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Reflections on Composition and Consciousness

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Abstract

This thesis explores the personal, technical, philosophical and worldview perspectives that relate to my recent compositions in an attempt to establish a convincing *raison d'être* and context for my work as it moves into territory that seems, for me, new and strange. The folio of compositions covers a wide range of approaches and styles and an equally wide range of critical perspectives are explored and presented.

In order to validate the central role of gongs and singing bowls in many of my recent compositions, I present the findings of my detailed research and explorations into their special resonant and harmonic characteristics. The extensive possibilities of the computer and modern sound technologies are also presented as they relate to my different compositional approaches and techniques.

A critical commentary of my compositions is presented in two parts, both delving into a folio of pieces composed between 2011-14. While technical challenges and philosophical aspects are explored in both parts, the emphasis in the first part is on a body of work that is personal and reflective. The second part demonstrates the challenges of recent collaborative projects and the way in which my personal vision has been incorporated, expressed and amplified.

I have treated my compositional practice as a field of endeavour without any preconceived theory. It has been in the course of reflection and analysis that significant concepts have been uncovered and these are discussed in detail, often in the light of ideas gathered from different artistic disciplines and practitioners.

Declaration by author

This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

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Publications during candidature

None.

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None.

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1904 Performing Arts and Creative Writing	100%
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For

Daniel Jordy Lorin

Sophie Louis Frida

Leo

and those to come...

“Who is the thinker behind the thought?”

Who is the hearer of the ear?”

(Kenopanishad)

“You Are That!”

(Chandogya Upanishad)

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Chapter 1 - INTRODUCTION

1 Introduction

1.1 What are my Compositions about?

The compositions that are the subject of the critical commentary represent a body of work composed between 2011 and 2014. There are works resulting from project collaborations on diverse themes with a range of artists from backgrounds including dance, film, improvisation, installation, symphony orchestra, chamber music and spoken word. These include collaborations with the choreographer Graeme Murphy and the film directors Mark Lapwood, T. Arthur Cottam, Daniel Askill and Lorin Askill, the improviser and composer Fritz Hauser, the conductor Paul Daniel and the West Australian Symphony Orchestra, the orator James Khidir and the players of Early Warning System.

There are also compositions that are personal meditations on sound and silence, often inspired by the written and spoken word - the poetry of Robert Frost spoken by Jorge Luis Borges, the Heart Sutra (*Prajnaparamita Hridaya*) spoken by James Khidir and the poetry of Arseny Tarkovsky as spoken in Andrei Tarkovsky's film *The Mirror*. My most recent piece, *WAKE*, is based on the final chapter of James Joyce's epic dreamscape, *Finnegans Wake* and is set to readings of the final, dying words of Anna Livia Plurabelle, the character representing the River Liffey (life) as it pours back into the great ocean of consciousness.

To understand the motivations behind these compositions requires some personal reflection. There are various pathways, inspirations and musical threads that have led to my current aesthetic and thinking concerning the interconnected aspects of musical composition with an ongoing questioning of life and purpose, perception and reality. I must acknowledge the contributions of composers such as Edgard Varèse, John Cage, Olivier Messiaen, Karlheinz Stockhausen, Iannis Xenakis, James Tenney and John Luther Adams to my musical knowledge and inspiration. I also acknowledge personal friends and colleagues such as the Australian

composers Nigel Westlake, Gerard Brophy, Ross Edwards, the late Peter Sculthorpe and Martin Wesley Smith.

For me, composition is partly mechanical, but ultimately driven by inspiration. Tapping into this inspiration can occur in a number of different ways and these are explored throughout the thesis and commentary.

1.2 Consciousness - Duality and Non-Duality

I look to the ancient Vedic teachings of the Upanishads known as Advaita Vedanta for methods of self-enquiry (*atma vichara*) and for learning to discriminate the real from the unreal (*atma anatma viveka*). I will make particular references to the Mandukya Upanishad, The Gospel of Sri Ramakrishna and the Direct Path teachings of Sri Atmananda Krishna Menon.

I include reflections on Duality and Non-Duality as they are expressed in Advaita Vedanta and Buddhism since these expressions inspire and inform my work. We exist in time and space and make sense of our world by naming objects, concepts and their relationships. The concept of sound is only relevant in terms of silence and darkness can only exist in terms of the absence of light. By becoming attached to these opposites, we get a confused sense of reality forgetting that they are an expression of Non-Duality.

Non-Duality is a translation of the Sanskrit word *advaita*, which means 'not two' and points to the essential oneness, wholeness, completeness and unity of existence, a unity which exists prior to any apparent separation. Non-Duality is also an expression of the Vedic concept of Consciousness (*Cit*) – the Upanishads say that the ultimate, non-dual reality is pure consciousness (*prajnanam brahma*). But in the world of duality and opposites this remains a mere philosophical concept.

In order to arrive at a sense of how this non-dual consciousness is expressed in my compositions, I have found that applying and exploring various dualistic concepts can provide the philosophical and critical perspectives that allow my work, as a whole, to be seen as eventually resolving into a unified vision of non-duality. Some of these dualities include:

music and noise, sound and silence, interiors and exteriors, linear and nonlinear, horizontal and vertical, visual and acoustic.

The philosophical range of these explorations and findings includes the metaphysical and spiritual reflections of others that I have found helpful in giving meaning to the various aspects of my compositions and compositional process.

1.3 Perceiving Sound and Making Sound

Sound as Music and Noise

Sound suggests the idea of something quite common - conversations, music, the sound of the wind or the nocturnal sounds of insects. The sensation of sound is inherent in the function called hearing, a function that allows music and noise to rise and fall in our perception. Music is generally considered a pleasant experience. Noise is generally considered something unpleasant and invasive, to be disliked or rejected like the sounds of industry, machines and lawnmowers on a Sunday morning. Much of this is based on personal taste and cultural upbringing.

Some of the leading composers and thinkers of the 20th century, for instance Edgard Varèse and John Cage, chose to challenge the established Euro-centric musical notions of the 19th century including the idea of noise being the antithesis or enemy of music. Instead they proposed that, rather than trying to argue that one aspect of sound should be liked and the other disliked, music and noise can both be appreciated as the dualities that create a sound wholeness. We can then give ourselves the permission to appreciate the sounds of nature and silence with the same wonder as a Mozart symphony (Schafer 2004) or like Olivier Messiaen, appreciate the subtleties of gongs:

with their halo of harmonics and false fundamentals, and other very complex sound phenomena that actually brings us close to some of the enormous and strange noises in nature like waterfalls and mountain streams (57, 1994).

Percussion Instruments

My particular interest and specialisation in percussion instruments and their evolving role in Western music, from the beginning of the 20th century to the present, is explored in detail. Through this exploration I will try to establish a compositional and philosophical lineage to which my own work can be connected by referencing a diversity of luminaries such as John Cage, Olivier Messiaen, Andrei Tarkovsky, Marshall McLuhan, Steven Schick and John Luther Adams.

Ancient Sound Technology

Much of my music prior to 2011 was occupied with time-based rhythmic material and interlocking patterns that were articulated on combinations of drums and/or mallet instruments such as vibraphones and marimbas. More and more of my recent music has been concerned with slowing time in a musical sense and the idea of suspending time, an idea expressed in various philosophical thought schools and in scientific concepts such as quantum theory. I have become increasingly interested in instruments with complex vibrational properties and long sustain and decay characteristics, such as those very ancient instruments originating in Asia - gongs and singing bowls.

Many of the ideas recently explored in the West by composers and music theorists relating to the suspension of linear time are not new. They are often influenced by studies of Eastern traditions where the role of the single unchanging sound has long been a tool for meditation or as a basis for elaborating musical forms such as the Indian raga. Shri Atmananda has explained the role of the single, unchanging sound in Indian music as follows:

Music, in its gross form, is composed of distinct sounds harmoniously blended on an apparently changeless background called *shruti*. This *shruti* is again audible and gross, but transcends the changes of rising and falling. Leaving the diverse sounds of the music, one has to get absorbed in the unity of the *shruti*. The purpose of the *shruti* is to show an audible background to represent the inaudible (194, 2009).

New Sound Technology

The evolution of technology in the 20th century and the emergence of analogue, then digital recording devices, has provided musicians with a creative composing medium that no longer requires pen, paper and the help of a pianoforte. High quality portable recording devices allow the collection of sounds that can be listened to again and again. These can be edited then stored and retrieved for later inclusion in a composition. I will present a concise description of the way musical technologies have evolved during the 20th Century and describe my own compositional use of these technologies.

A modern composer can choose to use commercially prepared and pre-recorded sounds (samples), rhythmic or musical phrases (loops) and myriad numbers of synthesised and processed sounds bundled in commercial collections. I choose to balance any use of these synthetic sounds with my own collections of authentic instruments that I record myself or otherwise try to remain true to a particular instrument or tradition by recording players and instruments from that tradition.

Chapter 2 – EXPLORING CRITICAL PERSPECTIVES

2 Exploring Critical Perspectives

2.1 Perspectives on my compositional approach

In order to formulate a critical perspective of my recent compositions, it was necessary to clarify the apparently disparate approaches that I had used in my work prior to 2011. There were works that had been composed for the concert hall, works designed for collaborations with musicians from different cultural backgrounds, works that only existed as CD recordings resulting from different combinations of notated and improvised ideas and works that existed in the form of a recorded soundtrack for a specific event or performance, such as a sports event or opening ceremony. I have identified four compositional approaches:

- (1) Music with notated score and parts - *Lemurian Dances* (1990)
- (2) Music combining parts for reading musicians and guide sheets or verbal instructions for those that don't read Western notation – *Salome* (1997) for the ballet by Graeme Murphy
- (3) Recordings of notated music or recordings constructed from combinations of notated music, improvised music and electronics, including samples – *Space* (2006) and *Invisible Forces* (2008): Celestial Harmonies CDs
- (4) Recorded soundtracks designed for film, theatre, dance or a special event, sometimes involving live performers - *We Have Decided Not To Die* (2001) and *Eclipse* (2006).

These compositional approaches have retained their relevance in the mix of compositions that I have composed since 2011 and that appear in my current portfolio of works. While there are one or two pieces of 'Music with notated score and parts', the bulk of the music is not notated and rather exists in the digital domain as a combination of the compositional approaches (2), (3) and (4).

Approaches to compositional analysis that “tacitly give more emphasis to the theoretical aspects of music and its visual representations, rather than to music as lived experience” (Macedo 29, 2010) are clearly unsuitable for these works and deny the opportunity to present and discuss the multitudinous contributions of non-musical ideas, inspirations and elements.

Ferrara (1984) presents an alternative idea of three separate approaches (or “levels”) that present the listener or analyst with different orientations to a work or composition: syntactical, semantic and ontological (LXX.3). I have used these orientations as a general guide to approaching and describing my own work:

Syntactical orientation: describing my compositional methods, I can give the listener a fundamental framework for listening purely to the sounds and their interconnection.

Semantic orientation: adding descriptions of extra-musical references such as film, choreography or an event that the music is designed to accompany.

Ontological orientation: a consideration of the work that takes into account the worldview of the composer and proposes a deep level of investigation into all the aspects behind the music.

2.2 My compositional approach in a worldview context

Ferrara describes the ontological aspect of a composition as the “perspective of world in which it was written” (3, 1984). Much of my worldview has been influenced by reading and studying Buddhist texts such as Chogyam Trungpa and Francesca Fremantle’s translation of *The Tibetan Book of the Dead* or D.T. Suzuki’s *Essays in Zen Buddhism*. A more recent interest in Advaita Vedanta and Upanishadic texts such as the *Bhagavad Gita* and *Vivekacudanami* are important, if sometimes subconscious factors in my compositions. In retrospect, it is now clear to me that John Cage was one of the main catalysts that lead me to study Buddhist and Vedic texts through reading about some of his influences: D.T. Suzuki, Ananda K. Coomaraswamy and Sri Ramakrishna.

As the work of a composer such as Cage is only understandable in the light of these influences, so is my own work inter-connected with a range of influences and these also include two of the literary figures that were important to Cage, James Joyce and Henry D. Thoreau. Cage's statement that "we become aware of the past by what we do" (37, 1967) has been borne out by my attempts to find the connections that might give some validation and context to my own work. It has sometimes been a challenge to find a critical platform, especially for those works that cannot be analysed or critiqued in terms of melody, harmony, rhythm and form. Such a traditional approach seems to belong to a worldview Hemphell describes as "dominated by linear logic and the symbolic abstraction of meaning" (n.pag. 2013).

McLuhan suggests that:

a 'sacred' universe is one dominated by the spoken word and by auditory media. A 'profane' universe, on the other hand, is one dominated by the visual sense. The clock and the alphabet, by hacking the universe into visual segments, ended the music of interrelation. The visual desacralizes the universe and produces the "nonreligious" man of modern societies (174, 1994).

I see my work as part of McLuhan's 'sacred' universe. Even my compositions that feature drumming and rhythm, do so in a way that is practised in traditional drumming cultures where circular rhythmic patterns are used to create a sense of timeless ecstasy, or to inspire the dance, an act that transforms horizontal motion into vertical motion. I consider many of my compositions to be explorations of sound and silence, time and space, waking and dreaming. These ideas, as they are interpreted from an Eastern perspective, are paralleled in the work of certain Western artists in the visual, musical and literary arts that also influence and inform my work.

Amongst these I would mention:

- *Film*: Andrei Tarkovsky, Ingmar Bergam and Antonioni Michelangelo.
- *Literature*: William Shakespeare, Italo Calvino, Jorge Luis Borges, Henry D. Thoreau and James Joyce.
- *Music*: Philip Glass, Steve Reich, John Cage, Brian Eno and John Tavener.

2.3 Interiors and Exteriors

My recent body of compositional work might be broadly considered in terms of two categories, interior and exterior. The interior category includes those compositions that are not compromised by the need to conform to a particular solution that is required when writing a commissioned work or composing for a film or event. These compositions reflect an interior world, the world of dreams. As such, they are not necessarily definable in terms of standard musical analysis.

The exterior category includes those compositions that deal with finding musical solutions for a specific project such as a film, video or collaboration – compositions that result from interactions with the outside world. These works are a response to an exterior world based in time and space and include compositions that have been commissioned or requested for specific projects or occasions. Whether for film, video, documentary, dance, remix or performance, these pieces are designed to meet and respond to specific musical and practical requirements. These requirements might include constraints such as a specific duration or instrumentation, a specific number of players or types of instruments and other specifics such as tempo, tonality, mood or atmosphere, audience profile and whether the piece is to be performed live, pre-recorded or a combination of both.

The interior works are related to the idea expressed in the Sanskrit word *tajjasa*. In Advaita Vedanta, *tajjasa* refers to the dream state when the mind withdraws from the external world into an interior projected world that often seems just as a real as its external counterpart. This dream state is independent of the time and space experienced in the external world and

these compositions are created intuitively without the conditions and constraints of the compositions created in the exterior category.

These ideas are extended in the Mandukya Upanishad to a description of three states of existence: waking, dreaming and deep sleep. The waking state represents our interactions with an apparent exterior world while the dream state represents an interior projected world. In the third state of deep sleep, interactions and projections have subsided - a state of consciousness that the Mandukya contends as being closest to pure awareness.

From a compositional perspective, there are meeting points and crossovers between the interior and exterior categories. These are inevitable and natural since the notion of interior is co-dependent on its exterior opposite, in the same way that nonlinear music can be produced in a music software program that is essentially linear by design.

2.4 Notions of Time

In *Understanding Media: The Extensions of Man*, McLuhan comments on the tyranny of time in Christian, literate society:

Historians agree on the basic role of the clock in monastic life for the synchronization of human tasks. The acceptance of such fragmenting of life into minutes and hours was unthinkable, save in highly literate communities. Readiness to submit the human organism to the alien mode of mechanical time was as dependent upon literacy in the first Christian centuries as it is today. For the clock to dominate, there has to be the prior acceptance of the visual stress that is inseparable from phonetic literacy. Literacy is itself an abstract asceticism that prepares the way for endless patterns of privation in the human community. With universal literacy, time can take on the character of an enclosed or pictorial space that can be divided and subdivided (171, 1994).

Time is measured as the interval between two events and in music this can be defined as the interval between two sounds that arise and

disappear in the perceptive faculty called hearing. Music is generally measured in horizontal time by recognisable cues that divide and subdivide a musical form.

My own compositions in the exterior category include pieces that have a time-based character and form due to rhythmic, melodic or occasional harmonic elements. Compositions in the interior category have a more elusive, static and vertical sense of time due to the slow unfolding of sounds and textures and the lack of perceivable pulse or meter. There are certain pieces in the exterior category that share these characteristics within the constraints of a time-based medium, such as a film, video or specific event.

2.5 Linear and Nonlinear Form, Visual and Acoustic Space

Linearity in a composition is the generally more common characteristic of music and a “principle of composition and of listening under which events are understood as outgrowths or consequences of earlier events” (Kramer 453, 1988). In Chapter Six, I present some visual examples of pieces as they appear in Pro Tools. The sound elements appear on a timeline, inherent in the visual and linear design of the software. But the organisation of sound elements was an intuitive process, based on listening as an experience removed from the limitations of the visual and outside the framework of linear time. This listening experience has the effect of suspending time. In *Music and Time*, Kramer quotes the psychologist Robert Ornstein:

In the linear mode, time is directional, a duration carrying us from the past into future; the present is always fleeting behind us. ...In the nonlinear mode, however, the present exists, and is all that exists (*Ibid*,18).

But linear and nonlinear forms will always have a complementary co-dependence and aspects of each will appear to varying degrees in any composition coexisting “in different proportions and on different hierarchic levels” (*Ibid*, 19).

The domination of linear forms in music can be seen in the wider context of Western history as a “side effect of the phonetic alphabet”, an idea hypothesised by McLuhan (Hemphell n.pag. 2013). Academic musical

analysis has historically been validated by the visual, musical score and it is a generally accepted notion that modern culture is dominated by an orientation towards the visual spaces provided by computers, tablets and television.

Nonlinear and vertical forms in music can be related to McLuhan's idea of "acoustic space":

In contrast with the linear biases of visual space, acoustic space is analogous to the natural environment. Acoustic Space surrounds us; it approaches from 360 degrees. It is a simultaneous process of "centers (sic) everywhere and margins nowhere." Acoustic Space was dominant in pre-literate societies, where orality and myth were the medium between humans and the environment (Ibid, n.pag.).

The idea of a sound space that emanates and approaches "from 360 degrees", resonates completely with my compositions combining the enveloping and immersive sounds of gongs and singing bowls with sounds of the natural environment.

Chapter 3 – ANCIENT SOUND TECHNOLOGY

3 Composing with Ancient Sound Technology in the 21st Century

After performing for many years on the standard range of orchestral percussion instruments, I became disenchanted with their industrialisation. Whether it was a snare drum or a marimba, there seemed to be an excess of hardware and superfluous additions. The modern marimba's traditional predecessors, such as the African *balafon* or the Central American marimba possess a natural charm that is far away from the modern concert marimba that is in use today. With its perfect tuning, extended range and shiny resonators, this instrument is designed for a rapidly evolving repertoire of virtuoso marimba music (often composed by performers) such as Eric Sammut's *Four Rotations* (1996) and Keiko Abe's *Wind in the Bamboo Grove* (1984).

Even the simplest notion of the drum, when looked at from the perspective of the Mongolian shaman, takes on a significance and deep connection that has been lost in the modern world:

The ceremony for 'animating the drum' is of the highest interest. When the Altaic shaman sprinkles it with beer, the shell of the drum 'comes to life' and, through the shaman, relates how the tree of which it was part, grew in the forest, how it was cut, brought to the village, and so on. The shaman then sprinkles the skin of the drum and, 'coming to life', it narrates its past. Through the shaman's voice, the animal whose skin has been used for the drum tells of its birth, its parents, its childhood, and its whole life to the moment when it was brought down by the hunter. It ends by promising the shaman that it will perform many services for him (Eliade 170, 1964).

As a performer with Synergy Percussion, I was sometimes frustrated by the number of instruments demanded by composers of new music who often,

in my opinion, ignored the aesthetics of sound quality or the unexplored potential offered by a single instrument, or one or two instruments in combination. Subsequently, as a composer, I felt the need to consciously restrict my palette of sounds. I wanted to explore sound in detail and I wanted to establish a relationship with one or two special instruments.

3.1 Gongs and Singing Bowls - the Nature of Sound

I have always been drawn to the gongs and singing bowls that are found in different parts of Asia. These instruments are still hand made in small factories and workshops in China, Nepal and throughout South East Asia using centuries-old formulas and techniques. Despite the frequent appearances of gongs in Western music, there is still a mystique surrounding their ancient origins and use. Blades presents an extensive discussion of gongs in his *Percussion Instruments and Their History* (92-101, 1970). As musical instruments in the West have developed to the point of technical perfection, gongs and singing bowls remain, by and large, as they have been for centuries.

3.1.1 The Gong

The gong (or tam-tam) found in most modern orchestras is the same as the chao gong still produced today in and around Wuhan, in China's Hubei Province. Frequent visits over the years to the Gaojiahe gong factory outside of Wuhan have given me a considerable insight into the making of these instruments and the different styles that have been developed in China over many centuries. Gongs have played a part in a range of orchestral pieces, but it was hearing Olivier Messiaen's *Et expecto resurrectionem mortuorum*, that made me realise the gong's true power, potential and significance. According to Messiaen:

These instruments (gongs, tam-tams, bells) offer us power, poetry and an unreal quality...they still are and always have been amazing instruments (57, 1994).

The etymologies of the word 'tam-tam' are confused particularly since it resembles the word for a low drum: 'tom-tom' (White 65, 1960). In the Western musical lexicon it is generally agreed that 'tam-tam' denotes a gong without a clear pitch, even though these instruments do have a discernible low fundamental tone. This fundamental is often overlooked due to the complex overtones and harmonics that are the main characteristic of the tam-tam sound. The tam-tam is generally a flat piece of hammered metal with a flanged edge. Another popular Chinese gong is the *feng* gong, known in the West as the wind gong. This gong is created without a flanged edge. Instead, a slight concave shape gives the metal plate the necessary tension to respond quickly with a wash of overtones and harmonics.

Paiste, the Swiss company, produce a range of excellent gongs with a patented formula containing more silver-nickel than the traditional tin and copper bronze formula of Chinese gongs (Blades 98, 1970). In Chapter Six I will discuss Paiste's 'Planet Gongs' in the context of my composition *WAKE*.

I interchange the terms 'gong' and 'tam-tam' since the Chinese Chao 'gong' is the instrument referred to in the west as 'tam-tam'. While 'gong' is a generic term that encompasses the 'tam-tam', certain gongs from Bali, Indonesia and parts of South East Asia are made with a raised centre to suppress harmonics and overtones (Smith Brindle 67-8, 1970). My main concern is with the Chinese flat gong, the Chao gong or tam-tam that elicits many overtones and harmonics as used by Olivier Messiaen in *Et exspecto resurrectionem mortuorum* (1965), Karlheinz Stockhausen in *Microphonie I* (1964), James Tenney in *Having Never Written a Note for Percussion* (1971) and John Luther Adams in *Strange and Sacred Noise* (1997).

The evocative nature of the gong sound can be better understood by exploring some different musical, cultural and spiritual perspectives. I have chosen some commentaries relating to gongs, sound and silence by Olivier Messiaen, Shri Atmananda, Hazrat Inayat Khan and Harijiwan representing the perspectives of the Catholic, Vedanta, Sufi and Kundalini Yoga traditions. I will explore these in the context of writing from Steven Schick (percussion performer), Jonathan D. Kramer (musical theorist) and Tom Service (music critic).

Perspectives on the Gong Sound

There is a single tam-tam stroke in Movement IV (Adagio Lamentoso) of Tchaikovsky's Symphony No. 6 (*Pathétique*) that Black describes as sounding "like a summons to the Hereafter" (146, 2008). It is a profound moment before the final apotheosis of the piece that seems to evoke the mysterious and the eternal - a moment beyond time.

Messiaen describes the role played by the three tam-tams in the preface to the score for his *Et exspecto resurrectionem mortuorum* (1965) as follows:

The three mysterious beats, the threefold echo, the pianissimo and fortissimo beats on the tam-tam which interrupt the flow of the music again and again, symbolize for one thing the call of the Trinity, the solemn moment of the resurrection and the distant melody of the stars.

Having played this piece many times, I can attest to the totally convincing aural experience provided by the tam-tams – from quiet whispers to awesome and unrelenting sonic power. Service attests to this:

Et exspecto resurrectionem mortuorum turned the Albert Hall's secular Victoriana into a place of solemn, sacred sonic ritual. Messiaen himself said that *Et exspecto*, which he wrote in the Alps in 1964, with its scoring for winds, brass, bells, gongs and tam-tams, could be played outside, even on mountaintops - finally, a piece that fitted and filled the cavernousness of the Albert Hall.

It worked, too, and not just in the music's terrifying blazes of tam-tam and gong crescendos but, more importantly, in the gigantic silences after them. Such complete concentration from the players, and the audience, meant that you felt the silence as a physical entity, just as much as the loudest fortissimo (n.pag. 2008).

The observation that the “terrifying blazes of tam-tam and gong crescendos” created the sense of “gigantic silences” goes straight to the heart of the power of sound. Sound and silence rely on one another for their appearance and are together unified in a totality against a background described by Shri Atmananda as the “soundless *nada*” or abode of the Absolute. By following the sound of a resonating gong into silence, we are in the domain of the inaudible, *anahata* in Sanskrit. The Sanskrit word *nada* is the generic name for all sounds and Shri Atmananda describes the idea of seeing the formless in form and soundlessness in sound:

Through the form, direct your attention to the formless light – the Ultimate – called *oli*. And through sound, direct your attention to the soundless *nada* (194, 2009).

For practitioners of Kundalini Yoga, the gong is an important tool in their practice of meditation and physical transcendence. In his commentary entitled, *The Universal Sound of the Gong*, Harijiwan writes:

The universe is powered by sound. The gong is the basic creative sound. Out of the gong comes all music, all sounds, all words. The sound of the gong is the nucleus of the Word. The mind was created out of this sound: it is like the father and mother together. The gong is the first and last instrument for the human mind. It is the one thing that supersedes the mind. The mind has no power before the gong. It takes three to ninety seconds for the sound of the gong to overtake the mind. Then we are free of the conditioned habitual pattern of the perceptual filters of our magnetic field. We have expanded beyond the frequency of our mental imprints. We now have the opportunity to experience new realms of our own psyche, new energetic aspects of our own being, new dimensions of ourselves (n.pag.).

and

The gong is a beautiful reinforced vibration. It is an inter-vibratory system. It is like a multitude of strings, like playing a million strings (n.pag. 2009).

Harijiwan's comments may seem somewhat esoteric and fanciful, so it is interesting to segue directly into a description from Steven Schick, one the world's foremost percussion soloists. Schick describes his experience performing James Tenney's composition for solo tam-tam: *Having Never Written a Note for Percussion*:

Imagine performing this piece as a tam-tam solo. You start with the softest possible tremolo at the centre of the tam-tam. Only the lowest fundamental tones of the instrument are produced. As you begin to play louder the sound level increases, brightening as more and more high harmonics are excited. At a certain point the performance space begins to reinforce pitched bands of vibrations. Louder still. Pitched humming sounds appear frequently now and seem to move around the room. You do not know which pitches will be activated or how they will move since every instrument and every performance space is different. Wave patterns alternately surge and abate as they are reinforced or canceled by the acoustical properties of the hall. You play even louder and the sound becomes noisier. The entire range of vibrations is in play now. Bands of pitch appear and disappear with great speed, beating against each other in conflicting vibrations like out-of-tune notes. Shimmering swatches of high-end noise spin upward only to dive back into the noise floor and reappear elsewhere in space as hints of pitch. Super-low combination tones percolate in the background. Near its peak volume the sound loses its particularity. The tam-tam sonority becomes molten and plasmic as individual sounds fuse into a solid undifferentiated wall of noise. At the absolute top, every bit of your energy is going into the tam-tam and it is pushing back at you just as hard. You hold this maximum for just an instant and then begin a controlled descent back through the

warren of conflicting tones and noises. Ten minutes after you began, the tam-tam settles back into the lowest, softest fundamental tones and finally disappears altogether.

A simple portrait of pure percussion sound? Hardly! *Having Never Written a Note for Percussion* is as crowded as a Dickens novel. Furthermore it is crowded not just with a variety of sounds, but also with the rub of rhythm and texture. The sonic material here is more than just sound; it is about context and function as well. It is about the turbulent voyage of sound through time (180-81, 2006).

This description seems at first to invalidate Harijiwan's comment that "The mind has no power before the gong" since it is a lucid and articulated description of a "voyage through time". But one has to be clear that Schick's description is a postscript of the actual performance experience (perhaps considered while listening to a recording of his performance) that allows a certain separation.

An extended piece for solo tam-tam does not contain the cues of a work that employs melody, harmony and rhythm with discernible forms. These cues generally give the listener a strong, linear sense of movement on a horizontal axis. Perhaps Schick's "voyage through time" description could be explained by a different mode of listening that occurs outside of the actual performance experience. When performing, the obvious horizontal and linear cues are attenuated, softening the temporal distinctions of past and future into a vibrant present, a sense of vertical time that Kramer defines as a "temporal continuum of the unchanging, in which there are no separate events and in which everything seems to be part of an eternal present" (454, 1988). It is in this vibrant and time-suspended present that one begins to focus on subtle nuances of sound and vibration.

Oceans of Sound

The stroke of a tam-tam creates a spreading wave of vibrations that interfere with other waves creating washes of white noise, the cumulative effect of multiple combinations of different frequencies. In this respect, the sound of a tam-tam is comparable to the sound of the ocean. Any expectant parent who has attended an ultrasound (otherwise known as obstetric sonography) will recognise the washes of white noise coming from within the watery environment of the uterus. Could the tam-tam sound be similar to the primal sound inside the pregnant womb?

In my experiments playing soft gong sounds and tremolos in a relaxed situation that could be described as a 'sound meditation', I have discovered that many people find themselves immediately immersed in this 'ocean of sound'. Some are able to articulate their own experiences and while some describe a voyage, others describe a suspension of time or a different perception of time as experienced in a dream.

3.1.2 Himalayan Singing Bowls

I have been curious about singing bowls for as long as I can remember. It was not until about 8 years ago, however, that I became a serious collector and researcher. Whenever I toured as a musician to countries such as Japan, Taiwan, China and Korea, I would visit Buddhist temples to see (and hopefully hear) the bowls, bells and gongs. When I began to investigate Tibetan Buddhism I expected to see Tibetan singing bowls in a temple setting. But while the bell and *dorje* (a sceptre-like object representing wisdom) are used regularly in various aspects of Tibetan Buddhist practice, there was no sign of singing bowls. There are some theories that suggest that singing bowls are more likely to have been used as part of the shamanic practices of the pre-Buddhist Bon religion (Humphries 5, 2010).

During a research trip to Kathmandu in 2009, I visited the ancient cities of Patan and Bhaktapur. I discovered that bowls have been traded from Bhaktapur into Tibet for centuries and that Patan is still the production centre for the finest Nepalese metal work. I now prefer to call singing bowls from this area and areas of Northern India and Bhutan, 'Himalayan' singing bowls

rather than the more commonly used 'Tibetan' singing bowls.

Singing Bowl Qualities

Following conversations with my singing bowl suppliers in Kathmandu, Narendra Lama and Tok Bahadur, I discovered that Nepalese artisans judge a good singing bowl by its balance of "male" and "female" sound qualities. The male sound is the fundamental tone and the female sound is the most audible overtone. The sound should have an all-encompassing effect, even when heard from a distance. Ideally there should be a steady singing tone when the bowl is rubbed around the upper edge with a suede-covered stick - the male sound - and a high singing overtone when more pressure is applied or when the bowl is rubbed around the upper edge with a wooden stick - the female sound.

Generally speaking, the thicker the bowl the higher the pitch. For each diameter of bowl there tends to be an ideal thickness for the best combination of qualities described above. In larger bowl sizes (25cms or more in diameter) these balanced qualities seem to occur in the bowls known in Nepal as *Jambati* - a softly rounded bowl. In medium sized bowls (18-24cms in diameter) these occur in the bowls known as *Thadobati* - bowls with a flat bottom and straight sides. Other bowl varieties include *Manipuri* - a shallow, half-moon shape, *Copraybati* - usually thin and very rounded, and *Utabati* - deep bowls with an out-turned edge.

Listening to Singing Bowls

In the following three paragraphs I will present some of my own findings concerning the characteristics of Himalayan singing bowls. Listening to a singing bowl is different to listening to a musical instrument that is designed to create melodies using scales (whether Western or Non-Western). Singing bowls are not created to be in tune with the notes of any prescribed scale and not designed for use in a band or ensemble. A bowl can accidentally be in tune with a note of a particular scale, but may display strong overtones (often at the interval of a tritone - a diminished fifth or augmented fourth in Western musical terms) that make it sound out of tune.

Quiet Sounds and Proximity

Himalayan singing bowls sound best when struck at low dynamics using a soft suede stick or padded mallet. When the bowl is struck, the wall of the bowl vibrates creating maximum vibration and amplitude at the sides of the wall. Any vibrational detail outside of this horizontal emanation field is lost, even while holding and bowl and striking it directly in front of the body. The full effect of the vibration and any interior pulsing due to hammering irregularities is most evident when the bowl is brought close to the ear after the stroke. The effect is the same with many other vibrating, metal percussion instruments. Gongs and cymbals can create a high volume of sound, but the subtle, interior aspects of their sounds can only be heard at close range.

This proximity effect can be explored in a detailed way using high quality condenser microphones and preamplifiers. In addition, it is possible to record the interaction of a number of singing bowls by careful microphone placement and by recording the interaction in one recorded take or as separate recorded takes (or overdubs). More detail can be achieved by recording each bowl separately. I have begun to experiment with changes of proximity between different individual bowl recordings during the actual recording process to achieve spatial disorientation and changes in aspects of wave interference.

Suspending Time

Placing bowl strokes accurately in metered time is generally my least concern when recording and composing with these instruments. Rather I am interested with what happens to sounds once they have been set into vibration and the way they react with other sounds in space, a process that simply 'happens' and is beyond my intervention. Perhaps it is in this sense that the analytical mind is freed from the tyranny of following the horizontal and linear cues characteristic of many Western forms of music. The continuous 'singing' sound of a bowl produced by moving a suede-covered stick around the outer top edge of the bowl is a simple expression of attenuating our notion of time. This is similar to the Indian idea of the *shruti*,

the apparently changeless background drone heard in the ragas. As the circular movement of the stick around the edge of a bowl held in the hand produces a continuous hum where is time?

Psycho-acoustic and Therapeutic Properties

Bells are as important in Hinduism and Buddhism as they are in Christian religions. The great Sufi musician Pir Hazrat Inayat Khan declared that:

The secret of the continual ringing of the bell practiced by churches at all times, even now, is that it is not only a bell to call people, it is to tune them up to their tone (322, 1991).

Singing bowls are like a portable form of the church bell with a sound that can be warm, mysterious and evocative. The fact that a bowl can be held in the hand and the vibrations transmitted through the body, gives them their therapeutic potential. I quote Jansen:

The large metal bowl sits heavily in my hand. I strike the rim gently with a felt-tipped beater. A humming, singing sound envelopes me. The deep, throbbing undertones gradually change into undulating overtones. I strike the bowl again, and then again and again. The more I strike, the more the room in which I am sitting is filled with sound. The sound calms me. I gradually lose an awareness of time and place. I am living in the sound and the sound is living in me (xi, 1992).

Bowls can be also be used directly on different parts of the body, either for relaxation, as a preparation for healing, or as a tool to enhance the meridians used in Chinese acupuncture or the chakras used in Indian Ayurveda. It is the complexity of the singing bowl's overtones that make them a potential tool for healing, along with the sensitivity and intention of the person working with the sound. According to a formula proposed by Goldman:

Frequency + Intention = Healing (20, 2002).

Other bowl practitioners believe that particular frequencies are required to heal or energise particular organs and chakras (Shestra 21-23, 2009). Singing bowls filled with water and then struck will produce ordered patterns known in Sanskrit as *mandalas*. Visible areas of stronger and weaker vibration, demonstrate the potential effect of the bowl's vibrations on the moisture content of the human body when played in close proximity.

Hand beaten singing bowls produce a perceived pulsing sound. The pulsing effect is due to irregularities in the bowl's construction due to hand hammering and uneven thicknesses around the edge of the bowl. The slight discrepancies in pitch cause an effect similar to binaural beats, a phenomenon documented by the biophysicist Dr. Gerald Oster in his article *Auditory Beats in the Brain* for the Scientific American magazine (94-102, 1973). Two frequencies are introduced into left and right audio channels. The frequency in the left channel is almost identical to the frequency in the right channel, but with a difference of a few hertz. The brain calculates this difference, perceiving it as a slow pulse that shifts the brain from beta wave activity into slower alpha, theta and delta wave activity - the kinds of wave activity the brain enters during relaxation, meditation and dream states (Brummel-Smith 217, 2008). Binaural beats are now embedded in music specially designed for relaxation or meditation (Filimon 104-5, 2010).

Chapter 4 – NEW DIGITAL TECHNOLOGY

4 Composing with New Digital Technology

I was excited in the 1980s by the accessibility, potential and increasing sophistication of digital devices that could be used to compose music. While Martin Wesley-Smith was creating music using the Fairlight CMI, another composer colleague, Nigel Westlake, began composing using the Roland MSQ-100 Polyphonic Sequencer. Musical information was programmed into the sequencer using a keyboard that sent messages via the MIDI protocol. The sequencer controlled multiple tracks of MIDI information that were sent to eight Yamaha DX7 modules. Westlake used this system to create his marimba masterpiece *Omphalo Centric Lecture* (1985).

The ability to hear a composition via sequencers and synthesisers, then make changes and edits before transferring the music to notated parts for actual musicians was a new innovation for composers such as Westlake and performers like myself. It was inevitable that computers would be the next step in providing a visual interface for the composer, with added power and sophistication. Carl Vine exemplified a shift in computer-based composition when he purchased an Apple Macintosh computer (while on tour in the US) in 1984. This and subsequent Macintosh computers would become Vine's main tool (with Digital Performer software) for the composition of some of his major symphonic works.

The ability to harness and control noise, sounds and silence within a computer environment has now developed a degree of sophistication that was only imagined by the early 20th century advocates of noise (sounds that fall outside of the Western idea of what constitutes music) such as Russolo, Varèse and Cage. These developments encouraged me to experiment with composition and the organisation of sounds. With a Digital Audio Workstation (DAW) I am able to listen to my work over and over again, discerning and refining details in a dimension that was impossible for composers before the advent of computers. Eno has likened this to taking music out of the "time dimension and into the space dimension" (56, 1979). The processing power

of current digital computer technology allows composers access to a variety of sophisticated sonic manipulations. For a composer like Stockhausen, such manipulations in the 1950s and 60s would have required tape machines, expensive analogue processing equipment and many arduous hours of work.

4.1 The Intuitive within the Linear

DAW software such as Avid Pro Tools, presented me with a very powerful tool for recording, mixing and pinpoint editing in a linear, visual environment. Tools such as time stretching and others that allow rhythmic and pitch quantisation, foster creative decisions that I have found particularly useful. I can combine differently sourced drumming tracks or make subtle adjustments to tempi and when necessary, change the overall duration of an entire piece or section. Pro Tools also allows an intuitive approach to composition where the linear functions of the software can be ignored. This approach is largely based on trying combinations of recorded files and sounds, listening and then trying again. Sound elements, imagined as colours, tones and densities, can be mixed, layered and organised. Varèse himself declared:

But after all, what is music but organised noises? And a composer, like all artists, is an organiser of disparate elements (20, 2004).

In some compositions I often manipulate sounds (detailed in the next sub-chapter) so that they take on different forms to the original. In these intuitive compositions, melody, harmony and rhythm in the traditional Western sense are replaced by a slow unfolding of space that attempts, in the words of Rudhyar, to “respond to the possibility of allowing the full vibrancy of the whole musical space to inspire a new consciousness of tone” (228, 2000). But these pieces are not meant to deconstruct, devalue or destroy the great traditions of Western music. To quote Varèse once again:

My fight for the liberation of sound and for my right to make music with any sound and all sounds has sometimes be misconstrued as a desire to disparage and even to discard the great music of the past. But that is where

my roots are. No matter how original, how different a composer may seem, he has only grafted a little of himself on the old plant. But this he should be allowed to do without being accused of wanting to kill the plant. He only wants to produce a new flower. It does not matter if at first it seems to some people more like a cactus than a rose. . . . (19, 2004)

4.2 Signal Processing

Digital signal processing and software plug-ins often play an important role in my compositional process. The signal processing plug-ins available in programs such as Pro Tools and Logic Studio are the result of serious research at institutions such as IRCAM (Institut de Recherche et Coordination Acoustique/Musique) in Paris and extensively documented in volumes such as the collection of essays, *Handbook of Signal Processing in Acoustics* (Havelock, Kuwano & Vorlag, 2000).

Despite their sophisticated algorithms, contemporary musicians now take plug-ins for granted as compositional tools. Some of these are simply used to add depth and dimension to sound (via equalisation) and its apparent position in a space (via reverberation). Other processing plug-ins such as time stretch, convolution, reverse and pitch change can give the listener a whole new perspective on the nature of sound and an alternative to the way we are conditioned to hear sound based on the limitations inherent in our hearing function, cognitive processing and awareness. From my perspective as a composer searching for ways to connect my compositions to notions of the invisible and inexpressible, I like to imagine that sound processing can provide a window to other sound dimensions that may exist at any moment, “parted by the flimsiest of screens” (James 378, 1978).

4.3 Performance, Recording and Editing

The recording studio provides a degree of control and intimacy that is very different to the vagaries of public performance. Canadian pianist Glenn Gould was very outspoken about relinquishing public performance for the recording studio and the potential of using recording and editing to create the

perfect performance of a classical composition (331-52, 1984). My own experiences during the production of many CDs have given me my own insights into how the recording studio can be used to create an ideal performance of composed music for acoustic instruments.

Eno has described the recording studio as a 'compositional tool' (127, 2004) and it is impossible to imagine recorded masterpieces such as those by Stockhausen and recent works by Reich, without sophisticated analogue and digital studio techniques. In other musical domains, major artists such as The Beatles and Michael Jackson have used the recording studio to produce many popular music masterpieces. In my own solo recordings of Australian percussion repertoire, multi-tracking, mixing and digital editing techniques were often used. For Westlake's marimba quartet, *Omphalo Centric Lecture*, I recorded all the parts as separate takes on separate tracks and these were then mixed to create the final version for CD.

The advent of DAWs and sophisticated music software such Pro Tools, means that multi-tracking and improved editing possibilities are now available to everyone. Physical tape editing and splicing (cutting into tape, then sticking the tape back together) gave mixed results, but digital editing is very precise and even presents options for correcting wrong notes, erasing or filtering unnecessary noise and adjusting a vocalist's intonation. Editing techniques can also be a powerful creative tool and I use them often in my computer-based compositions. Edited sections can be repeated (looped), inverted, reversed and layered, then used as the building blocks for shaping a composition.

4.4 Learning to Record

Over the last few years I have researched and studied aspects of recording so that I can achieve optimum results by the most direct means. Without the ideal room or acoustic space in which to record, I have opted for a recording set-up that is portable and uses the finest microphones and pre-amp combination available within an affordable budget. I have researched and studied aspects of acoustics and microphone configurations to optimise the quality of my recorded material (Stavrou 89-100, 2003), whether as

source material for an electroacoustic composition or a stand-alone recording destined for inclusion on a CD.

In some of the works included in this portfolio, I have embraced the inclusion of natural and environmental sounds. While the ideal recording room in an expensive professional studio is specifically designed to be noise free and quite dry to accommodate later applications of reverb and effects, recording in a natural environment can be invigorating and liberating. I have explored this in two pieces: *Earthwater* and *Canonical Double Duo*. I am inspired by R. Murray Schafer's notion that musicians should take the initiative "to treat the world soundscape as a huge macrocosmic composition which deserves to be listened to as attentively as a Mozart symphony" (37, 2004).

A less obvious aspect of recording technology is the ability to suspend the normal perception of time – music software designed for recording is inherently time-based and linear, yet provides an ideal platform for the creation of nonlinear music that can provide the "vertical" experience described by Kramer in *The Time of Music* (454, 1988).

4.5 Changing Roles and Transformations

When I first started working in recording studios, my role as a musician was distinctly separate to the role of the recording engineer. The music was generally notated and performed on instruments that were standardised in terms of tuning and sound quality. How has this changed? I now collect one-of-kind instruments from their source. This may be as far away as Kathmandu, Nepal or Wuhan, China. I then ship these instruments into the country. I am now a curator of sounds and instruments as well as performer, improviser, composer, recording engineer, mixer and mastering engineer.

While recording, in one sense, can be considered literally as an audible time capsule of a performance, modern recording technology can present the listener with an aural experience not available in a live performance setting. One of the most obvious possibilities is in the use of multi-tracking to layer separate recorded segments (or 'takes') into something perceived by the listener as a singular, cohesive mixture of sounds. The most common use of

this technique is to create a sense of controlled, orchestrated sound that places the individual instruments and voices at the optimum volume. The listener is also presented with a sound image that recreates a sense of actually sitting in the concert hall or performance venue, in the best possible position for listening without any distractions, such as extraneous audience noises.

Recordings may be less suited to those situations where a sense of tribal communion might enhance the total experience, but where the aim is the concentration of the musical experience, recordings can be ideal. I have often found, when listening to live performances involving amplification and mixing, that the shortcomings of technology become apparent due to many factors: perhaps the acoustic of the venue is not the best, perhaps there is only one optimum position for listening, perhaps the quality of microphones used on stage is lacking. The performers themselves may be experiencing issues that compromise their performance, such as feedback or inadequate foldback monitoring.

The recording studio can provide the performer with the optimum conditions necessary for a carefully considered performance and the result, when reproduced on a good, domestic sound system or through headphones, can be much more satisfying for a listener than the live music experience. But the recording artist must always be aware of losing the excitement and adrenaline factor of the live performance while striving for accuracy in the studio.

Chapter 5 – FROM CHALLENGES TO SOLUTIONS

5 Compositional Evolutions, Challenges and Solutions

One of the first LPs of electronic music in my collection in the mid-1960s was Stockhausen's *Gesang der Jünglinge* (1955-56). I was intrigued but perplexed by this music that brought together sounds that were generated electronically with recorded acoustic sounds and events, like those used in the *acousmatic* compositions of Schaeffer and *musique concrète* compositions of Varèse and Henry. In the 1980s, I performed Stockhausen's graphically notated piece, *Kontakte* with the British composer and pianist Roger Smalley, a work that requires the performers to have an intimate knowledge of a pre-recorded tape prepared by the composer.

I also had the opportunity to work with one of Australia's leading electronic composers, Martin Wesley-Smith on a number of his works that also combined live performance with electronic sounds created using the Fairlight CMI. These experiences presented me with an awareness of the possibilities of creating sounds that went far beyond those created by acoustic instruments. While much of the technology now used for recording and composition is taken for granted, it is important to acknowledge those that blazed new musical trails and revealed unexplored fields of sound potential.

Tracing a Compositional Lineage

My own attempts at composition and sound exploration would mean very little without the efforts of those composers who came before me and who began to challenge the boundaries between noise and music in the early 20th century. I try to compose with a sense of respect to the lineage of composers to whom I feel connected. For example, George Antheil who composed the extraordinary *Ballet Mécanique* (1923–24) with its combinations of pianos, keyboard percussion and noise instruments, including aeroplane propellers.

I am constantly inspired by Varèse's *Ionisation* (1929-31) and Cage's three *Constructions* (1939-42), works that seemed to resonate with the ideas of Russolo and the Italian futurists who proposed the radical overthrow of Western art music with their noise machines (6, 1913). In his *Future of Music: Credo*

(1937) Cage wrote: "Percussion music is a contemporary transition to the all-sound music of the future" (27, 1937).

I see the percussion works of Cage and Varèse from the 1930s and 40s as precursors to their own explorations in electronic music. Other compositional explorations by composers such as Schaeffer, Henry, Stockhausen and Luciano Berio into sounds that had previously been considered as noise have been well documented in recordings. These composers envisaged the role of percussion music as a transition between conventional music (based on the European classical model) and the emerging potential of electronic music - music that would use technology to embrace and transform environmental and industrial sounds, as well as imagining and creating new sounds.

In the early 20th century a growing interest in the use of tuned percussion instruments resulted in works such as Percy Grainger's *The Warriors* (1913-16). My own introduction to the study of tuned percussion instruments led me to the discovery of Olivier Messiaen's *Chronochromie* (1960) and later, Steve Reich's *Drumming* (1970-71). While Messiaen uses the xylophone, marimba and glockenspiel to translate the songs of birds, Reich uses marimbas and vibraphones to drive and colour his harmonic minimalism. Equally inspiring, but totally different is John Luther Adam's *Strange and Sacred Noise* (1997), a work that explores monotimbral combinations of tuned percussion instruments including marimbas, vibraphones and glockenspiels while also exploring the noise potential of tam-tams, snare drums and air raid sirens. The chance to perform *Chronochromie*, *Drumming* and *Strange and Sacred Noise* has given me insights into these works that unconsciously permeate my own compositions.

Percussion music is still evolving but perhaps from a less radical standpoint now that electronic music (or music created in the digital domain) is so pervasive. To some degree percussion music, in the sense envisaged by Cage, Varèse and those that followed, faces the challenge of losing some of the excitement of being fresh, new and revolutionary in a world that is now bombarded with musical information but in the percussion works of composers such as Luther Adams these instruments are presented with a new level of depth and maturity.

5.1 Navigating Musical Diversity and Pluralism in the 21st Century

Eighty-five years after the composition of *Ionisation*, we have an accessibility to highly sophisticated compositional tools and ways to record that earlier composers could have only dreamed of. Analogue technology has now been largely replaced by digital technology. I have been a witness to the radical changes in the way music has been packaged and disseminated, from vinyl LPs to cassettes and cartridges to portable music devices. The more recent development of digital media such as CDs and DVDs has paralleled the development of computers, music recording and notation software. These allow easy access to the composition and production of musical forms that can be digitally shared and circulated. Definitions of music have been increasingly questioned and Cutler suggests that the notion of notated music as the definitive musical form seems to be an idea that may only be relevant to a form of art music that originated in Western Europe (Cutler 138-156, 2004).

As a 21st- century composer I am now confronted with a bewildering array of possibilities and directions. Many styles of music coexist resulting in a musical diversity that challenges the composer and listener. But musical diversity does not necessarily equal musical pluralism. Eck points out that “pluralism requires participation and agreement” while diversity can result in the creation of sub-cultures “with little traffic between them” (n. pag. 2011).

Some composers ignore any perceived barriers and definitions of musical diversity and pluralism accepting everything as worthy of consideration. Matthew Hindson’s orchestral piece *Headbanger* (2001) “borrows musical gestures from heavy metal music or rock music” while Steve Reich’s *Radio Rewrite* (2012) “references songs by the rock group *Radiohead*”. Many popular artists have re-recorded their songs with lush, orchestral arrangements, such as Joni Mitchell’s *Travelogue* (2002). *Reich Remixed* (1999) includes remixed versions of Reich pieces by various DJs including DJ Spooky and Tranquility Bass. For many composers, including myself, combining elements of music using techniques such as sampling, remixing and looping is common and these techniques are “central to digital and online culture” (O’Neill 92, 2008).

Online services such as iTunes and Spotify present an array of musical categories, further divisible into a myriad of subcategories, that are all immediately and simultaneously available in what Dodds calls “electric space”:

This electric space puts all times and spaces in touch with each other. The rubbing of these times and spaces against each other is not cyclical. Simultaneity is different from cycles. Cycles have a sense of duration. There is no duration when everything is in touch with everything at electric all-at-onceness (Dodds, n.pag. 2008).

Each composer must find his own personal solutions when faced with this “electric all-at-onceness”. My own solution has been to embrace all the potential of modern digital technology while remaining true to those ancient instruments, sounds and concepts that have stood the test of time. I will articulate some of these solutions in the following paragraphs.

5.2 Combining New and Ancient Sound Technologies

I constantly return to the theme of defining complementary dualities to arrive at a sense of wholeness. My compositional use of ancient and new sound technologies is an attempt to achieve a balance between the two. New technology provides the composer with constantly evolving tools to record raw material into a computer using microphones and pre-amplifiers. The material is then available as visual waveforms that can be edited and integrated with other sound elements. I regard the computer as my main compositional tool and mostly use my own recordings as raw material.

Ancient Technology has provided the instruments that are an important source of my interest and investigation. Many of my recorded compositions demonstrate a pre-occupation with the long resonances of gongs and singing bowls and a move away from instruments with short percussive attacks that generally invite faster and more active music.

5.3 Spoken Word

The sound of the human voice is an important element in some of my recent compositions, sometimes as a poetic or story telling element, sometimes as an abstract sound element. My attraction to the spoken word goes back to my childhood experience of listening to radio plays or vinyl recordings of stories, such as those by Jack London that used sound effects and musical underscoring. Aaron Copland's *Lincoln Portrait* (1942), Arnold Schoenberg's *Gurrelieder* (1900-03), Frederick Rzewski's *Coming Together* (1971) and Brian Eno & David Byrne's *My Life in the Bush of Ghosts* (1981) have all been influential in my use of spoken word as a compositional impetus and sound element.

5.4 Combining Sound and image

I am often invited by filmmakers or video artists to create music or sound elements to enhance and complement their visual elements. This form of collaboration brings into play an interesting challenge for the composer. A composition may generate imaginings in the 'mind's eye' during the listening experience. When a composition is conceived in conjunction with visuals and/or dramatic action, the mind begins to create imaginary relationships between what is seen and what is heard. When that composition is separated from the image it is possible for an independent set of interior images to arise. In my experience, the reverse is also true. Music composed without a visual reference may find extra resonance when set against images. My challenge has been to find a place for my musical sound world in contrasting visual settings, sometimes with dramatic elements and dialogue, sometimes without. I explore this in my compositions for film and video. *Objects* (2012) is an example of a linear film with a horizontally defined narrative and storyline, juxtaposed with the vertical sounds of Himalayan singing bowls and gongs. *Modern Worship* (2012) is a nonlinear video installation using slow-motion techniques that are heightened in their effect by the vertical sounds of singing bowls and gongs.

5.5 Environmental Recording and Natural Sounds – Earth, Water, Fire, Air and Space

Many of my cited composers (Cage, Schafer and Oliveros) have written about listening to the sounds around us, appreciating their beauty and their manifold combinations. John Luther Adam's 2014 Pulitzer Prize winning composition, *Become Ocean* translates the primordial sound of the ocean into orchestral textures, waves and densities. And it is not unusual to find compositions created using natural sounds or combinations of natural and processed sounds such as those (discussed earlier) by Stockhausen, Henry and Schaeffer.

In my recorded works, *Earthwater* (2011) and *Canonical Double Duo* (2013), I use field recordings of environmental sounds as an essential compositional element. Sounds of birds, wind and thunder make their appearances along with the sounds of cars, scooters, conversations, bells, bands and temple singers. Recordings of water are used in a number of my pieces such as *Submerge* (2012), *Strangeness* (2011), *Rain* (2011) and *They Took* (2012). These include recordings of water falling to earth in the form of rain, water droplets falling on a watery surface, running water recorded near creeks and drains, ocean sounds, splashes and underwater recordings using a hydrophone in my backyard swimming pool. In some of my pieces the placement of sounds enjoy an apparent randomness. Perhaps listening to the sound of raindrops and the nocturnal conversations of frogs has inspired this, or studying the forms of the stars or of pebbles washed up on the beach.

5.6 Acquacities

In Robert Adams Day's essay entitled *Joyce's Acquacities*, I found parallels with the reoccurring theme of water in much of my music and the various sonic connections, whether as percussive raindrops or underwater sounds.

The first word of the *Finnegans Wake* is "riverrun" and many scholars have explored the use of water (and thunder) in this and other works by Joyce. There is a relationship between water, fluidity and the stream-of-consciousness style of Joyce's writing encapsulated in the word "riverrun". Buch (in relation to *Finnegans Wake*) articulates the associations between this fluidity and notions that I have already discussed such as verticality, nonlinearity and the interior dream-state:

In *Finnegans Wake*, Joyce takes stream-of-consciousness narrative to the next level, plunging the reader into another world, one where the narrative conventions of the waking world are abolished. In dreams, an entirely different set of rules congeals from the fog, and since analysis is a tool of the waking mind, we are not granted immediate comprehension of these rules – that is, assuming they can even *be* understood. In dreams, we are utterly complacent when the strange woman we are talking to suddenly becomes our mother, or a house we have never seen rings with all the familiarity of home, and then becomes a castle; or a tree becomes a stone. The narrative of *Finnegans Wake* reflects this mercurial reality, this hypnogogic logic: characters and scenes melt into each other (sometimes literally!), and allegorical or mythic counterparts exist for everything and everybody. Here time collapses and becomes meaningless, and all identities are mutable – a series of masks to be shuffled and discarded as the need arises. In the *Wake*, even the words themselves are impossible to pin down to any one clear definition (n.pag. 2014).

This brings me to my most recent piece, *WAKE (2014)* in which text readings from James Joyce's *Finnegans Wake* are combined with the sound of singing bowls, then the sound of seven tam-tams (specifically Paiste Planet Gongs) played by five players. As the 'wake' in *Finnegans Wake* refers to a post funeral gathering in the traditional Irish sense, so might it also refer to the wake pattern produced by a boat moving through water or the waveforms of a tam-tam (that most oceanic sounding gong) as they spread outwards from the source until exhausted.

Chapter 6 – COMPOSITIONS

6 Selected Compositions: 2011-2014

6.1 INTERIORS

6.1.1 Earthwater (2011) - 12'01"

Earthwater is my first serious attempt at creating a sound work using my own field recordings. Taking cues from the work of Pierre Schaeffer (who developed *musique concrète* compositions in the 1940s using field recordings of sounds such as trains as raw material) and the ideas of R. Murray Schafer's "acoustic ecology" initiated in the 1970s, I have integrated natural sounds into many of my pieces. *Earthwater* is created entirely from field recordings made on a trip to Nepal. The only exception is a loop incorporated into the opening airport sequence that has its origins in a piece that I composed for a 1987 recording called *Roads to Xanadu*. A short section of the piece was treated with a process called convolution, rendering it hardly recognisable when compared to the original. This process exaggerates prominent frequencies and attenuates those frequencies with smaller amounts of energy. This convolved loop is used to add a sense of the suspended time often experienced in an airport-waiting lounge.

The main purpose of my Nepal trip was to research and collect Himalayan singing bowls. By using a portable digital recorder, I was able to record high quality audio sequences at different stages of my journey. On my return, the recordings were transferred to a computer and imported into Pro Tools for editing and mixing. Small amounts of processing were necessary with software plug-ins to enhance imaging or to give extra dimension via reverb, but overall, the sounds are true to the original recordings.

Mixing and placement of the various sound files often involves combining recordings that were made in different places and at different points in time. The aim was to create both a vertical sense of time and a unified sense of place. In this way, my approach has been different to those *musique concrete*

composers who treated sounds in a way that confused their original source in order to “abstract the musical values they were potentially containing” (Reydellet 1996, 10).

The following summary describes the origins and details of the recordings that make up the final piece with approximate timings:

- Bangkok Airport (0':00"-3':00"): This recording captures the resonant ambience of Bangkok Airport with occasional flight announcements, piped music and even cleaners opening and closing rubbish bins.
- Basantapur - Durbar Square (3':00"-7':30"): recorded in the evening, this square is one of the busiest areas of Kathmandu. It is customary for worshippers to sound the bells that hang around the various shrines or temple entrances situated near the square. These random bell sounds mix naturally with the conversations of vendors, passing motorbikes and footsteps.
- Swayambunath - Monkey Temple (6':20"-7':30"): the recording of a devotional song (Bhajan) was made at the Monkey Temple early in the morning. The singers, perhaps a group of ten or twelve, were mostly older people accompanied by tablas, small cymbals and harmonium
- Thamel – Kathmandu (7':30"-9':00"): during a visit to a few shops in this retail quarter of the city I was able to capture the sound of a passing wedding band. These bands incorporate raucous brass and wind instruments, drums and shakers into an infectiously syncopated and traffic-stopping cadence.
- Phewa Lake – Pokhara (9':00"-12':00"): after the intensity of Kathmandu and the precarious journey along narrow, mountainous roads, a quiet drink by the lake is the perfect antidote. It was during such a quiet moment that the rain began. Conversations and distant music can also be heard.

6.1.2 Strangeness (2011) - 7'25"

The apparent reality of life in all its time-based activity and the equally powerful sense of reality experienced in the suspended time of the dream state are paradoxes that have attracted me to authors such as Italo Calvino (1923-85) and Jorge Luis Borges (1899-1986). I have been interested in trying to explore and express these paradoxes in some of my electro-acoustic compositions.

The inspiration of a particular book or poem often leads to a search for recordings of a poem or book excerpt read by the author. Hearing some recorded lectures given by Jorge Luis Borges became the trigger for the composition of *Strangeness*. In one of the lectures, Borges discusses Robert Frost's *Stopping by Woods on a Snowy Evening* (1923), at the same time referencing the Chinese philosopher, Chuang Tzu's story about the dream of a butterfly:

Once Chuang Tzu dreamt he was a butterfly, a butterfly flitting and fluttering around, happy with himself and doing as he pleased. He didn't know he was Chuang Tzu. Suddenly he woke up and there he was, solid and unmistakable Chuang Tzu. But he didn't know if he was Chuang Tzu who had dreamt he was a butterfly, or a butterfly dreaming he was Chuang Tzu. Between Chuang Tzu and a butterfly there must be *some* distinction! This is called the Transformation of Things (Burton, 49, 1968).

I listened to this lecture while composing and constructing the piece and even tried integrating complete sections of the lecture into the piece. Finally I decided to use only the final lines of the Robert Frost poem as spoken by Borges:

The Woods are lovely, dark and deep.
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

The piece uses some of my own recordings of singing bowls and gongs as well as natural sounds recorded in the hills close to my home – birds, wind, water and footsteps on stones. The various elements of the recording include a gong track that has been processed in the Pro Tools plug-in called *Structure*. *Structure* acts as a keyboard sampler that replays the original recording from any note on a keyboard. In this case the original is replayed at a much slower speed and relatively lower pitch.

An improvised metal percussion track that I performed and recorded has also been used. The voice of Borges has been processed using the *Cosmonaut* plug-in to give it a quality that might be heard through an old radio or communication system. I recorded, edited, mixed and processed the three main sound elements separately before combining them into a single piece. The different recorded elements were layered, mixed and moved around until I was satisfied with the resulting combination of sounds, colours, timbres and tonal densities. Nothing is notated.

Element 1

A pair of omni-directional AKG 414 XLS microphones were set up in the courtyard of a small, isolated residence set high in the Koonyum range close to Mullumbimby, NSW. This particular microphone can be adjusted to capture narrow or wide fields of sound using its various settings. The omni-directional setting records a 360 degree sound panorama. This recording captures wind through trees and bamboos, local birds, the creaking sounds of the house and footsteps on stones. Two gongs were hanging in the interior of the house and these were occasionally struck. Towards the end of the piece the sounds of raindrops and water are heard and these were added using a recording made in my own backyard as soft rain fell on the swimming pool.

A recording of singing bowls was re-pitched, once again, using the Pro Tools software plug-in called *Structure*. A final singing bowl sequence was recorded at home using the same AKG microphones. This time, one microphone was directed towards the bowls using a narrow field cardioid setting, while the second microphone was directed off-axis toward the bowls using a figure eight setting. This mid-side (MS) recording technique results in

three separate tracks using the following process: recorded material is imported into Pro Tools and the stereo track is divided into two mono tracks. The mono track corresponding to the figure eight microphone is duplicated and the phase reversed. The resulting three tracks give added control to the balance possibilities of the central cardioid signal with the two (more ambient) side signals (Stavrou 89-97). The separate recordings of environmental sounds, gongs, re-pitched singing bowls and natural singing bowls were mixed to create a single stereo track.

Element 2

This element consists of a recording of myself improvising on a collection of Chinese bells, cymbals and wind gong. I sourced these instruments directly from the factory in Wuhan, Hubei Province, China. Here they are played with long chopsticks, superballs, mallets and hands. The superball is attached to a metal or bamboo skewer then moved across the face of a gong. The resulting friction causes harmonic squeaks and squeals, often compared to the underwater sounds made by whales and dolphins.

Element 3

This is a short recording of a Chinese wind gong being struck while being raised and lowered in a large perspex bowl filled with water. The resulting recording was combined with a recording of struck singing bowls, then processed in *PaulStretch* software, stretching the track to eight times its original length without altering the track's original pitch. These three elements have been combined to create the final piece. The layer of low, dark sounds that supports the sounds of nature and the unprocessed acoustic sounds reflects the ideas expressed by Borges, Calvino and even the Upanishads – that our apparent, constantly changing reality is superimposed on an unchanging background of awareness.

6.1.3 Shimmer Pulse (2012) - 7'28"

This composition uses multiple layers of large singing bowl sounds that slowly appear and disappear at different rates. These recordings were made at Southern Cross University and engineered by Michael Worthington. As discussed earlier, hand beaten singing bowls exhibit a pulsing effect, similar to

binaural beats, due to the slight discrepancies in pitch between the various sections of the bowl's edge. In *Shimmer Pulse* a further pulsing effect has been added by playing the mixed track against itself, detuned to a ratio of .618:1 - the *Fibonacci* ratio. The mixed tracks are also out of sync by the same ratio. Also known as the Golden Ratio as it is found in nature, architecture and music, the Fibonacci series is expressed in the spiraling number series: 1,1,2,3,5,8,13,21,34 and so forth.

6.1.4 Submerge (2012) - 7'32"

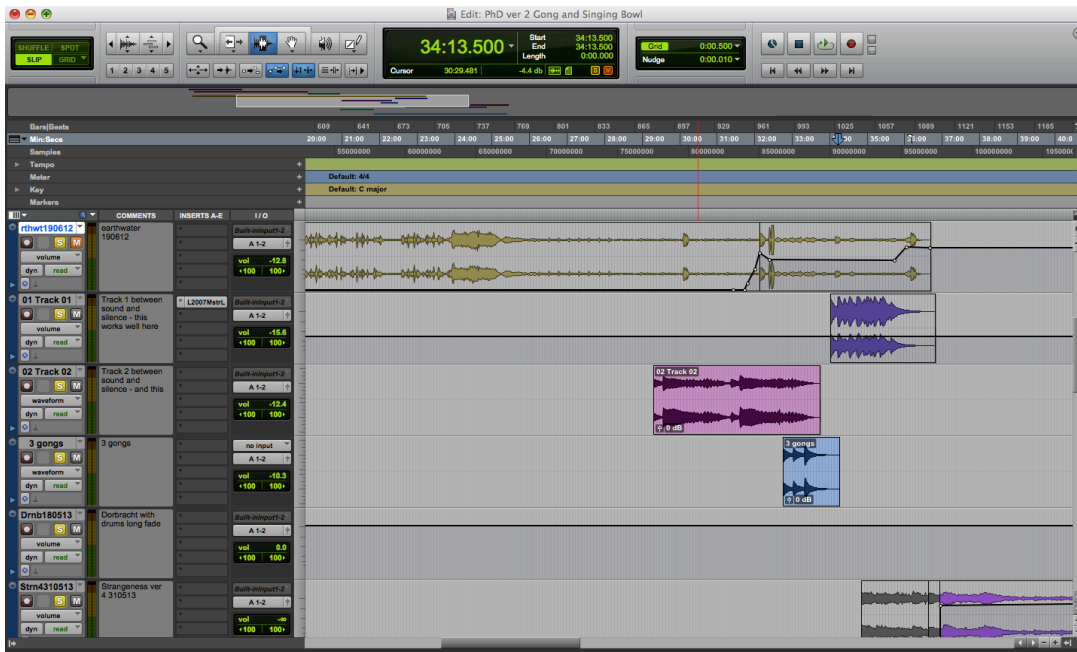


Figure 1. Pro Tools arrange window *Submerge*

Submerge combines four different and separately conceived tracks into a single piece. The pink track in the Pro Tools window above is a composition of mixed singing bowls constructed from recordings made at Southern Cross University with the sound engineer Michael Worthington. The interaction of the bowls in this track demonstrates the strong pulses inherent in each bowl and the interference waves created due to the interaction of different pulsations. The purple track is a sequence of large struck singing bowls that I recorded at home using two ribbon microphones. These ribbon microphones have a figure of eight pick-up pattern and were arranged with close proximity to the wall of each bowl. The blue track is a sequence of three gong strokes (using a Chinese wind gong) recorded at my home using AKG 414 microphones. The challenge with all exposed recordings of gongs and singing bowls is allowing the sustained vibrations to recede into silence without picking up extraneous noises such as human rustling, traffic and domestic noises.

The longer track shown with volume automation is part of a longer piece constructed from field recordings made at different locations: Nepal, a local beach and my home. The following picture demonstrates the detailed volume automation of the various elements that make up this track alone.

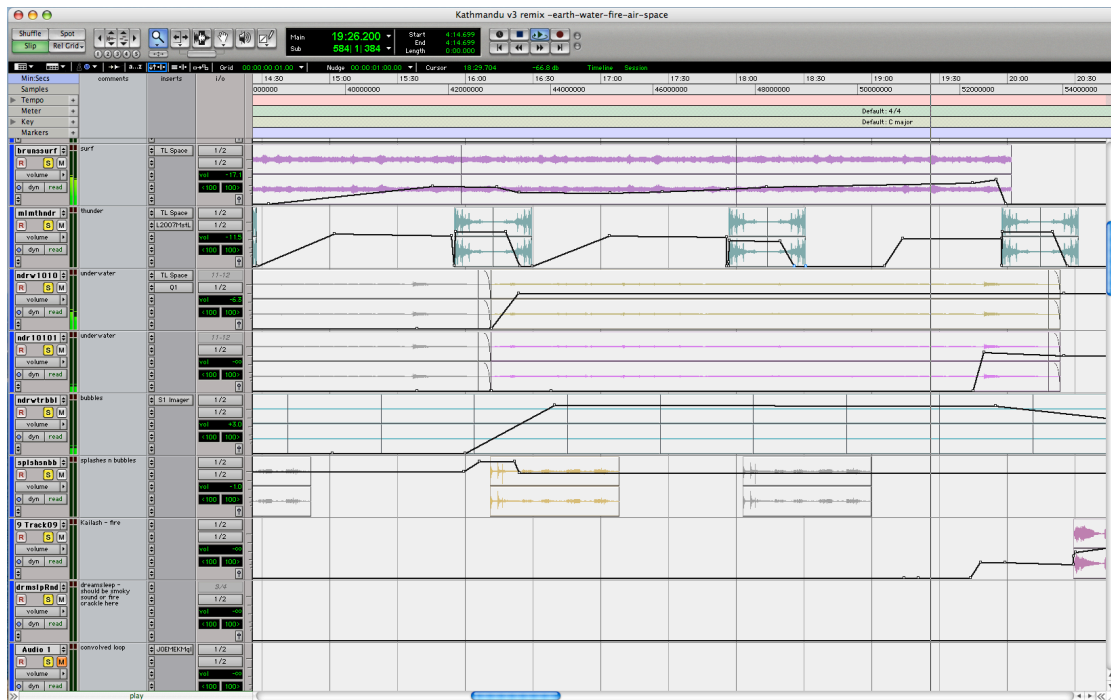


Figure 2. Pro Tools mix window *Submerge*

The surf element was recorded at Brunswick Heads, the thunder element was recorded on my front verandah and the underwater and splash elements were recorded in my swimming pool and kitchen sink using an Aquarian HD-3 hydrophone, a microphone that can be placed underwater. Terrestrial recordings were made with either a portable digital recorder with onboard microphones, or where possible, AKG 414 microphones and a high quality Grace pre-amplifier. Separate reverb settings have been placed on some of the tracks. An extremely long reverb gives the underwater sounds a sense of otherworldliness.

My purpose in combining and organising the various sounds was to create the sound of submersed bells. Any extra-musical references in this piece were partly inspired by reading stories and legends from different cultures relating to sunken bells that can be heard at certain times. Debussy composed *La Cathedrale Engloutie* around the following Breton legend:

A cathedral, submerged underwater off the coast of the Island of Ys, rises up from the sea on clear mornings when the water is transparent. Sounds can be heard of priests chanting, bells chiming, and the organ playing, from across the sea (Hutcheson 314, 1981)

For me, the sounds of gongs and singing bowls co-exist happily with the sounds of nature. As suggested by Messiaen, the complexities of sound inherent in a gong are close to the complex sounds of the ocean and waterfalls (57, 1994). A universal myth resonates around the idea of submersed bells - apart from the Breton legend already quoted, Slessor's *Five Bells* and Shakespeare's *Full Fathom Five* evoke similar ideas.

The piece opens with a sequence of three struck singing bowls followed by the stroke of a large bowl. Out of this stroke emerges the sound of bowls being rubbed to create a sustained singing sound – the pulsing and interaction of interference waves is very evident. Gradually the sound of rain and thunder appear, then repeated splashes or dives that seem to take the listener underwater. The gong strokes emphasise this sense of submersion and the sound of fine foam and bubbles begins to emerge. A new sequence of singing bowls begins coinciding with the sounds of ocean waves. This signals a gradual rise to somewhere that is closer to the surface. With the sound of thunder, ocean waves fade into a wake of foam and then into silence.

My interest in combining the sounds of natural elements, particularly water is demonstrated in this piece and once again, the final track is a result of superimposing, layering and mixing a number of separately recorded elements. The opening singing bowl sequence explores the struck and singing aspects of the bowls and the pulsing resulting from wave interference between their different frequencies. This sequence was constructed from recordings made at Southern Cross University, once again with sound engineer Michael Worthington, using microphones placed at different distances from the bowls to obtain the best mix of close and ambient sound perspectives. The bowls were carefully recorded one by one. The second bowl sequence was recorded at my home using ribbon microphones.

The water sounds are a mixture of my own underwater recordings combined with rain and thunder recordings. The underwater recordings and splashes used an Aquarian hydrophone submersed in my swimming pool and the rain and thunder recordings were made during storms and recorded from my verandah.

6.1.5 And The Sky Unrolled Itself (2013) - 8'43"



Figure 3. Pro Tools arrange window *And The Sky Unrolled Itself*

The pacing of this piece, like many of my other pieces is slow and spacious. A visual comparison would be the films of Andrei Tarkovsky. Films like Tarkovsky's *The Mirror* (1975), present a suspension of time and a sense of visual meditation that has been a great inspiration to my own work.

Throughout his book *Sculpting in Time*, Tarkovsky presents the philosophy behind his film-making aesthetic. His films often don't appear to make sense or appear to present a logical argument (it occurs to me that my music might have similarities) and in the introduction to *Sculpting in Time*, Tarkovsky discusses his frustration with the often negative responses and misunderstandings of his Russian audience towards his films. After quoting some negative letters concerning *The Mirror*, he cites an anonymous letter from a member of the Institute of Physics of The Academy of Science in Moscow. Here is an excerpt:

You have to watch this film simply, and listen to the music of Bach and the poems of Arseny Tarkovsky; watch it as one watches the stars, or the sea, as one admires a landscape. There is no mathematical logic here, for it cannot explain what man is or what is the meaning of life (9, 2006).

My piece, *And The Sky Unrolled Itself*, evolves slowly towards a reading of a poem that occurs in Andrei Tarkovsky's film masterpiece *The Mirror*. *First Meetings* is a nostalgic love poem by Andrei's father, Arseny Tarkovsky. Even though the poem occurs early in the film, Tarkovsky has already achieved a profound sense of timeless mystery, innocence and longing - all combined with powerful elements of water and fire - immersing the viewer in a slow, strange unfolding. It is some of this strangeness and beauty that I wanted to capture, but it was not my intention to musically interpret the meaning of the words.

Based on the English translation by Kitty Hunter-Blair, the poem's words reveal a sense of love and longing, but this interpretation is not important in the context of the piece. Rather, it is the sound of the voice and the images occurring with the poetry reading in the film that have inspired me. But whether a listener has seen the film or whether the listener understands the poem is not important.

The words that I have used for the title of the piece, *And The Sky Unrolled Itself*, appear in the English translation by Kitty Hunter-Blair of Arseny Tarkovsky's poem. The same line in another translation appears as, "and the sky spread out before us". I prefer the Hunter-Blair translation and its resonance with the idea that the apparent vastness of the sky might be peeled back to reveal itself as a superimposition on the ultimate reality or reveal "another world on the other side of the mirror" (Johnson and Petrie 117, 1994). The mystery of Tarkovsky's films represents his own search for truth through his film-making, a truth that lies behind the background of life with all its happiness and sorrows:

Its main purpose is to help me to find my way through the maze of possibilities contained in this young and beautiful art form – still, in essence, so little explored – in order to be able to find myself, fully and independently, within it (13, 2006).

As the screen shot of the Pro Tools file suggests, this piece uses a small number of simple sound elements. These elements have been performed, recorded, mixed (where necessary) and edited separately. Together, they create a unified sound sculpture. The repeated sounding of three gong strokes

re-occurs throughout the piece. I use this simple idea in other pieces. I often feel intuitively, that a single gong stroke needs to be completed by adding two more. This may be a conditioned reflex or a remembrance of the three gong strokes used by Messiaen in *Et expecto resurrectionem mortuorum* to symbolise the call of the Trinity.

The three gong strokes can be heard as a slicing up of time, but for me they are also an acknowledgement of Vedic Trinity symbolised in the Mandukya Upanishad as the word *AUM* representing the waking, dreaming and sleeping states: *vishva*, *tajasa* and *prajna* (Chinmayananda 44, 2011). The sound of *AUM* is seen as emerging from the silence of awareness, pulsing and vibrating until it disappears back into silence:

All that is past, present and future, verily, is Aum. That which is beyond the three periods of time is also, verily, Aum. (Mandukya Upanishad)

Sri Ramakrishna uses the gong to illustrate and explain *AUM*:

The striking of the gong is like the falling of a heavy weight into a big ocean. Waves begin to rise; the Relative rises from the Absolute; the Causal, Subtle, and Gross bodies rise from the Great Cause; from Turiya emerge the states of deep sleep, dream and waking. From the Absolute to the Relative and from the Relative to the Absolute.

Therefore I give the illustration of the gong's sound 'tom'. I have clearly perceived all these things. It has been revealed to me that there exists an Ocean of Consciousness without limit.

From it come all things of the relative plane and in It they merge again. Millions of Brahmanda rise in that Chridakasa and merge in It again. All this has been revealed to me.

(The Gospel of Sri Ramakrishna)

The gong strokes have been placed in the foreground of the sound mix so that the interior resonances and overtones are clearly heard. A second track of gongs is also heard, mixed further in the background, representing another place, another time.

The poem is first heard as in a dream. The reading of the poem and the accompanying bowls are both stretched in time (using *PaulStretch* software) creating a sense of dream-like disembodiment. I remember hearing these disembodied voices in my dreams as a young boy. *PaulStretch* literally stretches sounds in time without changing their pitch, creating an effect that is strange and disconcerting. A recording of large singing bowls, humming due to the action of the suede stick that is moved around the upper edge of the bowl in a circular motion, acts as a constant, shimmering, enveloping cloud of sound throughout the piece. This track is mixed with a duplicate track towards the end of the piece that has been re-pitched at .618:1 – this is based on the *Fibonacci* ratio and is intended to provide a strong pulsing interaction between the two humming, singing bowl tracks.

This layering of long tones that are slightly distinct in pitch, results in beats and complex overtone patterns. Similar psycho-acoustic effects have been explored by composers such as the American Phill Niblock who uses conventional instruments tuned microtonally, in intervals smaller than a semitone (Bellouin 14-15, 2012).

Finally, the reading of the poem is heard as it is in the original film surrounded by resonances and halos of harmonics, until the reverse resonance of a gong takes us back to a single gong stroke that is left to disappear back into silence.

6.1.6 Dreaming Dornbracht (2011) - 5' 31"

Dreaming Dornbracht represents a meeting point of the interior and exterior approaches that I have used to help define my compositional work. In this case, the exterior aspect of collaboration for a specific project had been proposed and initial ideas discussed. As a precursor to such a project, I will often try ideas based on my imaginings. These ideas often establish a direction

that is discarded later when more details and guidelines are established. But sometimes a new and satisfying piece is produced.

Dreaming Dornbracht begins with a surreal, watery track featuring marimbas and drums with *shakuhachi* (Japanese bamboo flute) and singing bowls. The *shakuhachi* recording emphasizes the player's breath. A slower second section features the sounds of large singing bowls, smaller struck bowls and *tingsha* (small Tibetan cymbals). A sound produced by using the mouth cavity as a resonator to emphasise certain harmonics of a singing bowl is also used. The sound elements include some archival drumming and marimba that I recorded in 2000. This material has been lowered in pitch, but maintains the original tempo and 5/4 time signature. The breathy *shakuhachi* elements are also archival and were originally recorded for inclusion in a score that I composed for the Sydney Dance Company. The singing bowls sounds are more recent, some recorded at home and others at Southern Cross University. The elements in the second section include a vocal breath sound that was also part of an earlier project for Sydney Dance Company. The struck bowl sounds, *tingsha* and vocal harmonic sounds were recorded in my home.

6.1.7 Marimba Dreams (2012) - 7'14"

Since 2011, it is rare for any of my compositions to include the marimba even though I have recorded a number of well-known Australian marimba compositions (*Omphalo Centric Lecture* (1985) and *Fabian Theory* (1987) by Nigel Westlake and *Marimba Dances* (1982) by Ross Edwards) and included marimba in some of my compositions including *Lemurian Dances* (1990), *Spirals* (2001) and *Three Places in Kathmandu* (2009). In recent years the marimba has become a virtuoso solo instrument with a growing catalogue of compositions that take advantage of advanced four mallet techniques. Guitar solos are regularly transcribed for the instrument and transcriptions of JS Bach are also popular. Even though it is still rare to hear a marimba recital outside of a University environment, it has become a respectable solo instrument.

In *Marimba Dreams* I wanted to subvert this respectability using bit-rate reduction to add hiss, distortion and sonic artifacts to the marimba sound and a slicing into sound files that gives an effect resembling a CD skipping – effects

usually considered as unwanted errors or glitches. Working purposefully with these techniques has evolved into an artform known as 'glitch' in the digital arts. Kim Cascone (2000) describes this idea as "the aesthetic of failure". I recorded two simple marimba passages that have been looped, layered and treated using the techniques described above while accompanied by unchanging machine-made rhythms. Delayed versions of the marimba passages are added until a rising organ-like passage heralds the ending.

6.2 EXTERIORS

6.2.1 Asia Drum Suite Remix (2012) - 4'13" with Great Big Events

Writing about his 2012 piece, *Radio Rewrite* Reich said:

Now, in the early 21st century, we live in an age of remixes where musicians take audio samples of other music and remix them into audio of their own.

Asia Drum Suite Remix uses material from my own *Asia Drum Suite* (2006) to create a new remix. This new version was made at the request of Jennie Lee, a producer with Great Big Events, one of Australia's major event production companies. The new version was used for an event within the 2012 Asian Swimming Championships in Dubai. *Asia Drum Suite* was originally designed for the 2006 Asian Games Opening Ceremony as eight discreet movements, each representing the drumming styles of different Asian regions. *Al Arabi* and *Al Khaleeji* represent the Arab Gulf and Arab North African regions. *Lion Dog* represents the North Asian region. *Tiger* represents the South East Asian region and *Dragon* the Northeast Asian region. *Garuda* represents the South East Asian region and *Horse* the Central Asian region.

These pieces represent collaborative compositions with an array of percussionists such as Hossam Ramzy (Egyptian percussion), Bobby Singh (Indian percussion), Simon Barker (Korean percussion), Ron Reeves (Javanese percussion and vocals) and musicians from Synergy Percussion and Taikoz (Japanese percussion). I produced the recordings using multi-track techniques at the Trackdown Studios in Sydney and used Pro Tools for editing and mixing. The remix version was made by layering and combining the various original

compositions to create a showcase of Asian drumming styles. This showcase of drumming styles creates an intentional pastiche but retains the original integrity of the original performances that were executed with great skill by the various percussionist/collaborators. Chinese drumming is layered with Indian drumming. Middle Eastern drumming is layered with Japanese drumming which is then layered with Javanese percussion. Korean percussion is layered with voices from Java then a female choir from Upper Zarashvan segues into a final Middle Eastern drumming section.

6.2.2 Canonical Double Duo (2013) - 9'57" with Fritz Hauser

I have worked with the Swiss drummer and sound artist Fritz Hauser a number of times over the last ten years or so and in 2005 we collaborated on a CD of improvisations (collectively entitled *Space*), recorded in Switzerland and released on the Celestial Harmonies label. Our work together has generally been improvised and free of time constraints such as specific tempi and time signatures. Though this piece contains certain aspects of the verticality and space that belong to the Interior category, it is primarily the result of an interactive and reactive improvisatory process between two performers – the reason for placing it in the Exterior category. The recording was made at a friend's house in the hills behind Mullumbimby, NSW.

Omni-directional recording was used, designed to capture not only the metal instruments used by both players (singing bowls, small gongs and large gongs), but also the sounds of the local birds and insects. I have always been intrigued by the idea that musicians might be able to absorb and then duplicate relatively complex material in an improvised music situation. I explored this idea in *Lemurian Dances* (1990). *Lemurian Dances* begins with a long vibraphone solo that is notated, but my intention was to make it sound as though it was a spontaneous improvisation. This solo is picked up and duplicated note for note by the marimba and repeated in unison with the vibraphone.

In *Canonical Double Duo*, the original recorded improvisation has been layered with a duplicate track that has been displaced by 1'30" to create a canon, or delayed version of the original. This creates another level of the interplay already inherent in the original recording. The sounds of birds, insects

and the distant roar of jet engines overhead, provide additional canonic counterpoint. The first part of the piece is an exploration of metal sounds of short duration interspersed with occasional long sounds. These rapidly executed passages gradually subside, giving way to the long resonances of gongs, singing bowls and Tibetan *tingsha*.

6.2.3 Objects (2012) – excerpt - 8'02" with T. Arthur Cottam

A work in progress for the Los Angeles based film director T. Arthur Cottam. This is not a notated music score in the conventional sense, but uses Pro Tools to record, edit and organise sound elements that can be synchronised with film images and dialogue. A director may choose to edit his film to an existing piece of music, but here the music is composed to follow the action and dramatic contours of the film.

The sounds (predominantly singing bowls and gongs) and the vertical nature of the resulting composition reflect the aesthetic of the pieces in the Interior folio of compositions. But since this composition has been based on exchanges with the director and responses to the film content, I have placed this in the Exterior folio.

My own recordings of singing bowls and gongs have been used, combined with other sounds of my own that have been processed using software plug-ins such as Waves Audio Limited's *Maxxbass* and *Q1* as well as Avid's *TL Space*, *Convolve* and *Structure*. *Maxxbass* and *Q1* allow equalisation adjustments while *TL Space* can change the listener's perception of the space surrounding the sound source. *Convolve* can completely change the character and sound of the original source material and *Structure* allows radical adjustment of pitch and time.

I have also explored the relationship between slowly developing sound envelopes and aspects of the dramatic action. For example, a Chinese wind gong dipped slowly into a perspex bowl filled with water and lifted out again while being struck, produces slow pitch changes. This effect was first recorded, then mixed with the sounds of struck singing bowls. The recording has then been stretched in time (eight times its original length) using *PaulStretch* and placed against images of sexual tension and intensity. The designers of

PaulStretch claim that it is possible to stretch a sound file smoothly without introducing artifacts such as unwanted noise or digital clicks. Slowing down the sounds of singing bowls and gongs, with all their associated pulses and harmonic fluctuations and maintaining smoothness was a real challenge for the software!

There is a heartbeat effect that continues throughout the track. To achieve this, an excerpt from an earlier composition was looped and then processed using a convolution plug-in. Equalisation was then applied to attenuate all but the lower frequencies to create the effect. Singing bowl pulses interacting and colliding cause interference waves in which two waves superimpose to form a resultant wave of greater or lower magnitude. This very physical aspect of sound can heighten moments of intense emotion. Other approaches include the reversal of a struck singing bowl sound resonance to create a slow, then sudden crescendo into the original attack. Recognisable musical forms have been abandoned in favour of creating fields of sound and density. Improvisational elements have been recorded, then edited, cut, looped and processed.

6.2.4 They Took (2012) – version 2 (5'34") with Greg Barrett

The filmmaker and photographer Greg Barrett approached me to collaborate on a work about William Dawes (1762-1836) who came to Australia as an astronomer with the First Fleet, the first European recorded as defending Aboriginal rights. Dawes left an enduring legacy in his documentation of the *Dharuk* language of Sydney. William Dawes had a close relationship with a young Aboriginal woman called Patyegarang, who assisted his research into the local language. My research led me to a recording of a story spoken in the *Dharuk* language that is simultaneously translated into English by Richard Green:

One day whiteman came across the ocean, in big canoes - *big* canoes. They sailed through the waves, onto the beach. In and around they put their feet, and took country. They walked together and took country, country. They looked and seen - earth. They looked and seen - trees.

They looked and seen - clouds. They looked and seen - water. They collected country. They collected country and earth. We gave to them our songs, singing. We gave to them our hearts, and our heads and minds. We gave to them, him and others, we gave to them. They took *all* the country, all the country. Look and seen whitemen. Tomorrow let's sing together. And sing. Please, thank you. Let's walk.

The text is powerful and the meaning clear enough. But despite the sense of loss, there is no malice and this attracted me to the idea of setting the words to music. *They Took* (version 2) was created in the music program, Logic Studio. Using Logic was a new experience for me having done most of my previous work using Pro Tools. Pro Tools has changed a great deal over the years, but remains a very solid environment for recording and editing while Logic's strengths are slightly different. Logic Studio comes with an array of instruments, audio samples and huge library of pre-edited loops.

They Took (version 2)

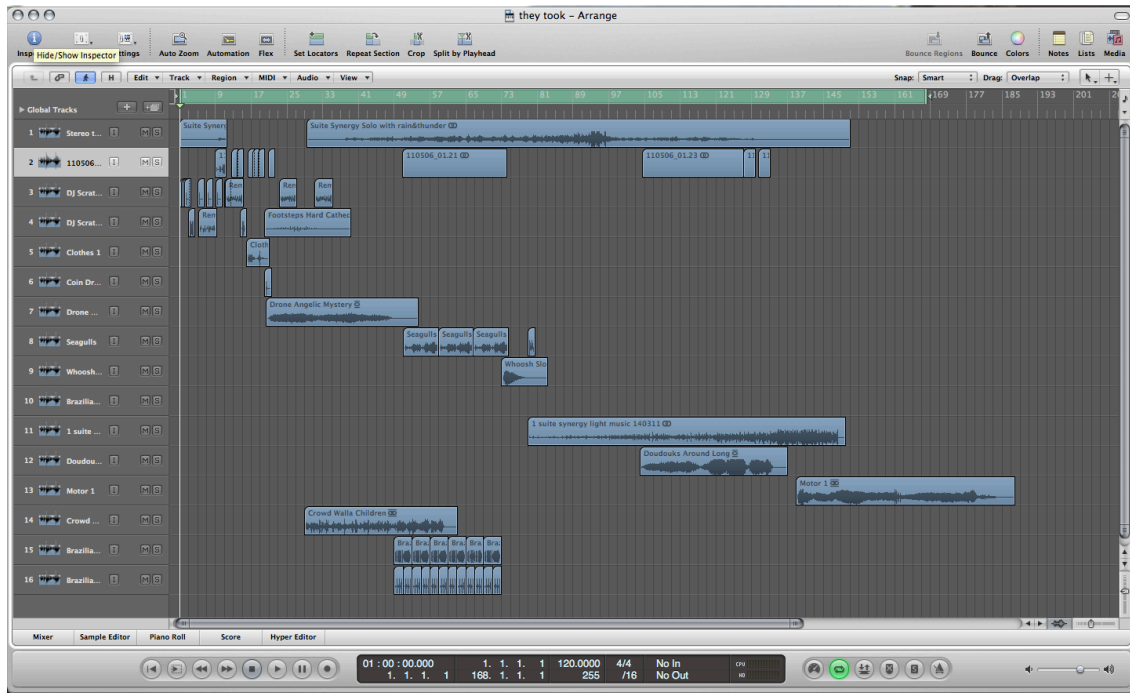


Figure 4. Logic Studio arrange window *They Took* (version 2)

They Took (version 2) mixes cut-ups of the spoken text with library sounds that are available in Logic Studio. Some of these are abstract sounds that have been sampled as a resource for sound designers in the film and video fields and include the sounds of rustling clothes, a door slamming, footsteps in a cathedral, seagulls, insects, a coin dropping on the ground, a crowd of children and a motorised pump. Electronically processed sounds with exotic names such as *Whoosh* and *Angelic Mystery Drone* are also used. There is also a rhythmic drum loop and an Armenian *doudouk* sample.

In addition, I have integrated two recorded pieces that I composed for the 2011 dance production called *Suite Synergy*. *Rain* is composed using thunder sheets, voice and bull-roarer (an Australian Aboriginal instrument that is spun around the head to create a deep propeller-like sound) with the addition of rain and thunder recordings recorded at my home in Mullumbimby, NSW. The second notated piece is called *Light Music* for three performers using shakers, log drums and handclaps.

They Took makes no judgement or statements about the invasion story. This treatment mixes metaphors and meanings to blur any specific musical

intent until the final rhythmic percussion that drives towards the words “they took, all the country – all the country”.

6.2.5 Rain (2011) - 4'03" with Graeme Murphy

I composed *Rain* for the 2011 dance production, choreographed by Graeme Murphy, called *Suite Synergy*. The repertoire for *Suite Synergy* included my 1990 percussion quartet *Lemurian Dances* and my drumming sequences composed for the 1996 Graeme Murphy ballet *Free Radicals*. These pieces showcase the rhythmic strengths of drums, timpani, marimbas, vibraphones and xylophones in various combinations. In contrast, *Rain* (for solo female dancer) returns to natural sound elements and the percussive nature of falling rain. Structured rhythmic passages are replaced by the simple sound of falling rain and the sounds of a summer storm.

The piece is composed using voice, thunder sheets and the bull-roarer (an Australian Aboriginal instrument that is spun around the head to create a deep propeller sound) with the addition of rain and thunder recordings recorded at my home in Mullumbimby, NSW. The murmuring vocal by the noted didgeridu artist, David Hudson, was recorded in Cairns in the mid-1990s for the Celestial Harmonies recording entitled *Free Radicals*. This spontaneously improvised and mantra-like vocal has found its way into a number of subsequent recordings and compositions including *Invisible Forces* (1999) composed for Graeme Murphy's ballet, *Air and Other Invisible Forces*. The percussive nature of raindrops as they appear in *Rain* resembles the ancient South East Asian bronze instruments called Rain Drums or Frog Drums, as described by Cooler (39, 1995). Random, percussive sounds are created when raindrops strike the surfaces of the resonant metal drums, creating a varying rhythmic counterpoint to the sounds of the monsoon rains.

6.2.6 Morning Song & Lemurian Dance No. 2 (2011) - 8'50" with Great Big Events

for: string orchestra, timpani and percussion with soprano and tenor voices, clarinet, flute, piccolo, trombone and percussion soloists.

Morning Song was commissioned for the CHOGM (Commonwealth Heads of Government Meeting) 2011 in Perth and recorded by the West Australian Symphony conducted by Paul Daniel. The composition exists in three formats:

- Orchestral score
- Recording of the orchestral score
- Video recording: comprising the recorded orchestral score and the added elements such as choreography, spoken word, projections and miming.

The piece was composed within a very short time frame to cater to very specific requests presented by the CHOGM production team (Great Big Events). These included a request from the choreographer that the first and last parts of my *Lemurian Dances* (1990) be incorporated into the piece since the tempo matched a Scarlatti piano piece that he had been using for choreographic and rehearsal purposes!

Great Big Events also requested that the orchestral piece should feature string, wind and percussion soloists who would mime their parts at the actual event. There would also be featured vocal soloists from the West Australian Academy of the Performing Arts. The piece needed to be relatively easy to perform and would be rehearsed and recorded in one session of two and a half hours in the Perth Concert Hall. The piece also needed to accommodate three spoken word sections describing Commonwealth ideals that would be spoken live by two young actors from the West Australian Academy of Performing Arts.

I decided to use two pre-existing recorded sections of *Lemurian Dances* (1990) that were used to bookend the new piece. The first section is used as a prelude to the entrance of the orchestra. No changes were made to the original recording performed by Synergy Percussion. The second section was integrated into a newly composed part for the orchestra, requiring the conductor

to listen to the recording and an added click track while conducting the orchestra. Adding a click track to the original *Lemurian Dances* recording was a special challenge because of the tempo fluctuations, a natural part of any live performance. My solution was to record myself clicking two drumsticks together while listening to the recording in headphones.

The conductor (Paul Daniel) eventually listened to a combination of the original recording and the drumstick click while he conducted. There were still tempo discrepancies when I tried to match the orchestral recording and the original Synergy recording. This was due to the slightly delayed response (inherent in any orchestra) to the visual baton cue of the conductor. These discrepancies had to be resolved by shifting or nudging individual orchestral attacks by microsecond increments inside Pro Tools.

It is worth noting another tempo challenge encountered while recording this piece. The tempos of the various sections are designed to gradually increase by a few metronome clicks for each subsequent section. I discovered that the recording set-up in the Perth Concert Hall didn't accommodate sending a headphone click from the control room to the conductor, so Paul Daniel opted for a visual metronome on his iPad. This was a compromise and resulted in one of the sections being recorded a few clicks slower than the previous section instead of a few clicks faster. It was difficult to monitor such a discrepancy during the recording process, since we were recording one section at a time under severe time constraints. It was only after returning home and listening to the recording sessions in Pro Tools that I discovered the problem. I was able to rectify this issue using the *Time Compression/Expansion* plug-in that reduces the length of a recorded section, effectively increasing the tempo without affecting pitch and without adding any unwanted artifacts.

Once the introductory prelude using the opening of *Lemurian Dances* is over, the orchestra begins the first of three similar and circular sections, designed to accommodate the three spoken word deliveries by the young actors on the ideals of the Commonwealth. The cellos play a simple rising three-note phrase over a sustained low C in the basses. The timpani plays an ostinato based on the ostinato used in the original slow section of *Lemurian Dances*. These sections are designed to give enough time for each text delivery

until the high strings enter to prepare vocal and instrumental solos. In the first section the solo is taken by the soprano, in the second the tenor and soprano together and in third, the trombone. The melody, the same in each section, is taken from the first movement (*Dawn Bhajan*) of my percussion quartet entitled *Three Places in Kathmandu* (2009).

What follows are consecutive sections in 7/4, firstly for solo clarinet accompanied by pizzicato strings, then flute and piccolo duet with the addition of a snare drum ostinato, then a trombone solo followed by the full *arco* string section with timpani and percussion including tuned crotales, cymbals and bass drum. All of these sections were choreographed for two dancers who are gradually joined by the complete *corps de ballet* for the final coda. It is the final coda that combines solo trombone, then full orchestra, with the final section of *Lemurian Dances*. This coda was choreographed with the complete company of dancers from WAAPA.

6.2.7 Modern Worship (2012) - 3'37" and Dornbracht – Transforming Water Tryptich (2012) - 3'10" with Daniel Askill

The music used in both of these collaborations is very similar with small variations of time, placement of the sound elements and use of extra-musical sounds. I composed the main sound elements by firstly recording (with my own microphones and pre-amp) a singing bowl sequence that I played at home. This was edited in Pro Tools into the simple sequence that occurs throughout both pieces. The other bowl sounds are from recordings that I produced at Southern Cross University with the sound engineer Michael Worthington. I used similar material for the accompaniment of the spoken word in *Heart Sutra*.

Modern Worship was designed as a video installation, a commentary on the cult of Michael Jackson and the events of 9/11. Daniel Askill conceived the video and sound design (adding noise elements such as jet engine sounds, crashing glass and spinning coins) and I composed the music. The piece is designed to run as a continuous loop and has been presented so far in Sydney and Los Angeles.

Dornbracht – Transforming Water Tryptich is another video installation intended for continuous looping, directed by Daniel Askill. It was created for the

Cologne-based company Dornbracht (specialists in interior water design) and featured at a showcase of industrial design in Milan. The idea of using singing bowls as the main sound element came from Mike Meire, one of Germany's leading art directors and designers. Additional elements to the singing bowls include breath sounds and *tingsha* – small Tibetan cymbals that are struck together to create high pulsating sounds. The spacious and vertical nature of the music is enhanced by slow pacing and sonic immersiveness, allowing the slow motion images of the videos to unfold without adding a musical subtext, enhancing their meditational nature when watched as a continuous and repeating loop.

6.2.8 Heart Sutra (2013) - 5'21" with James Khidir

I have worked with the actor and orator, James Khidir over many years. Our explorations into combining music and text, have resulted in a number of projects including *The Five Elements* performed at Angel Place, Sydney with Synergy Percussion and Taikoz; *Coming Together* by Frederic Rzewski performed at the Queensland Conservatorium with Early Warning System and "...in the between" - *Meditations and Illuminations on the Tibetan Book of the Dead* performed over many years at venues in Brisbane, Sydney, Lismore, Bangalow, Byron Bay and the Woodford Folk Festival.

The *Heart Sutra* (known in Sanskrit as the *Prajnaparamita Hridaya*) is one of the most popular sutras of Mahayana Buddhism. This composition combining voice, singing bowls and gongs uses essentially the same material as *Modern Worship* and *Dornbracht – Transforming Water Tryptich*. I have extended the sound elements to accommodate the spoken word recording that was carefully edited to allow for placement of the low singing bowl strokes. A large Chinese wind gong was recorded for the strokes at the beginning and end. These strokes combine the interior gong sounds recorded at very close range and a recording taken further away that captures the spatial resonance of the gong.

The paradoxical words of the *Heart Sutra* express the idea that our sense of physicality as the five *skandhas* (or elements) is an illusion, not lasting or real. My intention was to create a sound *mantra* using the repeated elements of the singing bowls - a sound meditation that would suspend the intellectual mind process of attempting to decipher the meaning of words. The sounds and words

together act as an auditory signpost pointing towards consciousness, the non-duality behind the dualistic concepts of the spoken words. Like the music, the words are best left as a vertical, static sound element that is absorbed intuitively, rather than understood intellectually.

Avalokitesvara Bodhisattva
when practicing deeply the Prajna Paramita
perceives that all five skandhas are empty
and is saved from all suffering and distress.

Shariputra,
form does not differ from emptiness,
emptiness does not differ from form.
That which is form is emptiness,
that which is emptiness form.

The same is true of feelings,
perceptions, impulses, consciousness.

Shariputra,
all dharmas are marked with emptiness;
they do not appear or disappear,
are not tainted or pure,
do not increase or decrease.

Therefore, in emptiness no form, no feelings,
perceptions, impulses, consciousness.

No eyes, no ears, no nose, no tongue, no body, no mind;
no color, no sound, no smell, no taste, no touch,
no object of mind;
no realm of eyes
and so forth until no realm of mind consciousness.

No ignorance and also no extinction of it,
and so forth until no old age and death
and also no extinction of them.

No suffering, no origination,
no stopping, no path, no cognition,
also no attainment with nothing to attain.

The Bodhisattva depends on Prajna Paramita
and the mind is no hindrance;
without any hindrance no fears exist.
Far apart from every perverted view one dwells in Nirvana.

In the three worlds
all Buddhas depend on Prajna Paramita
and attain Anuttara Samyak Sambodhi.

Therefore know that Prajna Paramita
is the great transcendent mantra,
is the great bright mantra,
is the utmost mantra,
is the supreme mantra
which is able to relieve all suffering
and is true, not false.
So proclaim the Prajna Paramita mantra,
proclaim the mantra which says:

gate gate paragate parasamgate bodhi svaha
gate gate paragate parasamgate bodhi svaha
gate gate paragate parasamgate bodhi svaha.

6.2.9 a complete 180 (2012) - 4'15" with The Sound Collectors

a complete 180 is composed for the percussion duo 'The Sound Collectors' – Louise Devenish and Leah Scholes. This piece has been composed within the parameters of the '180 Series' – composers were requested to compose a short piece within a three-hour (180 minutes) time frame.

The piece is constructed around the number 180 and some simple divisions. For example, a group of 90 semi-quavers is divided into six groups of six, five of five, four of four, three of three and two of two before initiating a retrograde pattern to complete a total of 180 semi-quavers. The piece is to be performed at 180 beats per minute and features rhythmic patterns on three drums accompanied by metronomic wood blocks. The rhythmic patterns are strictly defined by the rules of the number divisions and each division is signaled on a higher or lower drum depending on whether the start of a division begins on the left or right hand.

6.2.10 Yaatra (2013) - 7'12" with Lorin Askill

Yaatra was composed for a short film of the same title directed by Lorin Askill. Footage for the film was collected on a trip to India with the Australian fashion designers Josh Goot and Michelle Jank.

Taking a similar approach to the one taken in *Asia Drum Suite Remix*, much of the source material was taken from former projects including my soundtrack for the short film *Eclipse* directed by Mark Lapwood and once again,

Asia Drum Suite. The North Indian drums known as the *tabla* are played by Bobby Singh and the female vocals are by Lakshmi and drawn from a series of recordings made in India by Mark Lapwood. The various percussion loops have been gathered from the various recordings made during the *Asia Drum Suite* project. Many of these have been edited and adjusted to fit the main *tabla* track. The drone that starts and ends the piece has been made using my own Indian *shruti*-box, an electronic device used for drone accompaniment by Indian musicians.

6.2.11 WAKE (2014) - 21'52" with Early Warning System

“as a wick weak woking from ennumberable Asias unto fierce force fuming, temtem tamtam, the Phoenican wakes” James Joyce, *Finnegans Wake*

Wake was inspired by Robert Adams Day's essay 'Joyce's Aquacities' as well as reading and hearing various commentaries on *Finnegans Wake* by Marshall McLuhan, Anthony Burgess, John Cage and Joseph Campbell. It has long been my intention to compose a work exclusively for gongs. In late 2013, I was invited to become a Gong Artist for the Swiss gong makers, Paiste. In early 2014 I was sent seven Paiste Planet Gongs ranging in diameters from 20" – 38". Each Planet Gong is specifically tuned to represent the planetary rotations calculated by the Swiss theorist Hans Cousto and presented in his book, *The Cosmic Octave – Origin of Harmony*. I decided to use these gongs as well as ten singing bowls in a newly commissioned work for the Brisbane-based percussion ensemble, Early Warning System. After a long period of experimenting with the gongs, assisted by members of Early Warning System, I decided on some simple and straightforward playing techniques that allowed the gongs to express their elemental power. I decided on an approach to scoring the piece that encouraged maximum creativity from the players and ease of memorisation in order to avoid the use of music and music stands.

Here is an example of some of the notes from the experimental sessions outlining a design and choreography for a possible piece:

(B. and S. behind large gongs left and right)

Breathing

1. 'Breathing' sounds using bows: downbow (inward breath), upbow (outward breath) pause, then repeat

(M. behind gongs centre)

Space Sounds

2. 'Space Sounds' – M. adds superball sounds and this is the cue for B. and S. to add soft gong beats while the bows begin to create harmonics and overtones – play with these!

3. B. and S's gong beats gradually get louder and slightly faster, bowed sounds gradually disappear, M's superball sounds gradually disappear.

(M. moves to front – B. and S. continue gong strokes from back)

4. M. plays short 'swishes' (shooting stars!) on edge using rattan.

Binaural Beats then Open Fifths

5. M. begins 'binaural beat' sequence between closely pitched gongs, B. and S. continue gongs

6. M. cues fifths, B. and S. finish while M. plays: A to D then G# to C# - 3 times

(B. and S. move to front left and right)

Clock Face sequence

7. Using one mallet in the right hand – choose one gong – building the sound using 12, 3, 6 or 9 clock positions gradually moving in a clockwise motion. Choose a second gong and do the same. All players work slowly and independently. M. ends first, then...

Rain Sequence

8. M. gradually begins rain drops at the edge, B. and S. join gradually building to 'waves' of rain then a steady strong 'downpour'

Rivers

9. M. diminuendo rain, while B. and S. remain loud – M. begins soft timpani sticks tremolo, S. diminuendo change to timpani sticks, then B. etc – tutti 'rivers of sound', waterfalls etc

Ocean

10. M. begins Ocean with large gong beaters, then B. and S. join – independent waves and crashes etc. M. plays big wave and 'crash' – then everyone ppp!

Tsunami

11. We play one big crescendo together – peak – and then back to ppp then crescendo for a really big crescendo together and finish.

After some attempts at graphic notation, I decided to take a similar approach to the one used by Karlheinz Stockhausen in *Aus Den Sieben Tagen - From The Seven Days* (1968). Stockhausen gives simple, Zen-like, instructions to the players refraining from any use of traditional or graphic notation. While Stockhausen's instructions verge on the poetic ("play a sound with the certainty that you have an infinite amount of time and space") my instructions in *WAKE* are straightforward and practical. For instance:

WAKE: 3 – Time

Player 1/Speaker: *'It's something fails us. First we feel. Then we fall.'*

Tutti: Gongs played softly in the centre. Crotchets @ 60 bpm. Player 1 moves to gongs and joins.

Starting from the smallest gong to the largest, the players build the sound using Quavers @ 120 bpm marking the points of the clock face: 1-2-3-4-5-6-7-8-9-10-11-12, crescendo then diminuendo then back to crotchets at the centre – after one completed crescendo, the next player begins until all gongs have been sounded in this way.

When the largest gong begins the crescendo, the other gongs players join in building to a tutti climax completing the clock face twice, then tutti release.

Pause until the resonances subside. Player 1 returns to speaking position.

In *WAKE*, four selected passages from Part IV of *Finnegans Wake* are read over an accompaniment of singing bowls until the words of the dying Anna Livia Plurabelle introduce five sections subtitled 'Before Time', 'Awakening', 'Time', 'Rain' and 'River to Ocean'. In these sections the players explore a range of gong sounds and sonorities – from softest breathing to the ocean's roar.

From my program notes:

Striking a gong initiates a “wake” of vibrations that are perceived as a single sound of dark, elemental power. This world of sound arises and then disappears back into an ocean of apparent silence, ready to begin again. All the “riverrun” of experiences and histories within *Finnegans Wake* merge back into an ocean of consciousness, ready to begin again.

7 Conclusions

By delving into the topic, 'Reflections on Composition & Consciousness' I have extrapolated some important findings. Through personal reflection and by articulating my ontological and worldview perspectives in terms of metaphysical and spiritual concepts, I have reached a deeper understanding of the motivations behind my compositions. The perceived dualities explored in and through my compositions such as music and noise, ancient and new, linear and nonlinear, vertical and horizontal, visual and acoustic, interior and exterior, have been useful analytical tools. Analysing my compositions in light of these dualities has helped resolve apparent compositional diversities into a sense of wholeness and an expression of non-duality or pure consciousness.

In addition I have been able to establish myself as part of lineage of composers. This is not to do with compositional style but with a compositional philosophy and consciousness of sound that places the dualistic notions of music and noise on an equal platform. This connection through lineage is subtle, but I believe it will have profound effects on my future work.

I have presented detailed descriptions from my personal experience with gongs and singing bowls (Ancient Sound Technologies) and the use of computer-based software (New Digital Technologies) in order to present a personal approach to using sound as an honouring of the past while exploring new possibilities as they are presented by modern technology.

Although my musical background includes performing on a wide range of percussion instruments in a variety of concert hall and recording situations and composing for combinations of these instruments, my choice to restrict many of my recent compositions to the sounds of singing bowls and gongs has been purposeful and innovative given that these instruments fall outside of the standard compositional devices such as melody, harmony and rhythm.

The impetus behind many of my 'Exterior' compositions has been shown to relate to the shared vision of a particular collaborative project and the subsequent realisation of innovative musical and instrumental solutions. In the case of the 'Interior' compositions, there has been the personal need to express

something that is beyond formulas and intellectual abstractions. While looking at one particular composition may not present a clear picture, taking into account my body of work as a whole shows a tendency towards finding balance. This may be expressed as simply as showing one composition to be predominantly rhythmic and time-based (using instruments that exhibit short sound durations such as drums and mallet instruments) and another composition to be out of time (using instruments with long sound durations such as gongs and singing bowls).

Ultimately, these reflections on my compositions are as much about silence as they are about sound. Sounds are like us – they are mere disturbances that arise and disappear endlessly on an infinite ocean of silent consciousness.

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APPENDIX A - TECHNICAL INFORMATION

Digital Devices, Microphones and Software Cited

AKG414 microphones: AKG acoustics are an Austrian manufacturer of microphones founded in 1947

Avid Pro Tools: a computer-based linear recording and editing environment originally designed by Evan Brooks and Peter Gotcher. The various plug-ins subsequently designed and developed for Pro Tools and referred to throughout this document are registered trademarks of the North American digital audio technology company formerly known as Digidesign, now known as Avid Audio.

Aquarian HD-3 hydrophone: a microphone designed for underwater use.

Digital Performer: A DAW software package designed and published by Mark of the Unicorn, Cambridge, Massachusetts, USA.

Fairlight CMI (computer musical instrument): A digital sampling synthesizer designed in Australia by Kim Rylie and Peter Vogel in 1979.

Grace Design (USA): Specialists in the design and manufacture of audio interfaces and pre-amplifiers.

Logic Studio: Apple's digital audio workstation software.

MIDI: Musical Instrument Digital Interface – a protocol that allows electronic devices such as computers and synthesizers to connect and communicate.

Paulstretch: Open source time stretch software developed by Paul Nasca.

Roland MSQ-100 Polyphonic Sequencer: a MIDI-compatible sequencer with cassette tape memory interface released by the Roland Company in 1984.

Waves Audio Ltd.: A developer and supplier of professional audio signal processing technologies and audio effects used in recording, mixing, mastering and post production founded by Gilad Keren and Meir Sha'ashua in 1992.

Yamaha DX7: A digital synthesizer manufactured by the Yamaha Corporation of Japan between 1983-86.

APPENDIX B – THREE SCORES

Morning Song & Lemurian Dances No. 2 (2011)

a complete 180 (2012)

WAKE (2014)

APPENDIX C – LIST OF ACCOMPANYING AUDIO FILES

- Audio 1 EARTHWATER (2011) - 12'01"
- Audio 2 STRANGENESS (2012) - 7'25"
- Audio 3 SHIMMER PULSE (2012) - 7'28"
- Audio 4 SUBMERSE (2012) - 7'32"
- Audio 5 AND THE SKY UNROLLED ITSELF (2013) - 8'43"
- Audio 6 DREAMING DORNBRACHT (2011) - 5'31"
- Audio 7 MARIMBA DREAMS (2012) - 7'14"
- Audio 8 ASIA DRUM SUITE REMIX (2012) - 4'13"
- Audio 9 CANONICAL DOUBLE DUO (2013) - 9'57"
- Audio 10 OBJECTS (2012) - 8'02"
- Audio 11 THEY TOOK (2012) VER 2 - (5'34")
- Audio 12 RAIN (2011) - 4'03"
- Audio 13 MORNING SONG & LEMURIAN DANCE NO.2 (2011) - 8'50"
- Audio 14 MODERN WORSHIP (2012) - 3'37"
- Audio 15 DORNBRACHT-TRANSFORMING WATER TRYPTICH (2012) - 3'10"
- Audio 16 HEART SUTRA (2013) - 5'21"
- Audio 17 A COMPLETE 180 (2012) - 4'15"
- Audio 18 YAATRA (2013) - 7'12"
- Audio 19 WAKE (2014) - 21'52"

APPENDIX D – LIST OF ACCOMPANYING VIDEO FILES

Video 1 RAIN (2011) - 3'26"

Video 2 MORNING SONG & LEMURIAN DANCE NO.2 (2011) - 10'56"

Video 3 MODERN WORSHIP (2012) - 3'37"

Video 4 DORNBRACHT-TRANSFORMING WATER TRYPTICH (2012) - 3'10"

Video 5 A COMPLETE 180 (2012) - 4'29"

Video 6 YAATRA (2013) - 7'06"

Video 7 WAKE (2014) - 22'13"

Morning Song
&
Lemurian Dance No. 2

Michael Askill 2011

note: Lemurian Dance No. 2 (letter J) needs to be synchronised
to an existing recording of the final section of
Lemurian Dances for percussion quartet.
Marimba, Vibraphone and Timpani cues
from this recording are provided in the score for the conductor's reference.

Instrumentation:

Piccolo

Flute

Clarinet in B flat

Trombone

Soprano Voice

Tenor Voice

Timpani

Bass Drum

Cymbals

Tam-Tam

Snare Drum

Triangle

Glockenspiel or Crotales

Marimba (cue)

Vibraphone (cue)

Violins I

Violins II

Violas

Violincelli

Double Basses

Morning Song

Moderato ♩=95 **A**

The score is divided into two systems, each marked with a box containing the letter 'A'. The tempo is Moderato at 95 beats per minute. The first system includes the following parts:

- Piccolo
- Flute
- Clarinet in B \flat
- Trombone
- Timpani: *soft sticks*, *p sempre*
- Bass Drum: *l.v. sempre*, *p*
- Cymbals
- Tam-tam: *p*
- Snare Drum
- Triangle
- Glockenspiel or Crotales: *p*
- Marimba
- Vibraphone
- Soprano
- Tenor

The second system includes the following parts:

- Violin I
- Violin II
- Viola
- Violoncello: *divisi*, *p*, *pp*, *p*, *pp*, *p*, *pp*, *p*
- Double Bass

B

3
Picc.
Fl.
Cl.
Tbn.
Timp.
B. D.
Cym.
T.-t.
S. D.
Tri.
Glock.
Mar.
Vib.
S.
T.

B

Vln. I
Vln. II
Vla.
Vc.
Db.

16

Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

The score consists of 16 measures. The Piccolo, Flute, Clarinet, Trombone, Maracas, Vibraphone, and Trumpet parts are mostly silent. The Snare Drum and Cymbals play a rhythmic pattern of eighth notes, with dynamics *p*. The Triangle plays a single note in measure 19 with dynamic *p*. The Glockenspiel plays chords in measures 16, 17, and 18 with dynamic *p*. The Saxophone part features triplets in measures 16 and 17 with dynamics *mp* and *p*, and a melodic line in measure 18 with dynamics *mp dolce*. The Violin and Viola parts play sustained chords with dynamics *p* and *pp*. The Violoncello and Double Bass parts play sustained chords with dynamics *p* and *pp*.

5 C 23

Picc. Fl. Cl. Tbn. Timp. B. D. Cym. T-t. S. D. Tri. Glock. Mar. Vib. S. T. Vln. I Vln. II Vla. Vc. Db.

l.v. sempre
p *p* *p*

pp *p* *pp* *p* *pp* *p* *pp*

D

30

6

Picc.
 Fl.
 Cl.

Tbn.

Timp.

B. D.
p
l.v. sempre
p

Cym.
p
l.v. sempre
p

T.-t.
p

S. D.

Tri.

Glock.
p
p
p

Mar.

Vib.

S.
 (ah)
p *mp dolce*
p *mp dolce*

T.
 (ah)
p *mp dolce*
p *mp dolce*

D

Vln. I
pp luminoso

Vln. II
pp luminoso

Vla.
pp
p
pp
p

Vc.
p
pp
p
pp
p

Db.
p

7 37

Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

44

8

Picc.

Fl.

Cl.

Tbn.

Timp.

l.v. sempre
p

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

pp luminoso

pp luminoso

p

p

p

F

9 52

Picc. Fl. Cl.

Tbn. *nobilmente*
mp 3 *mp* 3 3 3 3

Timp.

B. D. *l.v. sempre*
p

Cym. *l.v. sempre*
p

T.-t.

S. D.

Tri.

Glock. *p* *p* *p*

Mar.

Vib.

S.

T.

F

Vln. I

Vln. II

Vla. *pp* *p* *pp* *p* *pp* *p*

Vc. *pp* *p* *pp* *p* *pp* *p*

Db.

G Allegro ♩=110

59 10

Picc. Fl. Cl. Tbn. Timp. B. D. Cym. T-t. S. D. Tri. Glock. Mar. Vib. S. T.

espressivo e grazioso
mp *mp* *mf*

mp 3 *p* *p*

G Allegro ♩=110

Vln. I Vln. II Vla. Vc. Db.

pp *p* *pp* *p* *pp* *p* *pp* *p*

unis. pizz *p* *pizz* *p*

66

11 Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

3

mp

mf

71 12

Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

mf

3

76 **H** poco più mosso $\text{♩} = 115$

mf con brio

mf con brio

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D. *p*

Tri.

Glock.

Mar.

Vib.

S.

T.

H poco più mosso $\text{♩} = 115$

pizz
mp

pizz
mp

mp

mp

pizz
mp

Vln. I

Vln. II

Vla.

Vc.

Db.

81 14

Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

85

15 Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

This musical score page covers measures 85 through 88. The woodwind section includes Piccolo (Picc.), Flute (Fl.), and Clarinet (Cl.), with the Piccolo and Flute parts featuring melodic lines and a triplet in measure 88. The brass section includes Trombone (Tbn.) and Tympani (Timp.), both of which are silent in this passage. The percussion section includes Bass Drum (B. D.), Cymbal (Cym.), Triangle (Tri.), Snare Drum (S. D.), and Gong (Glock.), with the Snare Drum providing a steady rhythmic accompaniment. The string section includes Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.), all of which play rhythmic patterns throughout the measures.

89 16

Picc.
 Fl.
 Cl.
 Tbn.
 Timp.
 B. D.
 Cym.
 T.-t.
 S. D.
 Tri.
 Glock.
 Mar.
 Vib.
 S.
 T.
 Vln. I
 Vln. II
 Vla.
 Vc.
 Db.
 3
 3
 7

Detailed description: This is a page of a musical score, likely for a symphony or concert band. It features 20 staves, each labeled with an instrument or voice part. The staves are arranged vertically from top to bottom: Piccolo (Picc.), Flute (Fl.), Clarinet (Cl.), Trombone (Tbn.), Timpani (Timp.), Bass Drum (B. D.), Cymbal (Cym.), Tom-tom (T.-t.), Snare Drum (S. D.), Triangle (Tri.), Glockenspiel (Glock.), Maracas (Mar.), Vibraphone (Vib.), Soprano (S.), Tenor (T.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.). The score is divided into four measures. The Piccolo and Flute parts have melodic lines with slurs and a triplet of eighth notes in the first measure of each. The Snare Drum part has a rhythmic pattern of eighth notes. The Violin I, II, Viola, and Double Bass parts have harmonic accompaniment. The other instruments (Cl., Tbn., Timp., B. D., Cym., T.-t., Tri., Glock., Mar., Vib., S., T.) are mostly silent, indicated by a dash on the staff. The page number '89' is at the top left, and '16' is at the top right. There are some small numbers (3, 3, 7) under the Piccolo and Flute staves.

93 **I**

Picc. *f*

Fl. *f*

Cl.

Tbn. *f eroico*

Timp.

B. D. *mf*

Cym. *mf*

T.-t.

S. D. *mf*

Tri.

Glock. *mf*

Mar.

Vib.

S.

T.

I

Vln. I *f*

Vln. II *f*

Vla. *f*

Vc. *f*

Db. *f*

97

Picc. Fl. Cl.

Tbn. *mf* *f* *3*

Timp. *p* *f*

B. D. *mf* *mf* *mf*

Cym. *mf* *mf* *mf*

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I *f* *arco*

Vln. II *f* *arco*

Vla.

Vc.

Db.

19 101

Picc. *f* 3

Fl. *f* 3

Cl. *f* 3

Tbn.

Timp.

B. D. *mf*

Cym. *mf*

T.-t.

S. D.

Tri. *ff*

Glock. *f* 3

Mar.

Vib.

S.

T.

Vln. I 3

Vln. II 3

Vla.

Vc.

Db.

105 20

Picc. *mf*

Fl. *mf*

Cl. *mf*

Tbn.

Timp.

B. D. *mf*

Cym. *mf*

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I *mf*

Vln. II *mf*

Vla.

Vc.

Db.

This musical score page covers measures 105 to 110. The instruments are arranged as follows from top to bottom: Piccolo (Picc.), Flute (Fl.), Clarinet (Cl.), Trombone (Tbn.), Timpani (Timp.), Bass Drum (B. D.), Cymbal (Cym.), Tom-tom (T.-t.), Snare Drum (S. D.), Triangle (Tri.), Glockenspiel (Glock.), Maracas (Mar.), Vibraphone (Vib.), Saxophone (S.), Trumpet (T.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.). The woodwinds (Picc., Fl., Cl., Vln. I, Vln. II) and strings (Vc., Db.) play melodic lines with various articulations and dynamics, including a *mf* (mezzo-forte) marking. The percussion section (Timp., B. D., Cym., T.-t., S. D., Tri., Glock., Mar., Vib.) provides rhythmic accompaniment, with the Snare Drum and Triangle playing a steady eighth-note pattern. The Trombone and Saxophone parts are mostly rests. The score includes dynamic markings such as *mf* and articulation like accents and slurs. Measure numbers 105 and 20 are indicated at the top left and right respectively.

Lemurian Dance No. 2

109 **J** c. ♩=156 Entry of pre-recorded soloists

21 Picc. Fl. Cl. Tbn. Timp. B. D. Cym. T.-t. S. D. Tri. Glock. Mar. Vib. S. T. Vln. I Vln. II Vla. Vc. Db.

Picc.
 Fl.
 Cl.

Tbn.

Timp.
 (pre-recorded cue)
f

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.
ff

Vib.
ff

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

K

23 Picc.

Tbn. *f*

Timp.

B. D. *f*

Cym. *f*

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

K

Vln. I

Vln. II

Vla.

Vc.

Db.

Picc.
 Fl.
 Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

142

Picc. *f*

Fl. *f*

Cl. *f*

Tbn. *f*

Timp.

B. D. *f*

Cym. *f*

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib. *marcato simile*

S.

T.

Vln. I *arco* *f* *simile*

Vln. II *arco* *simile*

Vla. *arco* *simile*

Vc. *arco unis* *f* *simile*

Db. *arco* *f* *simile*

27 147

Picc. *f*

Fl. *f*

Cl. *f*

Tbn. *f*

Timp.

B. D. *f*

Cym. *f*

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

152 28

Picc.

Fl.

Cl.

Tbn.

Timp.

B. D.

Cym.

T.-t.

S. D.

Tri.

Glock.

Mar.

Vib.

S.

T.

Vln. I

Vln. II

Vla.

Vc.

Db.

marcato simile

The image displays a page of a musical score, measures 152 through 155. The score is arranged in a standard orchestral format with multiple staves. The instruments listed on the left are Piccolo (Picc.), Flute (Fl.), Clarinet (Cl.), Trombone (Tbn.), Timpani (Timp.), Bass Drum (B. D.), Cymbal (Cym.), Triangle (T.-t.), Snare Drum (S. D.), Glockenspiel (Glock.), Maracas (Mar.), Vibraphone (Vib.), Saxophone (S.), Trumpet (T.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.). Measures 152-155 show a sustained melodic line in the woodwinds and brass, with a rhythmic accompaniment in the percussion and strings. The vibraphone part is marked 'marcato simile'. The page number '152' is at the top left and '28' is at the top right.

29 Picc. 156 *f* *ff*

Fl. *f* *ff*

Cl. *f* *ff*

Tbn. *f* *ff*

Timp.

B. D. *f* *ff*

Cym. *f* *ff*

T.-t.

S. D.

Tri.

Glock.

Mar. *p subito* *crescendo molto* *ff*

Vib. *p subito* *crescendo molto* *ff*

S.

T.

Vln. I *cresc* *ff*

Vln. II *cresc* *ff*

Vla. *cresc* *ff*

Vc. *cresc* *ff*

Db. *cresc* *ff*

for Louise Devenish & Leah Scholes...

a complete 180

for 2 percussionists

Michael Askill

July 20, 2012

♩=180

3 Woodblocks

3 High Drums

Wind Gong

r.h.

l.h.

4

8

12

Musical score for measures 12-15. The top staff contains a continuous eighth-note melody with accents (>) above each note. The middle two staves are empty. The bottom staff contains a bass line with dotted quarter notes and eighth notes, some beamed together.

16

Musical score for measures 16-19. The top staff contains a continuous eighth-note melody with accents (>) above each note. The middle two staves are empty. The bottom staff contains a bass line with dotted quarter notes and eighth notes, some beamed together.

20

Musical score for measures 20-23. The top staff contains a continuous eighth-note melody with accents (>) above each note. The middle two staves are empty. The bottom staff contains a bass line with dotted quarter notes and eighth notes, some beamed together.

24

Musical score for measures 24-27. The top staff contains a sequence of eighth notes with accents (>) in every measure. The middle two staves contain rests. The bottom staff contains a half note with an accent (>) in the first measure, followed by a dotted half note with an accent (>) in the second measure, and this pattern repeats in the third and fourth measures.

28

Musical score for measures 28-30. The top staff contains a sequence of eighth notes with accents (>) in every measure. The middle two staves contain rests. The bottom staff contains a dotted half note with an accent (>) in the first measure, and this pattern repeats in the second and third measures.

31

Musical score for measures 31-33. The top staff contains a sequence of eighth notes with accents (>) in every measure. The middle two staves contain rests. The bottom staff contains a sequence of eighth notes with accents (>) in every measure.

34

Musical score for measures 34-36. The top staff contains a sequence of eighth notes with accents (>) in every measure. The middle two staves contain rests. The bottom staff contains a sequence of eighth notes with accents (>) in every measure.

37

Musical notation for measures 37-39. The top staff contains a sequence of eighth notes with accents (>) starting on a G4. The middle staff contains rests. The bottom staff contains a sequence of eighth notes with accents (>) starting on a G3.

40

Musical notation for measures 40-42. The top staff contains a sequence of eighth notes with accents (>) starting on a G4. The middle staff contains rests. The bottom staff contains a sequence of eighth notes with accents (>) starting on a G3.

43

Musical notation for measures 43-45. The top staff contains a sequence of eighth notes with accents (>) starting on a G4. The middle staff contains rests. The bottom staff contains a sequence of eighth notes with accents (>) starting on a G3.

46

Musical notation for measures 46-48. The top staff contains a sequence of eighth notes with accents (>) starting on a G4. The middle staff contains rests. The bottom staff contains a sequence of eighth notes with accents (>) starting on a G3.

49

Musical notation for measures 49-51. The top staff contains a sequence of eighth notes with accents (>) starting on a G4. The middle staff contains rests. The bottom staff contains a sequence of eighth notes with accents (>) starting on a G3.

52

Musical notation for measures 52-54. The top staff contains a sequence of quarter notes with accents (>). The middle staff is empty. The bottom staff contains a sequence of eighth notes with accents (>).

55

Musical notation for measures 55-57. The top staff contains a sequence of quarter notes with accents (>). The middle staff is empty. The bottom staff contains a sequence of eighth notes with accents (>).

58

Musical notation for measures 58-60. The top staff contains a sequence of quarter notes with accents (>). The middle staff is empty. The bottom staff contains a sequence of eighth notes with accents (>).

61

Musical notation for measures 61-62. The top staff contains a sequence of quarter notes with accents (>). The middle staff is empty. The bottom staff contains a sequence of eighth notes with accents (>).

63

Musical notation for measures 63-64. The top staff contains a sequence of quarter notes with accents (>). The middle staff is empty. The bottom staff contains a sequence of eighth notes with accents (>).

65

Musical notation for measures 65-66. The system consists of two staves. The upper staff contains a sequence of eighth notes with accents (>) above them. The lower staff contains a complex rhythmic pattern of eighth and sixteenth notes, also with accents (>) above them.

67

Musical notation for measures 67-68. The system consists of two staves. The upper staff contains a sequence of eighth notes with accents (>) above them. The lower staff contains a complex rhythmic pattern of eighth and sixteenth notes, also with accents (>) above them.

70

Musical notation for measures 70-71. The system consists of two staves. The upper staff contains a sequence of eighth notes with accents (>) above them. The lower staff contains a complex rhythmic pattern of eighth and sixteenth notes, also with accents (>) above them.

72

Musical notation for measures 72-73. The system consists of two staves. The upper staff contains a sequence of eighth notes with accents (>) above them. The lower staff contains a complex rhythmic pattern of eighth and sixteenth notes, also with accents (>) above them.

74

Musical notation for measures 74-75. The system consists of two staves. The upper staff contains a sequence of eighth notes with accents (>) above them. The lower staff contains a complex rhythmic pattern of eighth and sixteenth notes, also with accents (>) above them.

77

Musical score for measures 77-78. The score is written for three staves. The top staff contains a sequence of quarter notes with accents. The middle staff features eighth notes with slurs and accents. The bottom staff consists of eighth notes with accents.

79

Musical score for measures 79-80. The score is written for three staves. The top staff contains a sequence of quarter notes with accents. The middle staff features eighth notes with slurs and accents. The bottom staff consists of eighth notes with accents.

81

Musical score for measures 81-83. The score is written for three staves. The top staff contains a sequence of quarter notes with accents. The middle staff features eighth notes with slurs and accents. The bottom staff consists of eighth notes with accents.

84

Musical score for measures 84-85. The score is written for three staves. The top staff contains a sequence of quarter notes with accents. The middle staff features eighth notes with slurs and accents. The bottom staff consists of eighth notes with accents.

86

Musical score for measures 86-87. The score is written for three staves. The top staff contains a sequence of quarter notes with accents. The middle staff features eighth notes with slurs and accents. The bottom staff consists of eighth notes with accents.

88

Musical score for measures 88-89. The system consists of three staves. The top staff has a treble clef and contains a sequence of quarter notes with accents. The middle staff has a treble clef and contains eighth notes with accents, some beamed together. The bottom staff has a bass clef and contains eighth notes with accents, some beamed together. A double bar line is present after measure 88.

90

Musical score for measures 90-91. The system consists of three staves. The top staff has a treble clef and contains a sequence of quarter notes with accents. The middle staff has a treble clef and contains eighth notes with accents, some beamed together. The bottom staff has a bass clef and contains eighth notes with accents, some beamed together. A double bar line is present after measure 90.

92

Musical score for measures 92-93. The system consists of three staves. The top staff has a treble clef and contains a sequence of quarter notes with accents. The middle staff has a treble clef and contains eighth notes with accents, some beamed together. The bottom staff has a bass clef and contains eighth notes with accents, some beamed together. A double bar line is present after measure 92.

94

Musical score for measures 94-95. The system consists of three staves. The top staff has a treble clef and contains a sequence of quarter notes with accents. The middle staff has a treble clef and contains eighth notes with accents, some beamed together. The bottom staff has a bass clef and contains eighth notes with accents, some beamed together. A double bar line is present after measure 94.

96

Musical score for measures 96-97. The system consists of three staves. The top staff has a treble clef and contains a sequence of quarter notes with accents. The middle staff has a treble clef and contains eighth notes with accents, some beamed together. The bottom staff has a bass clef and contains eighth notes with accents, some beamed together. A double bar line is present after measure 96.

98

Musical score for measures 98-99. The top staff contains a simple melody of quarter notes with accents. The middle staff is empty. The bottom staff contains a complex rhythmic accompaniment of eighth notes with accents.

100

Musical score for measures 100-101. The top staff contains a simple melody of quarter notes with accents. The middle staff is empty. The bottom staff contains a complex rhythmic accompaniment of eighth notes with accents.

102

Musical score for measures 102-103. The top staff contains a simple melody of quarter notes with accents. The middle staff is empty. The bottom staff contains a complex rhythmic accompaniment of eighth notes with accents.

104

Musical score for measures 104-105. The top staff contains a simple melody of quarter notes with accents. The middle staff is empty. The bottom staff contains a complex rhythmic accompaniment of eighth notes with accents.

106

Musical score for measures 106-107. The top staff contains a simple melody of quarter notes with accents. The middle staff contains a melody of eighth notes with accents and slurs. The bottom staff contains a complex rhythmic accompaniment of eighth notes with accents.

108

Musical score for measures 108-109. The score is written for three staves. The top staff contains a sequence of eighth notes with accents. The middle staff features a melodic line with slurs and accents. The bottom staff has a rhythmic accompaniment consisting of eighth-note chords with accents.

110

Musical score for measures 110-111. The score is written for three staves. The top staff contains a sequence of eighth notes with accents. The middle staff features a melodic line with slurs and accents. The bottom staff has a rhythmic accompaniment consisting of eighth-note chords with accents.

112

Musical score for measures 112-113. The score is written for three staves. The top staff contains a sequence of eighth notes with accents. The middle staff features a melodic line with slurs and accents. The bottom staff has a rhythmic accompaniment consisting of eighth-note chords with accents.

114

Musical score for measures 114-115. The score is written for three staves. The top staff contains a sequence of eighth notes with accents. The middle staff features a melodic line with slurs and accents. The bottom staff has a rhythmic accompaniment consisting of eighth-note chords with accents.

116

Musical score for measures 116-117. The score is written for three staves. The top staff contains a sequence of eighth notes with accents. The middle staff features a melodic line with slurs and accents. The bottom staff has a rhythmic accompaniment consisting of eighth-note chords with accents.

118

Musical score for measures 118-121. The score is written for three staves. The top staff contains six quarter notes with accents. The middle staff contains a sequence of eighth notes with accents and slurs, including a dotted quarter note. The bottom staff contains a sequence of eighth notes with accents, including some beamed eighth notes.

119

Musical score for measures 119-122. The score is written for three staves. The top staff contains six quarter notes with accents, followed by a half note with an accent. The middle staff contains a sequence of eighth notes with accents and slurs, including a dotted quarter note. The bottom staff contains a sequence of eighth notes with accents, including some beamed eighth notes.

WAKE by Michael Askill (2014)

Meditations on Finnegans Wake (Part IV) by James Joyce
for Gongs, Singing Bowls and Voice

composed for Early Warning System
and funded by The Australia Council



WAKE – Instrumentation

Gongs: *Wake* requires 7 gongs ranging from 20” to 38” in diameter, ideally Paiste Planet gongs for their tonal consistency. The largest gong is placed centre with 3 gongs on either side.

Singing Bowls: Player 1 requires a single singing bowl. Players 2 & 5 require 4-5 singing bowls each, one of which will be a large bowl with a diameter of 10”-12”. The bowls are placed on a trap table. The large bowl is struck with a soft mallet and the rest a struck with wood wrapped in suede.

Microphones: The Speaker requires a vocal microphone and Players 2 & 5 both require one microphone placed very close to the large bowl and a stereo pair for the rest.

Wake was commissioned by the Australia Council for Early Warning System and premiered at the Brisbane Powerhouse on July 9, 2014

Spoken Part for WAKE (Prelude) - from Finnegans Wake (Part IV) by James Joyce
Vanessa: voice (microphone)
Michael: singing bowl (microphone) Cameron: singing bowl (microphone)

PRELUDE:1

Sandhyas! Sandhyas! Sandhyas! [1](#)
Calling all downs. Calling all downs to dayne. Array! Surrection! Eirewecker to the wohld bludyn world. O rally, O rally, O rally! Phlenxty, O rally! To what lifelike thyne of the bird can be. Seek you somany matters. Haze sea east to Osseania. Here! Here! Tass, Patt, Staff, Woff, Havv, Bluvv and Rutter. The smog is lofting. [2](#)
[3](#)
[4](#)
[5](#)
[6](#)

PRELUDE:2

In the wake of the [28](#)
blackshape, Nattenden Sorte; whenat, hindled firth and huddled [29](#)
furth, the week of wakes is out and over; as a wick weak woking [30](#)
from enmemberable Ashias unto fierce force fuming, temtem [31](#)
tamtam, the Phoenican wakes. [32](#)
Passing. One. We are passing. Two. From sleep we are passing. [33](#)
Three. Into the wikeawades warld from sleep we are passing. [34](#)
Four. Come, hours, be ours! [35](#)
But still. Ah diar, ah diar! And stay.

PRELUDE:3

'Tis gone infarover. So fore now, dayleash. Pour deday. To [8](#)
trancefixureashone. Feist of Taborneccles, scenopegia, come! [9](#)
Shamwork, be in our scheining! And let every crisscouple be so [10](#)
crosscomplimentary, little eggons, youlk and meelk, in a farbiger [11](#)
pancosmos. With a hottyhammyum all round. Gudstruce! [12](#)
Yet is no body present here which was not there before. Only [13](#)
is order othered. Nought is nulled. *Fuitfiat!*

PRELUDE:4

What has gone? How it ends? [19](#)
Begin to forget it. It will remember itself from every sides, with [20](#)
all gestures, in each our word. Today's truth, tomorrow's trend. [21](#)
Forget, remember! [22](#)
Have we cherished expectations? Are we for liberty of perusiveness? Whyafter what forewhere? A plainplanned liffeyism [23](#)
assemblments Eblania's conglomerate horde. By dim delty Deva. [24](#)
[25](#)
Forget!

Vanessa begins singing bowl hum, Michael moves to gongs...

WAKE:1

My great blue bedroom, the air so quiet, scarce a cloud.
In peace and silence.

WAKE:2

I could have stayed up there for always only. 10

WAKE:3

It's something fails us. First we feel. Then we fall.

WAKE:4 11

And let her rain
now if she likes. Gently or strongly as she likes. Anyway let her 12
rain for my time is come.

WAKE:5

And it's old and old it's sad and old it's
sad and weary I go back to you, my cold father, my cold mad 1
father, my cold mad feary father, till the near sight of the mere 2
size of him, the moyles and moyles of it, moananoaning, makes me 3
seasilt saltsick and I rush, my only, into your arms. I see them 4
rising! Save me from those therrble prongs! Two more. Onetwo 5
moremens more. So. Avelaval. My leaves have drifted from me. 6
All. But one clings still. I'll bear it on me. To remind me of. Lff! 7
So soft this morning, ours. Yes. Carry me along, taddy, like you 8
done through the toy fair! If I seen him bearing down on me now 9
under whitespread wings like he'd come from Arkangels, I sink 10
I'd die down over his feet, humbly dumbly, only to washup. Yes, 11
tid. There's where. First. We pass through grass behush the bush 12
to. Whish! A gull. Gulls. Far calls. Coming, far! End here. Us 13
then. Finn, again! Take. Bussoftlhee, mememormee! Till thous- 14
endsthee. Lps. The keys to. Given! A way a lone a last a loved a 15
long the

WAKE:1 - Before Time

Player 1/Speaker: *“My great blue bedroom, the air so quiet, scarce a cloud. In peace and silence.”*

Singing Bowls

Players 1&2 - humming.

Gongs

Players 3&4 use bass bows - soft breathing sounds (down-bow = inhale, up-bow = exhale).

Player 5 uses super-ball - *“Gulls. Far calls. Coming, far!”* - create this sound for a while, then finish.

WAKE:2 - Awakening

Player 1/Speaker: *"I could have stayed up there for always only."*

Singing Bowls

Player 1: continue singing bowl throughout this next section.

Player 2: gradually finish singing bowl and move to gongs.

Gongs

Players 3&4: Independent gong strokes that initiate melodies, harmonics and overtones with the bows x 3, then only gong strokes gradually becoming quicker and louder.

Player 5: Add super-ball sounds when 3&4 have finished bowed sounds.

Player 2: Joins with independent gong strokes gradually building.

Tutti building in dynamics and intensity until Player 2 cues a final stroke on largest gong, then pause letting the resonances subside.

WAKE:3 – Time

Player 1/Speaker: *“It’s something fails us. First we feel. Then we fall.”*

Tutti: Gongs played softly in the centre. Crotchets @ 60 bpm. Player 1 moves to gongs and joins.

Starting from the smallest gong to the largest, the players build the sound using Quavers @ 120 bpm marking the points of the clock face: 1-2-3-4-5-6-7-8-9-10-11-12, crescendo then diminuendo then back to Crotchets at the centre – after one completed crescendo, the next player begins until all gongs have been sounded in this way.*

When the largest gong begins the crescendo, the other gongs players join in building to a tutti climax completing the clock face twice, then tutti release. Pause until the resonances subside. Player 1 returns to speaking position.

*EWS used the following sequence: Player 4 (Nozomi Omote) - Player 3 (Rebecca Lloyd Jones) - Player 4 - Player 3 - Player 1 (Vanessa Tomlinson) - Player 5 (Cameron Kennedy) - Player 2 (Michael Askill)

WAKE:4 - Rain

Player 1/Speaker: *“And let her rain now if she likes. Gently or strongly as she likes. Anyway let her rain for my time has come.”*

Player 1 returns to gongs when ready.

Tutti: Gongs with fingers, knuckles and finger nails. Create the sounds of rain on water, rain on earth, rain on a tin roof. Create a mix of independent drops, showers and waves of rain building to a steady downpour. Player 2 change to soft sticks and begin tremolo on largest gong. Players 1,3, 4 & 5 gradually finish their rain sounds leaving Player 2 and a soft tremolo on the lowest gong.

WAKE:5 – River to Ocean

Player 1/Speaker: *“And its old and old it’s sad and old it’s sad and weary I go back to you, my cold father, etc – continue to ‘the’ ”*

During this reading Players 3 &4 gradually join Player 2 with soft tremolos. Player 5 creates the sound of seagulls using super-ball from behind the gongs. Cue: *“First. We pass through grass behush the bush to. Whish! A gull. Gulls. Far calls. Coming, far! End here.”*

Players 2, 3&4 accompany rest of text.

After the final sentence - *“A way a lone a last a loved a long the”* - Player 5 begins slow oceanic crescendo to fff joined by 3&4 – finish and let resonances subside.