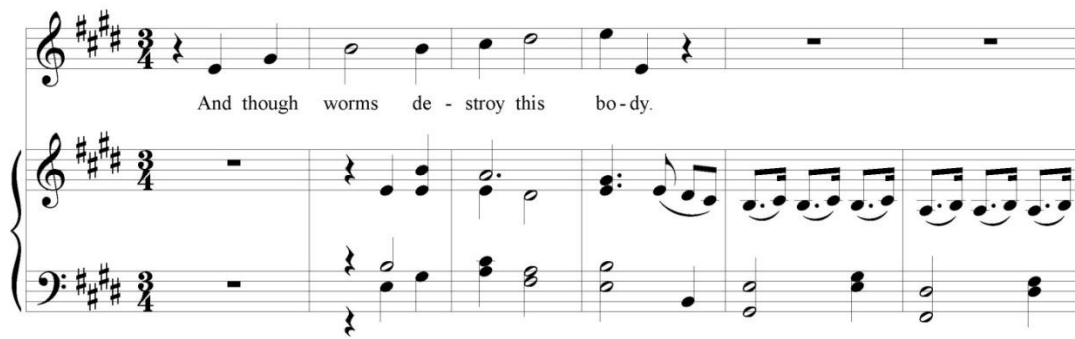


Figure 7.75. Excerpt from Handel's Aria 'I Know that My Redeemer Liveth'.

This excerpt formed the basis of the arrangement that is essentially a re-writing.

Figure 7.79 exemplifies the extent to which the re-writing removes the work from the original.

♩ = 72

Oboe

Violin 1

Violin 2

Viola

Cello

Double Bass

This page shows the orchestral arrangement of the excerpt. It includes staves for Oboe, Violin 1, Violin 2, Viola, Cello, and Double Bass. The tempo is marked as ♩ = 72. The arrangement features various dynamics such as *p* (piano), *pp* (pianissimo), and *ppp* (pianississimo). The Oboe part has a trill marked with a wavy line. The string parts are written in a way that they all play the same melody, creating a rich, layered sound. The key signature is three sharps and the time signature is 3/4.

Figure 7.76. Orchestral arrangement of the Handel excerpt.

This initial orchestration arrangement was made in the Finalé program. Once this was completed it was saved as a midi file and moved into the DAW where it was re-orchestrated using the EastWest Orchestral Platinum Library of samples. Another variation was created by removing the strings and copying the remaining oboe part into another track, then allocated to a clarinet transposed to an augmented fourth below. This re-arrangement of the re-arrangement is the first sounding of this Handel excerpt in the final product. The Handel was chosen because this was a work that my father loved and this music was intended to be autoethnographical.

As the first arrangement of the excerpt is sounded, my voice is heard speaking “Gilgandra, at the old-man’s grave”. When I am making a recording, I usually speak to identify the time and place of the data capture. Back in the studio, I heard my voice and immediately seized upon it and worked it into the movement as yet another expression of the autoethnography. I fragmentized the text, setting it in retrograde, before returning to the original; I broke it up so that the word “grave” stood alone. I ‘sent it’ through a series of DSPs (Max-Volume, X-Noise, EQ, Thalmus synthesizer Morphoder and Delay) and lowered its pitch, to create an ominous edge to my voice. This was the first time I have ever used my speaking voice as a sound source.

The recording of my cousin talking to my brother was added and this too was lowered and altered considerably to ‘dehumanize’ their voices and render them into a series of low distant rumblings. This too was deemed autoethnographical as the sources were from the same gene pool as my father. Figure 7.80 shows the entry of the Handel reference, the speaking and the other tracks in their context. From top to bottom the tracks are as follows.

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1. Cousin and brother talking
2. My speaking voice fragmented and then a passing car (at twenty-second mark)
3. Birds recorded at the Gilgandra cemetery
4. Butcherbird call
5. Rhythmic Figure from Flora and Fauna recordings
- 6 - 7. Afternoon storm
8. Birdcalls from farm property (called Riverview),
- 9 – 11 Orchestral excerpts of Handel.

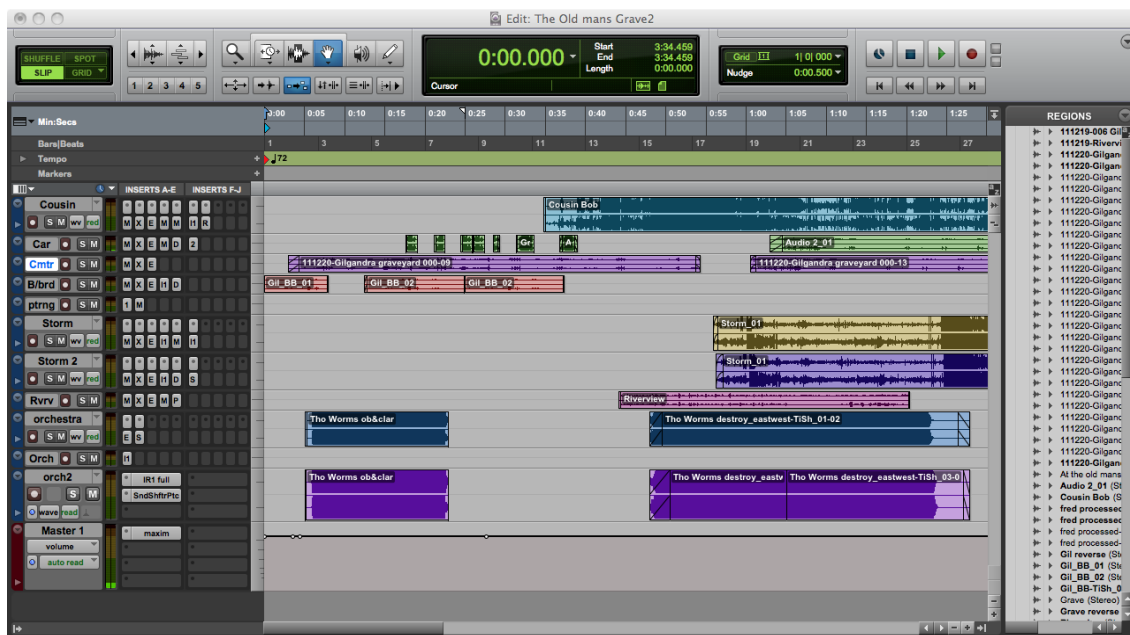


Figure 7.77. Showing the opening section of *The Old Man's Grave* in the DAW

After the ominous rumbling of the voices is established, the orchestral version of the Handel excerpt is presented, quickly buried beneath the sounds of the approaching storm. This is presented on two tracks to allow one track to be lowered in pitch to ensure the effect is more powerful. Once this has reached its zenith, a recording of a passing car (that interrupted my recordings at the cemetery) is added to the mix and sent to a morphoder to create a quintal/quartal chord built up from a low C. This chord consists of C, F, C, G, D flat and whilst open in sound, has a dissonant edge.

This chord dies away and another thunder rumble occurs, then the texture begins to clear with only the sound of falling rain and distant birds. Rising out of this clearing texture, the oboe, accompanied by 'warm strings' states again the Handel derived excerpt. This time it is clear and uninterrupted with just a hint of the rhythm created from material recorded at the Flora and Fauna Reserve. The call of the Butcherbird sounds first (in the distance), and then closer as another car motors past and the rumbling voices of track one return. The call of the Pied Mudlark is heard, the Handel quote is repeated and the work moves to a close with the call of the Mudlark and an unknown bird sounding the final cadence over the remnant of the diminishing car sound.

I believe the work is an important summary of ideas in my emergent voice. It is personally close to my heart and is an authentic autoethnographical piece. It brings together ornithological and ecological sound sources with those of the orchestra (treated as an equal sound source) and the whole is combined into a unified presentation.

In a similar way, this work builds on the previous work (Becoming II) and it too clearly contrasts with that of the earlier autoethnographical *Orchestral Variations on a Famiglia Theme* in its conception and realization. Yet, in this work there is a ‘sameness-of-spirit’, a shared quality, as if the new-voice speaks from the same heart. It is a slow movement but vastly different to the slow movements of the instrumental chamber music works.

Once again this is a further extension on previous works and is crucial to this exegesis because it clearly evidences the coming-into-being at the core of the philosophy underpinning the investigation. Crucial, because it employs new source materials that are subsequently manipulated in the DAW; namely orchestral excerpts (that have already been finalized and produced prior to the DAW) and spoken vocalizations and accidental happenings such as the passing cars. It is significant because something new has emerged from the process of the extra musical stimuli. The practice-based research has brought together autoethnography, birdcalls, extraneous and unexpected sound sources, and in the creation of this work, a clear developmental and cumulative expression of the new and emerging voice of my compositions. Change of timbre and harmonic movement are created through conventional score-based procedures and integrated into the work in an unconventional electro-acoustic dimension. This is evidence of difference in the emerging

voice whilst maintaining the original stability of orchestral craftsmanship. This is further proof of the fruit of the investigation.

This chapter has demonstrated the thinking and developmental processes behind the works created, the documentation of the process of becoming in musical format. Observed from the very start, there is a clear cumulative line of maturation evidenced in the musical compositions. The range of orchestral, choral and instrumental writing is extensive and the depth and breadth of the work shows improvement throughout. The musical elements of the compositions display an evolving confidence, with strong contrapuntal textures, internal interplay and unity; advanced harmonic certainty and comprehension; melodic flow, organic growth and metamorphosis affirming an elevated artisanship and an innate lyricism. The rhythmical devices, though visually simple, belie a complicated and engaging presence. The structures are sound, cohesive and well founded.

Process-relational philosophy, autoethnography and ornithological sound sources are present in the works and the music is a valuable contribution to the body of knowledge surrounding these subjects. These selected movements that stem from larger works are clear evidence that a process of becoming has occurred, and that process is real, that becoming is real and the philosophical stance has been justified by the music created.

Chapter 8. Conclusions

In this chapter, I will discuss the knowledge the investigation has uncovered, the conclusions to the research and future directions for myself as a practicing researcher.

The outcomes of the investigation.

The investigation has shown that the Whiteheadian theories of process-relational philosophy are supported by the findings of this research. The musical works clearly demonstrate a cumulative and developmental evolution in the process of my improvement as a composer, and that the insight that ‘everything is in process’ and ‘change is at the core of things’ are supported by this evolution and the compositional works: that flux is a dynamic, an actuality in which there is the permanence of ‘the present experience’ that is then replaced by another; that one actual entity (being) can change to another entity (becoming) by active involvement in the present action of flux; that there is a process of becoming; things (entities) can evolve and move from being to becoming.

Mesle (2008) in his introduction to *Process-Relational Philosophy: An Introduction to Alfred North Whitehead*, sheds light on the differences between being and becoming:

Plato gave priority to Being partly because he loved ideas. For him ... the truths of mathematics provided the paradigm of reality. Circles, squareness and $2 + 2 = 4$ are timeless ... They do not become or perish; they just are. Alfred North Whitehead was a mathematician and shared much of Plato’s desire to incorporate

Being into his vision of Becoming. [but] mathematical forms ... are abstractions. They are not actual. (p. X)

Mesle (2008), having established that ‘things’ that we take for granted as ‘solid’ are actually ‘abstractions’, continues with anecdotes about his children and experiences with them as toddlers and learning pre-teens, “I will never again teach the six-year-old ... to swim” and, emphasizes their becoming adults, married with their own children. He concludes that:

Life simply is change – becoming and perishing. The joy of life is in the journey. I am a process-relational philosopher because everything I care about is in process and in relationships – even my ideas ... I am never truly separate from the larger relational whole extending infinitely in time and ... my ‘self’ will eventually be lost as I fully melt back into earth, air, fire and water. (p. X)

Like Mesle, everything that I care about, family, faith and philosophy, music and music composition, is in process. Life and living is change, and change is a percolating activity happening in the now, the present, where reality is.

When something or someone engages with the present reality to create, the potential for change is amplified. Creation and the creative act, falls out of the reiterated recent past, it grows out of it, is influenced by it; and there is a potent desire, a ‘lure’ towards higher novelty, sophistication, aesthetics and fullness of potentiality within the active present. This activity is the dynamism in the process of becoming; as the common sense maxim states, ‘you are what you do’. To be active in process is to express one’s own self-

determination and to open one's self to the inclination towards greater refinement, sophistication and complexity.

There is also the reverse, which must be acknowledged here, though it was not a part of the investigation. The common maxim 'nothing comes from nothing' seems true. It behooves the entity to be active in the present actuality for the flame of potentiality to be ignited. One must respond to the occasion for a new entity to come-into-being. This is common sense and addresses the obvious criticism that can be leveled at this research; namely that if anyone sets to work at a thing, they most probably will succeed. While this is generally true, one must also remember that the new entity emerges from the recently reiterated past and that past, influences the value of the response and the potential. In simple terms, a non-musician with limited intellect will have great difficulty writing high calibre musical works. There is no the 'past' experience upon which the new actuality can be built.

New Music = New Knowledge

When applied to my investigation, the act of creating music resulted in new things coming into being. A virgin entity, a different expression, original new documents came into existence. Neoteric music conceived; au courant comprehensions made. Unique contributions to the wealth of knowledge actualized and displayed; archived and performed.

The investigation into whether a process of becoming would occur to me, as a creative practitioner has shown that indeed it did and does occur. The evidence of this

research establishes that the most recent music created clearly exhibits greater knowledge, is more musically profound, and artistically mature.

The evidence of the investigation is observed in the expanding ornithological evolution from people (siblings) to ecology as an autoethnographical source, and this process brings new knowledge or ‘novelty’. There is a progression towards greater sophistication and novelty in the composition of the music as part of a process of becoming is categorical and concise. When one compares the conservative first sketches of the *Orchestral Variations on a Famiglia Theme* to that of the final suites of electro-acoustic works, which includes *The Old Man’s Grave*, the compositional competence and development, displays a clear cumulative and exponential line of artistic and creative evolution, and technical proficiency and a reinvention of traditional score-based techniques. The documentation of the music is concrete evidence of this. The tone of the early music is profoundly different to the latter; a new and emergent ‘voice’ is evident, and the process of becoming has occurred.

Process-relational Philosophy

The investigation into process-relational philosophy has solidified previous intuitions and perceptions. A detailed and broad investigation into the literature of these philosophers, thinkers and theologians, achieved a clear and concise philosophical world-view. Rooted in reality, the understandings of science, the laws of the universe, the theories of relativity and evolution, this metaphysical reconciliatory philosophy brings together the comprehensions of the known world with the intuitions and explorations of a life lived to

the full. A comprehension, that human knowledge is not necessarily the limit of all there is; that the nature of reality exhibits a fullness of potentiality in the actual that argues the presence of another mind (panentheism), active in the present to attract responses from all levels of creation (panexperientialism) towards greater sophistication, aesthetics, novelty and relationships (inter-relational/relativity).

Autoethnography as a Methodology

Autoethnography as a research methodology has the capacity to bring qualitative and authoritative insight into the subjects of the investigation. That the anthropologist is a part of the cohort brings its own degree of depth knowing that might not otherwise have been possible.

This particular autoethnographical research has resulted in a deeper comprehension of the psychological ramifications of a restrictive religious rearing and its possible damage on the emotional well-being of those involved (including myself). There is now a realization of the impacts of the fears of failure and rejection, paranoia and inferiority-complex that the objects of the research are subject to. An understanding of the dissolution, desolation and devastation created by shattered faith syndrome. There is now an empathy and tolerance for the resultant expressions of the mental and emotional diseases of manic depression, bi-polar disorder, and sociopathic control issues observed in some of the cohort.

A positive outcome is that the research has to some extent, empowered the majority of the ethnography⁴² in their own process of becoming.

Ornithological sounds as external stimulus

The practice-based investigation into whether the use of ornithological and ecological sound sources (as artistic stimuli), would assist in the process of becoming a composer of more significant music has resulted in that hypothesis being found true. The evidence is in the music, which displays a developing, newly emergent 'voice'. The music is the documented evidence of the process of becoming.

The conclusions formed

I conclude that despite my own fears of failure, rejection and inferiority, if I engage in the creative process of reality (or, if I engage in reality in a creative process), to compose music of an artistic and novel nature, then I am capable of creating the same. The investigation has proven it; the research has shown this to be possible.

Though any external stimulus might work to initiate a creative response (as the palindrome used in the work *Glenelg*), the use of autoethnographical responses to family, philosophy, environmental and ecological has been the most personally challenging and stretching to my creativity.

⁴³ The knowledge gained by the investigation has served to assist some in their wellbeing and self-perception.

I conclude that the music created is of merit; it is not a self-delusion. This conclusion is supported by the responses to its performances and by the requests for new music to be created, by the recording of *Robinson Gorge* by the Queensland Saxophone Orchestra and by the contract with PARMA recordings to record the *Serenade for Strings*, and by The Lunaire Collective's inclusion of the *Woodwind Quintet* in their concert repertoire for 2012.

I have deduced that the documentation of the observations of an investigation in a musical format can be accurate, authoritative and more subtle and sensitive than purely linguistic text. I have decided that I should continue to document my observations in this manner and that such a method may be of benefit to other musicians.

Because of the investigation's evidence I have surmised that a process-relational philosophical world-view can be an appropriate stance in a postmodern era.

I have determined that electro-acoustic composition is a valid medium and it can be a technical, detailed and complicated artistic expression. I have found that all the skills of traditional composition are transferable to this medium, and that in my case I am able to take the workflow of creative expression from orchestral work over to the electro-acoustic medium. I can use an orchestrated work as an audio source material in the DAW and then manipulate it with DSP.

Future directions as a practicing researcher

University Lecturer

I have recently been appointed to the Sultan Idris Education University (UPSI), in Malaysia, as a Senior Lecturer in music composition. This is a two-year contract and is the direction of my most-immediate future. I shall be writing academic papers and submitting them for publication. I shall be submitting papers for inclusion in conference proceedings across the arenas of music composition, electro-acoustic music, music education, ethnomusicology and philosophy/theology.

I shall endeavour to teach the student-teachers at UPSI how to empower their students by demythologizing the inner workings of music theory. I shall teach music composition, music arranging and writing skills for both electro-acoustic music as well as the more traditional formats. I shall endeavour to inspire and motivate my students to realize their fullness of potentiality through the application of process-relational philosophy. I shall teach them that they are on the leading edge of everything that has gone before, all of creation, all of evolution, the complete sum of all the knowledge, all of the struggles of civilization, is in place and there to empower them to become. I shall encourage them to respond to the lure and live life to the full. This philosophical model will influence my work as a teacher of teachers.

Composer

I will compose music in both traditional mediums as well as in the electro-acoustic field. I shall continue to collect ornithological and ecological recordings in the field. I shall continue to include ornithological sources into my artistic expression and I intend to investigate the expression of process-relational philosophy through music. I will endeavour to ensure the ensemble works are played and published.

Philosophy

I hope to continue to read philosophy and theology. To impart my knowledge to those I teach as well as allowing the study of philosophy to permeate my music making. I hope that my employment at an Islamic University will be a boon in facilitating opportunities to research and find common ground amongst the thinkers and theologians within the Muslim community.

In Summary

The research into whether a process of becoming might be evidenced through a practice-based investigation into the crafting of a number of musical compositions specifically created to test the notion (of process), has resulted in a clear exponential line of development.

That autoethnography is a valid and worthy method of recording observations and recording the findings in music enhances the delivery and depth of the tenant of the

A PROCESS OF BECOMING

documentation. A greater subtlety and sensitivity of insight is brought to the authority of the observations.

Birdsong, present in many musicians' work throughout the ages, remains a muse today, and for me, a personal muse that stimulates me to higher artistic expression.

Electro-acoustic music in the genre investigated in this research represents a technically challenging, sophisticated and comprehensive form of music composition.

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APPENDICES

Appendix A: Transcriptions of birdcalls

The following scores are transcriptions of the birdcalls that were used in the compositions presented in this exegesis.

| | |
|--|---------|
| Butcherbird. | Page 1. |
| Diamantina Lake: Various birdcalls. | 2. |
| Figbird. | 6. |
| Grey Butcherbird. | 7. |
| Magpie. | 8. |
| Pied Butcherbird(s) (and Magpies not notated). | 9. |
| Butcher bird. | 10. |
| Red Wattlebird. | 11. |
| Red Whiskered Bulbul. | 12. |
| Southern Boobook. | 13. |
| Spotted Pardolate. | 14. |
| Superb Wren. | 15. |
| Willy Wagtail at Peacock Creek, Richmond Ranges National Park. | 16. |
| Willy Wagtail. | 17. |
| Wynnum Mangroves: Three different unsighted birds. | 18 |

Butcherbird

Allegro (M.M. ♩ = c. 120)

1/4

6

An octave higher

3

3

9

Diamantina Lakes

Various bird calls

Pno. 1

pp

mf

pp

p

Flutter

Pno. 1

ppp

p

ppp

p

crow

Pno. 1

First system of music for Pno. 1, measures 1-4. The score is in B-flat major (two flats) and 4/4 time. The right hand features a melodic line with eighth-note patterns, marked with a *pp* (pianissimo) dynamic. The left hand has a bass line with a half note and a quarter note, marked with a *mf* (mezzo-forte) dynamic. The key signature is B-flat major, and the time signature is 4/4. The first measure is marked with a *pp* dynamic. The second measure is marked with a *mf* dynamic. The third measure is marked with a *pp* dynamic. The fourth measure is marked with a *pp* dynamic.

Pno. 1

Second system of music for Pno. 1, measures 5-8. The score continues in B-flat major and 4/4 time. The right hand features a melodic line with eighth-note patterns, marked with a *p* (piano) dynamic. The left hand has a bass line with a half note and a quarter note, marked with a *mf* (mezzo-forte) dynamic. The key signature is B-flat major, and the time signature is 4/4. The fifth measure is marked with a *p* dynamic. The sixth measure is marked with a *mf* dynamic. The seventh measure is marked with a *p* dynamic. The eighth measure is marked with a *p* dynamic.

8va-----

Pno. 1

First system of music for Pno. 1, measures 1-4. The score is in 3/4 time with a key signature of three flats (B-flat, E-flat, A-flat). The first staff (treble clef) contains a melodic line with eighth and sixteenth notes, marked *pp*. The second staff (treble clef) contains a melodic line with eighth and sixteenth notes, marked *mf*. The third staff (treble clef) contains a melodic line with eighth and sixteenth notes, marked *pp*. The fourth staff (treble clef) contains a melodic line with eighth and sixteenth notes. The fifth staff (bass clef) contains a melodic line with eighth and sixteenth notes, marked *p*. The system concludes with a double bar line.

Pno. 1

Second system of music for Pno. 1, measures 5-8. The score is in 3/4 time with a key signature of three flats (B-flat, E-flat, A-flat). The first staff (treble clef) contains a melodic line with eighth and sixteenth notes, marked *p*. The second staff (treble clef) contains a melodic line with eighth and sixteenth notes. The third staff (treble clef) contains a melodic line with eighth and sixteenth notes. The fourth staff (treble clef) contains a melodic line with eighth and sixteenth notes. The fifth staff (bass clef) contains a melodic line with eighth and sixteenth notes. The system concludes with a double bar line.

Pno. 1

The musical score for Pno. 1 is written for a grand piano, consisting of five staves. The first two staves are grouped by a brace on the left. The key signature is B-flat major (two flats). The time signature is not explicitly shown but appears to be 4/4 based on the note values. The score is divided into two measures. In the first measure, the top staff contains a melodic line starting with a quarter note G4, followed by eighth notes A4, Bb4, and C5, then a quarter note D5, and finally a half note E5 tied to the second measure. The second staff in the first measure is empty. In the second measure, the top staff contains a whole rest. The third staff in the first measure contains a melodic line starting with a quarter note G4, followed by eighth notes A4, Bb4, and C5, then a quarter note D5, and finally a half note E5 tied to the second measure. The fourth and fifth staves in the first measure are empty. In the second measure, the third staff contains a whole rest, and the fourth and fifth staves are empty. The score ends with a double bar line.

Figbird

Allegro (M.M. ♩ = c. 120)

The musical score for 'Figbird' is written in 4/4 time with a tempo of Allegro (M.M. ♩ = c. 120). The key signature has one sharp (F#). The score consists of seven staves of music. Dynamics include *f* (forte), *pp* (pianissimo), *p* (piano), *mp* (mezzo-piano), and *fz* (forzando). Articulations include accents (>) and slurs. Rhythmic patterns include eighth notes, quarter notes, and triplets. The lyrics 'ee-ark' and 'Chuk-a keewl' are placed below the notes.

f ee-ark ee-ark ee-ark *pp* *p*₃ *f* *pp* *p*₃ *f*
Chuk-a keewl Chuk-a keewl

pp *f*₃ *pp* *p*₃ *f* *pp* *p*₃ *f*
Chuk-a keewl Chuk-a keewl Chuk-a keewl

f *pp*
ee-ark ee-ark

*p*₃ *mp* *p*₃ *f* *p*₃ *f*
p *f* *p* *f*

p *f*₃ *p* *p* *f*₃ *p*

mp *mp*
*f*₃ ee-ark ee-ark ee-ark ee-ark ee-ark ee-ark

*f*₃ *pp* *f*

Grey Butcherbird

♩. = 152

Musical notation for the first section of the Grey Butcherbird song, measures 1-13. The notation is in treble clef with a 12/8 time signature. Dynamics include *mp*, *f*, *p*, *mp*, *f*, and *p*. There are accents and a 1/4 note marking above a measure.

Vivace ♩ = 164

Musical notation for the second section of the Grey Butcherbird song, measures 14-17. The notation is in treble clef with a 4/4 time signature. Dynamics include *mf*, *p*, and *ff*. There is a crescendo hairpin.

From bar 14 on not as aurally accurate but interesting and worth keeping

Musical notation for the third section of the Grey Butcherbird song, measures 18-21. The notation is in treble clef with a 4/4 time signature. Dynamics include *mf*, *p*, and *ff*. There is a crescendo hairpin and a triplet marking.

Magpie

Allegro (M.M. ♩ = c. 132)

The musical score for 'Magpie' is written in 4/4 time and consists of four staves of music. The key signature has one flat (B-flat). The tempo is marked 'Allegro' with a metronome marking of approximately 132 beats per minute (♩ = c. 132). The score includes various rhythmic patterns, including eighth and sixteenth notes, and rests. Fingerings are indicated by numbers 1-5 below the notes. Slurs and accents are used to group notes and emphasize specific sounds. The piece concludes with a double bar line.

Staff 1: 4/4 time. Starts with a whole rest, followed by a quarter rest, then a series of eighth and sixteenth notes. A triplet of eighth notes is marked with a '3' below. The staff ends with a quarter rest.

Staff 2: Continues the melodic line with eighth and sixteenth notes. A triplet of eighth notes is marked with a '3' below. A slur covers a group of notes, with an accent (>) above. The staff ends with a quarter rest.

Staff 3: Continues the melodic line with eighth and sixteenth notes. A triplet of eighth notes is marked with a '3' below. A slur covers a group of notes. The staff ends with a quarter rest.

Staff 4: Continues the melodic line with eighth and sixteenth notes. A triplet of eighth notes is marked with a '3' below. A slur covers a group of notes. The staff ends with a quarter rest and a double bar line.

Pied Butcherbird(s) (and Magpies not notated)

Motif 1

f

1/4

Motif 2

f 3

Note: Green notes second bird *ff*

Motif 3

3 3

8va

p *f*

Motif 4

8va

f *p* *f*

1/4 1/4

Motif 5

3 3

3

1/4 1/4

Butcher bird

Allegro (M.M. ♩ = c. 120)

1/4 #

The musical score is written for three staves. The first staff is in treble clef, 4/4 time, and contains a series of eighth and sixteenth notes, including a triplet of eighth notes. The second staff is also in treble clef and contains a series of eighth and sixteenth notes, including a triplet of eighth notes. The third staff is in treble clef and contains a series of eighth and sixteenth notes, including a triplet of eighth notes. The score ends with a double bar line.

Red Wattlebird

The musical score for the Red Wattlebird is written in 4/4 time and consists of three staves. The first staff begins with a *ff* (fortissimo) dynamic marking. It contains several measures of music, including a triplet of eighth notes in the final measure. The second staff continues the melody with various note values and rests. The third staff also features a *ff* dynamic marking and includes a triplet of eighth notes. The score concludes with a double bar line.

Red-Whiskered Bulbul

Allegro (M.M. ♩ = c. 120)

The musical score is written in 4/4 time and consists of four staves. The first staff begins with a treble clef and a key signature of one flat (B-flat). It contains a series of eighth and sixteenth notes, some with accents and a flat. The second staff continues the melody, featuring a triplet of eighth notes marked *pp* (pianissimo) and a subsequent eighth note marked *f* (forte). The third staff shows a continuation of the melodic line with various note values and rests, ending with a triplet of eighth notes marked *pp*. The fourth staff concludes the piece with a final melodic phrase marked *f* and a double bar line.

Southern Boobook

♩=86

Haunting, lonely, with much resonance.



Spotted Pardolate



Superb Wren

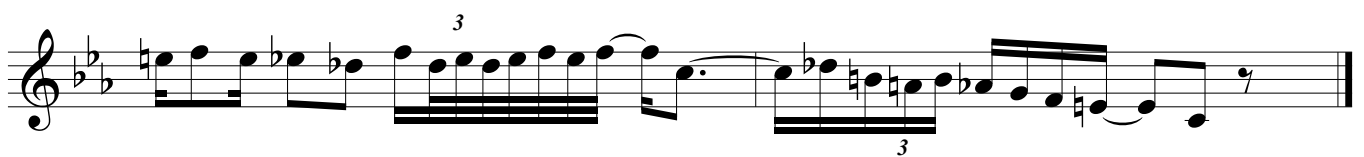
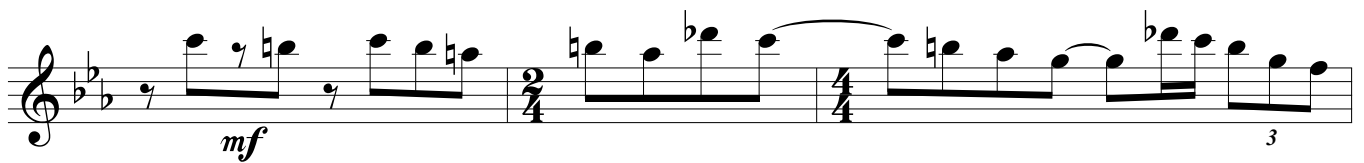
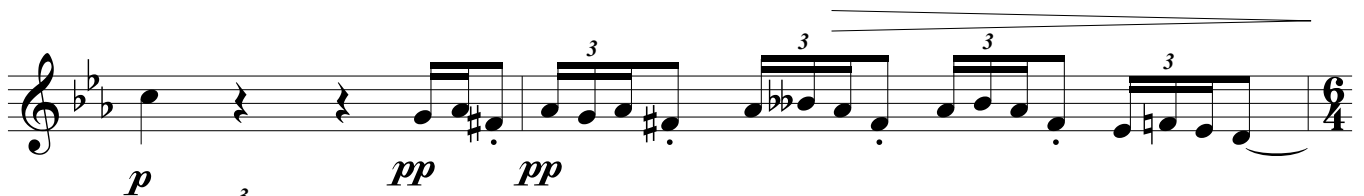
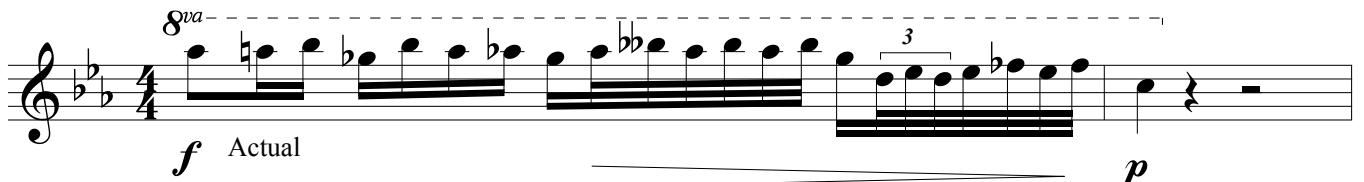
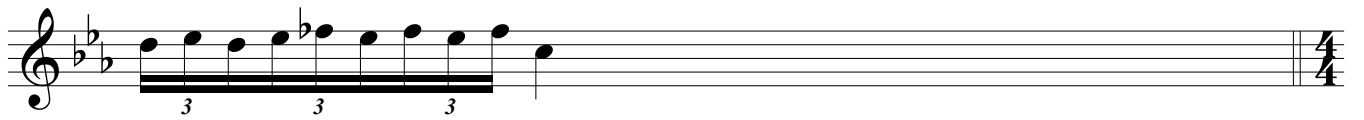
Molto Allegro (M.M. ♩ = c. 140)

f *p* *a tempo* *p* *mp* *pp* *p*

Willy Wagtail

at Peacock Creek, Richmond Range. NSW

♩ = 110



Willy Wagtail

The musical score for "Willy Wagtail" is written in 4/4 time and consists of four staves. The first staff begins with a treble clef and a key signature of one sharp (F#). It contains three measures: the first measure has a quarter rest followed by a quarter note G4, marked *p*; the second measure has a quarter note A4, marked *f*, followed by a quarter note G4 with an accent (>) and a quarter rest, marked *p*; the third measure has a quarter note A4, marked *f*, followed by a quarter note G4 with an accent (>) and a quarter rest, marked *p*. The second staff contains four measures: the first measure has a quarter note G4, marked *f*, followed by a quarter note A4, marked *ff*, followed by a quarter note G4, marked *p*; the second measure has a quarter note F#4, marked *f*, followed by a quarter note E4, marked *pp*, followed by a quarter note D4, marked *f*; the third measure has a quarter note C4, marked *pp*, followed by a quarter note B3, marked *f*, followed by a quarter note A3, marked *pp*, followed by a quarter note G3, marked *f*; the fourth measure has a quarter note F#3, marked *f*, followed by a quarter note E3, marked *pp*, followed by a quarter note D3, marked *f*. The third staff contains four measures: the first measure has a quarter rest, marked *p*; the second measure has a quarter note G4, marked *p*, followed by a quarter note A4, marked *ff*, followed by a quarter note G4, marked *p*; the third measure has a quarter note F#4, marked *f*, followed by a quarter note E4, marked *pp*, followed by a quarter note D4, marked *f*; the fourth measure has a quarter note C4, marked *pp*, followed by a quarter note B3, marked *f*, followed by a quarter note A3, marked *pp*, followed by a quarter note G3, marked *f*. The fourth staff contains four measures: the first measure has a quarter note G4, marked *p*, followed by a quarter note A4, marked *ff*, followed by a quarter note G4, marked *p*; the second measure has a quarter note F#4, marked *f*, followed by a quarter note E4, marked *pp*, followed by a quarter note D4, marked *f*; the third measure has a quarter note C4, marked *pp*, followed by a quarter note B3, marked *f*, followed by a quarter note A3, marked *pp*, followed by a quarter note G3, marked *f*; the fourth measure has a quarter note F#3, marked *f*, followed by a quarter note E3, marked *pp*, followed by a quarter note D3, marked *f*. The score includes various dynamics such as *p* (piano), *f* (forte), *ff* (fortissimo), and *pp* (pianissimo), as well as articulations like accents (>) and a *rall.* (rallentando) marking.

Wynnum Mangroves

Three different unsighted birds

The musical score is written in 4/4 time with a key signature of three flats (B-flat, E-flat, A-flat). It consists of 12 staves, with the first three staves representing the first bird, the next three representing the second, and the last six representing the third. The music includes various melodic lines, rests, and dynamic markings such as *p* (piano), *mp* (mezzo-piano), and *pp* (pianissimo). The third bird's part includes a complex, rapid melodic passage in the final two staves.

Appendix B: Analysis of *St. Paul's Suite*, Gustav Holst

Analysis of St Paul's Suite

For String Orchestra

Composed by Gustav Holst

This analysis is to determine the compositional elements and devices used to create this work. Composed in four movements, each movement will be analyzed separately. The first movement will be analyzed in greatest depth. The elements specifically identified and deconstructed will be Structure, melody, harmony, modulation, accompaniment, texture, rhythm and meter, orchestration and repetition, development and variation.

First Movement: Jig

Structure/Form: The movement is in sonata form, though there is no repeat at the end of the Exposition and the recapitulation utilizes some of the development material.

Traditionally dance movements, and a Jig is no different, are in binary form, usually with each section repeated (AABB), however folk musicians often strung several dances of the same or similar style together and so this seems to be what Holst is doing here, whilst employing a sonata form as the over-arching structure.

The Exposition begins with the first subject which is a folk like melody lasting 12 bars.

This is in the Dorian mode on D. The transition from first subject to second begins at figure

2. The second subject enters at figure 3. This is in the Mixolydian mode on A. The development, which is made from material derived from both themes, begins at figure 5. This begins with the Mixolydian mode on F#, then moves to Ab. The Recapitulation begins at figure 7 with the return of the first subject, Dorian melody on D set against a G pedal. The Transition to the second subject begins at figure 8 and is somewhat like a second development with the second subject being presented in a rhythmically augmented form, similar to that of the developments manipulation of the same material. At Figure 9 the second subject is presented in the Mixolydian mode on C and this takes the movement to its short codetta.

Imogen Holst, daughter of Gustav Holst, in her book; *The Music of Gustav Holst*, Oxford University Press, 1986, notes that:-

“The cheerful abandon with which the Jig broadens out into augmentation and then catches up with itself shows the influence of the ‘capers’ in the Morris dance tunes he had recently been arranging for military band.” Pg 30

On the site

<http://duramecho.com/Dance/CotswoldNotes/CotswoldDetailedNotesSingleFile.html> under [item 2.2.7](#) a ‘caper’ is described as:-

“a leap from one foot to the other. The foot leapt from should reach up to the buttock and end up kicking out.....a caper usually takes two beats”

It is possibly this requirement of the dance step to ‘take two beats’ that results in the rhythmic augmentation, that Imogen Holst refers to in the above quote. It is this augmenting of the material in the ‘development’ that almost hides the form from being Sonata form, and almost makes it seem to be a variant based on binary dance forms. Thus it could be read to be in A, A1, B, B1, A2, B. This is neither binary nor ternary and therefore best placed in a sonata form.

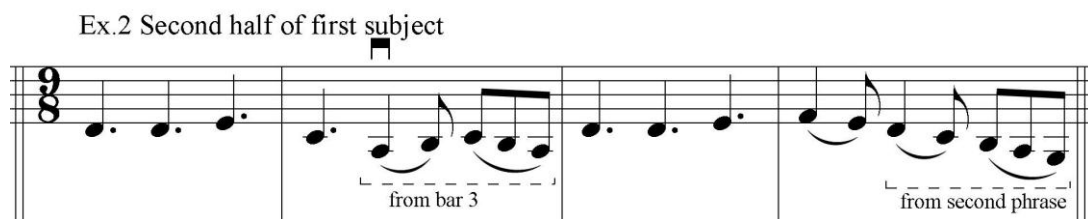
Melody: The melody of the first subject is in the Dorian mode on D. It has a range of a ninth, reaching from the fourth degree below the final to the fifth above. It is a Jig in compound duple time and is faithful to the tradition of the style of a folk dance. The opening two, four bar phrases, feature a lilting crotchet quaver rhythm, repeated notes and descending triplets.



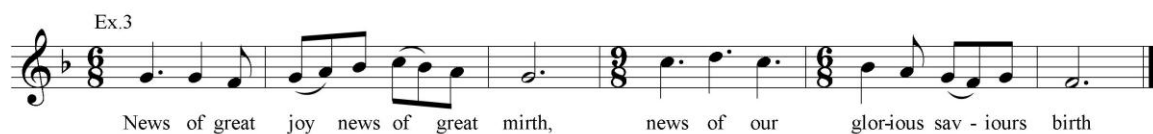
The third bar with its stepwise rising movement is employed by the composer throughout the work and can be found in the second half of the first subject, as an accompaniment figure in the transition (bars 8 – 11 of figure 2), rhythmically altered into duplets in figure 6 and 8, in bars 14 - 32 of figure 8 it returns in its original rhythmic form before the latter half of it becomes the rising triplet figure treated sequentially.

The second half of the first subject is set in compound triple time and features four dotted crotchet notes followed by the melodic fragment from bar 3 starting on the lower fifth degree. This is repeated with alterations to take the second statement up to the third degree

of the mode before descending and incorporating the motif from the third bar of the second phrase.

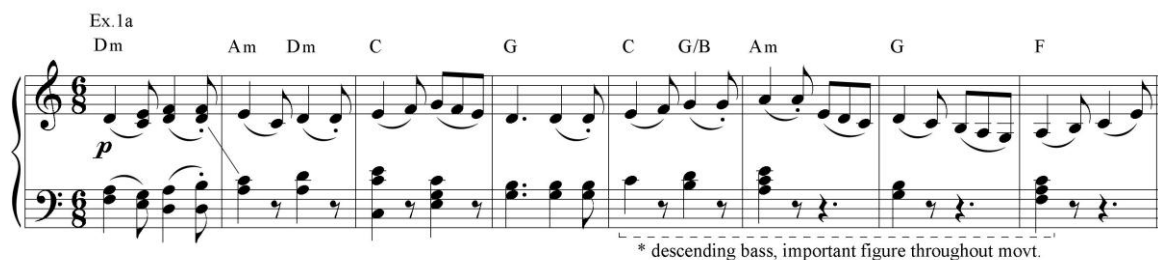


The change of meter is a characteristic of English traditional folk music and numerous examples can be found in the madrigals and ballets. Here is an example from the Sussex Carol.



The metrical change is not immediately audible as the ear retains the duple feel and this is reinforced by the melody itself, with the two repeated notes followed by the step which is then answered by the quote from bar three. This gives the listener the distinct feeling of the second half of subject one being comprised of two, three bar phrases.

The first subject theme is then repeated with harmony.



Note the descending bass line in the latter half. This line becomes pivotal in the progression of harmonies that lead to new keys as the movement develops.

The second subject, which is in the Mixolydian mode on A is comprised of four, four bar phrases. There is a new key signature of two sharps. The same lilting rhythm of the first subject pervades and this is in keeping with the Jig genre. The range is larger, rising to an octave and a fourth, if one does not count the last note which is a fourth below the final. If one includes this then the range is almost 2 octaves (octave and a seventh), and because the last three intervals become an accompaniment figure to the repeat of this melody, then one should not dismiss it lightly.

Ex.4 Second Subject in Mixolydian mode on A

A G A G A G V

Soli, Vln 2

p

The first phrase (Ex.4) leaps from the final to the fifth degree then moves by step to the seventh before falling back to the final and rising to the fourth, which is tied across to the second beat. This is answered by the second phrase which is derived from the first but is subtly altered with the seventh repeated to facilitate a rise to the octave which is held for 2 beats, thence to the 9th which is rhythmically the same as the last bar of the first phrase and is also tied across to the second beat.

These 2 phrases are answered with 2 phrases both of which are derived from material found in the first phrase of the second subject, thus the tied note is a feature as is the rise to the fourth. (please remember the two sharps of the key signature when reading Ex.5)

Ex. 5

from 2nd bar of 1st phrase of 2nd sub.

A

GM7

A

From bare 3. & 4 of 1st phrase of 2nd sub.

G6

A

from 4th bar of 1st phrase, inverted

The leap of a fifth that opens the second subject also concludes it, but to it is added the descent to the lower fifth degree. This becomes an accompaniment figure which will be addressed under that heading.

The melodic material of the development is derivative. Opening in the Mixolydian mode on F# the melody in the violins is that of the second subject in rhythmic augmentation with dotted minims replacing the crotchets and quavers. At the end of its statement there is a quote from the first subject in the violas and celli. This is answered by the second subject theme whilst still employing augmentation, though the value is halved.

Harmony

The harmony of the Exposition is simple tertiary chords, mostly in root position. Inversions are usually the result of voice leading, and in particular that of the bass. In figure 2 there is a series of seventh chords in third inversion resolving by step to another chord in second inversion. The most common resolution of the seventh chord in third inversion is to the tonic chord in first inversion, but this does not occur here. This will be discussed further under the heading 'modulation'.

There are other added note chords other than sevenths and mostly these are the addition of the sixth to a minor chord as in bar 17 of figure 2.

In the second subject material (Ex.5) there is the occasional 'open' or neutral chord. That is chord without its third. Also a neutral chord with a sixth as in the last bar of Ex.5

In the development there is the minor chord with the added sixth in first inversion (bar 9 of figure 5) again and just preceding this the chord of the seventh degree over the final, that is an E major chord over F# (bar 5 of figure 5).

In the recapitulation the Dorian melody on D is set over a G pedal which is an effective way of breathing new life into the theme. IN bars 14 – 15 of figure 8 there is a major sixth chord and a half diminished Emb5 in first inversion.

The codetta features the seventh degree chord as a major seventh chord to create a dissonance before resolving to the final.

Modulation

The movement opens in the Dorian mode on D. In its second statement the arrival of the melody back to the final is harmonized with a G chord to modulate to C major for rest of the statement in the 8 bars before figure 1. Figure 1 begins back in the Dorian mode but the stability of the mode is eroded by the descending bass that begins in bar five and heads towards a modulation to the dominant of C major.

At figure 2 the sequence of seventh chords created partly by the descending bass line, seems to modulate the work to Bb major in the fourth bar, however, this is false as the Bb is immediately made the seventh of a C major chord in third inversion (C/Bb) in the next bar, thus implying a modulation to F major.

Ex.6

G/F Am/E F/E G/D Em/D F/C B \flat

The composer plays with this for eight bars before making the modulation, not to F, but to A major. A semitone away from B \flat . This is the first of a number of enharmonic modulations that are facilitated by a semi-tonal step. This enharmonic shift is not allowed to settle in, and like the passage leading up to it, oscillates between the A major chord and a G minor in first inversion. This leads in to the second subject.

The second subject is in the Mixolydian mode on A. More oscillating between the A major chord and the G major chord allows the work to neatly step into the tonal center of F \sharp with another semi-tonal shift from the G chord.

Figure 6 which is mostly sitting on the A \flat tonal centre is arrived at through a Em6 chord in first inversion (Em6/G), thus another semi-tone step into another tonal centre. More of the oscillating chords of B \flat over A \flat and A \flat leads the work back to the recapitulation with another semi-tonal shift to G.

The recapitulation has the Dorian mode on D performed against a G pedal before settling into the D final, however the descending bass returns also and this time (bars 17-20) walk the work through to the key of B major at figure 8, with a semitone step from C. Eight bars of this and another step from the F \sharp of the melody to the F natural of a G seven chord.

(note: the G is also a semitone up from F \sharp). Here is a repeat of material from figure 2 that pulls the ear towards F major and this time we get to go, finally arriving in F in the 14th bar

of figure 8. The bass descends by step and takes the work into the Mixolydian on C# where the melody of the second subject is performed in the lower voices in simple duple time. 16 bars later the E# of the tonal centre of C# becomes the F natural of Bb Major, another enharmonic shift. This leads the movement to the Mixolydian on C at figure 9 which takes it through to the final cadence.

Accompaniment

The movement opens with a unison passage for 12 bars. Following this there is mostly simple tertiary chords under the melody, sitting on the beat, separated by rests.

Chords prevail in Figure 1 and the importance of the descending bass line that is first encountered in the bars preceding figure 1 (see Ex.1a), where the first subject theme is first harmonized, begins to make its importance felt.

Ex.7

Chords: C, G/B, Am, C/G, Dm/F, Em, Dm, C, G

Plus double bass octave lower

In Ex.6 from bar five of figure 1 we see the bass descending by step, thus determining the harmony and the inversions of the chords. This is used again at figure 2 (see Ex.6) and here it is used to create/underpin the modulation.

Also in figure 2 the motif of bar three of the first subject (see Ex.1) begins to be employed as an accompaniment figure. This first begins in the compound duple section where the

Ex. 8 B \flat C/B \flat B \flat C/B \flat (or E dim 7)

Note: rising upper voices, inversion of descending bass figure

This melodic motif from last bar of second subject

The musical score for Example 8 is written for piano in G-flat major (one flat). It consists of six measures. The first four measures show a sequence of chords: B-flat major, C major with B-flat in the bass, B-flat major, and C major with B-flat in the bass (labeled as 'or E dim 7'). The fifth measure features a complex chord structure with a melodic motif from the last bar of the second subject. The sixth measure shows a G-flat major chord with B-flat in the bass. The score includes a note about rising upper voices and an inversion of a descending bass figure.

The second subject accompaniment uses the simple chords on the beat separated by rests that have occurred before. Of importance is how the last few notes of the melody become an accompaniment figure for the repeat of the second subject theme.

Ex.9
A G6

The musical notation for Example 9 consists of two staves. The top staff is a treble clef staff with a G4 quarter note, followed by a dotted quarter note, and then a half note. The bottom staff is a bass clef staff with a G2 quarter note, followed by a dotted quarter note, and then a half note. A diagonal line connects the G4 note in the melody to the G2 note in the bass, indicating a perfect octave relationship.

The descending leaps of a fifth then a fourth are added to and become:-

Ex.10

Melody in triangle note heads

The musical score for Ex.10 is written for two staves. The top staff features a melody using triangular note heads, while the bottom staff provides accompaniment with standard circular note heads. The key signature is one sharp (F#). The score is divided into four measures, with chord changes indicated above the top staff: A (first measure), Gm/Bb (second measure), A (third measure), and G/B (fourth measure). The melody in the top staff consists of eighth notes and quarter notes, some beamed together. The accompaniment in the bottom staff consists of quarter notes and eighth notes, often beamed in pairs.

In Ex.10 the melody and 1st violin are represented using the triangular shaped heads and the 2nd violins have the accompaniment figure and are the notes with stems down in the treble clef. Here it can be clearly seen that the descending figure from Ex.9 is altered to become the note A, E, G (as in Ex.8) to which is then added a high Bb. This continues to be performed against the melody, even though this creates overlapping parts. Once the melody starts the chords change from G minor to G major. This figure continues to accompany till figure 5.

At figure 5 the melody in octaves in the violins is harmonized by the violas with notes of equal value whilst the cello and bass perform an ‘Oom-pah’, root and fifth of the chord. This continues at the same pitches (F# and C#) even when the chord changes to E major. At figure 6 the steady bass movement on each beat is reduced to a mere step and the middle voices perform long notes tied across the bar line. This creates a tension and release for each beat of this section. This is followed by a shift to compound triple time and later half of the first subject is performed by the middle voices whilst the first violins rise by step (an inversion of the descending bass figure?) whilst the bass performs an Ab pedal note every second beat, thus creating a polyrhythm that undermines the triple time.

Figure 7 is the recapitulation and here the first subject melody (as mentioned before) is in the Dorian mode on D, against a G pedal. Both elements are spread through the voices by dividing the parts.

At figure 8 all parts play the melody with some double stopping in the violins. This section employs rhythmic augmentation of the triplets in the melody that is the latter half of the first subject; however, it is not presented in triple time, but remains in duple time. The accompaniment of the transition is much the same as before till bar 19 of figure 8. Here the melody of the second subject is presented in rhythmic augmentation in the lower voices whilst the violins rise in sequentially treated thirds. This is possibly a derivation of the material from bars 8 of figure 2, but this time given much greater rhythmical impetus by the conversion of the dotted minims into repeated triplet quavers. If this is so, then the violins are performing a rhythmical diminution against an augmentation.

At figure 9 the accompaniment returns to its separated chords on each beat.

Texture

The opening texture is monophonic, unison voices. The basses do not sound.

When the first subject is repeated it is in a predominantly homophonic texture with the occasional soli line. Homophony continues till part way through figure 2 when oblique motion occurs whilst the violas perform a repetition of the motif from bar three of the first subject. This is a simple counter melody, thus polyphony.

Figure three is mostly homophonic then at figure 4 the second violins perform a fragment of the melody against the firsts who perform the melody, whilst the lower instruments complete the harmony. This is definitely two ideas at once (see Ex.10). More polyphony.

At figure 5 the texture returns to homophony, even though there are fragments of melody from elsewhere in the work, these only occur when the primary melody is stationary.

There is more oblique motion between the outer voices beginning at 9 bar in figure 6, and with a melody in the middle voices, this is polyphonic.

Figure 7 opens with oblique motion against a pedal point of G before returning to a homophonic texture.

The first 8 bars of Figure 8 is monophonic, followed by homophony then a polyphonic section where the outer voices move in contrary motion whilst the middle voices perform the small motif from bar three of the first subject. Thence follows more polyphony with the violins on counter-melodic material that is treated sequentially whilst the lower voices perform the main melodic material.

Figure 9 through to the end is homophonic.

Rhythm and meter

The meter is predominantly compound duple time, with sections in compound triple time (see Ex1,2 and 3). There is a section in figure 8 where the lower voices perform in simple duple time whilst the upper voices remain in compound duple, but this is purely a notation effect, as it is not aurally perceivable. Neither is the compound triple time because the nature of the melody has natural accents on every second beat, and the bowing instructions reinforce this (see Ex.2). However, at figure 2 the triple time is perceivable as the composer treats the material sequentially and asks for an accent on the third beat. In figure 6 the composer makes reference to the latter half of the first subject material and applies rhythmic augmentation, superimposing a duple time against the compound duple time thus creating a cross-rhythm, he then develops this further in the next passage where the 1st

violins and cello are clearly in triple time, the metrically ambiguous melodic latter half of the first subject is in the 2nd violins and violas and the bass performs on every second beat. Clearly the composer is exploiting this ambiguity to create a polyrhythmic effect of duple and triple times together. More duplets in figure 8, though these are not set against another rhythm.

The movement is accelerated in the last 14 bars with a very effective use of the rest to when the ear expects to hear something to create excitement just before the close.

The rhythm of the melodic material is a combination of the lilting crotchet quaver figure and the triplet figure which is so typical of traditional Jigs and Reels. The composer asks for the separate quavers to be dotted so as to accentuate the lilt and reinforce the impetus of the dance rhythm. When there are long notes in the melody the composer has the beat being performed on the lower instruments or a rhythmical motif is performed in one of the voices (bar 14 of figure 8) so that at all times the dance moves on.

Orchestration

The work is orchestrated for String Orchestra and most of the scoring is conservative. This is most likely because the work was first written to be performed by a school band. There is some use of double stops, and these are chosen carefully and many of them are open stringed or a combination of open and closed (figure 7). Any high writing is doubled below, either by dividing the part or doubling in another voice. There are a few places where the bass is asked to perform a low D (bars before figure 2) and a low C (final cadence) which is outside the normal range of the bass. This is probably resolved by the basses performing these notes up an octave.

Repetition, development and variation.

Repetition is used extensively through out the movement. Development and extension material is usually the result of repetition of a segment or motif from a theme or a variant on a whole phrase of a theme.

The first subject is repeated immediately without any change except to harmonize it. It is repeated again but this time an octave higher and the compound triple section is on G and not D as before. This is then developed through repetition to create a modulation by repeating the block chord sequence and moving it down by step.

The motif of the third bar of the first subject is employed throughout the movement and each repeat is either altered by placing it at a differing starting point (from E to D to A and extensively form Bb). In figure 2 it becomes a type of accompaniment figure.

Before the second subject is sounded a motif of downward leaping intervals, a fifth and a sixth (see Ex.8) which then becomes a fifth and a fourth is employed to complete this modulation. This very effectively heralds in the second subject and is a strong unifying element.

The second subject first sounded at figure 3 is repeated up an octave at figure 4 with the above mentioned motif repeating itself to create an accompaniment figure. More internal unity.

Figure 5 is the beginning of the Development and is made of the second subject treated in augmentation, first as dotted minims then as dotted crotchets. The small motif from the first subject keeps popping up here too. Figure 6 is constructed out of the latter half of the first subject with the triple meter removed and the lilting rhythm of the triplet quavers altered into duplets. Then this is taken back to its original rhythm to move the movement towards the Recapitulation. As is the nature of a recapitulation much material is repeated though the

duplets reappear in figure 8 and the second subject remains in its augmented state though this time it is in simple duple time before it returns proper at figure 9. The movement ends with repeated chord of B flat major seven as the dissonance before the final resolution.

Second movement: Ostinato

Structure:

This movement is through composed. An ostinato runs from beginning to end and a simple melody is performed against it. There are variants of the ostinato and various chord progressions and sustained dissonant chords present as well.

Melody:

The first melody proper begins at bar 13. Imogen Holst describes it as having:-

“a carefree lilt that he was not often able to achieve in later years.”

Pg 30, The Music of Gustav Holst.

It is simple, lyrical and naïve in quality lasting 16 bars. It is constructed in 2, eight bar phrases. With the octave displacement removed, it has a range of an octave and a third. The skeleton of the first 8 bars is simply that of descending notes beginning on the submediant above the stave and moving to the subtonic before leaping to the tonic; though the ear hears the mediant, which is constantly being reiterated by the ostinato. This is repeated. It is interesting to note that this descending line is reminiscent of the bass line from the Jig, and

the leaps of bar 16 (a fifth followed by a fourth) are an inversion of the last notes of the second subject of the Jig.

The second 8 bars begins with the melody displaced an octave and given to the viola and it is a mirror like response to the first half, with rising stepwise motion which is repeated up and octave and altered to incorporate the same four notes that end the two phrases of the first 8 bars. Accompanying this rising viola melody is a descending dotted minim note countermelody that begins on the submediant.

In the 8 bars before figure 1 the viola performs a melody that is derived from the ostinato and uses rhythmic augmentation. The quavers of the ostinato become dotted minims, beginning on the fourth degree and moving by step exactly as the ostinato.

At figure 1 the countermelody becomes the melody. There has been a change of tonal colour and it begins on a C, which is here the seventh of a secondary dominant chord. The ostinato with its repeated E notes brings out the ninth note of the chord. The melody descends in dotted minim notes, one per bar and is repeated. Then there is a seemingly new melodic pattern, but the first note of each bar reveals that this is a variant on the augmentation of the ostinato that is first employed in the bars preceding figure 1. This is repeated.

At figure 2 the meter is changed to duple time and the melody is in the cello (tenor clef) and is essentially the countermelody starting on the subdominant. It is important to note that the viola performs a note on the off beat that is a third higher, following the downward

movement of the cello. The ear hears the interplay of these two and melds them into one. After it is repeated, it continues to descend another four notes beginning on the Bb and this is repeated. This is presented again, though starting on the tonic and leading to the dominant.

At figure 3 this descending motif is treated differently with the combined effects of the two lines that occurred in figure 2 becoming one with each descending note followed by another from the chord, a third, a sixth, a third, a fifth. This is repeated. Then the dotted minims return in the basses and a quaver scalar run is begun that ascends through the instruments from the cello to the first violin, (jumping the seconds as they are still busy with the ostinato) to allow the first violins to take the ostinato from the second and perform it up an octave. This is figure 4 and the meter returns to triple time and the seconds get to play the first 8 bars of the melody from the opening of the movement. Then they return to the ostinato and the firsts repeat this melody.

At figure 5 the melody is a sustained half diminished chord of F#. However, because the ostinato incorporates a D note as well as the C and E, it could be argued that the chord is a D ninth in first inversion. The aural effect is that of a diminished chord. This is held for four bars and this allows the ear to return to the ostinato for a few moments. Then follows a passage where there are chords on every second beat, harkening back to the duple time of figure 2. The top notes of these chords move up and down by step and seem to have grown out of the ostinato. The sustained chord is repeated followed by more chords, the top melodic notes of which have now been flattened to heighten harmonic tension creating a F# chords that are derived from the whole-tone scale (F#, C, D, E, and Ab [G#] with Bb on the

second sounding). Of course it could be seen to be a further chromaticism of the previous possible D ninth chord in first inversion, with a flattened fifth. These resolve to tonic chord with its dominant seventh in second inversion, before being stated again. All this tension brings some melodic material from the first melody back. Only 2 bars worth, which is repeated an octave lower. Then our F# chord returns in the guise of a minor seventh chord with the fifth flattened (F#m7 b5) before a pentatonic descending figure to bring the work to a close on the tonic chord.

Harmony and modulation

The harmony of the second movement is tertiary. The progression of harmony is based mostly round IV, IB, ii, V and I. This is repeated throughout the work. At figure 1 a secondary dominant with its seventh is employed (D7) to modulate the work to the dominant. After 8 bars of this a tonic chord with its seventh (C7) is used to imply a modulation to the subdominant, that never arrives, however at figure 2 we do get the subdominant chord, but, not the key till the 9th bar, when the dominant seventh chord of F major heralds in the modulation at last. This is short lived as 7 bars later the work moves to the dominant of G major. At figure 3 it is back in the tonic key. Figure 5 has the above mentioned chord which has F# as its lowest sounding contributor and could be either an F# half diminished or a D 9th in first inversion. This is sounded again 8 bars later. Then there is a progression of chords that may be derived from the whole-tone scale (F# [Gb], Ab, Bb, C, D, E) or it could be an F#7 b5 chord. This bright chord is resolved to the tonic with its dominant seventh, thence to the subdominant and then to the tonic, only to be re-employed before the work ends with a harmonic straightening out using a pentatonic scale and the tonic chord.

Accompaniment, rhythm and meter

The accompaniment features the ostinato which runs through the whole work. There is the polyrhythmic effect of the ostinato and other voices clearly performing a duple time accompaniment (though notated in triple time) with the clear triple time melody. This is not straightened out till figure 1 where there is a clear beat of three with the melody on the first beat and the chords on two and three. At figure 2 there is a change of meter to duple time and the ostinato fits more comfortably into this time signature. The melody is still on the first beat and there is a chord on the second. At figure 4 the triple time returns and the ostinato is once again a 2 bar pattern, the melody and the accompaniment all set comfortably in three. After the sustained chord at the start of figure 5 the composer returns to the idea of superimposing duple time over the triple meter. He does this three times before allowing the work to sit in its meter comfortably to end the piece.

Texture, voicing and articulation

Essentially the texture is homophonic, even though the ostinato can be argued to create a polyphony. The voicing is straightforward, with no extremes. Move parts are placed where they sound their best. There is some dividing of parts and effective use of pizzicato.

Third Movement: Intermezzo

Structure

The movement is in Ternary form (ABABA). It is short work. It features two very contrasting sections. The A section is slow, 'Andante con moto', and the B section a contrasting 'Vivace'. The sections have differing tonalities (Dorian mode and major key),

rhythms, accompaniments, thematic material and meters. It is part of the nature of this movement that these two unlikely companions are placed together to make a whole. The opening section begins as a chaconne with a ground bass.

Melody

The melody of the A section begins in the Dorian mode on A and has a range of over 2 octaves (E below A440 to F above the treble clef stave). This is a span of 2 octaves and a minor second. The melody starts low and gradually climbs an octave and a fourth higher. The rhythm of the melody is essentially slow and lyrical. It features a ‘turn’ round the final in the sixth bar that is repeated in the bar before figure 1 an octave higher. Then the melody changes and moves away from the Dorian mode and into what seems to be the upper tetrachord of the D harmonic minor scale. This is exotic sounding and possibly a result of Holst’s interest in the literature and music of India and Imogen Holst, writing about this movement seems to confirm this:-

“(the) plaintive solo for violin.....transports us....to the world of *Savitri*” Pg 31, The Music of Gustav Holst

“Savitri is a Hindu character from the story of *Savitri and Satyavan* in the epic Mahabharata” [Http://en.wikipedia.org/wiki/Savatri](http://en.wikipedia.org/wiki/Savatri)

The melody is brought back into the Dorian mode by the violas who perform the first phrase again, thus the internal phrase structure of the A section is ternary (AABA).

The melody of the B section is bombastic in nature and very dance like. Imogen Holst notes that:-

“It is the same tune used for the Spirits of the Fire in *The Perfect Fool*” Pg 31, The Music of Gustav Holst. (The Opera *The Perfect Fool* was written between 1918 -22)

It begins in the key of A major starting on the tonic note. It is 8 bars long and is repeated up the octave against a ‘drone’ pedal note in the first violins, before being re-presented in the Lydian mode on C, and is altered to start on the third degree of this mode. The melody is very rhythmical and features semiquavers and quavers in a tika ti, ti tika, ti tika, ti ti ti pattern that is five beats long and that, when first stated arrives on the down beat, but is immediately stated again beginning on the up-beat and thus arrives at the end of the phrase, on the off-beat. This disturbs the ear and also creates a 5 bar statement that has to be answered by three bars to balance everything out. This moving of the accent and unevenness of phrase may also have been a study of Holst’s interest in folk music, and is possibly influenced by Hungarian dance rhythms. The internal phrase structure is binary (AAB)

The repeat of the A section and its sudden slowing of pace, features a solo violin on the melody and it presented an octave higher than before.

The repeat of the B section at figure 5 is changed to be in the key of F major and is presented in the lower voices before the C Lydian mode is restated exactly as it was in figure 3.

The first 6 bars of the A section is restated with the addition of a G#, placing it in the A melodic minor scale and then repeated before the melody descends down to a close,

touching the D# note as a lower chromatic neighbour note as it goes. This chromaticism helps to create tonal ambiguity and implies the Lydian mode.

Harmony

The harmony is basically tertiary with chromatic chords such as the half diminished (or F#m 7 b5) as found in bar 5 and 8. It begins with an A minor modal tonality that is not clearly established till the melody enters over the ground bass. At figure 1 the work moves from the minor harmonies to a D major chord over which the melody performs the upper tetrachord of the D harmonic minor scale before returning to the minor and the return of the ground bass.

Figure 2 (the B section) is in A major and sits squarely on A chord for the opening two phrases. Thence a shift to a chromatic 'Neapolitan sixth' chord with its seventh and the fifth augmented (a flattened sixth chord in its first inversion or F7aug/A), immediately followed on the next beat by the dominant chord in first inversion. It could be argued that this is a simple II,V, progression with the chord of II functioning as a secondary dominant being substituted with what jazz musicians call a 'tritone substitution'. In this case B7 with F7. Both chords share the D# and the A. However, the expected arrival back onto the tonic is delayed and more tonal ambiguity is introduced with the note of the flattened seventh in bar 8, though this is really just a result of the bass line descending a semitone, and it lasts only a fraction of time. The whole 8 bars are repeated with the melody harmonized in sixths and a high E drone.

Figure 3 sees this section move to the Lydian mode of C with its augmented fourth degree. To facilitate this, the preceding chord is the above mentioned chromatic Neapolitan sixth which functions here as chord IV of C major. Here the melody begins on the mediant, not

the tonic, and is harmonized in sixths again, whilst the lower voices perform strident four note chords, a mix of open and closed strings, creating a vulgar, simple and robust sound, all at fortissimo.

This leads into a return to the A section material and mode through the harmonic progression of chord IV in C which is the Neapolitan sixth of A. However, just in front of this is a semi-tonal descent in the bass that leads to the A note and a sounding of the A major chord, preceded by Bb7 b5, a tritone substitute for the dominant chord of A, which is preceded by B major, a secondary dominant of A, thus we have a simple progression fifths, coloured with chord substitution.

Figure 5 is the B section repeated but this time the Lydian mode is replaced with F major. No sooner established than abandoned with the return of the Lydian mode on C, heralded by the descending semi-tonal bass and a progression of V to I chords (G9 to C, F9 to Bb, G7b5 to C. Note that the dominant ninth chords are voiced without their root, probably for a mixture of simplicities sake, clarity of line and of course, ambiguity).

The movement ends with the Dorian melody of the opening, however, there is a reference made to the Lydian mode in the D# notes in the last few bars. The harmony here is dominated by the descending chromatic bass line that starts on the A above middle C and descends semi-tonally to the D below. Harmonized by the second violins and viola this progression creates a series of chords that begins simply and develops through inversion, diminution and added notes to arrive on the A major chord in second inversion with the added colour note of the suspended sixth (F#) before resolving to the fifth against a low A.

The Fourth Movement: Finale

Imogen Holst, Holst's daughter and musicologist, in her book "The Music of Gustav Holst" says "The Finale is almost identical with the Fantasia on the Dargason at the end of the *Second Suite* for Military Band."

Structure and melody

It is Strophic. It is the one folk melody, *The Dargason*, repeated from beginning to end over which is set another, namely *Green Sleeves*. The first is in compound duple time and the second is in triple time. The composer having both time signatures running simultaneously as in figure 3.

The Dargason is in the Ionian mode on C and Green Sleeves in the Aeolian on D.

Harmony and accompaniment

The harmony is simple and open to allow for the counterpoint of the simultaneous melodies. There are drones, neutral chords (bar 1, fig 1), major ninths (bar 3, fig 1) and dominant ninths (bar 4, fig 1). Apart from these most are normal triads for modal music. The tendency of modal harmony to be a 'to and fro' between adjacent chords is here exploited to allow the two melodies to flow together.

Accompaniment in figure 1 begins with neutral chords (no third) then moves to a 'walking bass' harmonized by an upper voice that moves in parallel. There is a subtle modulation to F major two thirds of the way through figure 1 with the introduction of the Bb note in the first violin.

Figure 2 and the texture is fuller with the melody harmonized in sixths and a C pedal established over which the modal harmonies move to Dm and G9 before dropping into A minor with less accompaniment to herald the arrival of *Green Sleeves* at figure 3. Here, the

voices that are not busy with the melodic material provide complimentary harmonic structure that relies heavily on the bass progression.

Figure 4 and the texture lightens with only one melody and once again Holst's love of the descending bass line resurfaces to create contrast and keep the ear interested. This is followed by the robust four note chords on the beat to remind one that this is indeed a peasant dance. Figure 5 and the melody is in the bass with droning trills and open chords above. The duple figure superimposed over the compound time that first appears in the first movement, reappears as a rising scale to take the drone up an octave higher at figure 6 before descending down to middle register. Here the drone is given to the bass, the first violin and viola have the melody and the seconds and cello have an ascending chromatic scale that steadily rises for 8 bars before the bass takes it up also, thus creating a dynamic crescendo the volume and dissonance and arriving on an A minor with added sixth chord (or F# half diminished in first inversion) at figure 7.

At figure 8 the melody is forced into the Aeolian mode on A and the duple figures are performed every second bar in a disruptive, accented, descending manner till the bass and cello harmonizes the melody which is now in the second violins and violas a third below.

At figure 9 this heaviness of low melody and harmony is relieved with the return of *Green Sleeves* floating above the other melody in the first violin, reinforced by the cello an octave below, before both violins soar with it above the whole. This is brought down again by the time of figure 10. The lower instrument have the tune and the upper voices hold sustained harmonies before the theme is fragmented and tossed between the bass and the first violin, leading to a C scale, high trill and then a final cadence on the C major triad.

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All best wishes,

Rob

Robert Fallon
Assistant Professor of Musicology
Coordinator of Musicology
Carnegie Mellon School of Music
rfallon@cmu.edu

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