

https://dspace.org/

Foley music: an exploration of the relationships between sound design and 'music' in film

Mabitsela, Diale Daniel

2016

http://hdl.handle.net/10539/22001

Mabitsela, Diale Daniel (2016) Foley music: an exploration of the relationships between sound design and 'music' in film, University of Witwatersrand, Johannesburg, <http://wiredspace.wits.ac.za/handle/10539/22001>

Downloaded from a DSpace repository. https://dspace.org/

Foley Music:
An Exploration of the Relationships between Sound Design and 'Music' in Film

Diale Daniel Mabitsela

A thesis submitted to the Faculty of Humanities,
University of the Witwatersrand, Johannesburg,
in fulfilment of the requirements for the Degree of Master of Music

Johannesburg 2016

Abstract

Recently, scholarly work in the field of film sound design has emphasised the crucial significance of sound in film. Writers such as Mark Underwood (2008), Larry Sider (2003) and Danijela Kulezic-Wilson (2008) have expressed the view that film sound design ought to be approached from a musical perspective substantiating this position through analytical discussions on the relatively musical use of sound design in scenes from films such as Alfred Hitchcock's *The Birds* (1963) and Darren Aronofsky's *Requiem for a Dream* (2000). Building upon the work of these and other scholars, this thesis investigates the varying ways in which music and foley sound design relate and interact within a film seeking to categorise with some specificity the various ways in which foley sound design can ascend beyond its ordinary remit and in so doing function in lieu of film music as well as in cooperation with it. I consider examples from, amongst others, *The Godfather*, parts one (1972) and two (1974) by Francis Ford Coppola and *The Matrix* (1999) by Ana and Lana Wachowski.

In each chapter of part one of the thesis (which I call Take 1), I explore a particular aspect of the way in which foley makes known its capacity to function quasi-musically. Chapter one looks at Walter Murch's concept of the metaphoric use of sound and how, through this technique, foley sound can be applied so as to fulfil roles more accustomed to film music in its stead. Chapter two details some of the ways in which film music and foley interact within a film. A crucial element of this discussion is the on going debate between scholars such as Michel Chion who disavow the existence of a soundtrack and others such as Rick Altman who contradict Chion on this matter. Chapter three looks at how otherworldly diegetic contexts help to encourage creativity in designing and applying foley sounds so as to further enhance its pre-discussed ability to act in film music's stead while chapter four focuses on the voice as the soloist within the melee of sounds that constitute the film soundtrack.

Part two (or Take 2) of the thesis consists of compositions written in response to some of the theories and concepts explored in the first part of the thesis including a 'dramatic string quartet' in which I attempt to realise in a musical composition some of the ideas discussed in all four of the chapters. I conclude the thesis by reflecting on the main insights uncovered throughout the thesis in addition to reflecting on the process of composing the pieces in relation to the relative success of the performances thereof.

Declaration

I know that plagiarism is wrong. Plagiarism is to use another's work and pretend as if it were my own.

I have used the author date convention for citation and referencing. Each significant contribution to and quotation in this dissertation from the work/s of other people has been acknowledged through citation and reference.

I declare that this dissertation is my own unaided work. It is submitted for the degree of Master of Music at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

_____

Diale Daniel Mabitsela

25 September 2015

Contents

Acknowledgements and Dedication v

List of Video Examples vii

List of Music Examples vii

Title Sequence 1

TAKE 1

Foley Scoring: The Metaphoric Use of Foley Sound in Film 9

Mise en Bande: Where the Twain Shall Meet 24

Music in the Air: Deconstructing Cinematic Reality 38

The Sound of the Voice: The Voice as Sound Object 50

TAKE 2

Extended Programe Notes 68

***Iconography*:**	Miriam	*1-3*
	Fragments of Big-Father	*1-4*
	Maria	*1-4*
	Fragments of Big-Father II	*1-5*
	Dance with my Big-Father	*1-3*
***The Interior Castle*:**	Light Phases	*1-16*
	Crystal Structures	*1-11*
	The Seventh Room	*1-6*
***Tin Can Transport*:**	Cue A	*1-4*
	Cue B	*1*
	Cue C	*1-4*
	Cue D	*1-3*

Epilogue 89

Bibliography 97

Acknowledgements

A variety of people have been instrumental to the success of this degree. Among them I would first like to thank Dr. Grant Olwage and Dr. Cameron Harris for their valuable advice and supervision throughout the course of this master's degree. Without their guidance and support, this research project would not have materialised in the way it has. In addition, I would like to express heart felt gratitude particularly to Dr. Harris and Dr. Marie Jorritsma. At the onset of this masters Dr. Harris advised me to apply as a student composer for the Ostrava Days Festival in the Czech Republic. My application was subsequently accepted and it was only due to the financial generosity of Dr. Harris and Dr. Jorritsma that I was able to attend the festival which proved more than significant in the outcome of my research.

I would like to thank all the individuals who assisted in the organisation and administration of the Foley Music Concert. Among these I would like to thank especially Dr. Cameron Harris, Jonathan Crossley, Donald from Wits TV as well as Victoria Hume for the extensive technical assistance which they contributed towards the staging of the concert. I would also like thank Wits Music for providing equipment and staffing towards the concert as well as Wits TV for allowing us to make use of its Television Studio and the facilities therein. Lastly, I'd like to thank all the performers for the dedication that they put into the rehearsals and in the performances of the pieces.

At this point I express great gratitude to all who have contributed financially to the success of this master's. I acknowledge The University of the Witwatersrand for awarding me various bursaries that accommodated me in the first two years of this degree in addition to the National Arts Council for awarding me a bursary in the second year of my graduate studies which proved influential. I also need to thank Jonathan Shaw as well as Tiledi Kekana for employing me in the first and second years of the degree respectively. Without the financial support received, none of this would have been possible.

Last but by no means least, I would like to thank both family and friends who supported me during this time. A special mention goes out to my parents for bearing with me throughout this lengthy spell of higher education. I also wish to thank my beloved aunts Mapilane Sofia Madiba, Lebohang Madiba and Morakane Madiba for often providing me with a place to stay

as and when I needed it as well as the love which they showed me during this time. I would also like to thank all my friends for the emotional and spiritual support they gave me. In a special way I wish to thank Brad Page, Dominic Milazi and Treasure Kunene all of whom bore the brunt of these three years.

This master's thesis and all the work therein is dedicated to my God and friend Jesus Christ, and my mother in heaven. Totus Tuus Maria

List of Video Examples

Ex. 1: *Se7en* "Inner City Decay"

Ex. 2: *The Matrix* "Squeegee Music"

Ex. 3: *Apocalypse Now* "Mango Search"

Ex. 4: *The Matrix* "Wake Up Neo"

Ex. 5: *The Godfather II* "Assassination"

Ex. 6: *The Matrix* "de-Atrophy"

Ex. 7: *The Godfather II* "Open Drapes"

Ex. 8: *Apocalypse Now* "Hovering Threat"

Ex. 9: *The Matrix* "Gun Ballet"

Ex. 10: *The Exorcist* "Dog Fight"

Ex. 11: *The Matrix* "Interrogation"

Ex. 12: *Inception* "Parisian Construction"

Ex. 13: *The Matrix* "Dodge Bullets"

Ex. 14: *The Conversation* "The Way She Says…"

Ex. 15: *The Exorcist* "Evil Voice"

Ex. 16: *The Passion of the Christ "Caiphas"*

Ex. 17: *The Passion of the Christ* "The Devil"

Ex. 18: *The Passion of the Christ "Eloi, Eloi"*

Ex. 19: *The Godfather "Si Italiano"*

The sound and video examples are found on the affixed DVD.

List of Musical Examples

Mus Ex. 1 "Blinding Light"

Mus Ex. 2 "Light Spray"

Mus Ex. 3 "Music Smoke"

Mus Ex. 4 "Temple Pediment"

Mus Ex. 5 "Crystal Spray"

Mus Ex. 6 “Neat Crystal”
Mus Ex. 7 “Crystal Pillars”
Mus Ex. 8 “Clarinet Presence”
Mus Ex .9 “Squeaking Horrific”
Mus Ex. 10 “Kree, Koh!”
Mus Ex. 11 “Text Box Music”
Mus Ex. 12 “Kwee ka”
Mus Ex. 13 “Unstable Wheels”

Title Sequence

Having been tasked to create and compose both the sound design component as well as the music for a short science-fiction film in the third year of my undergraduate studies, I remember having the peculiar inclination that the work I had done on the sound design aspect was musical in character. This is to say that many of the creative processes I had undertaken in constructing and manipulating the sounds, which in the end came to be used as foley audio in the film, were similar if not identical to the creative methods I used to compose the music. The audio materials used for the foley and music were very different as were the fundamental functions that each component fulfilled in the film, but the basic task was the same: to creatively edit and manipulate sounds so as to 'affect' audience reception.

My suspicions regarding sound design's relative 'musicality' were further augmented by my becoming acquainted with the creative methods and devices used by sound designers in the construction of sound effects, in particular for science fiction and animation films. David Sonnenschein advises that 'exchanging sounds, experimenting with new combinations and improvising' enhances creativity and produces 'richly rewarding results' (2008: 53). In animation films various sounds are created through experimentation with basic household items. For example, the sound of rain can be imitated by sprinkling salt on to paper while crumpling cellophane at different intensities can produce the raw acoustic materials necessary to create the sound of fire (58).

Whilst the purely functional aims of foley creation in these instances cannot be under emphasised, the creative measures employed warrant a deeper consideration of the artistic and by extension musical value of foley and sound design. I especially began to question whether or not the making of foley sound effects and other forms of sound design in some way constituted a form of 'music composition'. If so, what then could be said about foley sound design's relationship with music in film? In other words, how do film music and foley sound design relate and interact with one another given their coexistence in the film's composite soundtrack? Furthermore, what level of creative potential could there be latent within this quasi-contrapuntal relationship?

For example, there are substantial signs that foley sound design has a rich relationship with certain braches of western art music composition. Mark Underwood shows how the two

artistic practices have gradually approached one another throughout the course of the twentieth century.

Long Lost Siblings

Influenced largely by the works of Claude Debussy – in particular *Prélude à L'après-midi d'un Faune* (1894) – which feature experimental uses of harmony as well as the transformation of regular structural syntax thus reflecting an overall compositional style dedicated to the search and expansion of harmonic and musical sonorities (Prendergast 2003, Palmer 1973, Griffiths 1992, Underwood 2008, Hugill 2007), composers of western art music began to consider the topic of sound quality more closely (Underwood 2008: 193-194). Debussy himself is quoted as saying that 'The century of aeroplanes deserves its own music' (quoted in Prendergast 2003: 1), citing the need for composers to respond to the major impact rendered on the 'natural' soundscape by the substantial changes introduced into everyday life by industrial and technological developments. This led to an ever-increasing fascination amongst early twentieth-century composers with the possibilities availed by compositional devices such as extended techniques for traditional orchestral instruments, electronic systems and various other methods of extending the available timbral range (Underwood 2008: 195). The efforts of musicians such as Edgard Varèse, Luigi Russolo and John Cage stand out as perhaps the most notable contributions to the developments made in this period.

> I believe that the use of noise to make music will continue and increase until we reach a music produced through the use of electrical instruments which will make available for musical purposes any and all sounds that can be heard. Photoelectric, film and mechanical mediums for the synthetic production of music will be explored (Cage 1937).
>
> Our musical alphabet must be enriched… I refuse to limit myself to sounds that have already been heard (Varèse 1916, quoted in Holmes 2008: 16).
>
> We will have fun imagining our orchestration of department stores' sliding doors, the hubbub of the crowds, the different roars of railroad stations, iron foundries, textile mills, printing houses, power plants and subways (Russolo 1913, quoted in Holmes 2008: 14).

As per Underwood's observations, these early advances eventually led to the arrival of genres such as Pierre Schaeffer's *musique concrète* and Karlheinz Stockhausen's *elektronische Musik* (2008: 196). These predominantly electronic genres of music play a fundamental role in bridging the gap between foley sound design and music composition as both serve as

embodiments of the notion that sounds – whether recorded from everyday life or created synthetically – can be perceived and appreciated as a form of music (ibid.).

At the same time, Underwood makes it clear that prior to the efforts of Stockhausen and Schaeffer, film directors such as Reuben Mamoulian were in the habit of 'using sound montage with great effect and musicality' (199):

> In the Montage from *Love Me Tonight* [1932], we hear sounds, which have been excellently recorded, carefully selected and then rhythmically edited together. We hear the use of rhythmic non-tonal sounds i.e. sweeping, used in conjunction with more tonal sounds i.e. the baby cry, which to my ears may even have been tuned for the purpose. It has certainly been cut to make a phrase shape. This demonstrates a use of musicality as well as a sense of film montage, the sound track being used as a score element but using found sounds instead of conventional instruments (ibid.).

Mamoulian's musical use of sound then prefigures Schaeffer's contribution. It also reveals how film sound editing and design allowed for both the experimental and essentially musical application of synchronised sound very early on. It is perhaps worth noting that the idea of using synchronised audio solely as a tool for re-presenting the audio component of the onscreen visuals failed to find favour among several seminal early filmmakers. In 1928, practitioners such as Eisenstein, Pudovkin and Alexanderov drew up a statement in which they presented their case regarding the use of synchronized sound in film:

> The first experimental work with sound must be directed along the line of its distinct non-synchronisation with the visual images. And only such an attack will give the necessary palpability, which will later lead to the creation of an orchestral counterpoint of visual and aural images (Weis and Belton 1985: 84).

Other writers have also affirmed the idea that sound design shares a relatively intimate relationship with music. Marc Mancini details how sound specialists have been accustomed to applying musical methods and concepts in film sound. He includes examples of sound designers creating their work by playing them on keyboard to the images on screen, as well as the use of precise scoring methods, similar to those of music composition, ultimately highlighting a noted shift in the sound specialist's identity from technician to collaborative artist (1985, 361-367). Furthermore, Danijela Kulezic-Wilson strongly posits that 'sound effects can be designed with so much attention to their rhythmic and musical properties that they themselves become music: non-sentimental, non-domineering, non-illustrative, but strikingly effective and visceral' (2008: 130).

This Thesis

These reflections ultimately seem to point towards the idea that a kinship of real significance can be found between music and film sound design. This thesis is 'designed' to be an exploration of the various ways in which film music and foley sound design communicate and interact with one another. Through this exploration I aim to show how specifically foley sound design approximates the roles and functions of film music both individually as well as through interacting with non-diegetic film music.

Music/Sound Perception Matters

In order to fully address this subject, the issues related to the difficulty of perceiving sound as music require negotiating. Underwood mentions that film sound technicians and sound designers have often made use of ideas from *musique concrète* and *elektronische Musik* (2008: 203). Questions can therefore be asked about how we are to differentiate between sound design and music in film given the former's close relation with a tradition of composition within western art music that itself makes use of the recording and manipulation of environmental sounds.

Joanne Deemers addresses this through a discussion of the aesthetics of electronic music, in which she considers the notion of aesthetics as an instrument with which we understand art as art and therefore (in relation to electronic musics) music as music as opposed to any other sound event (2010: 10-11). She also mentions how western art, particularly 'traditional' classical music, tends to exist within a frame that is deeply tied to its aesthetics: in this case, elements such as sonata form, classical instrumentation, the concert hall and the standard western notation system all constitute western classical music's frame to which aesthetic appreciation of the music is connected (12). While some of his predecessors had made steps in the same direction, Schaeffer, through *musique concrète*, radically transformed the frame and aesthetics of concert music, ultimately challenging us as to hear 'every day', environmental sounds as 'sound objects' that come together to form music (ibid.).

Leigh Landy contributes to the conversation suggesting that the challenge in musically appreciating a form of electro-acoustic music such as *musique concrète* has much to do with

the difficulty of hearing environmental sounds outside of their codified existence within everyday life and the meanings they possess within that 'frame'. In addition, with regards to western classical traditions, music is understood within certain frames and doesn't participate within the frame of the 'everyday sonic experience' (2007: 1-3).

Various solutions to this situation have been put forward. Pierre Schaeffer himself, through an application of the concept of the 'acousmatic', suggested that listeners accept an invitation to listen beyond the everyday semantic identity of the given sounds in his works and focus in on the aural qualities and their interaction and development throughout the course of the work.[1] He referred to this as reduced listening (Wishart 1986: 41). Simon Emmerson formulated this practice as a way of using everyday sounds as 'aural discourse' (1986: 17-39). It is a view not shared by all makers of *musique concrète*, some of whom feel the need for the music to make full use of these sounds' access to the meanings that they carry in lived reality (that is, as mimetic discourse) (Deemers 2010: 12-13). It is perhaps through a combination of these two approaches that foley sound design is able to maintain its primary role as an acoustic signifier of the diegesis whilst moonlighting as a substitute for film music. Through an analysis of select Hollywood films renowned for their sound work, I will explore these and other concepts influencing the idea of sound design as a musical construction as well as the relationship sound design has with music composed for the film.

Chapter Breakdown

Whilst much has been written detailing the various ways in which foley sound can be used to communicate musically within a film, not much work has been done by way of classifying the particular conceptual and creative approaches of synchronising foley sound with the image track such that they are able to fulfill roles ordinarily maintained by film music. In this thesis I especially aim to identify and categorise with some specificity the methods and techniques with which foley sound is synchronised to, and sometimes against (that is, contrapuntally as defined by Eistenstein, Pudovkin and Alexandrov), the visuals in a film so as to allow them to satisfy the demands of the roles commonly associated with film music.

[1] Acousmatic music refers to music that is heard without the listener seeing the sources or causes of the sounds. Acousmatic music thus ruptures traditional notions of music reception (Emmerson and Smalley 2015: 3).

In the first and second chapters my attention will be centered on the capacity of regular foley effects to be used with musical significance in a film. By regular foley, I am referring specifically to the kind of effects that are tasked with the responsibility of fulfilling the acoustic requirements of the given diegetic context. These include sounds such as footsteps, bird song, wind and rain, and the like. Chapter one will focus on how these sounds operate in lieu of film music. In the case studies I address, the situation and setting in the scenes presented are 'designed' so as to provide diegetic audio materials that are able to satisfy both their primary role as foley as well as their 'metaphoric' functions more closely associated with music. In the second chapter, I will focus on how such sound effects function in 'harmony' and 'counterpoint' with film music in service of enhancing the way in which the narrative unfolds in a film.

In the third chapter I turn my attention to the manner in which fantastical diegetic material facilitates increased creativity in the foley sound design, which becomes a vehicle for greater symbolism and quasi-musical expression. In the final chapter, I pay closer attention to the use of the voice in film. I specifically focus on the voice as an aural object whose extra-lingual acoustic features allow for it to be used in roles commonly fulfilled by film music. As the foremost foley sound element entrusted with the responsibility of being the primary carrier of meaning, the voice in its various forms (speech, breath, timbral quality, and more) has the potential to add colour and depth to both a scene and the overall narrative of a film through the 'dialogue' and interaction occurring between its sonic characteristics and the onscreen visuals.

Is There A Soundtrack?

Michel Chion has famously claimed that there is no soundtrack, arguing that the sounds within a film have significance only in relation to the images presented and not to one another, and that there exists no frame by which the sounds in film can be contained so as to interpret their interrelationships in the same way that one would with the mise-en-scene (Altman, Jones and Tratoe 2000: 341). In his response, Altman justifies his opposition to Chion's viewpoint, arguing that the development of film sound practices over the years, in the interest of improving the quality of film sound production and editing, have sprouted from the need to negotiate the interactions between soundtrack elements indicating the importance

of inter-soundtrack relationships (ibid.). Through extensive analysis, he goes on to show that these relationships can affect meaning within the film.

Chion's supposition is more than pertinent to the parts of my discussion that specifically hone in on moments of interrelation between foley sound and music. Chapter two aims to take a closer look at the dynamics of this dispute in relation to filmic examples that feature pointed interactions between film sound design and film music. However, the very act of exploring the nature of the synergy between music and sound in film while placing particular emphasis on foley sound's ability to fulfil some of the requirements of the roles normally ascribed to film music strongly suggests that I am in agreement with Altman's observations. Alternatively, if there is no soundtrack, parts of this thesis could be easily rendered obsolete.

Nevertheless, my principle aim is not to comment directly on this matter but rather to conduct an investigation that would help to shed light on some of the key aspects of the debate. This is to say that by examining the extent of foley sound design's capacity to signify musically in film, as well as considering the characteristics of the resultant relationships it is able to forge with film music, I hope to draw further attention (in addition to the efforts of scholars such Underwood and Kulezic-Wilson) to the potential for film sound to play a role of greater significance within the composite soundtrack.

Take 1

Consider the presence of a light and hollow whistle of wind as one views a close-up shot of a man, the character named Lewylyn from *No Country for Old Men* (2007), hunting game in what at first appears to be a desert, seemingly on his own. Thereafter, the view changes to an extreme long shot confirming the suspected location as well as the lonely predicament Lewylyn faces. One interpretation is to say that this sonic ambience is natural and is to be expected in a windy desert. However, because of the man's potential vulnerability, the viewer cannot help but feel somewhat concerned for his safety, especially at the moment when he stumbles upon a scenario involving dead bloodied bodies strapped with heavy artillery fire-arms, a briefcase filled with money and a case of narcotic substances. Now the wind sounds take on a new meaning: The light and hollow whistle conveys a sense of fear and anxiety. The wind sound is now the manifestation of a haunting atmosphere that is visceral.

This example and many others like it in film soundtracks provide for us a 'sound' basis for a discussion and exploration of the capacity for foley sound – sounds that are designed for and deployed within films primarily for the purpose of representing the natural sound environment of the given filmic context – to transcend the borders of its ordinary use and begin to enter more consciously into the sphere of extra-diegetic commentary especially in the absence of music. As mentioned in the Title Sequence, the idea that foley operates in this manner has been considered by writers such as Mark Underwood, Danijela Kulezic-Wilson who advocate the need for film sound to advance its creative efforts through an integrated approach to the arrangement and construction of the soundtrack. Kulezic-Wilson points out that 'sound designs based on either diegetic or non-diegetic noises with the possible inclusion of musique concrète as well – offer more subtle and emotionally ambiguous soundscapes than the type of scores demanded by the mainstream' (2008: 130). Underwood however, shares more pointed insights regarding this understanding of how foley sounds could possibly function in the filmic landscape. He explores a particular technique that seems to result in the approximation of foley sound toward the role of extra-diegetic commentator.

It's Real out Here, or "Worldising"

> Any sound recorded in a space has a sonic signature composed of its own character plus that of the space it was recorded in and the distance away from the recording object. We as human

> beings are particularly attuned to this. Walter Murch famously described this relationship as akin to an audio 'smell'…. we instinctively know the environment from which a sound has come. Whether reverberant, full of echoes, dry, close, distant, all of these signifiers tell us very precisely where and what we are listening to, with all of its connotations (Underwood 2008: 204).

"Worldising", a term coined by multiple Academy Award winning film and sound editor Walter Murch, centres around transforming an individual sound into a holistic sound entity that bares greater significance than the individual sound itself and thus gives it the ability to signify beyond the role of 'basic fidelity' to realism. Simply put, the process involves playing back 'dry' sounds within specific environments and re-recording them within the environment in question so as to capture the natural reverberation as well as the other acoustic properties peculiar to that space (Underwood 2008: 206). This feature of modern sound design prompts Underwood to recognise, through an analysis of Ren Klyce's sound work in the film *Se7en* (1995), that the concept of the 'audio object' as such is something that comprises more than just the actual sound itself. Every aural dimension of the object communicates meaning into the film particularly in relation to the images against which the object has been juxtaposed (206-207). Foley sounds deployed in this manner have been transformed as such and potentially play a far more extended role within the film's soundtrack.

In this particular example, using this technique, Klyce goes about creating the sonic backdrop of a troubled city perceived from a tenement in which the protagonist, detective William Somerset regularly battles with insomnia, depression, frustration and cynicism about the dreadful state of the metropolis. His role as the person who goes around 'mopping up the mess' caused by communal apathy, poverty and criminal activity is a contributor to Somerset's mind-set, into which we are invited through the soundscape. Being elaborately composed of grungy garbage trucks bellowing in the middle of the night, late night domestic disputes, complex rain textures and the ever present howling of emergency service sirens, all of which are specially recorded within the relevant spaces so as to afford them the 'fragrance' of decaying urban life, the soundscape here established succeeds in evoking the sombre mood of the city presented to us in the film (Ex. 1 'Inner City Decay').

> Fincher wanted the textures of the tenements to feel oppressive. While he rarely had images of other people, he wanted the sound to convey this by feeling the neighbors upstairs arguing, and people in the alleyways…

> We hired some local actors in San Francisco, wrote some scene descriptions for them, and recorded them in various alleyways and locations. After editing the best takes together, I applied Lucier's technique and played back the takes in various rooms with acoustics that matched Fincher's images. I also experimented with moving the perspective of the microphone so that we would have a library of various 'distances' with which to edit (Klyce quoted in Albrechsten 2013).

One can imagine this technique would be adopted precisely to achieve greater fidelity to realism thus re-establishing the attainment of verisimilitude as the primary aim of the sound designer rather than foley sound performing any other type of extra-diegetic function. Klyce talks of his preference for the 'worldising' technique as the 'sound would be real authentic texture as opposed to a digital reverb effect' (Albrechsten 2013). This certainly applies in *Se7en* where the very mood and atmosphere of the city itself is meant to evoke the kind of emotional response we receive, that is, a city in a mess without hope plagued with an undeniable sense of moral and human decay.

Therefore, whilst foley is undoubtedly transformed by the 'worldising' technique, perhaps the question to consider in this case is whether or not the achieving of aural realism of the particular quality illustrated above can itself satisfy the requirements needed for it to function in an extra-diegetic manner as opposed to the suggestion that a transformation of the foley sound is that which renders it capable of affective functions. Put more simply, are natural sound environments, should they be as accurately portrayed as possible, able to function effectively in a role more suited to film music? Answering this question requires an understanding of the concept of the sound or aural object as developed within the music genre of *musique concrète* as discussed in the Title Sequence, and so I revisit some of the arguments presented there.[2]

[2] *Musique concrète* is a genre of experimental electro-acoustic music pioneered by Pierre Schaeffer that originally made use of recorded 'environmental' sounds to create, by arrangement and manipulation, composed pieces of music to be played through loudspeakers. *Elektronische Musik*, pioneered by Karlheinz Stockhausen, operates in a similar fashion; however, composers formulate and develop their own sonic material electronically as opposed to using pre-recorded environmental materials (Underwood, 2008: 198-202).

If Music is Sound, Why Can't Sound be Music?

In the Title Sequence I discussed the matter of our perception of sound and music in relation to the question of whether or not foley sound can be evaluated as having musical quality. There I considered genres of music such as *musique concrète* that drew out along with it the challenge of trying to establish a musical practice based on the use of 'non-musical' sounds. This challenge was met with the belief that environmental sounds contain within themselves the acoustic qualities necessary to produce a work that is both aurally stimulating and thus can stand as a legitimate work of music. The acknowledged founder of *musique concrète* Pierre Schaeffer believed that restricting our perception of environmental sounds to their timbral acoustic properties allows for the possibility of discerning musical characteristics within them. For Schaeffer, the capacity for these sounds, taken from everyday lived experience, to communicate meanings that belonged not to the realm of music was an obstacle to be overcome by this form of 'reduced' aural perception (Wishart, 1986: 41).

Building on from the above observations, I discussed both Leigh Landy's and Joanne Deemers' apparent validation of Schaefer's method by exploring the particular insights they raise regarding the way we hear everyday environmental sounds. Deemers addresses this issue regarding art, pointing out that aesthetic appreciation, as an instrument of identifying and evaluating art, is largely connected with frames of perception (2010: 10-11). Landy adds to the conversation by referring to the difficulty of hearing these sounds outside of their accepted codified contexts or frames whilst also mentioning the parallel reality that conventional 'musical' sound has always been catalogued as separate from everyday sounds (2007: 1-3).

I then noted that Schaeffer's approach as defined by his concept of reduced listening is but one among many, despite his seminal position within the genre of *musique concrète*. Many, including some of his disciples, advocate the notion that these particular characteristics of natural sounds need to be utilized due to the non-musical semiotic potential inherent within them. Therefore a proper consideration of the extra-musical significance they carry should be conducted (Deemers 2010: 12-13). These two disparate approaches to composing electro-acoustic music have been categorized by Simon Emmerson as aural discourse and mimetic discourse respectively (1986: 17-21).

The relevance of this debate to the issue of foley sound's capacity to perform roles ordinarily fulfilled by film music (such as the establishing of mood and atmosphere and the shaping of the narrative) is based on the nature of the relationship between *musique concrète* and film sound editing and design. As I also noted in the Title Sequence Underwood has pointed out the many similarities between film sound design and various genres of electroacoustic music such as *musique-concrète* (2008: 193-210). Walter Murch also makes mention of how as a ten year old he was struck by a *musique-concrète* piece composed by Schaeffer and Pierre Henry and the similarities between what he heard in the recording and the kind of work he had been doing; 'taking ordinary sounds and rhythmically arranging them on tape' (quoted in Ondaatje 2002: 7). Klyce tells of a similar experience that he had with a slightly different form of electroacoustic music, from which he drew the idea to use 'worldising' to recreate the acoustic effects of living within a congested tenement apartment. He speaks of his encounter with Alvin Lucier's "I'm Sitting in a Room" (1969) and mentions that the recording process Lucier used to create the piece inspired his decision to use the 'worldising' technique (Albrechsten 2013).

> What I liked about the Lucier piece was how Lucier's voice starts from a dry sound, then to sounding like it's in the next room, then down the hallway. Lucier played a dry recording of his voice in a room from one tape recorder, and re-recorded it to a second recorder, picking up the sound of the dry voice but with the acoustics of the room. I thought that this would be a perfect way to produce the sounds of the neighbors, as the sound would be a real/authentic texture (as apposed to a digital reverb effect) (Klyce quoted in Albrechsten 2013).

As a result, the issues reflected above are pertinent within film as well, as the barrier between what constitutes music and what constitutes sound editing and design becomes increasingly compromised (Underwood 2008: 193-210).

In the opening editorial of the journal *The Soundtrack* Stephen Deutsch makes reference to all sounds (including music) in film as belonging to two main categories: those that are literal and thus responsible for creating verisimilitude within the diegesis (that is, a primarily mimetic conception of sound), and those that are emotive and thus responsible for communicating to the listener-viewer what we are to feel about what we see. These latter sounds can use both mimetic and aural discourse in their function in varying ways (Deutsch 2007: 4). However, what is perhaps the most astute contribution comes from Christian Metz who posits that a difference exists between sound as an attribute of an object and sound as the given object in question (1985: 154).

Herein lies the basis for a thorough analysis of the functions of foley sounds and the capacity they may have to extend beyond the role of authenticating the filmic space. Foley sound converses primarily through mimesis as it poses as the environmental acoustic consequences of the visual representations we see and experience, hence posturing itself as the sonic attributes of the objects and circumstances in the diegetic space. However, in earnest, foley sounds, often being created and significantly processed and edited in post production, are to be understood by and large as sound objects themselves, bearing their own inherent attributes.

These attributes can include qualities such as timbre, spatial reverb, aural distance and perspective, texture and all other acoustic attributes that define the 'audio smell' of the sound (Murch 2007). In addition, the mimetic effect, together with the resulting symbolic language it introduces to the film, applies as another of the attributes which these sound objects can hold. The key word here is mimesis, the representation or imitation of what the reality might sound like. But the issue that cannot be avoided is that such an imitation remains the invention of the sound designer or editor, perhaps being guided by the desires of the director. So the idea of an accurately portrayed sound environment is a fallacy, as aural realism is never really achieved. What we may receive in a film, as a plausible occasion of 'real world' sound, is in fact an acoustic object designed to give us that very impression, operating at the service of a narrative process. Under this interpretation, worldising functions as one method of appropriating specifically the mimetic value of foley sound in order that it may fulfil this purpose.

In the following examples I will explore other ways in which foley sound as an object containing mimetic value can operate within film in the vain of film music.

"Yes Mr Reinhardt, Perfectly Clear": The Timbral Affect of Foley Sound

Consider a scene in the film *The Matrix* in which the protagonist Thomas Anderson or Neo finds himself facing disciplinary action on account of his late arrival to work that morning. My primary observation in terms of analysis is the seemingly curious choice of the sound designer Dane Davis to have it framed by window cleaning that takes place in the background (outside on Mr Reinhardt's office window). I have chosen to describe the scene

as being framed by the window cleaning on the basis that the sounds of the squeegees gliding across the windowpane surface distinctively define the mood and atmosphere in which we receive the action.

The framing that takes place is initiated by the opening moments of the scene in which the Company building is portrayed from a low angle. The soundtrack involves a Doppler shifting car hooter (signifying early morning traffic), leading into the sound of a squeegee being thudded onto the office window followed by an exaggerated version of its characteristic rubber-like spongy squeal. It is as the squeegee is applied to the window with an impressionable thud that the shot changes to a close up of the 'musical' instrument as it squeals foam off from the windowpane, raising the curtain on the interaction between Neo and Mr Reinhardt that follows. The volume of the squeegee sounds decrease as soon as we enter the office (as is to be expected), yet it is in its more reserved position from behind the window that the rubber squeals are effective as they continue to define the sequence as a whole (Ex 2 "Squeegee Music").

Sound quality or timbre is ultimately the mechanism by which these sound objects become more than just a framing tool for the scene. Timbre operates to establish the atmosphere: an atmosphere of ambiguity. This ambiguity occurs as a result of the juxtaposition of Mr Reinhardt's serious reprimand of Neo on account of his late coming and the wailing cries of the squeegee gliding against the surface of the office window. Through their distinctive character they function as a distraction from Mr Reinhardt's speech. It is possible to see evidence of this when Neo looks toward the window with a facial expression that, matched with the sounds, suggests he is awaiting the end of the uncomfortable occasion and his dismissal from the office, at which point a similar shot to that which occurred at the start of the sequence – of a squeegee being thudded against the glass and rubber-scraped across the surface – is shown (Ex 2 'Squeegee Music': 00:32). Attention is immediately removed from Mr Reinhardt and the content of his address.

Neo's facial posture also expresses a hint of frustration, which further suggests that he is in some way being made to humbly endure a form of torture against his will. Against this sentiment, the squeegees moving against the glass can also be said to emit sounds that resemble moaning and wailing, which therefore also become an embodiment of his supressed inner frustrations. Finally, consideration must also be given to the generally comical quality

of the squeegee sounds, particularly those that are high in pitch, which undercut and ridicule Mr Reinhardt's stern words of authority. Ultimately, then, a strong hint of sarcasm lingers in the air as the sound of Neo's interior dissent, made flesh in the whining of the squeegees on the window, steals away the attention of the audience from the dialogue to which it should be given; all this despite his firm outward show of obedience at the conclusion of the scene.

Never Get Out of the Boat: Foley Sound 'Commanding' the Scene

The scene in which Captain Willard and one of his soldiers named Chef roam through the jungle in search of mangos in Francis Ford Coppola's *Apocalypse Now* (1978) is perhaps one of the best displays of how intelligent and creative arrangement of foley sounds can both structure as well as emotionally guide a film scene. In fact it is through his use of sound to shape the scene that sound editor Walter Murch guides the audio-viewer[3] in terms of how to read the scene's mood and movement towards the climax, at which point a tiger that appears to have been stalking the pair makes an attempt to pounce on them. In particular, the incisive arrangement and deployment of timbre operates as a tool for structuring the scene at a subliminal level as the soundtrack transitions between and through different phases, working the sequence towards its climax. With these phases resembling sonic tapestries, the gradual shift occurring between them helps to partition the scene sequence with relative fluidity.

Illustrating this observation necessitates extensive analysis, which will require that I first undertake to provide an adequate description of both the relevant sound events that occur throughout the scene as well as the relevant visual material to which they are juxtaposed. This will then be followed by an analysis of the scene in relation to the descriptive information yielded by the former process. Though not dogmatically applicable, the scene appears to be made up of two parts. In the descriptive passage I will treat each part separately and then discuss the scene as a whole in the analysis, including the impact of the implied division of the scene into two parts.

<u>Part One – How Come They Call You Chef?</u>

The scene begins with a close proximity half body shot of Chef and Captain Willard as they trudge through the jungle in search of mangos (Ex 3 'Mango Search'). The primary element

[3] Michel Chion uses the term audio-viewer to describe a person who views a film. His use of the term is based on his notion that films are viewed and heard simultaneously (1994)

of the soundtrack is Chef's recounting of the story behind his nickname. Visually, the audio-viewer perceives, in addition to the two soldiers venturing through the jungle, out of focus, extreme close-up shots of jungle branches and large green leaves which impede our line of vision. Lying beneath the dialogue is a soundscape composed of a wide array of distinct hi-mid- to hi-frequency intermeshing forest sounds: a dense tapestry of squeaks, rustles, bleeps and buzzes. I refer to them as distinct because they can be clearly and individually perceived at this point suggesting that Murch assembled the overall texture piece-by-piece, buzz-by-buzz, squeak-by-squeak, sound object by sound object.

The camera angle then morphs slowly to a long shot of the two soldiers passing through an opening in the jungle (Ex 3 'Mango Search': 00:50). The approach to this shot is defined by a steady recession of the camera away from the soldiers resulting in a gradual increase of distance between camera and action. Evidence of this is reflected in how both the leaves and branches that previously crossed our line of vision phase out and how the camera angle changes to a full body shot of the soldiers as they climb over a massive tree root. As they continue, they eventually move through the clearing in the forest, which is presented to us through the aforementioned long shot. Aurally, the soundtrack mirrors the general outward withdrawal of the camera angle. As the recession begins, the jungle sound texture begins to wane. Eventually the dense forest soundscape echoes out, unveiling in its wake the shimmering sound of a cricket synonymous with the early evening tide.

The shot then moves into the passage through the opening in the jungle as the cricket buzz peters out into a soft hi-frequency hum. At this point, Chef briefly suspends his story, leaving the low-lying drone somewhat bare so that it pierces the air, yet "silently" so, thus assuming the role of perceived silence. Together with a large amount of reverb added to the overall sound mix, distant low rattles of either an explosion of some kind or a gun battle are lightly brushed on to the fairly blank canvas provided by the background drone. The close of this shot is brought about by a gesture assembled from the cackling and flapping sounds of birds launching into the sky, which echo off into the distance and simultaneously transition us into the following second half of the scene. It should perhaps be mentioned that in this part of the scene, a tangible tension embodied by the silence is introduced into the scene compelling us to feel concern for the safety of Chef and Willard.

Part Two – Is it Charlie?

There is a suggestion that we have come full circle in the subsequent shot as we encounter a replication of the audio-visual work that initiated the sequence (Ex 3 ‘Mango Search’ 01:04). Again a relatively full aural texture is matched with a close proximity half-body shot of Chef and Willard as Chef resumes his tale. However, this time they are immediately depicted walking away from the camera until they stop for Chef to relieve himself. The jungle soundscape, which is not as densely textured as before, in imitation begins to tail off somewhat sooner than on the first occasion. Evidently, there is a range of slight infractions to the various aural and visual patterns established in the first half of the scene, yet the basic ideas have been recapitulated as such. However, from here on the visuals no longer follow the patterns established before: Willard begins to sense danger and close-ups of his and Chef’s faces are used to depict his anxiety and alertness as well as establish a clear contrast between Chef and himself building up to the moment of the tiger’s pounce (Ex 3 ‘Mango Search’: 01:46-02:42).

The soundscape in comparison continues as it did before, progressively tailing off until it arrives at the soft hi-frequency drone mentioned earlier. Similar to before, Chef is reduced to silence, yet abruptly so on this occasion due to his realising the altered demeanour of his captain and the danger that is now potentially among them. In an extended period of ‘perceived’ silence (Chef’s nervous whisper not withstanding: “What is it? Charlie?”), against which we hear again the distant rattles of machine guns joined on this occasion by isolated and distinct micro-sonic insect buzzes and forest-sound inflections as well as a ‘noticeable’ crescendo of the high pitched hum, tension is reintroduced into the scene and augmented to boiling point (ibid.). Ultimately, a decrescendo of the hum, which falsely seeks to relieve us of our anxiety, is followed by a shock caused by the very loud roar bellowing from the pouncing tiger and the rattling of Willard’s machine gun, and this closes off the entire sequence as the viewer is launched into the ensuing aftermath.

Analysis

The two-part structure that unfolds over the course of the scene and the key differences that exist between them are pivotal to the scene’s success. In the first phase, the soundscape’s development over time is defined by the apparent intent to remain faithful to a ‘realistic’ representation of the diegesis. In order to adhere to this desire, the proximity between the

audience whose perspective is defined by the camera, and the action on screen would demand that the foley work adjust itself according to this point of relation. Therefore, the further we move away from the action, the more the texture should wane, become less distinct in terms of the clarity of different timbres and sounds and smoothen out into a general forest hum.

Conversely, in the second phase, the recession of the sound texture is not mirrored by a concomitant recession in the visuals. Visually the shots used are employed to effectively aid the story-telling process (for example, close-ups of Willard's face juxtaposed against close-ups of Chef's face so as to highlight the contrast between a focused captain and a vulnerable rookie). Therefore, the relationship between visuals and audio initially employed in the first phrase, seemingly at the service of environmental verisimilitude, has been severed in the second phase.

What is interesting to note about this disjuncture is that the repetition of the soundscape's initial form in the second phase, which as previously mentioned unfolds asynchronously in relation to the visuals, results in the soundscape moulding the entire sequence into the two-part structure that frames it: In both halves, we have a densely coloured forest texture that moves into a light and barely perceivable hi-frequency hum.[4] Furthermore, this apparent two part structuring of the scene by Walter Murch's aural editing also guides us as audio-viewers in our reading of the scene's emotional cues.

In the first phase, the long shot of the soldiers walking through the jungle combined with the high pitched hum and the reverb-filled eerie sounds of the distant machine guns impresses upon us an anxiety that stems from the apparent vulnerability of the characters. In the second phase, a variation of the same acoustic pattern is paired against shots of the soldiers' faces as they counter-stalk the tiger that lies in wait. On account of our lack of knowledge regarding the nature of the threat they face in addition to the dramatic increase of volume in the high frequency hum, the anxiety experienced prior is re-established and augmented to a point of climax. The high frequency hum is thus a narrative motif for apprehension and fearful uncertainty. Its first occurrence expressed the audio-viewer's apprehension regarding the safety of the soldiers, potentially foretelling of the fate that awaits them. On its second

[4] Sound image asynchrony refers to the film editing technique of juxtaposing sounds against a given image that do not directly correspond with it. Vsevolod Pudovkin argues in favour of establishing asynchronism as a principle in sound film (1929).

occurrence it confirms our fears as it builds up to the moment of encounter with the tiger. The soundscape thus guides viewer reception according to the aural codes and patterns set up within itself, determining the emotional responses of the viewer as well as ushering the movement of the scene to the occasion of the climax.

Rob Harrison suggests that the lack of synchrony between the visuals and the sound in the second half of the scene could be interpreted as a change of the 'point of audition' (2012).[5] This implies that what we hear in the first half is directly related to the positioning of the camera whereas in the second half our point of audition is altered such that we receive the aural perspective of one of the characters. This interpretation is plausible in that the waning of the aural texture made up of jungle sounds possibly symbolises either the increasing intensity of Captain Willard's sense of aural awareness as he blots out all other sounds apart from those made by the tiger, or the increasing intensity of Chef's anxiety progressively drowning out his hearing. However, this does not detract from my above observations regarding how the sound editing structures and emotionally frames the scene.

Foley Scoring as Music in *Apocalypse Now*

Kathryn Kalinak has recently endeavoured to summarise both the history and uses of music in film. Some of the functions of film music that she addresses include the creation of mood and the establishing of atmosphere, the shaping of narrative, the fashioning of emotional responses (at times even complex emotional responses), the unifying of sequences, the provision of rhythm and meter to a scene, and the encouraging of audience absorption into the film world (2010: 1-8). It is clear from the observations made above that the foley sound operating in the excerpt of *Apocalypse Now* that I analysed works not only to establish an environmental setting through providing the relevant acoustic backdrop, but also commands the scene structurally, determining its pace and rhythm as well as the emotional reception of the audience. Fulfilling these functions, foley sound displays the capacity to act in a manner that is significantly similar to Kalinak's assessment of how music can function in film.

What is also important to note about the forest scene in *Apocalypse Now* is the way in which visuals and sound co-structure each other. As has been illustrated, visuals together with the

[5] Point of audition refers to hearing a sound from the perspective of a particular character within the film. The manipulation of volume and reverb are normally used to create this effect (Altman 1992: 251).

diegetic demands shape the soundscape's unfolding in the first half of the scene. In the second half, the aural patterns set up in the first phase are repeated creating a two-part structure in the soundtrack through which it provides the framework for the scene. This is a crucial point to note about the foley sound, and how it may be considered to operate in the manner of music. K.J. Donnelly as well as David Neumeyer and James Buhler equally stress the importance of syntax and form in traditional western art music composition (2001: 2-3, 2001: 18). This notion is also applied by Simon Emmerson who comments on the different systems used by composers for the assembling and structuring of sound objects into electro-acoustic musical works (ibid.).

Emmerson proposes the concepts of abstract and abstracted syntax as two ways in which compositions can be structured. Abstract syntax refers to abstract systems of organisation imposed on to the sound objects; the imposition of serialist-like principles on newly created electronic sounds is an example of this. In comparison abstracted syntax refers to the organic assembling of the piece and its components based on the nature of the objects themselves; basing the form and organising principles on the nature of either the aural or semantic aspects found in the sound objects (1986: 17-39). Applying this conceptual framework to the excerpt from *Apocalypse Now* further implies the musical identity of the foley sounds, especially in relation to the second half where the aural activity, having already been syntactically defined by the images in the first half, and thus no longer sustaining a synchronous relationship with the visuals, hangs marginally above the diegetic frame, maintaining a vague suggestion of the natural environment as it subliminally fulfils the services often catered for by music.

Metaphoric Use of Sound

Throughout the course of this chapter I have attempted to show some of the ways in which foley sounds can extend beyond their customary role of faithfully representing the expected natural acoustic consequences of a diegetic setting in a film. At first, I consulted the technique of recording dry sounds within a given space in order to capture its unique resonances and aural characteristics and the manner in which sound designer Ren Klyce made use of this technique to augment the significance of the atmospheric foley sounds belonging to a congested tenement allowing them to speak with greater emphasis. I also visited a scene from *The Matrix* in which the timbre of foley objects works to control the mood and alter our perception of the action. Lastly I considered a scene in which the foley

sounds help to structure, mould and control the movement of a scene in addition to defining the characters' and audio-viewers' emotional responses.

In these ways foley sound appears to be able to reach beyond its primary scope and play a pivotal role in the narrativising of the film. What stands at the heart of this ability is the recognition of foley sound's fundamental nature: foley is primarily a discrete object bearing its own attributes, with which it is deployed to pose in lieu of the acoustic properties of the objects and scenarios represented in the diegesis. Foley sound mimes reality. It is, therefore, always disposed to being used in quasi-musical ways that aid in the telling of the story portrayed in the film.

Walter Murch expresses a similar idea in his essay "Stretching Sound to Help the Mind See" (2000). Reemphasizing the above observations on how sound and image are re-associated in film (as opposed to the common reading of sound as a kind of 'shadow' of the onscreen events), he insists that the relationships established between sound and image 'be stretched wherever possible' in the service of 'creating a purposeful and fruitful tension between onscreen information and what is kindled in the mind of the audio-viewer'. He describes this manner of editing and designing sound for film as 'metaphoric', recounting how each stretched association 'produces a metaphor that seems at first to be an error before later revealing a deeper truth about the thing named and our relation to it' (ibid.).

In an interview entitled "Sound Doctrine" conducted by Michael Jarrett, Murch illustrates how conceiving of film sound in this way led him to craft the sound work in the central scene of the film *The Godfather* (1972), in which Michael Corleone commits his first murders and in so doing reaches a turning point in his life, having previously vowed never to involve himself in his father's 'illicit business affairs' (2000: 8). He refers to Francis Ford Coppola's desire to not have music score the main action so as to 'not dilute the effect'. Accepting that they could both sense that something was absent from the scene, they turned to the metaphoric use of a sound.

> I always try to be metaphoric as much as I can and not to be literal. When you're presented with something that doesn't quite resolve on a normal level, that's what makes the audience go deeper. Again, that train screech in Godfather is a good example. It doesn't make any sense from what you're looking at. You haven't been shown a train anywhere in the neighborhood. The loud-ness with which you hear it is too loud. Even if you were in a restaurant right under an elevated train, it wouldn't be quite that loud. So the audience is presented with a

> discontinuity. They're looking at very still images, close-ups of people talking in a foreign language, and yet they're hearing something completely different. That forces them to say, "What is that? What could that be?" Again, not consciously but subconsciously. And, as a result, they come up with a feeling about Michael's state of mind, and then they re-project that feeling onto his face (ibid.).

It is worth highlighting that the director's initial decision to leave out regular film music created a chasm, providing asynchronous foley sound with the opportunity to extend beyond its normal range and express itself metaphorically. Therefore, understanding foley sound under this rubric of metaphorical use provides us with the tools to consider other ways in which foley sound can perform the acoustic roles often associated with music.

In the previous chapter I explored how the capacity for foley sounds to operate within film in a similar fashion to film music is quite substantial. Furthermore, traditional film music could perhaps be considered as a convenient supplementary (and even unnecessary?) filmic device amidst the previously detailed extended functions and qualities of the foley soundscape. In such a case it seems appropriate to dedicate a chapter to the question of whether or not these two sonic elements are able to co-function within a soundtrack so as to enhance the narrative processes of a film. In fact, an analysis of these sorts of relationships could shed further light on foley sound's capacity to participate as an extra-diegetic commentator. Evidence of this is presented to us in two short scenes from the films *The Godfather part II* (1974) and a film I have already discussed, *The Matrix* (1999).[6]

The theme of reality against false reality, particularly that which is related to the idea of 'dream-space' or 'dream-reality', is continually explored in the early stages of *The Matrix*. Consequently, sound begins to play an important role in the interaction between these two spheres of diegesis. The most telling example of how sound literally plays a pivotal role in the tension that is constantly hinted at between 'dream-space' and reality is presented in the scene during which Trinity and Neo converse for the first time in a night club. As can be expected, diegetic music in the form of rave-based electronic dance music more than populates the soundscape so as to accurately portray the diegetic surroundings. Just as Trinity completes her message to Neo (an important discourse within the narrative development of the film) a distinct electronic buzzing begins to crescendo from beneath the melee of other electronic buzzes and poundings that form the diegetic musical soundscape of the nightclub. Despite the distinction that can be discerned, this sound object, at first listening, presents itself as being a part of the diegetic environment due to its 'timbral kinship' to the musical material as well as the adherence of its iterations to the meter and rhythm of the club music (Ex 4 'Wake Up Neo': 00:53).

However, as it rises in dynamic level, it becomes more distinct from the music. In addition, the substantial amount of reverb applied to this buzzing sound decreases over time at a rate

[6] Seminal literature on *The Matrix* includes the work of Whittington (2007) and Buskin (1998), as well as the transcript to a seminar given by the film's sound designer Dane Davis (2013).

parallel to the growth in its dynamic level. As Trinity's words linger in the air for Neo to ponder, the crescendo reaches a climax at which point the diegetic scenario suddenly switches from the scene in the night club to a shot of Neo's morning alarm clock buzzing away and in so doing wrenching him out of both the supposed 'dream' and his bed. This interplay between filmic devices suggests that the buzzing was never a part of the music. Instead the implication is that the buzzing sound emanated from the alarm clock bellowing from within the depths of his mind and thus rising in disturbing prominence as it brought him closer to full consciousness (Ex 4 'Wake up Neo': 00:56).

More can be said about this brief moment of interaction between sound and music, however what is driven home successfully in this moment is the case for the successful co-operation between music and foley in a film. This particular example specifically addresses the phenomenon of what I call 'timbral kinship' that can occur between the two components of the soundtrack thus giving each element a doorway into the workings of the other. The buzzing sound in question on account of its ability to fit easily into the world of electronic dance music bequeaths to the 'real world' and its associated foley sound object the clock, due to give Neo a rude awakening, penetrative access into his supposed dream through a kind of aural camouflage allowing it to pass off as a part of the musical surroundings, imitating an effect that we ourselves experience often in being vigorously woken from within a dream.

In so doing however it inversely allows the diegetic music of the nightclub a similar level of access to Neo's 'real world'. As the morning scene suddenly snaps into focus, it does so in accordance with the rhythm and meter of the buzzing which in turn is operating with the rhythm and meter of the music from the nightclub. In addition, by virtue of the alarm buzzing in sympathy with the music of the 'dream space', the suggestion is made that the recollection of all that happened within the dream including the conversation shared between Neo and Trinity continues to linger (or pound) within Neo's head as he drags himself out of bed. The pounding nature of the buzzing having originated from within the dream carries along with it the above mentioned memories from the dream that eventually impact the subsequent course of events in Neo's life.

For the sake of clarity it must be noted that the scene in the nightclub is not a dream per say despite it being presented as such. For it is also plausible to consider it as a moment that occurred on the night prior to his being roused in the morning by the alarm clock. Despite this

alternative reading, the alarm clock buzz sustains its function as a drawbridge between the two scenes through the bi-mutation of its identity.

In Francis Ford Copolla's *Godfather part II*, we have another, yet very different, example of foley sound's cooperation with film music. A scene depicting the killing of a man by asphyxiation is scored with great nuance, especially with regards to the interactive relationship between the foley sound elements and the music fitted to the screen. As the victim steps out onto a balcony, dark, weighty music with a strong throbbing pulse and a low register pedal point pervades the soundtrack. Suddenly an assassin moves in from behind the victim, proceeding to strangle him with a foreign object, at which point an eerie melody cries out against the murder. Perhaps due to the assassin's expertise, the expected sounds of struggle are suppressed. Instead, wailing out against the musical backdrop are the oscillations of a siren of an emergency services vehicle, the last of which extends out in an expressive moan approaching a dramatic crest before easing off and resolving as the victim's final efforts of resistance are overcome (Ex 5 'Assassination'). In addition, the low register rhythmic throbbing has also subsided into sparsely positioned stabs, allowing the low pedal point to accompany the siren for the most part. At the resolution of the final oscillation which marks the cessation of the wailing, the sound of a motor vehicle screeching to a halt rings out providing this particular aural 'phrase' with a cadential close. Just at this point, the theme that echoed out at the inception of the assassination is reiterated and the dark musical backdrop recovers its dense throbbing impetus (Ex 5 'Assassination': 00:35).

It is easy to notice that the homicide being depicted is the focus of the scene. This is signalled implicitly by the positioning of the ominous melody on either side of the action as well as the significant sound events that punctuate the scene as the murder is being committed. Consider how the music's cessation in rhythmic drive allows the siren the space to perform its role as both a signifier of hope for the victim and an instrument of dramatic anxiety caused by the apparent likelihood that the ambulance or police vehicle in question will fail to arrive in time. Part of what helps it to operate in this way is the extension of the final oscillation, which gradually rises in pitch to a moment of tension before slowly withdrawing as it descends, guiding the scene towards its climax and resolution. Moreover, the sound of screeching tyres that closes off the sequence seems to halt not only the vehicle in question, but also the life of the victim. This scene, like that discussed for *The Matrix*, conveys the great effectiveness of music and foley sound's cooperation in a film soundtrack. In the rest of this chapter I will

consider various other examples in which this relationship is fashioned.

I make multiple references to Andy and Lana Wachowski's *The Matrix* (1999) in this chapter. Within the film, there are repeated scenes and moments in which the music and sound design encounter one another and infringe upon one another's space. Sound designer Dane Davis refers to his aim to have the "sound effects integrate seamlessly with the music" such that one "didn't notice when the score cues, or even source cues, were starting and stopping" (Droney 1999). Thus, *The Matrix* is a well-suited case study for this chapter. I will also be referring to the sound editing and mixing work of Walter Murch in the second instalment of *The Godfather* series as well as his contribution in the award-winning masterpiece *Apocalypse Now* as both films contain notable ways in which sound and music combine so as to influence the discussion around their interaction in film.

Co-operation

The idea of cooperation between elements of the foley and music in film was crucial to my foregoing discussion. By 'cooperation' I refer to the kind of collaboration between foley sound and music that occurs in such a way that the two entities retain their individual and perhaps more primary roles as foley representation and film music respectively. Despite this retention of original identity, the two sonic entities communicate with one another in the soundtrack so as to add to the effort of successfully delivering the narrative to the audience. I consider two particular ways in which 'soundtrack cooperation' might occur in film.

<u>Assimilation/Sync</u>

Walter Murch emphasises the importance of rhythm in effective storytelling and thus also emphasises the necessity of rhythm in effective film editing: a craft that hinges on good narration ("Walter Murch: On Editing"). Music therefore can assist in the editing process. It is often acknowledged that the adding of music to a sequence can bequeath to it a sense of pulse in addition to various layers of macro- and or micro-rhythmic definition (Kalinak 2010: 6). This sense of rhythm and meter is further 'amplified' on occasions where foley sounds are fitted and incorporated into the metrical pulse and rhythmic subdivisions of the music and thus 'cooperate' rhythmically with it. In such circumstances, the aligning of the foley sounds to these parameters results also in the aligning of the action portrayed. One consequence of

this may be that the film editing itself then aspires to correspond with the rhythm defined in the music-foley interaction. Scenes thus become integrated and coherent passages, which unfold the action in the narrative efficiently as well as guide and direct the scene to its relevant goals.

The scene from *The Matrix* in which Neo's muscles are being rebuilt and habilitated to the conditions of the 'real world' successfully illustrates this cinematic device. The primary focus of this sequence, which is presented to us as montage, is to condense the lengthy process of redeveloping Neo's muscles to within a short space of filmic time. Non-diegetic music (composed by Don Davis) is the cinematic device used to create this effect as is well within its capabilities (Kalinak 2010: 6). The music consists of a sombre melody carried by soprano voice and accompanied by sustained chords on orchestral horns and a string section in addition to ascending and then descending woodwind scalar passages. The sound of a Neo's heart 'beeping' through a heart-rate monitor provides us with an accurate sense of meter to which the music is synced. As a result, a clear metrical underlining is provided supplying rhythmic clarity to the scene. This sense of rhythm is enhanced by camera shot transitions and crossfades, which are mapped and plotted against the metrical divisions thereof.

In addition, the rhythmic coherence of the scene is consummated by sound designer Dane Davis' manipulation of two diegetic incidents whose repercussions are allowed to pierce through the blanket of music at the moment of their occurrence. It is perhaps no coincidence that these transpire at rhythmically opportune moments within the music. Firstly, Neo's body flinches towards what is both the end of the first quarter of the scene and the music's form. This jerking of Neo's body rings out with the clanging of various needles that are rooted in his flesh; a clanging that is further treated with delay and reverb allowing it to echo out in synchrony with the music well after it fulfils its diegetic purpose. It is also worth mentioning that this particular sound instance occurs towards the conclusion of a sub-section in the scene thus simultaneously punctuating the close of the first quarter and marking the commencement of the remainder of the scene (Ex 6 'de-Atrophy': 00:52-01:18); and thereby helping to delineate the scene's internal structure. Secondly, a shot of the same needles being gradually extracted from his body and subsequently dropped in a metal container, is positioned such that the sound of these needles landing in the container rings out in sympathy with both the meter of the music and consequently with the beeping heart-rate monitor. These sounds are also treated with delay and reverb allowing them similarly to echo out in synchrony with the

music (ibid.).

Considering the lengthy period of 'diegetic time' that this scene presumably covers, the largely fragmented nature of the process depicted and the random frequency at which the portrayed occasions would actually occur, the assumption of diegetic foley sound elements into the rhythm and meter of the music together with the synchronisation of the shot transitions to the pulse of the music work to unify the sequence as a whole. The disjointed components of the action depicted here are bonded together by the music's and foley's rhythm, which helps to package it into an integrated montage that successfully compresses the experience of a lengthy process into a short sequence.

The Matrix has enjoyed much appraisal on account of Davis' accomplishments in the soundtrack. However, much of the attention is focused on macro-scale sound effects and the innovative techniques used to 'concretise' the fictional contents of the film's setting. Such features include Davis' use of a Jacob's ladder[7] to produce the aural signature of the hovercraft named the Nebuchadnezzar (Davis 1999, Buskin 1998). These techniques and sound design moments in the film are indeed impressive, however it is also in the understated and nuanced moments, witnessed in the examples discussed above, that the sound design in *The Matrix* achieves it success.

Horizontal Juxtaposition

Cooperation through assimilation focuses on vertical and or simultaneous interactions between the foley and music elements of the soundtrack. However, music is also linear in its organisation, and so horizontal associations can also matter. In this vein, Gianluca Sergi, reflecting on a macro-scale form of film sound analysis, which he refers to as contextual analysis, identifies the need to pay attention to relationships and juxtapositions that occur both vertically or simultaneously as well as horizontally or sequentially in the soundtrack (2004: 145-155). In considering the question of cooperation between foley and music in film, sequential relationships therefore also require investigation.

[7] A Jacob's Ladder is scientific tool involving a high voltage climbing arc. An electric spark jumps between two parallel wires. The spark then "climbs" up the ladder. This lets off a particular sound which is used as explained above by sound designer Dane Davis (http://wonders.physics.wisc.edu/jacob-s-ladder.htm: last accessed 03 January 2016).

In the previous chapter I discussed a scene from *Apocalypse Now* in which the gradual dissolving of an aural texture composed from rain forest foley sounds created an overall contrast between two distinct sonic phases in the sequence with each phase conditioning audience response in a particular way. This gradual shift from one phase to the other was shown to be instrumental in directing the scene and guiding the audience systematically through the various sub-phases towards the climax of the sequence. In this particular case, the gradual unfolding of horizontal relationships is central to the success of the sound editing.

Effectual manipulation of a linear relationship between foley and music is well articulated by Walter Murch in *The Godfather part II*. To set the scene of one such example: Early in the film, Michael Corleone enters his bedroom, undoes his tie and prepares to join his wife, Kay, in bed. As they share a conversation about their son, a light-hearted and somewhat romantic arrangement of one of the core thematic melodies of *The Godfather* film series pervades the soundtrack. However, as the scene progresses, the music seems to wane slightly, both in terms of the fullness of orchestration and volume. Just then, Kay remarks at the peculiarity of the open window drapes (which should supposedly be closed). She points this out to Michael just as a rumble of thunder announces the impending arrival of a 'storm'. Somewhat curious, Michael turns to the open window drapes, surveys the situation and in a moment of sudden realisation drops to the ground as a hail of bullets rampage their way through the room.

During the fracas that ensues, Michael crawls to the other end of the bed where his wife lies and drags her down to the floor until the end of the 'gunfire storm'. A few seconds later the shooting ceases all at once leaving a haunting silence in its wake, fused with the sounds of broken window shards crumbling to the ground and dogs barking in the distance. The bedroom, having been previously lit, is left in darkness as Michael checks on the condition of his wife. Both it seems are unscathed, yet both are none the less rattled (Ex 7 'Open Drapes').

This excerpt makes use of a kind of 'snap-contrast' technique. Unlike the scene from *Apocalypse Now* mentioned above, a gradual shift between phases is abandoned for a sudden snap-like transition. We can identify therefore three distinct phases that make up the scene: the exposition, the attack or 'hit' on Michael and Kay and the immediate aftermath of the shooting. The crucial transition occurs between the first two phases. Music sets up the scene in the beginning painting it with sentiments of the everyday joys of marriage and family life. The topic of conversation affirms the atmosphere: an illustration drawn by the couple's eldest

child. But familiarity with the first instalment of *The Godfather* series would suggest that the moment at which Kay notices an abnormality in the room is a subtle yet crucial pivot point.

In the first *Godfather* film an attempt on the life of Vito Corleone (Michael's father) is made on the very day that his driver and bodyguard (Paulie) suddenly decides to take sick leave (00:43:00–00:43:44). Departures from the norm in Sicilian mafia life often precede a deadly attack, it would seem. Consequently, at the very moment that Kay questions the orientation of the drapes, the music begins to decline in density and volume as a gentle flute melody supported by soft orchestral accompaniment is left hanging over the scene before being joined by a rumble of thunder. On this occasion, the combination of dialogue, music and foley alters the atmosphere of the scene, which suddenly takes on a hint of ambiguity, and in so doing creates a notable sense of apprehension for the audio-viewer (Ex 7 'Open Drapes': 00:40).

Once Michael is aware of the encroaching danger and ducks to save his life, the music suddenly ceases and we are treated to an aural barrage of window shattering machinegun-fire. Having been set up by the music to expect a fairly comfy and somewhat intimate encounter between Michael and Kay, the extreme quality of the foley sounds deployed to suddenly interrupt their privacy creates the experience of severe narrative deception. It can also be said that this '*subito'* sonic transition establishes a connection between the audio-viewer and the characters onscreen by way of effectively communicating the content of their emotions in the wake of the attack. The cold contrast between the warm, cosy mood established in the music – in collaboration with shots of Kay nestled comfortably in bed – and the coarse, frenzied mesh of cracking machine gunfire that follows abruptly spells out in frank terms the mixture of shock, fear and confusion that hovers over the couple (Ex 7 'Open Drapes').

In short, the nature of the sequential relationship between foley sound and non-diegetic music is instrumental in the success of the scene. The betrayal of narrative expectation established in the soundtrack between phases A and B defines the purpose of the sequence in that it poetically comments on the contradictions and tensions inherent within the lives of mafia men. Even when at home in their most intimate space, in which safety and security of family is expected, and in which they attempt to live out the façade of a comfortable and ordinary family existence, do the dark secrets of illicit business present themselves as a constant threat to their own lives and those of their loved ones. This particular extract is perhaps not a great

example of Walter Murch's trademark metaphoric use of sound better associated with the scene depicting the assassination of Sollozzo in the first instalment of *The Godfather* series (2000: 8). Rather it is through a simple execution of linear contrast between non-diegetic music communicating an atmosphere of love, peace, warmth and comfort and cacophonous diegetic foley sounds that abrasively interrupt the false dream with a cold dose of the deadly reality of mafia life that the sound design and editing successfully enhances the narration of the plot.

Blending

Between Fine Lines: Where the Twain Shall Meet

At this point I'd like to revert attention back to the excerpt from *The Matrix* discussed earlier and focus specifically on the delay and reverb effects applied to the needle sounds. These alterations made to the sound objects in question slightly obscure the implied mimetic references, to an extent extracting the sounds from out of the diegesis and positioning the sound objects in the liminal region between narrative space and extra-narrative space. Together with their subsequent cooperation with the rhythmic subdivisions of the underscore, this attenuation of their aural qualities further assimilates them into the music that permeates the scene, so much so that one could potentially identify them as musical components moonlighting in a mimetic capacity as foley sound.

This particular type of relationship between foley sound and music in film, which I refer to as "blend" or "sonic composite", lies at the heart of the matter as it directly confronts the issue of distinguishing between foley and music in film. Perhaps the best example of this manner of sound deployment in a film is portrayed yet again by Walter Murch in *Apocalypse Now.* In the film, the visual and sonic presence of helicopters plays a crucial role in the establishment of a war setting in Vietnam. Their role as depicted is to symbolise the terror of the American army and the destructive potential of its arsenal of weapons. They are the modern 'cavalry' of the American forces occupying Vietnam (Sragow 2000). Apart from their overbearing and cacophonous presence in the first half of the film, the thematic significance of helicopter imagery and sounds is entrenched from the very outset of the film. The characteristic aural slice and flutter of chopper blades pressed against a black screen opens the film. Thereafter, these sounds proceed to accompany and 'cooperate' with the title music ("The end" (1971) as

performed by The Doors) during the opening montage.

The most telling use of sound, which indicates and emphasises the imperious authority of the helicopters, is presented through Murch's decision to have their near ceaseless chatter wed with non-diegetic music. In a scene depicting a fleet of helicopters progressing over expanses of jungle and ocean, the combined chorus of rotating blades bellows out through the air supplemented by ominous music founded upon a succession of dense low-register pedal points played on a synthesizer. This chatter is treated with significant amounts of distortion and phasing and is also modified potentially through pitch shifting resulting in a dark 'bassy' aural texture. The resultant texture is then 'smelted' into the low-register pedal points that underpin the music (Ex 8 'Hovering Threat': 00:30). The moulding of this sound object is such that it is unclear in this passage as to whether or not the modified helicopter sounds constitute foley representation or an augmentation of the music. Due to the lack of clarity the suggestion is made that the sonic composite in question fulfils both its duties by way of occupying the liminal between non-diegetic music and diegetic foley.

There is a noticeable significance in the decision to intimately fuse foley and music in this manner. This particular scene functions as a prelude to the violent destruction of a Vietnamese village that will occur in the following scene. Through relational mechanisms at play in the soundtrack the fleet of helicopters is specifically portrayed as a deadly force en route to executing a vicious attack. The music on its own is sufficient to establish the portentous sense of dread that permeates the brief passage. However, it is the marriage of foley and music that further enhances this effect. From the perspective of the occupants of the village down below, the sound of encroaching war helicopters equates to ominous music that tells of impending danger and strikes fear in their hearts. Through the blending of music and foley in this instance, we are briefly allowed to share in the emotional experience of the Vietnamese victims in relation to the helicopters prior to our witnessing of the attack. Again, the nuanced relationship between music and foley proves an efficient filmic device in aid of a successful relaying of the narrative.

Mise-en-Bande vs. Disparate sound objects

To this point this chapter has taken the form of an exploration of the different ways in which sound and music encounter one another in film. The basis of this exploration is the idea that the summation of these relationships constitutes an integral whole referred to as the *mise-en-*

bande, known also as the soundtrack (Altman, Jones and Tratoe 2000: 341). The term *mise-en-bande* is derived from the filmic term *mise-en-scene*, which refers to the positioning and subsequent inter-relationships between the various visual elements within the camera's frame.

As I touched on in the Title Sequence the theory of the *mise-en-bande* has met with stern opposition from film sound theorist Michel Chion, who contests that there is no such thing as *mise-en-bande* and therefore no such thing as a soundtrack. His contention is based on the principle that the *mise-en-scene* exists on account of the presence of the frame, which defines the interrelationships between the visual elements within it (Altman, Jones and Tratoe 2000: 341). But the same cannot be said about the soundtrack. In having no frame within which the disparate sound instances can be contained, the sound instances can therefore only form relationships with the visual elements on screen and not with each other. In response, Altman argues that the development of film sound practices over the years, in the interest of improving the quality of film sound production and editing, has sprouted from the need to negotiate the interactions between soundtrack elements thus indicating the importance and validity of these relationships and the potential inherant within them for the implementation of creative and nuanced ideas in the editing and designing of a film's sonic component (ibid.). Like Altman, my analyses have attempted to show that these relationships significantly impact meaning within the film.

Opposing 'Blending'

Jim Buhler suggests that Chion's view was probably provoked by propositions from writers such as Noel Burch who himself argued for a unified soundtrack. Unlike Altman, Burch argues in favour of the development of a sound design model, in which affinities between sound design and music are exploited so as to service likeness and cohesion between the two soundtrack elements (2001: 53). Buhler rejects this suggestion citing that moving towards a soundtrack in which the disparate elements are indistinguishable does away with the possibility of forging these elements into a productive tension that benefits the soundtrack and thus the film (54). Read in this way, the concepts of cooperation and blend which I pursued earlier come under scrutiny. It can be argued that the positive tension between aural elements is maintained in instances of sonic cooperation. However, blend approaches more closely Burch's notion of a unified soundtrack, and it is perhaps appropriate to revisit this

technique in relation to Chion's and Buhler's contentions.

The merging of foley and music in the helicopter scene from *Apocalypse Now* is perhaps the best example of the exploitation of affinities between sound and music. Given the low register rumbling flutter of rotating helicopter blades, the opportunity to join the aural object with the bass notes of the non-diegetic music was clearly seized by Walter Murch and put to use in this passage. The question to pose is whether or not this merger retains a positive tension between foley and music that would benefit the soundtrack as opposed to compromising the efficacy of the foley sounds and the music by conflating the two?

In answering this it is useful to note first, that the sequence as a whole is largely dominated by the music thus positioning the foley sound as a subordinate aural component. The helicopter sounds can therefore be legitimately adjudged as a feature employed to enhance the music, giving the music marginal access to the diegetic world through the semantic value of the chopper foley that becomes part of it. Second, the interpretation put forward earlier regarding the elevation of the helicopter sounds from within the diegesis into the liminal space between these two filmic regions, allowing them to play an extended role within the film as an aural signifier for military might, also maintains validity. As a result, despite the fusion between both aural objects they retain enough of their identity so as to communicate their respective meanings and adequately fulfill their respective functions – that is, they oppose a complete blending – and in so doing enhance the overall efficacy of the soundtrack in the passage.

It can even be argued that the marrying of these two elements allows the tension to be highlighted as it scrutinises the relationship between the helicopter foley sound and the non-diegetic music. Should conventional sound editing and design practices have been used such a relationship would most probably have passed unnoticed and tension would therefore not be the word to describe their interaction (and perhaps interaction itself would be an inappropriate characterisation of their relationship).

A Complex State of Affairs

Given the analyses presented in the previous section Buhler's observations raise important questions about the nature and role of foley and music in film respectively. Whilst moments

of intimate union between these two components of the sountrack can prove effective in the development of the narrative, a certain level of jest and interplay between them can also amount to a successful result. Among the most frequently cited scenes from *The Matrix* is the massive gun battle in the lobby of a building, in which Morpheus is being held captive, between Neo and Trinity and a host of security forces. The scene stands out on account of the approach adopted by Davis in constructing the sound design. Given its contents, it is assumed that the foley component of the soundtrack would consist of a great barrage of gunfire. But under the creative direction of the Wachowski brothers whose interests were focused more on 'peaks and valleys', Davis and his team adopted an alternative and more abstract approach to creating the sound design.

> As soon as the audience would expect something, such as the guards to keep shooting, we'd pull way back on the gunfire and just go with the sound of the bullet flying past from Neo's perspective. That means it doesn't play at all in a literal way, but it's still really exciting. Similarly, a lot of times we'd insert the reverse sounds of guns being shot because it worked great with the music. It made the beat more intense and punchy, even though it had no literal meaning, and we'd also put in off-screen gunshots because they were interesting in a musical way. In fact, the producer, Joel Silver, is known for liking things louder, but he loved the poetic approach so much that even he said, "Hey, go more abstract". Coming from Joel that was terrific, and it was a license for joyous insanity (Buskin 1998).

As a result, Davis was allowed to explore various ways of relating foley and music in the scene. On occasion, timbral blending is deployed as is mentioned by Davis who refers to the insertion of reverse gunshot sounds on account of their 'timbral kinship' with elements found in the music (ibid.). However for most of the scene, sound and music interact in an intricate form of cooperation. At various points the music and foley rhythmically correspond while, at other moments, a cooperative ebb and flow between the two sound components takes place resulting in a kind of aural 'ballet' (Ex 9 'Gun Ballet'):

> "We had to find a way to make the pulse of the source song come through," Davis says. "It had been cut extremely carefully to fit the scene by Zig Gron, the source music editor, working with score editor Laurie Eschler. I had to dance around that music, and in some places it meant not hearing the guns-they're just part of the fabric of it. We'd let that particular downbeat come in, let that particular bass guitar riff establish itself, and then the guns would come back in. A lot of times it's not literal at all. We tried to play the characters' mental perspective of all the sound events in the scene. In this case, it's as if the song was pumping the characters up to their actions." (Droney 1999).

Buhler's suggestion that a positive tension be preserved between sound and music in film is well demonstrated in Davis' work in this scene. The actual blending of sound design and music occurs seldom and as such plays a subtler role in aiding the telling of the brief story

presented in the scene. Instead, for the most part remaining distinguishable from one another, foley and music engage in a vibrant yet intricate and tense dance that drives and guides the scene in its purpose and direction thus giving weight to Buhler's reflections.

Conclusion

In this chapter I explored various ways in which film music and foley sound design can interact in the interest of assisting the effective narration of a film's story. First, I explored the rhythmic synchronisation of foley sound events with non-diegetic music and the effectiveness of this technique in integrating the disparate aspects of a scene. Second I considered the efficacy that stylistically arranged linear relationships between music and foley can have in making poetic reference to the screen action. Last, I scrutinsed the contentious practice of the merging of foley and music in film through the manipulation of affinities that exist between them. In so doing I examined the potential that this technique has to enhance further the narrative processes in a film as well as the opposition to the use of this technique on account of the danger that it poses to the integrity and function of the soundtrack. To this end I considered an example in which a more complex relationship between foley and music is used to score the scene.

Due to the creative potential as yet uncovered in both ways of approaching the relationship between foley sound and film music, I assume that this debate will continue for some time. That said, it does bring me somewhat conveniently to the next chapter and the question of how foley sound design and music work within the genres of science fiction, horror and animation. These genres deal extensively with the creation of what I refer to as 'imagined foley', which on account of the creative processes used to create this form of foley sound, further scrutinises the relationship between film music and sound design.

In the previous chapters I discussed the various ways in which ordinary foley sounds can be amplified in purpose within film so as to communicate at the level of film music. First I discussed the potential inherent within foley sounds to operate with poetic significance particularly in the absence of film music. Guided by Walter Murch's concept of the 'metaphoric use of sound' I analysed scenes in which foley-sound functions not only to fulfil the sonic-environmental requirements of the cinematic reality presented but also exceeds this mandate: emotively charging the scene or, in addition, assisting in the structuring and framing of a sequence.

I then considered several ways in which foley and film music cooperate to further enhance the level of nuance and complexity within the soundtrack, which in turn augments its efficacy in terms of its role as a narrative agent within the film. A distinctive significance can be given to the intimate interaction between music and foley sound to facilitate a relationship between the diegetic and non-diegetic plains of the film. By inhabiting the liminal space that lies between diegesis and extra-diegesis, the sound compound formed by a blending of non-diegetic music and foley sounds is able to operate at an even higher 'pitch' of meaning than either isolated foley sound objects or film music on their own. Existing at once both inside and outside of the diegesis, foley-music compounds of this nature allow the aural signature of the objects they sonically represent to speak with the kind of allegorical expression most associated with the underscore. By their presence in the diegesis they possess direct links with the onscreen action and thus prove far more effective in aiding the narration of the film then underscore music alone.

As alluded to at the beginning of the thesis, the power of film sound design can be traced to the constructed nature of the soundtrack. Although reality in film, as represented in the sounds we perceive, amongst other elements, is itself a construct. It is this constructed or 'cinematic reality' (as referred to by William Whittington and Ben Winters) that avails the potential for audio storytelling as we have already seen (2008: 96; 2010: 225-230). But this potential is all the more 'amplified' when the diegetic context calls for the creation and use of relatively intangible sonorities as foley sound effects.

Whittington points out that the rise and development of sound design in film owes much to the particular freedom availed to sound designers and editors by the genre of science fiction to creatively engage with filmic material (2007: 5).[8] This freedom is facilitated by the imaginary and fantasia-like quality of the diegetic framework, often constituted by substances and physical circumstances that exist outside the confines of our everyday experience (8). Foley sounds, as they are deployed in films that present audiences with alternate times and worlds, are thus often approached from the perspective of invention calling for the application of abstract aural materials that by their very nature open themselves up to extra-foley significance within a film. In this chapter I will engage with the topic of how (predominantly) science fiction films provide a platform for foley sounds to extend beyond their remit as agents of aural verisimilitude and in so doing ascend in their semantic role so as to approximate, if not fully satisfy, the varying functions of film music. As a prelude to this discussion I attend to Whittington's use of the term 'expressionism' as it relates to the practice of sound design in film; for, through expressionism, the aim of a given sound object is centred on visceral impact as opposed to diegetic accuracy.

Expressionism

Towards the beginning of William Friedkin's *The Exorcist* (1973), an old and beleaguered archaeologist Father Merrin strolls wearily through a bustling market place in a North African town. As he absent-mindedly heads through the claustrophobic corridors of the bazaar he narrowly escapes being run over by a horse carriage. Thereafter he wanders off into the silence of the desert and arrives upon a site of ruins. It is then that a gust of wind rapidly picks up around him accompanied by a band of screeching violins, which enter the fray just as a long shot of a beastly statue is shown darkened by its own shadow obscuring his view of the setting sun (Ex 10 'Dog Fight'). The protagonist proceeds to ascend a small heap of ancient rubble where he meets the 'graven image' carved out in malice, face to face. At once, two dogs – one white, one black – begin to engage in fierce battle on an adjacent hill. As he turns his attention back to the statue, whose horrific countenance we now see in full detail, the low and deep, bloodthirsty grunts and growls emanating from the skirmish between the dogs begin to mutate in aural character (Ex 10 'Dog Fight': 00:45).

[8] Throughout this chapter I make extensive reference to Whittington as there is very little detailed interpretive analyses of a narratological type of sound design's functioning in these film genres.

Treated heavily with various kinds of audio processing, the gnashing sounds of the battle soon become a wash of abrasive low register growling. As such the function of these sounds is changed in so much as they begin to assume the role of 'narrative commentator', weighing in on the old man's encounter with the statue. In commenting on this scene, Whittington indicates that the scuffle between the dogs is meant to metaphorically express the battle between good and evil in which Fr. Merrin will participate later in the film as an exorcist (2007: 135). This metaphoric reference is linked to the old man's encounter with the demonic image through the foley sounds now operating as a quasi-musical element. As such, they connote the ferocious quality of the bout that is to ensue and the ominous outcome that is likely to result from the encounter (135).

The musical material rendered by the violins is fundamental to the scene's success. The high-pitched rapid screeching represents one approach to western art music composition that developed during the twentieth century: the consideration of music as raw sound. Under this rubric, music is free to evoke impressions and abstractions and thus create meaning through the visceral immediacy of sound (Underwood 2008: 196). In a similar way, sound in general also experiences emancipation through the cultivation of its own ability to 'conjure' meaning in various ways (194). The example here presented thus demonstrates this coming together of 'music that aims to exploit the true, physically experiential totality of sound' (d'Escrivan 2007: 1) and foley sounds that are fashioned to semantically influence the interpretation of the scene. The searing textural quality of the high-pitched screeching violins facilitates the incorporation of the similarly disturbing granular lattice of barking and grunting into the realm of film music. Together they form an abstract sound mesh that saturates the scene in fear and dread.

The analysis of this scene as presented above stands as a notable exemplification of what Whittington refers to as the expressive application of foley sounds and music often used in the genre of horror films. He asserts that the deployment of sound and music in this manner is often fashioned to create a visceral experience charged with a significant degree of emotional intensity. The soundtrack is therefore often composed with the intention of aggressively impacting the audience resulting in an increased emphasis on the conceptual use of sound and music in genres that accommodate the expressionist application of foley (2007: 130). Remarking on this particular approach to using music in horror films, Neil Lerner agrees with Whittington on this matter:

> Stylistically, music in horror films tended to allow greater freedom for composers to experiment with harmony and instrumentation. It may be regarded as a commonplace of twentieth-century history that film music absorbed some of the practices of aesthetic modernism from the concert hall, and that in particular the genre of the horror film turned to unresolved dissonance, atonality and timbral experimentation as part of its characteristic stylistic qualities. Frightening images and ideas can be made more intense when accompanied with frightening musical sounds, and music in horror film frequently makes us feel threatened and uncomfortable through its sudden stinger chords and other shock effects (2010: ix).

This approach to the construction of the soundtrack opens up numerous possibilities for the interaction of foley sound and music. Sonic material designed to affectively impact the audience with 'tangible' aggression easily occupies the mantle of film music given the functions of film music discussed in the first chapter. Furthermore, non-diegetic music fashioned to influence filmgoers through aural materiality is able to intermingle with the foley thus collaborating with it in successfully aiding the narration of the film.

It is however, important to note that this 'conceptual' and expressionist use of sound and music does not belong solely to the horror film. Whittington emphasises that after Ridley Scott's *Alien* (1979) science fiction cinema embarked on a journey through the 'darkest recesses of space' highlighting how this particular film facilitated the coming together of science fiction and horror whilst overseeing the process of cross-pollination between the two genres (2008: 129). As such the kinship between science fiction and horror, established well before the release of *Alien* in films such as *The Thing* (1951) and *Invasion of the Body Snatchers* (1956), was revived and endowed with a renewed vigour thereby 'expanding the codes and conventions of science fiction cinema' (ibid.). The subsequent use of expressionism in the approach to sound design in science fiction is a feature thus inherited from its close relationship with the genre of horror in Scott's film:

> Traditional science fiction sound effects for spacecraft engines, computers and androids became infused with horrific emotions – dis-ease, shock and terror. Even the most mundane of sound elements such as wind, footsteps and body movement (and disembowelment) became charged with meaning, emphasis and status. Ultimately, the film's unprecedented sonic constructions offered new image-sound relations as a means of rethinking sound suture and spectacle, which extended the parameters and possibilities of the sound design model (Whittington 2008: 130).

Invented Foley

Expressionistic sound editing therefore plays an important role in enabling foley sounds to function in a similar way to film music. It also mediates the relational gap between non-diegetic film music and foley sounds and in so doing facilitates their interrelation thus resulting in a cohesive effort that fulfils the narrative duties of traditional film music. While the genres of horror and science fiction are perhaps most adept at implementing this approach to foley sound design, they do not hold any kind of monopoly over it. As I showed in previous chapters, both *Apocalypse Now* (1979) and *The Godfather* (1972) contain examples in which the editing and mixing of everyday sound effects closely resembles foley expressionism. Certainly the loud screeching train sound that dominates the soundtrack as Michael contemplates committing his first murders qualifies as an example of emotionally applied foley (01:22:26–01:25:44).

However the proficiency of a genre such as science fiction in effectively using this technique resides in the sizeable amount of flexibility that is made available to filmmakers to define the rules that govern the diegetic framework of the film thus opening up the same freedom to sound editors and designers. In other words on account of the fictitious and relatively foreign worlds and realities encountered in a typical science fiction adventure, the task of sound editing and design is allowed the creative license that accompanies the practice of 'inventing' 'never heard before' abstract sonic materials devised to stand in as foley sound effects. These aural materials are very often crafted and moulded from everyday sounds using innovative methods of sound capture and manipulation thus transforming their natural sonic character into intricate sound objects, each one heavily laden with the potential to function in lieu of musical sound within film (Whittington 2007: 95).

Julio d'Escrivan's concept of 'reverse engineering' sheds further light on the practice of making sound effects for film and the value of invention for the practice:

> The sound designer must 'reverse engineer' a sound 'source' from a visual image. They must work backwards by trying to imagine how a given image should sound. This process of imaginary listening consists of listening in advance of the actual sound being perceived. They see the means of production (the image on screen) and have to imagine, browsing and recombining their memories of sound, what it could sound like (2007: 3).

The emphasis placed by d'Escrivan on imaginative and creative processes are most effective in the event that the conceptual and diegetic framework of the film and consequently the

sound track remains open to a variety of possibilities. David Sonnenschein encourages this kind of openness in creating 'unique' sound effects particularly in relation to creating foley sounds for animation:

> Experimentation is the key here, so don't be closed to the potential of some unexpected sound you may create. As Gary Rydstrom was seeking fire sounds for *Backdraft* while blow torching a metal pipe, he discovered eerie musical singing sounds. He comments, "There is no excuse for having a mental or creative block in sound. You can just go out and collect things in the real world – They make the sound, not you" (2001: 58).

Neo's interrogation at the hands of agents in *The Matrix* (1999) presents us with an insightful example of the semantic capability of invented foley. The scene begins with an exchange of words between Agent Smith and Neo. Smith is attempting to solicit Neo's help in tracking down and apprehending Morpheus. In a tone of obstinate sarcasm Neo refuses and demands to be allowed his constitutional right: a phone call. It is at that moment that Smith challenges Neo in relation to his request: "Tell me Mr. Anderson, what good is a phone call if you're unable to speak" (Ex 11 'Interrogation': 03:10). Soon thereafter, Neo realises that he is in fact unable to mouth a single syllable. Eventually his lips are brought together against his will and his mouth begins to seal shut (Ex 11 'Interrogation': 03:25). By this point a dissonant texture of music comprising a tapestry of orchestral timbres performing minute interlocking phrases and gestures has entered the fray and begins to increase in intensity. The music's function is clear in so far as it paints the scene in a shade of foreboding. Through its visceral quality the music literally crawls down one's spine creating a tangible sense of anxiety over the pressing inevitability of Neo's fate.

Eventually, after making a futile effort to resist being apprehended, Neo has his shirt torn open and is wrestled on to the table. Here the music suddenly reduces in mass and volume to a soft low register trembling on the piano and punctuating timpani rolls (Ex 11 'Interrogation': 03:46). Smith then declares to Neo that the latter has no choice but to cede his cooperation, and then proceeds to remove what we eventually understand to be an advanced tracking device from his own (Smith's) pocket. Upon being activated, the device gives off a medium high shimmering buzz and subsequently morphs into a prawn-come-scorpion shaped semi-mechanical insect equipped with wild elongated feelers (Ex 11 'Interrogation': 04:00). With Neo pinned half naked to the table and unable to defend himself, Smith releases the animated tracking device on to Neo's abdomen. It then quickly

proceeds to thrust its feelers down Neo's navel and thereafter slowly force itself into his body amidst the desperately horrified yet muted screams emanating from his skin-sealed mouth (Ex 11 'Interrogation': 04:00-04:24)

Sonically speaking, as the tracking device undergoes its metamorphosis a deeply unnerving sound perceivable as a rapidly congealing semi-metallic strain of sludge accompanies its swift transmutation (Ex 11 'Interrogation': 03:58). Once the mini-monster breaks free, its foley component breaks into a two-part aural compound. The first sound feature can be identified as high frequency infinitesimal chattering. The second branch of sound is composed of violent whipping and slashing which is loosely synchronised to the rapid movement of its feelers (ibid.). Once the bug is placed on Neo, every feeler that it sends down his navel and attaches to his umbilical innards is accompanied by the slashing sound (Ex 11 'Interrogation': 04:12). Again the visceral power of this particular sound effect's palpable materiality successfully translates Neo's experience to us as we unwillingly empathetically experience his pain. It is also important to note that upon the bug being emancipated from its slimy cocoon, the full range and intensity of the scored music is restored as the chaotic mass of both high and low orchestral sounds assist the foley sounds to re-establish a penetrating sense of fear and dread.

In collaboration with the visuals, the high register chattering further affirms the tracking device's characterisation as an insect or an arachnid. Shivers are intended to be sent down the audio-viewers' spines as we anticipate Neo's impending misfortune of having the biomechanical device released onto his bare skin. As such the sound associated with the device is implemented so as to awaken our own fears of having either a spider or scorpion move about with free reign on our bodies. The sounds of slashing and whipping are also effective in this regard. It must be acknowledged that there is an incompatibility between the image portrayed and the sound object to which it is paired. Given the device's association with arachnids and insects, its violent whipping sounds lie outside of audience expectation in relation to the visuals presented.

Whittington stresses the importance of avoiding the creation of ruptures in the audio-visual relationship (2007: 99). He notes that despite the handsome degree of creative licence that the sound designer has in constructing these particular sound effects, maintaining the credibility

of the audio-visual pairing remains a priority on account of the natural hesitation in belief between reality and fantasy experienced by film goers (98):

> For a sound designer, engaging the science fiction genre is a matter of careful attentiveness to recording and production techniques, spatial concerns, the history of sound effects and genre convention. For these reasons, ghosts continue to moan, thunderstorms whip and wrap around us and computers go on crunching data in audible whistles and chirps. Sound and image construction is often a balance between an established representation and abstraction (99).

The whipping sounds emanating from the tracking bug therefore jeopardise the integrity of the audio-visual match due to the audience's lack of familiarity with a creature of that nature and the whipping sounds juxtaposed against its image. In the same way that the sound of a contemporary car placed in synchronisation with a futuristic vehicle may be perceived as being incompatible and possibly a function of parody (ibid.), the whipping sounds in this scene could easily be read as an over-exaggeration. Nonetheless, their contribution to the audience's reading of the film remains influential in enhancing the sense of fear generated by the hi-frequency chattering. They are particularly effective in so far as they provoke within viewers the fear of extreme violence against the naked flesh. The association between these sounds and the act of scourging is instrumental to their function as an emotive signifier in this scene.

Finally it is also worth noting that the image of the device thrusting its oblong shaped body through Neo's navel whilst he is forcefully pinned half naked to a table undoubtedly symbolises rape and or other bodily violations of a sexual nature. Violent encroachment of the body is a trope of horror films (and by extension, horror-science fiction films as well). It is customary within the genre to apply visual and sonic excesses to incite terror and severe apprehension within the audience particularly in relation to the representation of the human body and its defilement: 'In this spectacle of sonic and visual excess there is also a visceral connection between filmgoers and the character. The image-sound relations get beneath our skin' (Whittington 2007: 140-141).

In summary, the visual and acoustic elements at play in this scene work cohesively to incite tremendous unease surrounding bodily incursion on three levels of meaning. First we are horrified by the thought of a venomous arachnid crawling with free reign over our body. We then suffer significant discomfort at the prospect of being subjected to the agonising violence

of a scourging. Finally we are made to sympathise with Neo as we experience the revulsion and 'horror' of quasi-sexual violation at the hands of a detestable biomechanical organism.

This is made possible on account of the freedom availed to sound designer Dane Davis to craft a multifaceted aural object with the capacity to signify on multiple levels of meaning. Guided by the general associations conjured by the visual presentation of the tracking device, Davis was able to piece together sonic fragments from the recesses of his aural memories and thus derive an acoustic composite that would strike fear into the hearts of the audio-viewer. As such the musical capacity of invented foley sounds is fully exemplified.

> In space fantasy the work becomes much more abstract. Your imagination can take much greater leaps. You are not limited by what people are expecting. Sound in fantasy can function somewhat like music. You can decide what emotional reaction you want to create (Ben Burt quoted in Whittington 2007: 107).[9]

Anchorage

Earlier I mentioned that invented foley sound materials are often derived and fashioned from everyday environmental sounds through various recording techniques as well as post-production audio processing. Typically speaking these everyday sounds act as an aid in creating credibility for the sound effect (Whittington 2007: 104). Whittington provides further insight into the effectiveness of using everyday environmental sounds referred to as real world 'anchors':

> Although these sounds are manipulated through electronic means, they are not generated electronically and thus maintain their complex character in terms of dynamic range and texture variation (ibid.).

He further asserts that the efficacy of aural anchors depends greatly on the suitability of the audio-visual pairing (ibid.). Various 'physical and auditory' factors are to be taken into consideration so as to arrive at the appropriate sound-image coupling (105).

Acoustic anchors are also able to characterise the meaning and function of the given sound effect within the relevant filmic context. Sound designer Richard King speaks of the

[9] Ben Burt is an academy award winning sound designer most renowned for his work on George Lucas' *Star Wars* (1977-present) franchise.

challenge of creating foley sound effects that would adequately represent the sound of an entire Parisian neighbourhood rising up and folding over onto itself in Christopher Nolan's *Inception* (2010). He refers to this diegetic scenario as 'something we've never seen or heard before' thus opening up a vast range of auditory possibilities (Jackson 2010). King notes:

> It could be a very sci-fi, synth-y, smooth sound. The shot could totally rely upon music. It could be very frightening or awe-inspiring. Chris' direction was that he wanted it to sound like massive machinery, like a huge watch mechanism – again, using a relatable sound for an image we've never seen (quoted in Jackson 2010).

He continues:

> Imagine a machine that would be massive enough to move a city like that. That's the sound that I tried to make… What you hear in the film is composed of all kinds of different sounds: it's big metal groans and giant, heavy machinery moving, pivoting, clattering. I tried to create a little (sound) suite that would progress as the city rises and folds over (ibid.).

One of the central themes that runs through *Inception* is the distinction between reality and fantasy. The ability to distinguish between what is real and what belongs to a dream is of grave importance to the characters in the film (Ex 12 'Parisian Construction'). Therefore, the metallic sonority of the industrial machines presumably responsible for the neighbourhood's reconfiguration underlines the point that the dream world is fundamentally engineered and constructed. Evidently the choice of anchor(s) for this particular passage of foley sound is able to express meanings that are well beyond the remit of standard non-diegetic music.

Perhaps the most interesting use of the semantic influence given by an acoustic anchor occurs in *The Matrix* (1999) in which Neo is compelled on several occasions to negotiate being shot at by agents. The principle scene in which this occurs happens on the rooftop of a skyline where Neo is left defenceless against an agent who proceeds to shoot directly at him. In order to showcase the speed of Neo's movements as he dodges each bullet one by one, time, as we ordinarily perceive it, is slowed down and with it the pace of Neo's movements as well as the pace of the bullets. Visually, we are treated to a spectacle in which each bullet leaves a ray of ripples in its wake as it glides serenely through the air. The sound design contributes immensely to the success of this scene as the movement of each bullet is accompanied by the unmistakable sounds of jet engines firing up and aeroplanes taking off.

Based on the extraordinary idea of matching aeroplane sounds with objects as miniscule as bullets, it might at first seem that the audio-visual pairing could presumably cause a rupture in the credibility of the diegetic scenario. On the contrary, this particular combination is successful as the ferocious sound of the aeroplanes effectively expresses the undeniable power and intensity of the bullets precisely through the sound of the violent swishes of the surrounding air, which combine beautifully with the ripples created by the bullets as they pierce through the atmosphere (Ex 13 'Dodge Bullets'). Sound designer Dane Davis remarks further on the creative decisions behind the sound work in this scene:

> …we aren't scientists – and neither are the directors – so we could break all the rules. But one of the fun things was doing the sound of these bullets flying around in "bullet time". And I thought just for fun I would take this one "bullet time" sequence… All of these bullets are made up of slowed down jets and rockets and airplanes and ricochets and bullet-bys, and there's some diesel trucks going by that have been sped up and all kinds of sounds like that just to give this raw sense of massive, massive dangerous power of these little bullets going through space, to basically make us all completely in awe that this guy Neo can actually move around and manipulate time – he could move around and dodge bullets but they still had to feel dangerous. If you slowed things down as much as they looked it would just be this "wwwwra wwwwra wwwwra" thing, and it couldn't be that, so we had to keep kind of a full range to the sounds to keep it piercing and painful and all that stuff (2013).

Ultimately, both the examples from *The Matrix* and *Inception* show the telling significance of the 'added value' made available by the symbolic worth of everyday environmental sounds, which through their associative meanings are able to more than accommodate the connotative demands of film music whilst simultaneously adding depth and dimension to invented foley sound effects.[10]

Conclusion

Throughout the course of this chapter, guided extensively by Whittington's reflections, I explored examples in which the concept of "cinematic reality" allowed for the kind of diegetic flexibility that promotes greater creativity in the application of foley sounds to a film. I addressed a scene from the film *The Exorcist* in which the application of foley and music is levelled at registering visceral impact upon audio-viewers thus enhancing foley sound's ability to signify quasi-musically in addition to facilitating intimate cohesion between foley sound and music. I then proceeded to discuss how the creation of unique sound

[10] Added value is term used by Michel Chion which refers to the way in which sounds and images are able to influence each other when synchronised together in film (1994: 5).

effects for the sake of using them as foley sound for invented diegetic objects and scenarios more commonly found in science fiction and horror films provides space for sound designers to knead degrees of nuance into the semantic value of such sounds. One of the ways in which they are able to do so is by the careful selection of real world anchors that contribute both their aural features as well as their associated real world semantic value to the resultant sound object.

What is clear from the analyses presented in this chapter is that the nature of diegetic reality within the medium of film allows for creative opportunities to be taken advantage of in the service of the effective and nuanced narrating of a film. This is shown particularly in the area of foley sound design where the malleable boundaries of acoustic cinematic reality are often bent to allow sounds to resonate like ‘music in the extra-diegetic air’.

> Just as a mother awakes when the distant crying of her child disturbs the normal sound environment of the night, in the torrent of sounds our attention fastens first onto this other *us* that is the voice of another. Call this *vococentrism* if you will. Human listening is naturally vococentrist, and so is the talking cinema by and large (Chion 1999: 6).

My investigation of the deployment of foley sounds that assume musical capacities within film has brought me to an analytical consideration of what could be conceived of as the 'soloist' of the soundtrack: the voice. As Michel Chion alludes in the epigraph, the voice plays a fundamental role in sound film. However its significance in the history of cinema harkens back to the 'silent' era. In the introductory chapter of his treatment of the voice in cinema, Chion explains how prior to the breakthrough sound film, *The Jazz Singer* of 1927, the labels 'silent' or 'mute' cinema were non-existent. Instead they were applied retrospectively to the films that preceded the advent of synchronised sound (1999: 7). However, both terms fail to adequately describe the nature of these 'voiceless' films. For they were neither silent nor mute given that they were accompanied by various forms of sound accompaniment such as music and live commentary, whilst also featuring characters that engaged in robust although unheard conversation (8). In light of these observations, Chion provides his own label, namely Deaf Cinema, pointing out the reality that the disability belonged to the spectators who were 'deaf' to the sounds present in the film's diegesis. But despite this forced disability the 'spectators could not avoid hearing voices – the voices that resonate in their own imagination':

> Voices in silent film, because they are implied, are dreamed voices. Garbo in the silent era had as many voices as all of her admirers individually conferred on her. The talkie limited her to one, her own (ibid.).

Despite therefore not belonging to an era of film that catered for the transmission of synchronous sound, films of the 'silent' era were nonetheless impacted by the significance of the voice. Just as our eyes tend to gravitate toward faces on the screen so too do our ears gravitate to voices in the soundtrack (Chion 1999: 6). 'Everything is mobilised implicitly to take heed of this other us', that is, the voice. And as such it 'commands and orders all the

other elements of the soundtrack around it' (ibid.).[11] Therefore a comprehensive discussion about the quasi-musical functioning of foley sound design should also entail an analysis of the voice as an aural object whose extra-lingual acoustic features allow for it to be used in roles commonly fulfilled by film music. As the foremost sound element entrusted with the responsibility of being the primary carrier of meaning, the voice in its various forms (speech, breath, timbral quality, and more) is able to bring colour and depth to both a scene and the overall narrative of a film through the 'dialogue' and interaction occurring between its sonic characteristics and the onscreen visuals.

In order to render an adequate analysis of the voice and its functions within the cinematic framework, a few reflections on the voice as an existential entity are in need. Philosopher Mladen Dolar provides crucial insight on what the voice is and how it works. Similar to Chion and Wishart, he stresses the centrality of the voice to human living and how it occupies the prime position so far as the hierarchical arrangement of our discernment of sounds is concerned. Dolar argues that this is largely attributable to 'the voice's inner relationship to meaning' (2006: 14). As a 'bearer of utterance' or 'the support of a word', the voice's place of privilege within the range of human aural perception relates directly to our keen sensitivity to sounds that effectively and 'intimately' 'mean' (ibid.).

Whilst dutifully fulfilling the role articulated above, however, the voice itself is not often considered as an active participant in the meaning conveyed. This is to say that the voice is but 'a vessel by and in which the voyage toward meaning is made. Upon the shores of significance the vessel is abandoned for it is no longer necessary' (15). This separation of the voice and the significance it communicates, I argue, assists in an analysis and understanding of the music-like functions the voice could play in film. Separated from the conventional code of signification, the voice is able to operate at the level of a 'sound object'. Understood in this way, the voice gains a greater capacity to elicit connotations that assist in the efficient telling of the film's story.

That said, my attention will not be exclusively turned toward the aural value of the voice as a 'sound object', which is to say in terms of its aural characteristics. There are various other

[11] Trevor Wishart states that due to its unique formant structure as well as its ability to produce a rapid stream of timbrally disjunct entities, the human voice is distinctly recognisable even when subjected to high levels of audio processing (1986: 50).

ways in which the voice is able be used within film so as to signify at the level of film music. In this chapter I will address Chion's reflections on the acousmatic presentation of the voice; that is when the voice is heard within a film without the corresponding onscreen depiction of its source. Referring to this technique as the '*acousmêtre'*, he moves to show how making use of the voice in this manner opens up a range of possibilities that allow it to communicate aurally with the onscreen materials so aiding and enhancing the development of the film's plot. I will also pay brief attention to Dolar's thoughts on those particular vocal sounds that are by nature 'extra-linguistic' yet nonetheless bear the ability to suggest an array of meanings depending on the audio-visual relationships established between these sounds and the images with which they are positioned. The focus of this chapter and the analyses therein therefore is to address and begin to investigate some of the various factors that assist the voice in its capacity as a sound object to fulfil roles more typically suited to the manner in which music operates in film.

'Acousmetric' Voices

In this section I briefly discuss the positioning of the voice in a film's diegesis as an instrument that strengthens the efficacy of the narrative processes of the film. To this end I analytically engage with Walter Murch's design and editing work in Francis Ford Coppola's *The Conversation* (1974). Michel Chion's notion of the acousmetric voice within film forms the theoretical core that informs my analysis, and hence his theory of the filmic *acousmêtre* requires brief unpacking.[12]

Chion's notion is based on the manner in which a film is able to present to the audience the voice of a character who is 'present' in the diegesis yet is absent from the screen. This lack of relationship between the images we see and the sounds we hear creates the acousmetric voice or the *acousmêtre* (1999:18). There are various types of this phenomenon such as the visualised *acousmêtre* (whose body has already been seen) and the complete *acousmêtre* (whose body is yet to be seen) and consequently each affects the film in a different way (21). However, generally speaking the acousmetric voice always occupies a particular position in relation to the diegesis of a film: 'that is neither inside nor outside', 'wandering along the

[12] Chion's notion of the acousmetric voice is related to the idea of the acousmatic voice. The word 'acousmatic' refers to the *akusmatikoi*, pupils of Pythagoras who, so that they might better concentrate on his teachings, were required to sit in absolute silence while they listened to their master speak, hidden from view behind a screen (Emmerson and Smalley).

surface' and 'seeking a place to settle' (23). It is from this position that the *acousmêtre* is able to make use of unique powers to influence the other characters in the film (ibid.).

The powers of the *acousmêtre* as discussed by Chion include ubiquity, panopticism, omniscience and omnipotence (24). Each of these is associated with the voice that cannot be seen, for if we cannot localise the voice to a source, in particular, a body, it remains free to roam without physical restriction as though emanating from 'everywhere' (ibid.). At the same time, the *acousmêtre*'s absence from our visual field allows it the advantage of being able to see and hear everything. This is to say that our experience of a voice whose body 'I' am unable to see is not so much that they can see everything but that they are able to see 'me' (25).

My use of this concept of the *acousmêtre* in probing the implementation of the voice in *The Conversation* is delimited to a consideration of the *acousmêtre* in its most basic sense: the 'already seen' off screen voice. The development of *The Conversation*'s plot hinges on how Harry Caul interprets a conversation that is at first presented to us live, yet aurally filtered through his recording devices. Due to difficulties encountered during the recording process Harry's first assignment is to clean up the recording before presenting it to his client. It is then that he discovers information on the recording that could potentially lead to murder. The outcome of the film depends on whether or not he is able to derail the seemingly inevitable conclusion of which he feels he would be liable as an aid should he choose to turn a blind eye.

The film presents to us a reversal of de-acousmatisation. Throughout the plot's development, the conversation undergoes a slow and gradual metamorphosis as it transitions from being presented live and on screen to functioning as an acousmetric voice. The film opens with the conversation being recorded in a public square, substantial portions of which are indiscernible (00:00). Thereafter we accompany Harry as he attempts to restore the integrity of the recordings and recover the missing details. At this point the conversation is heard through the medium of a tape recorder. In becoming disembodied, the voices in the conversation are transformed from regular dialogue into *acousmêtres*. From this vantage point, they begin to exercise their respective powers.

The conversation is being held by a young couple who appear to be having an affair. As the narrative unfolds, it becomes clear that the young lady (Amy) is somehow romantically involved with the director of a large corporation who is at the same time Harry's employer. During the process of improving the audio quality of the tapes Harry is able to uncover an important phrase spoken by the man (Mark) from beneath the incessant drumming of percussive music: "He'd *kill* us if he had the chance" (39:04). This information ignites his conscience and deters him from returning the tapes to his employer as he becomes increasingly obsessed with the conversation and its contents due to a growing concern for the safety of the couple. It is also worth noting that in the aftermath of a previous audio-surveillance assignment conducted by Harry, the wife and children of one of his targets were brutally murdered. Guilt and regret are thus influential contributors to Harry's fixation with the tapes and the consequences that lie in wait should he submit them to the director.

This is illustrated when he is unable to detach himself from listening to the recording again despite being seduced by Meredith; the woman sent to seduce Harry so as to retrieve the tapes from his possession. In this scene he calls particular attention to Amy's voice and the manner in which she speaks (Ex 14 'The Way She Says'). In so doing he makes lucid the extent to which he feels sympathy for her. In particular, through referencing her manner of speech, emphasis is placed on the aural quality of the disembodied voice. Speaking with a soft, gentle and smooth tone of voice in the mid to high registers, she is able to give off the perception of innocence. Furthermore she shapes her phrases in a way that imitates the speech patterns of a young girl thus reinforcing the interpretation of child-like innocence. This is especially explicated when she sympathises with a beggar lying asleep on a park bench:

> …he was once somebody's baby boy and he had a mother and father who loved him and now there he is half dead on a park bench and where are his mother and his father and all his uncles now? (Ex 14 'The Way She Says': 00:49).

Through her choice of words and intonation, Amy's acousmetric voice is able to unhinge Harry's emotional resistance thus drawing both sympathy and guilt from him. Dolar comments thus on the (non-musical) sense of vocal intonation:

> Intonation is another way in which we can be aware of the voice, for the particular tone of the voice, its particular melody and modulation, its cadence and inflection, can decide the meaning. Intonation can turn the meaning of a sentence upside down; it can transform it into

> its opposite. A slight note of irony and a serious meaning comes tumbling down; a note of distress, and a joke will backfire (2006: 21).

This intonational aspect of speech is foregrounded when our access to denotative significance is impeded and, as aptly described by Dolar, its capacity to either amplify or subvert linguistic meaning can be further 'translated' into the capacity to signify 'beyond language'.

Having discussed Amy's voice's aural qualities, it must be emphasised that a fundamental component of the way in which it works lies in its acousmetric identity. Mediated through the tape playback device, her voice is able to hover about Harry's dimly lit workshop as it echoes through the warehouse-like space, filling it with its presence and in so doing occupying both the workshop and Harry's mind (Ex 14 'The Way She Says': 01:10). We see this in how Meredith struggles to contend with Amy's voice as she drapes herself around him in an effort to steal his attention (Ex 14 'The Way She Says': 00:35). Despite her insistence that he 'feel nothing' about the tape and the conversation (which ought to have been nothing more than a job) Harry remains seized by it. Standing over the playback device he stares intently at it as though hoping to uncover more as Amy's sweet and innocuous voice gently echoes throughout the workshop (ibid.).

Meredith eventually manages to 'wrestle' Harry to bed. Despite this, Harry's enchantment with the tape is far from broken. As Meredith presents herself to him, Harry remains disinterested staring aimlessly at the ceiling as though hypnotised while the pleasant sounds of Amy's voice continue to sound out in the aural backdrop (Ex 14 'The Way She Says': 00:35). At the same time, the audio-viewer is also caught up with the charm and sweetness of the *acousmêtre* as it allows us in this sense to identify with Harry as we too are drawn in by the gentle and mellow tones emanating from a potential murder victim. However it is the acousmetric nature of the voice in this regard that grants it the fullness of its efficacy. Released from the physical boundaries of its source it is free to roam about the space and fill it, acting as a substitute for non-diegetic music (of which there is none at this point) in so far as it directs our emotional response, compelling us to identify with Harry thus drawing empathy from us in much the same way that it does from him. Therefore in separating the voice from its source, one simultaneously opens up the possibility of using it to satisfy a role that is more typically given to non-diegetic music.

The 'Grain of the Voice'

Vocal timbre is one of the more primary aspects of the voice that allow its identity as a sound object to be highlighted suggesting its capacity to function as a quasi-musical signifier within film. Dolar refers to timbre as the 'fingerprint' of the voice identifiable as the distinct 'individual resonance, pitch and melody' belonging to a particular person:

> This fingerprint of the voice is something that does not contribute to meaning, nor can it be linguistically described, for its features are as a rule not linguistically relevant. They are the slight fluctuations and variations which do not violate the norm – rather, the norm itself cannot be implemented without some 'personal touch,' the slight trespassing which is the mark of individuality (2006: 22).

The question of vocal timbre's capacity (or incapacity) to communicate meaning as alluded to in the quote draws attention to Roland Barthes' celebrated article "The Grain of the Voice" (1977) in which he expresses his opposition to the conventional criteria for the aesthetic appreciation of the singing voice related to language and expression, and rather embraces the materiality or 'grain' of the voice, which he argues 'affects the listener in a personal and quasi-erotic way providing pleasure and escaping the semiotic and the social' (van Leeuwen 1999: 128). While at the same time acknowledging Barthes' vital contribution to this area of study Theo van Leeuwen challenges both his and Dolar's understanding regarding the inability for semiotic communication through the aural quality of the voice; that is its timbre or 'grain':

> Sound never just 'expresses' or 'represents', it always also, and at the same time, affects us. The two cannot and should not be separated and opposed to each other, especially not in the case of sound. There is always both the social and the personal, both meaning and pleasure – or displeasure (ibid.).

He goes on to discuss varying ways in which vocal timbre as well as speech sounds signify within a film. Using his observations as a point of departure, I explore in the analyses below a few examples in which the timbral quality of the voice is inimitably crafted and fashioned thus distinguishing it from other voices guiding attention to its 'grain' or aural qualities and therefore its identity as a sound object. As such the semantic value of its acoustic (as opposed to lingual) character is brought to the fore and enabled to engage with the images and narrative of the film in quasi-musical ways. Given the importance of the insight van Leeuwen

provides, I also make use of his catalogue of terms designed to help describe and discuss extra-lingual vocal sounds and their respective meanings at various points in my analyses.

The voice of HAL 9000 in Stanley Kubrick's *2001:A Space Odyssey* (1968) exemplifies this point. The voice is meant to belong to the computer entrusted with controlling and managing the faculties, components and systems of the spaceship. Having been constructed and programmed to function at a capacity level that approaches that of the human mind, it is lauded as the perfect computer bearing an impeccable failure record. As such it imitates human consciousness and is thus extended the privilege of having a 'voice'. The voice of HAL (performed by Douglas Rain whose voice is manipulated to sound robotic) has been the subject of much comment. Dolar refers to it as an example of the 'impersonal, mechanically produced voice, which always carries a touch of the uncanny' particularly on account of it being void of timbral definition or a 'human touch' (2006: 22). Marcelo Starr notes that in order to create HAL's particular way of speaking, Rain created speech patterns made up of 'slowly spoken, crisply enunciated words with deliberate pauses after each sentence' making HAL's voice 'robotic and peculiar, yet emotive' (2006: 68).

These descriptions of HAL's voice lend to 'his' character a particular insensitivity. The monotonous and systematic way of speaking he employs attributes to him a calm and passive demeanour, with which he silently and meticulously carries out the murders of three of the four astronauts on board the ship (Starr, 2006: 68). Thus it is through the distinctive aural quality of his voice – its timbre – that the unsettling and ominous sense of the 'uncanny' that surrounds HAL is mediated. So impactful was this specific depiction of the 'inhumane murderer' that Kevin Spacey adopts a glaringly similar 'timbre-less' and automated manner of speech (without electronic manipulation) in his performance as the psychopathic serial killer John Doe in David Fincher's *Se7en* (1995) (01:37:51). Anthony Hopkins also credits Rains' vocal performance as HAL as inspiration for his rendering of Hannibal Lecter in *The Silence of the Lambs* (1991) (Starr, 2006: 67). Admittedly, the success of Rains' vocal performance is equally attributable to Dolar's considerations on vocal intonation (the particular tone of the voice, its particular melody and modulation, its cadence and inflection). However, applying the definition of timbre as a particular 'sound' or 'aural quality', intonation in this instance operates in the service of the development of a cold and mechanical vocal timbre that seemingly never fails to unsettle audiences.

The voice of the demon from the film *The Exorcist* (1973) is a further example of the use of timbre to incite fear into the hearts of the audience. The voice, performed by Mercedes McCambridge, is multi-faceted and manifests in a number of aural guises through the film, sometimes all in one scene. When Fr. Damien Karras visits Regan MacNeil (the young girl possessed by the demon in the film) for the first time, he addresses her as 'Regan', to which the demon responds: 'I'm not Regan', in a soft and girl-like yet coarse and breathy voice (Ex 15 'Evil Voice': 00:55). As the conversation progresses the timbre of its voice changes to being relatively low pitched, gritty and hiss-filled as if it were the voice of a vicious chain-smoking old man (Ex 15 'Evil Voice': 00:45-01:11). When questioned in an interview about how McCambridge produced the voice of the demon, she referred to it as 'just bronchitis' recalling that she had developed the disease early in life and was able to use the varying hiss-filled breathy timbres at her disposal on account of her compromised health to voice the demon's character ("An Interview with Mercedes McCambridge"). William Friedkin, the director of the film, unveils more about how McCambridge was able to create the demon's voice:

> She worked for, maybe, three weeks doing the demon voice. She was chain-smoking, swallowing raw eggs, getting me to tie her to a chair – all these painful things just to produce the sound of that demon in torment. And as she did it, the most curious things would happen in her throat. Double and triple sounds would emerge at once, wheezing sounds, very much akin to what you can imagine a person inhabited by various demons would sound like. It was pure inspiration (in Bergman, 2004).

It is clear that McCambridge made use of timbre in her performance of the voice of the demon in a very different way to Douglas Rains' villainous offering. Whilst HAL created unease through cold and mechanistic speech patterns, the demon is frightening precisely for the opposite reason. An unnerving coarse breathiness provides the timbral foundation of the voice. But it is the variety and colour of gritty sounds that convince us most of the threat it bears.

Sounds 'Speak' Louder than Words

Thus far I have approached the topic of vocal timbre by focussing on speech. Yet the acoustic character of the voice is often times better expressed by vocal sounds that are by nature non-linguistic or extra-linguistic. In the film *The Exorcist* the vocal sounds of the demon's

breathing is used to great effect at the onset of the scene in which the above-mentioned first encounter between the demon and Fr. Karras occurs.

As Karras enters the house accompanied by Chris MacNeil (Regan's mother) we are acoustically confronted with a chain link of long drawn in breaths or inhalations (Ex 15 'Evil Voice': 00:00) Though I use the word 'breaths', the sound we hear is more akin to wheezing and thus reflects a rather rough and grainy-textured aural profile. Similar to the demon's speaking voice, we are able to discern that the sound object in question stands as a composite of multiple sonic threads blended together to create a colourful mix of coarse wheezing sounds. As we progress up the stairs with Karras and MacNeil whose face reflects the evidence of an unpleasant encounter with the demon we hear a micro chorus of thin high frequency noises ring out softly against the main breathing sounds as though they were overtones to the 'fundamental' components of the aural composite.

Upon MacNeil's arrival at the summit of the staircase, a relatively loud, low-pitched groan is let out (Ex 15 'Evil Voice': 00:20). This particular sound maintains the rough texture inherited from the other wheezing sounds that continue to moan in the background. At this point our eyes are guided towards the door of Regan's room, now barricaded by Karl the butler who stands somewhat defensive and at attention before it with a chair in hand and terror apparent on his face (ibid.). It is as though the deployment of the groan sound in collaboration with the subsequent rise in volume of the other breathing noises is meant to prepare Fr. Karras and, by extension, the audience for an encounter with the demon.

In his treatment of extra-linguistic vocal sounds, Dolar classifies these materials as existing in two fundamental categories: pre- and post-linguistic. He describes the former as 'physiological manifestations', which include coughing and hiccoughs (2004: 24). Breathing would typically belong to this grouping. The common understanding is that these vocal objects bear no significance to meaning, which is perceived as being translated exclusively at the level of language. Voice emissions like these are thus perceived as being 'animal' and 'soulless' (Aristotle, 2001, *De Anima*, 420b 28-37). Dolar however disagrees with this understanding:

> The non-articulate itself becomes a mode of the articulate; the presymbolic acquires its value only through opposition to the symbolic, and is thus itself laden with signification precisely by virtue of being non-signifying (2004: 24).

In other words, the significance of the cough is not in the cough itself. Rather it is the cough's relationship to the conversational context that gives to it the potential to mean (ibid.).

The use of breathing (particularly in lieu of words) to signify passive yet notable presence is a commonplace in film. In George Lucas' first two *Star Wars* films, *A New Hope* (1977) and *The Empire Strikes Back* (1980), our first visual experiences of Darth Vader are accompanied by the shrill mid to low register mechanical sounds of his strained breathing through the mask that he wears (00:00). In each of these scenes, Darth Vader does not speak, yet we are immediately able to intuit a certain sense of power and dread that becomes associated with his character throughout the first trilogy. In the same way through the sound of the demon's coarse and beleaguered breathing in *The Exorcist*, Chris MacNeil's home is saturated with a wraith-like atmosphere announcing the demon's ubiquitous presence within the house. Furthermore, it must be noted that the voice is applied acousmetrically in this scene thus allowing it to play a similar role to that which is played by the acousmetric voices of Harry's recording in *The Conversation*. It too wanders restlessly about the MacNeil home occupying and filling it, its occupants and the audio-viewer with fear.

Sacred Tongue

Mel Gibson's *The Passion of the Christ* (2004) is a notorious film on account of the graphic intensity with which the crucifixion of Jesus and the violence thereby associated is depicted. The second point of notoriety arises from the first in that critics have asserted that the severity of the violence depicted in the film is anti-Semitic (Rosenbaum 2008; Hammond 2006). The film's defenders argue that the severe violence is an accurate representation of a roman crucifixion warranting the degree of violence displayed in *The Passion of the Christ* (Ebert 2004; Antani 2010). Gibson has corroborated this, emphasising his desire to achieve unprecedented authenticity in the rendering of a film with biblical content (Boyer 2003: 58). In this regard, Gibson refers not only to the graphic intensity of the film but also to the decisions made regarding language and dialogue:

> These guys hop off the boats and they're all hairy and they're scary and they've got axes, and some of them are berserkers and they're doing flips and twirls and they just wanna rape and kill, you know? But if they start coming out with "I want to die with a sword in my hand" and "Oh, fair maiden," that would be like—you know, you don't believe them. If they come out with a low, guttural German, they are frightening. They are terrifying. They're like demons from the sea. So that's what the language thing did for me. It took something away from you—you had to depend upon the image (Gibson in Boyer, 2003).

As a consequence Gibson had the film shot in the languages of Aramaic, Latin and Hebrew. Richard Popp comments on the use of non-English languages in the film, referring to Gibson's initial desire to have the film released without English subtitles, which essentially strips the role of denotation away from the dialogue (2006: 13-14). Instead 'verbal interaction in the film becomes a sign connoting authenticity and historical accuracy' (14). In addition to the cultural capital attained, Gibson's use of non-English languages and his preliminary intent to release the film without English subtitles was part of a vision that he had to 'allow the sound of the languages not to mention the frequent splattering of blood speak for themselves' (Bierma 2004). According to his publicist Alan Nierob, Gibson felt that the film was first and foremost a 'visual film' and believed that subtitles would ultimately be more of a distraction than an aid (ibid.).

On this point I would have to contend that the film is not so much visual as it is visceral. The ancient languages used assist to 'represent an attempt to accurately recreate the world in which the crucifixion took place' (Popp, 2006: 13-14). Consequently, through the purposefully constructed illusion of authenticity, the audience's experience of the film is immediate both on account of the intensity of the images and the nature of the sounds deployed throughout the film. The audience is immersed in the world of an imagined first-century Palestine as the action and the drama unfolds, feeling it with the senses and reading it in accordance with the raw and gritty audio-visual signage employed by the film.

This can be observed in the scene in which Jesus is tried by the Jewish court the Sanhedrin. Battered, bruised and bound in chains Jesus is situated in the centre of the court surrounded by a crowd including the chief priests and what appear to be Roman soldiers. As witnesses step forward to give testimony against him, many of them move about within the circle like predators stalking their prey. Others approach him screaming accusations in his face while a character who appears to be a chief priest spits at his feet in disgust. Indeed the entire crowd is presented as an angry mob passionately fisting the air as they bay for his blood (23:00–

29:00). This imagery quite vividly portrays the degree of hatred directed at Jesus by those who wish to do away with him. The 'sound' of the dialogue and verbal interaction solidifies this impression.

At the commencement of the scene two characters appearing to be chief priests preside over the proceedings. As they question Jesus, a distinct contrast can be perceived in the way that each one addresses him. One of them, who appears to be the elder chief priest, speaks with a slow and measured rhythmic pulse allowing him to clearly enunciate his syllables, most of which, on account of the nature of Aramaic contain phonemes categorised as 'fricatives' such as the *sh* and *th* sounds according to Theo van Leeuwen's catalogue of speech sounds (1999: 148).[13] These particular speech sounds tend to signify friction due to the acoustic quality of the phonemes involved thus providing a menace-filled timbral colour to the chief priest's words (ibid.). His phrases are spaced out and his vocal register occupies the mid to low range resulting in a somewhat seductive yet threatening voice (Ex 16 'Caiphas': 00:20). Most notably, the manner of speech employed by the chief priest mirrors the way in which the devil tries to discourage Jesus in the opening scene of the film. Not only does the devil make use of slow, measured and evenly spaced phrases, there also appears to be a slight hiss and purr to its vocal timbre thus amplifying the seductive appeal (Ex 17 'The Devil': 01:05). Given that a woman plays the devil, the added feminine aural quality voice helps to sustain this effect (ibid.).

Consequently, a point of relation is established between the chief priests and the devil thus highlighting the evil behind their plot. What perhaps is more readily perceivable is the manner of speech employed by the witnesses who testify against Jesus. Most of them yell passionately at the top of their voices signalling the degree of outrage and abhorrence that they feel in relation to the charges they've brought against him (Ex 16 'Caiphas': 02:05). A notable moment in this passage occurs when a mysterious four-syllable phrase is softly uttered against an onscreen close-up shot depiction of Jesus hanging his head as though in shame with his face covered in bruises (Ex 16 'Caiphas': 02:08). The lighting in the court is dim thus coating the mise-en-scene of this shot with a strong dark tint. In relation to the voice, there seems to be no clear source for it thus making it an *acousmêtre*. Most strikingly, the manner in which the phrase is spoken resembles hissing, and its breathiness – contributed

[13] Theo van Leeuven has catalogued a range of terms that assist in describing vocal timbres and speech sounds as well as relaying their respective possible meanings.

to by further fricative speech sounds – casts the utterance as an intimate yet chilling whisper of malevolence that drifts about the court as a kind of aural manifestation of the evil intentions of those present.

Presenting the Sanhedrin and the Jewish crowd in this manner renders the effect of associating them with religiously defined extremist groups based on Hollywood depictions of such entities, particularly within a Middle Eastern Arabic context. Jack Shaheen comments on how Hollywood has consistently depicted members of the Arabic community as 'Public Enemy number one – brutal, heartless, uncivilized religious fanatics and money-mad cultural 'others' bent on terrorizing civilized Westerners, especially Christians and Jews' (2003: 172).

> Pause and visualize the reel Arab. What do you see? Black beard, headdress, dark sunglasses. In the background – a limousine, harem maidens, oil wells, camels. Or perhaps he is brandishing an automatic weapon, crazy hate in his eyes and Allah on his lips (ibid.).

While these 'visual' descriptions do not entirely apply to the Sanhedrin and the Jewish crowd in *The Passion of the Christ*, by virtue of the nasal phonetic timbre of the Aramaic spoken in the film (likening it aurally to Arabic) and the hate-filled excessive vocal expression portrayed in these scenes, the Jews in the crowd are portrayed as merely a different breed of the Middle Eastern extremist. Apart from the fact that they are all willing to kill in the name of God, ultimately they all look the same and crucially they all 'sound' the 'same'; the same Other.

By virtue of his vocal presentation Jesus is characterised in a substantially more positive light. Throughout the film he assumes the role of the suffering victim who, despite the injustice perpetrated against him is able to maintain a certain grace and fidelity to his beliefs. This conflict between the Jesus who suffers and the Jesus who is 'a king' is constantly on display. At the start of the film, as he prays incessantly for God to defend him, his speech is impeded by and heavily drenched in strained breathing and shivering cries as though unable to find the adequate words to express the severity of his anguish (5:08). Yet when questioned by Pilate in Aramaic, he has the presence of mind and strength of will to respond in 'pure' Latin (41:46). Rev. William Fulco, who was responsible for translating the screenplay into the ancient languages used in the film, explains the decision to have Jesus speak in this manner.

> There's an exchange where Pilate addresses Jesus in Aramaic, and Jesus answers in Latin. It's kind of a nifty little symbolic thing: Jesus is going to beat him at his own game. One line (in that exchange) I kind of enjoyed is when Jesus says, 'My power is given from above, otherwise my followers would not have allowed this'. That's (spoken in) the pluperfect subjunctive (in Languagehat: 2004).

Towards the end of the film, Jesus who is ravaged, broken and hanging from the cross gives out a poignant cry to God who he feels has forsaken him. The meaning here (even if watched without subtitles) would be clear and discernible to a Christian audience given its familiarity. It is the point that signals the climax of the story and of the film. The first phrase, a word consisting of three syllables ('Eloi' pronounced ay-lo-hee), sounds out as a loud cry in the mid to low registers of the voice. In addition, the tension in the voice coupled with a rough corrosive texture gives off the impression that he is almost demanding an audience with God (Ex 18 'Eloi, Eloi'). The second phrase, which is an iteration of the first, is immediately contrasted against the first. In it the volume has decreased dramatically and the vocal register is higher in pitch thus thinning out its density. This barely voiced utterance is followed by a longer yet equally timid phrase which is spoken and wept at the same time (ibid.). These lines are effective in signifying Jesus' feelings of desolation at this point chiefly due to the power of vocal timbre and (Dolar's concept of) vocal intonation, as discussed previously: 'the particular tone of the voice, its particular melody and modulation, its cadence and inflection' (2006: 21).

Walter Murch sought to make use of vocal intonation in this sense when he and Francis Ford Coppola chose to leave out subtitles in the Italian conversations in *The Godfather* series: 'As a result', Murch explained, 'you're paying much more attention to how things are said and the body language being used, and you're perceiving things in a very different way. You're listening to the sound of the language, not the meaning (quoted in Greene 2004: 107). In what has often been called the most important scene of the first instalment of *The Godfather* series, an un-subtitled Italian conversation ensues between Michael and Sollozzo. The purpose of the meeting from the point of view of Sollozzo and his police chief accomplice, captain McCluskey, is to request a truce between themselves and the Corleone family with whom they are currently embroiled in a mafia war. Michael's aim, unknown to the two, is to retrieve a gun hidden in the bathroom of the restaurant in which they are meeting and to murder them. For the audience the scene is already poised on a knife-edge. So the decision to carry out the

conversation in Italian without subtitles puts the audio-viewer in a position of ignorance, which further amplifies his or her anxiety.

As illustrated by Richard Popp, authenticity provided a strong motive to shoot the scene in this way (Popp, 2006: 13-14). The use of Italian in a film about Italian mafia life is highly appropriate, legitimising it as an honest portrayal of the content. However, given that the majority of the film is shot in English, other deductions can be made regarding the decision to negate translation. In the second instalment of the series, the theme of anti-Italian xenophobia is brought up when Michael stands trial (*The Godfather part II,* 1974: 2:15:38). It is therefore conceivable that as a non-Italian, the policeman McCluskey – and all other non-Italian speaking viewers – are deliberately left out of the discussion because the issues to be dealt with do not concern non-Italians. This only partially hints at what are perhaps the more prominent themes of mafia family exclusivity – referred to at the start of the film by Vito Corleone who sternly opposes the idea of his son-in-law participating in the 'family business'– and privy knowledge. Liz Greene comments on this issue, which highly affects our reception of this scene.

> To non-Italian speakers not understanding the language has a further implication: it has a distancing effect between the world of the audience and the Mafia characters. It becomes an unfamiliar world, the characters less predictable, and the outcome seems all the more uncertain. The rules are not known or are not the same as one is used to. This effect breaks all the conventions of film, to distance an audience is meant to destroy a film, whereas Coppola creates a curiosity within the audience through this absence, drawing the audience deeper into the film (2004: 108).

The dance between curiosity and uncertainty and the tension that it creates is shown at various points in the conversation. One such moment occurs at the height of the conversation when Sollozzo ends a relatively lengthy monologue with a phrase that appears to be the issuing of a threat (Ex 19 'Si Italiano': 01:08). A close up shot of his stern unwavering face is depicted as he speaks (ibid.). Aurally, the sentence in question is relatively short and is spoken at a fast pace with intense rhythmic drive. Phonetically speaking, the words used contain a number of sharply emphasised plosives and fricatives, which together signify both a sense of friction on one hand and a sense of explosiveness on the other as created by the percussive texture produced by an alliteration of *t* sounds towards the end of the phrase. Despite not knowing what is said, Sollozzo's lethal seriousness is fully conveyed in his vocal

delivery. As such we begin to fear for Michael whose vulnerability seems to be all the more emphasised at this point.

This particular scene is highly effective for many reasons. And the use of a foreign language is instrumental to its success. For non-Italian speakers, dialogue that can be semantically understood is minimal. Forced to listen primarily to the manner in which words are vocalised, our perception of the scene becomes a matter of decoding acoustic information sonically designed to operate in quasi-musical functions precisely through the quality and orientation of its aural features.

Conclusion

There are various ways in which the voice can be made to effectively participate in the nuanced development of the plot as a quasi-musical entity. As we have seen, foreign languages force us to focus on other elements of expression within the voice as well as to pay greater attention to the audio-visual relationships that occur during dialogue. Vocal timbre is also important in that it heavily influences our emotions, shaping our reception of certain characters. Non-linguistic communication provides an alternate way for us to understand the voice as a signifier in film, inviting us to see the voice as more (or perhaps less) than simply dialogue. Finally the diegetic positioning of the voice is also a contributor to the manner in which it is able to effect meaning in a film. This variety thus disposes the voice to be adept in being deployed in quasi-musical ways to assist the narrative processes of the film.

Take 2

In the first part of this dissertation I explored some of the uses of foley sound design in Hollywood films, paying particular attention to the manner in which sound designers and editors have exploited the aural qualities of foley sounds so as to allow them greater resonance as aural signifiers in film. This part presents several compositions, the two primary works seeking to explore some of the ideas encountered in my analyses in the first part.

The Interior Castle

The core idea behind this piece is the intention to produce 'sonified images' with the aim of ordering and structuring them into a piece of music according to principles and concepts derived from the artistic practice of film editing. In particular, I sought to compose a number of short and somewhat sonically static 'audio-stills' or 'sound snapshots'. I sought to base these 'audio-stills' on repetitive, textural and drone-like material, thus aiming the initial focus of the composition at exploring musical space variously conceived. Thereafter I intended to arrange and morph the stills together to form a kind of advanced audio montage applying the basic techniques used by screen directors, cinematographers and editors in compiling visual montages or image sequences in films.

Early on in the process of composing this piece, I encountered a number of difficulties that lead to a change of plan. Having restricted myself to exclusively using repetitive and textural materials, I began to feel that in so doing, I had limited the degree of intricacy that was possible concerning both the nature of the music as well as the degree to which the images would be perceivable to the audience. As such it became clear that a different approach to realising 'visualised sound' was in need. I conceded that given the dynamic nature of sound (in contrast to the static nature of still images) composing a piece that is acoustically interesting and at the same time is able to sufficiently connote visual figures was not possible according to the original model detailed above.

In response I developed a different approach to this piece, which centred on composing materials that themselves suggested particular objects. Through a spatialisation system setup

to create a double panel screen using eight speakers, the composed 'audio-visual'[14] objects would be disseminated so as to create the illusion of seeing the objects morph and move about the three dimensional sound screen as the music progresses. Both panels are constructed from fours speakers. Each speaker is placed at one of the four corners of the sound screen. At the time, my opinion was that this particular method made the concept of 'visualised music' more attainable than the former in that it opened up the possibilities of the project and allowed for the use of more flexible materials such as gestural phrases and pointillistic structures. It was also important that the music be composed for live acoustic instruments. Aesthetic preference serves as one of the primary reasons for this choice. However, I also desired to investigate, through composition, the potential for pure acoustic timbres to evoke visual imagery without the assistance of considerable signal processing.

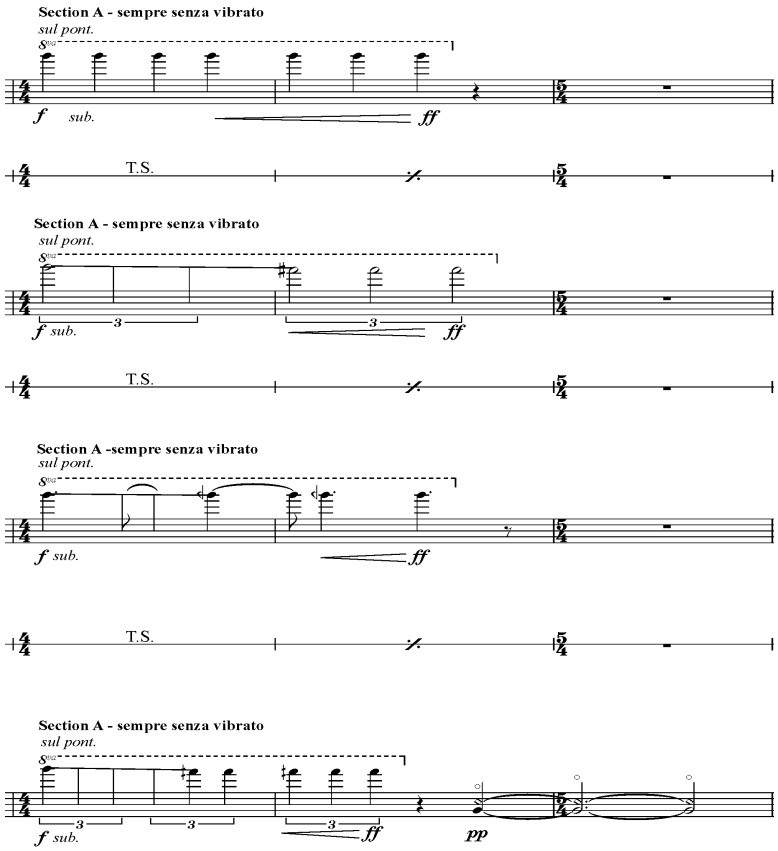
The Narrative

I decided to have the images represent a narrative such that the composition would amount to a kind of tone poem. The storyline I eventually adopted describes a journey through an ancient castle or temple. It is loosely based on a piece of literature entitled *The Interior Castle* (1588) as written by the Catholic mystic Teresa of Avila. In it she details a journey on which one travels through the different corridors and rooms of ones own soul symbolically presented as a castle of crystal. In the end, one hopes to arrive at a room referred to as the seventh room in which one meets God and communes with him. In the music, this journey unfolds in three movements; 'Light Phases', 'Crystal Structures' and 'The Seventh Room'. Throughout the piece, the images invoked are meant to detail through first person perspective a dreamlike experience of wondering through the castle. Consequently it is made up of a variety of different images that fade into and out of sight interspersed with periods of black screen (silence). Confusion and disorientation are words that best describe our experience of the castle's corridors as mediated through the music.

Light Phases

[14] In Take 1 of the thesis, I made use of the term audio visual in reference to Michel Chion's use of the term in his seminal work *Audio Vision* (1994). In discussing *The Interior Castle,* my use of the term refers to the idea of composing audio materials intended to create visual impressions.

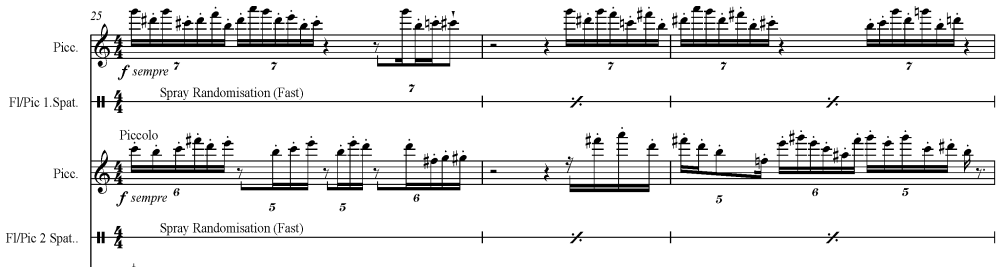
'Light Phases' begins with one opening ones eyes and subsequently being bombarded with intense blinding light. The loud and high-pitched material is shaped to symbolise this. Hence, a relationship between bright visuals and high pitch is established. Consequently, the opposite associations apply as well. High dynamic levels are also used to connote the clarity and immediacy of a given visual object whilst low dynamic levels suggest the opposite with silence symbolising. Therefore, the low level, held harmonic note as shown in the music example below indicates a tremendous dimming of our perception of the light as though we were attempting to fend it off while the subsequent period of silence indicates a closing of the eyes thus producing a black screen. Dissonance is also used in this passage to add to the intensity and harshness of the light. These initial audio-visual relationships are maintained throughout the three movements of the piece.



Music Ex. 1 – Blinding Light: Bars 2-3

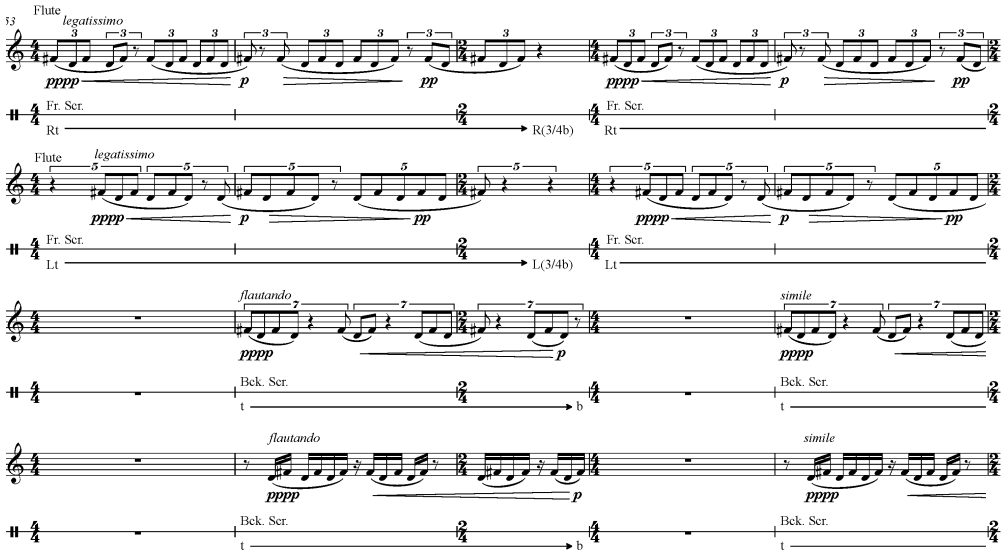
The snappy pointillist materials that feature extensively in both 'Light Phases' and 'Crystal Structures' represent sparkles of light that glitter about the screen. The idea behind these materials was to create a visual effect similar to that of a dynamic night

sky. In Light phases, occasions of these moments are shown in bars 25 to 30 as well as 77 to 108. These signify a kind of dispersion of the light into a spray of sparkles across a dark plane. Here, we witness the intricate composition of the light and the ebullience within it.



Music Ex. 2 – Light Spray: Bars 2-3

There is also material in all three movements that does not directly connote any particular visual configuration. Instead these materials are employed to give the piece a different dimension, which is more musical in a stricter sense than visual in its function. Bars 53 to 75 of 'Light Phases' feature such material. These bars present a period in which incense completely saturates the vision of the protagonist. The inter-phasing repetitive oscillations reminiscent of György Ligeti's *Ramifications* (1968) allude to the interweaving curls of smoke rising from a censer. Through spatialisation, these sounds are generally meant to ascend from the bottom of the sound screen to the top imitating the movement of rising smoke. This passage of the piece is also inspired by Martin Arnold's technique of continuously looping small segments of video excerpts forming a variety of rhythmic manipulations as shown in *Passage à l'Acte* (1992) (Herbert 2006). Though less intricate than the given example, the above-mentioned interweaving melodic lines are consistently duplicated (minor alterations added in service of developing the material notwithstanding) in imitation of the visual effect created by Arnold's work.



Music Ex. 3 – Music Smoke

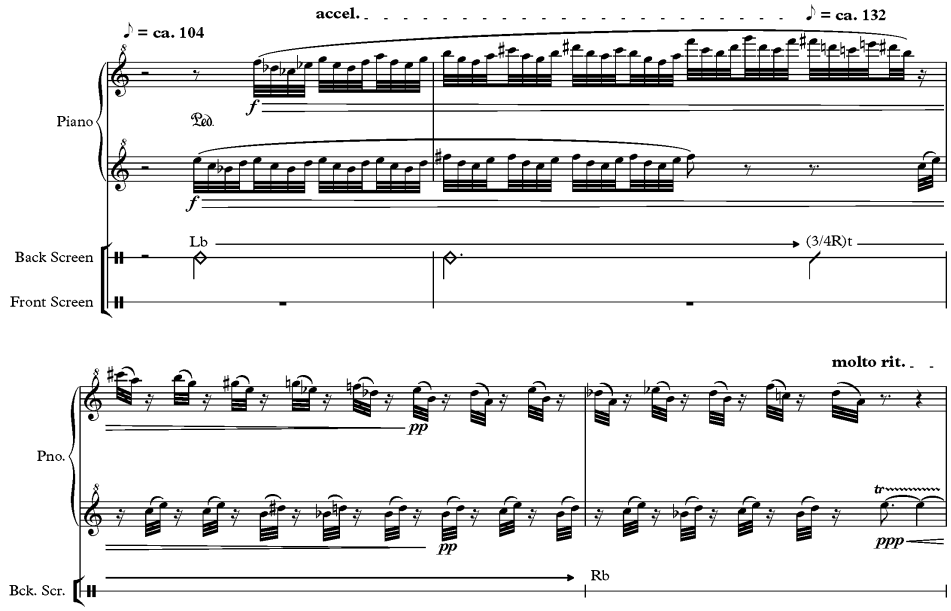
A similar image (rising incense smoke) is employed at the close of with piece with high sustained harmonics notes echoing beneath it. These held notes are employed to symbolise a distant glow from within the haze and mist. In contrast to the Ligeti like 'incense' material, the image is presented here using a different strategy of audio-visual association. The dry frictional sound of paper rubbing against woollen fabric is used to timbrally allude to rising smoke. The circular motion used in the production of this material again helps to entrench the idea of the music representing an interlocking mesh comprising curls of smoke. Allowing these two depictions of rising 'audio-visual smoke' to have distinct musical features promotes aural variety and greater depth within the piece. These slightly more purely musical passages are intended to connote in a less literal manner as compared to the moments of blinding light. A concession of this kind allows for greater flexibility subsequently opening up further compositional options.

As I mentioned above, 'Light Phases' begins with sudden blinding light. The subsequent images discussed above together with the blinding light passages are meant to relay the experience of being inside a crystal castle. However, our experience is a disoriented one and our capacity to see is significantly hindered. We are therefore only able to perceive incoherent abstractions of light and incense smoke as mediated through the music.

Crystal Structures

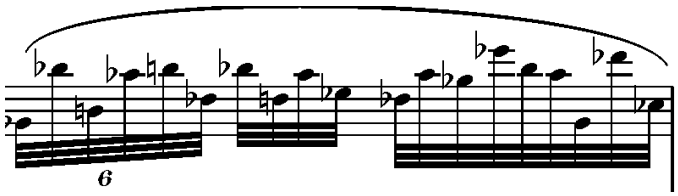
‘Crystal Structures’ - the second movement of the piece - sees our vision clear up significantly such that we begin to identify more details about the nature of the castle. As such we begin to perceive that the castle is constructed from crystal. In addition we are also able to recognise that the castle is designed to resemble a greco-roman temple. As a result, the two principle visual configurations of the movement are rows of pillars and the kind of pediments or gables that are a key feature of such temples. I chose to represent these figures using high register piano gestures to highlight the crystal nature of the imagery. In making this association, I felt that the percussive quality of an acoustic piano in the high registers could timbrally evoke crystalline imagery.

I constructed the pediment imagery by repetitively duplicating a short melodic figure. The left hand remains in the same area of the keyboard while the right hand slowly ascends by step up until a climax is reached. Thereafter an alternating two-note pattern between both hands ensues, allowing the right hand to descend with the left remaining in the same place thus completing the triangular shape. These figures are consolidated through spatialisation movements, which generally begin at either the bottom left or bottom right of a panel and progress towards the top central region before descending to the bottom corner of the opposite end of the screen. The floral character of this material is employed to evoke the ornaments often used as decoration on the pediment structure.



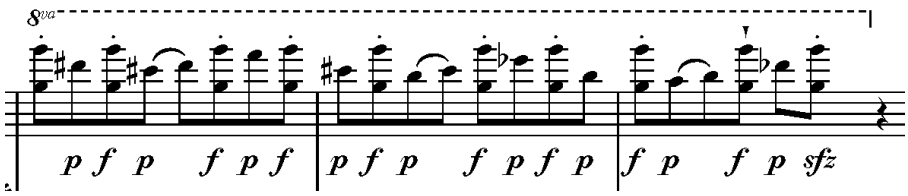
Mus Ex. 4 – Temple Pediment

As mentioned when discussing the imagery for 'Light Phases', 'Crystal Structures' also features pointillist music. A number of moments in this movement contain fast note passages that cover a wide range in terms of register. These are designed to elicit the idea of perceiving a vague accumulation of crystal structures as can be found in a cave filled with stalactites. Limited vision prevents us from clearly perceiving what these structures are. Consequently we are restricted to being able to see only the sparkle and glimmer of light reflecting off the crystal surfaces that permeate the castle.



Music Ex 5 – Crystal Spray

On other occasions it would appear that the crystal structures have been crafted into neatly arranged ornamental figures as portrayed by the slow measured passages shown in the example below.

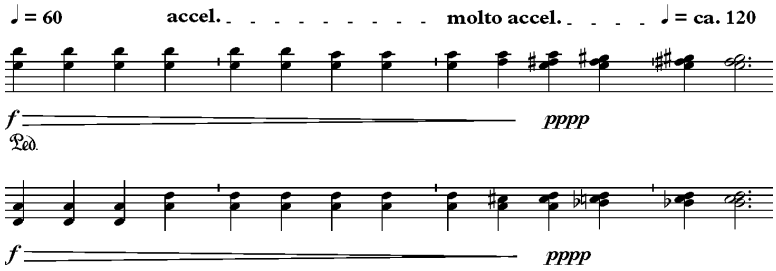


Music Ex 6 – Neat Crystal

One of the foundational elements of this movement is the image of an array of pillars. This image was created through the use of sequential chords in the high registers of the piano. The decision to build these chords by predominantly using perfect fourths and perfect fifths was motivated by the clarity of sound that these harmonies are able to evoke particular when combined with the 'crystal' clear timbre of the upper registers of a piano. As such they suggest that the pillars are much more refined than the other structures baring a semblance with glass. The various arrays are presented as though they were lining long corridors. I therefore sought to imitate the visual effect

of having the pillars fade into the distance. I used spatialisation to have the chords pass from either the right hand side or left hand side of the screen to the centre. Using the front and back panel, I also fashioned the sounds to move from the front to the back to create a sense of distance.

To further emphasise this particular image, the chords begin to collapse on to themselves. Dissonance is gradually introduced to symbolise the blurring of the pillars and colours caused by the light reflecting off of the crystal. The dynamic level decreases slowly from very loud to barely audible in keeping with the audio-visual relationships established in 'Light Phases' (loudness referred to closeness and or brightness and quiet sounds referred to dimness or a distant shape). An accelerando is also used to imitate the perceived decrease in distance between the different pillars the



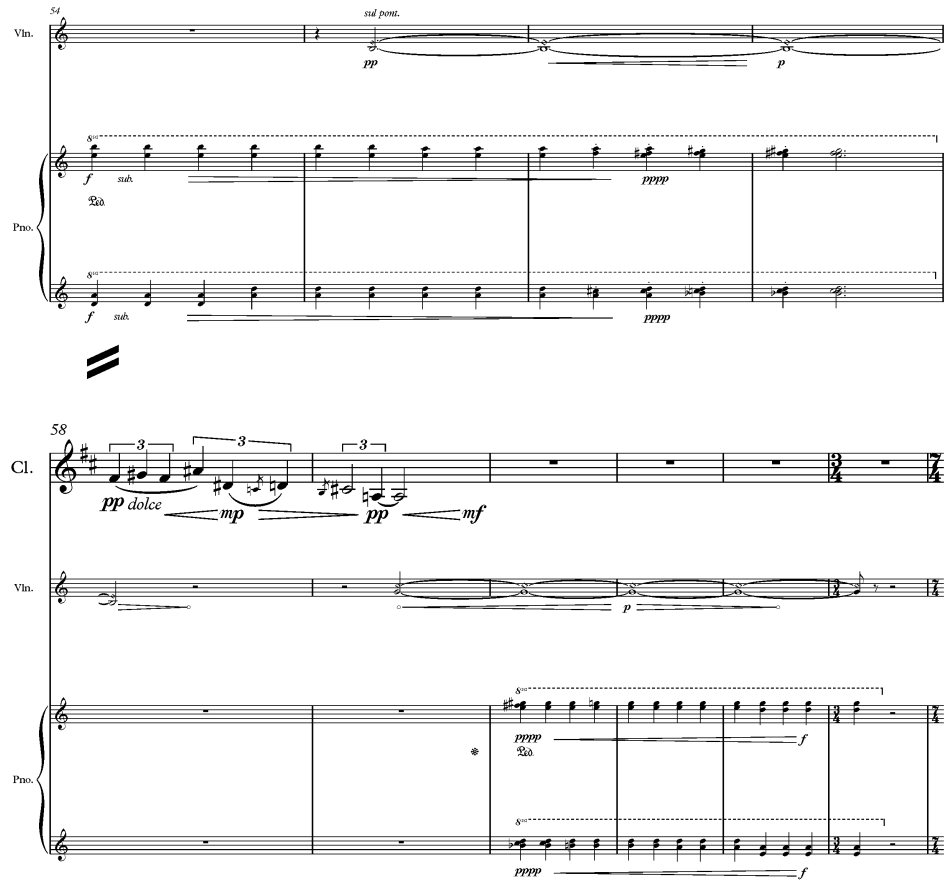
further away they are from our point of perception.

Music Ex 7 - Crystal Pillars

The Seventh Room

This movement represents the climax of both the piece and the supporting narrative. As such it contains much of the same kinds of materials that were used in the previous movements. These include the pillar chords in the piano part as well as the held high harmonic notes in the violin continuing to evoke the presence of light. However, this piece was designed to remain purely acoustic and be performed as a chamber piece. Hence due to the lack of spatialisation, these materials are employed to represent the given images metaphorically. Given their use in the preceding movements, they are deployed in 'The Seventh Room' to function as leitmotifs in the standard sense.

An important part of this movement is an encounter with the person of God (the source of the light) as recounted in Teresa of Avila's original text. I chose to metaphorically associate the timbre of the clarinet with this added presence. Furthermore, the clarinet occupies a primary position in the trio acting as a soloist. In the example below, the clarinet rings out a slow sombre melody in the aftermath of an occurrence of the piano pillars. As such the suggestion is made that the long corridor lined with the pillars leads to the clarinet melody which can be found at the pinnacle of the journey. Furthermore, just as is the case throughout most of the movement, the clarinet is accompanied by a held note in the violin showing how light issues from and accompanies the clarinet.



Music Ex 8 – Clarinet Presence

Iconography

Iconography was commissioned for the 2015 edition of the Johannesburg International Mozart Festival. Writing it proved beneficial, for doing so served as good preparation for writing *The Interior Castle.* The Project involved collaborating with visual artist Lebohang Kganye by writing a piece of music in response to select photographs taken from her catalogue *Ke Lefa Laka* (2013). The catalogue serves as an artistic reflection on Kganye's personal exploration of her family history following the death of her mother. As such it comprises of two main parts, each one focusing on a particular figure: her late mother and her late grandfather. Through the catalogue she expresses closeness to them by engaging with each of their characters using the art of photography.

Fragments of Big-Father I and II

In the section relating to her grandfather, she constructs scenarios using enlarged cut outs from old family photographs in order to depict in still imagery the various stories that have been relayed to her by family members regarding the life of her grandfather. In each of these still scenes, she adopts his character, dressing up in his clothes and posing for the stills in his stead. These specific images draw upon the notion of collage given the fragmented appearance of the blown up extracts and the way in which the various cutouts are congested against one another to form the given scenarios. Another interesting feature of these depictions is the use of colour. The photographs from which she derived her extracts are all in black and white and slightly obscured due to the limitations of the photo technology of the time. In contrast to this, Kganye in assuming her Grandfather's shoes allows herself to be depicted in full colour and high-resolution detail thus highlighting her anachronistic presence making her (that is her portrayal of her grandfather) the focal point of each of the photographs.

In relation to these photographs I chose to focus on the notion of applying the idea of collage and fragmentation in a musical setting. As such movements two and four entitled 'Fragments of Big-Father' parts one and two respectively feature multiple occasions in which contrasting musical materials are aggressively juxtaposed against each another. The employment of fragmentation within these movements as demonstrated by the use of sudden transitions and unpredictable breaks in rhythmic

flow is meant to illicit the impression that these specific movements were composed by 'piecing' together extracts from other pieces thus further entrenching the idea of collage in the music. As such the music comes off as a montage of sound bites. Hence interruption and a jagged sense of forward progression define its nature. It is worth noting that I also sought to create the impression of the rough and hard edges commonly associated with collage work through the use of percussion and drum kit.



Ill. 4 – His-Story extract

Miriam and Maria

The second section sees Kganye draw closer to her mother through the memory of her mother as presented in old photographs of her. By dressing up in her mother's clothes and visiting the exact locations presented in the photographs, she 'acts' out the images posing as her mother thus symbolically engaging with her memory. Furthermore she superimposes her photographic impressions of her mother upon the original pictures allowing herself to become a kind of ghost from the future within the originals.



Ill. 5 – Her Story Extract

Kganye's conceptual work in this part of the catalogue led me to consider the idea of using thematic materials and motifs to indicate personhood. Furthermore the idea of the body as a carrier of ones personhood also demanded consideration. In the photos, the person of Kganye's mother is transferred from her own body to Kganye's body in the imitated photograph. The picture featuring both individuals is thus interpreted as a kind of transitional image in which the transferral of personhood from one body to another is portrayed: Kganye's mother symbolically passing on her own person and with it the family heritage to her eldest daughter. This aspect of the catalogue is engaged in the first and third movements of the piece.

The first movement of the piece entitled ‘Miriam’ features thematic material aimed at representing each of these two characters. The principle theme as carried by the bassoon with which the movement opens symbolises Kganye’s mother as depicted in the original image. The melody carried by the flute loosely refers to Kganye’s own person. From an emotive perspective, both themes are employed to evoke a sense of loss and nostalgia. In the third movement entitled ‘Maria’, the melodic material as borne by the flute in the first is used to derive the bulk of the music therein. Furthermore, the short and snappy phrases used imply a much more inquisitive character contrasting rather strongly with the sense of pathos established in the first. Kganye was moved by the loss of her mother at the onset of this project. However she is subsequently led through a therapeutic adventure of inquisition and joy as she explores her family heritage engaging her mother’s memory more closely. At the end of this movement, the principle theme echoes out again, yet on this occasion it is carried by the violin thus symbolising the transferral of identity between Kganye and her mother, from one body to the other.

Dance with My Big-Father

The final movement of the piece is a musical reflection on Kganye’s imitation of her Grandfather in the collage-like photographs. Together with the second and fourth movements, this movement stands as a musical image of a particular photograph in which members of Kganye’s family are depicted in a line leading up to her portrayal of her Grandfather. This scene is meant to relay the story of how members of her family as depicted in the sequence followed her Grandfather to Johannesburg who migrated there seeking employment and a brighter financial future. This final movement is thus positioned as the focal point of the piece in much the same way as Kganye positions herself in colour towards the right-hand side of the image (see ***Ill. 4 – His-Story extract***).

The introduction of a new timbral colour through the dominant presence of the marimba allows for the application of its distinct tone colour to semantically allude to the glaring optical contrast between Kganye and the photographic cutouts of her family members. Furthermore, I made use of jazz-based phrases and riffs as a way of augmenting the symbolic reference to her Grandfather through popular musics of the time such as mbaqanga. Additionally, using jazz influences also helps to further

differentiate this movement from the other four enhancing the allusion to the visual distinction between Kganye's image in the photo and the cutout fragments.

Audio Visual Translation

As I mentioned, writing this piece proved instrumental in enabling me to compose *The Interior Castle* as it helped me to engage with the idea of using musical devices as a means of expressing different elements of a visual piece through the medium of music. Crucial to the success of this piece, as well as that of the *The Interior Castle,* is the establishment of links between the two mediums. Creating a successful translation of visual structures into musical structures hinges on being able to identify areas of affinity between select optical elements to acoustic elements in terms of material effect. For in employing musical devices that contain such acoustic elements, one is able to hint at closely related visual manifestations. Sudden transitions between contrasting musical materials aided in creating a sense of musical collage as derived from the practice of collage in visual art, even as the manipulation of motivic material and timbral associations assisted in translating Kganye's technique of superimposing portraits of herself onto images of her late mother.

These observations proved paramount in the composition of *The Interior Castle* as they assisted me to consider what possible affinities there could be between the images I intended to express in the piece and the medium of music itself. As such it allowed me to see that composing the *The Interior Castle* was fundamentally about identifying and working with musical devices that could best express select image configurations. Furthermore, a major part of the piece would have to involve choosing appropriate images. That is to say selecting images that could be easily represented through the medium of sound. Negotiating these two parameters proved to be the lion's share of the conceptual work throughout the composition of the piece.

Tin Can Transport

Composing *Tin Can Transport* provided an artistic platform upon which to experiment with some of the ideas and concepts discussed throughout the thesis. In essence I viewed it as an opportunity to further research the topic of the relationships between film music and foley sound design. Through the process of composing the piece, research would be carried out through creative compositional practice and thus hopefully uncover new discoveries about the relationship between sound design and music in a dramatic setting. I intended to focus specifically on the interrelationships between sound and music in the absence of visuals so as to allow their interaction to take centre stage. The project was therefore initially conceived within the framework of a radio drama.

However, a process of evolution soon began to take place. Firstly I intended the piece to be performed with live musicians and a live actor-singer to contextualise it as a form of art music. Following on from this decision, I felt that the use of extended techniques on traditional orchestral instruments as opposed to prerecorded foley sounds better served the aims of the project as they allowed for greater emphasis to be placed on the musical value of the 'foley-inspired' sounds as deployed throughout the piece. Lastly, I intended that the resultant production be recognisable as a piece of concert music as opposed to an augmented radio play. As such, greater interaction between foley sounds, music and dialogue was required than that typically found in traditional radio plays which tend to prioritise dialogue, relegating sound design and music to subordinate roles.

Given these considerations, I took the decision to compose a piece for string quartet, voice and percussion that would be structurally defined by a dramatic script which would help to develop and shape the different sections of the piece as well as the piece in its entirety. Given the need for input from the perspective of dramatic arts practice, this piece also facilitated practical research into the production of artistic work involving both dramatic and musical aspects.

The initial stages of creating the work involved a fair amount of preliminary discussion between an appointed scriptwriter and myself in which we discussed the narrative and its themes. Thereafter, the scriptwriter was tasked with producing an initial script. Once this initial rendition of the script was completed, a lengthy

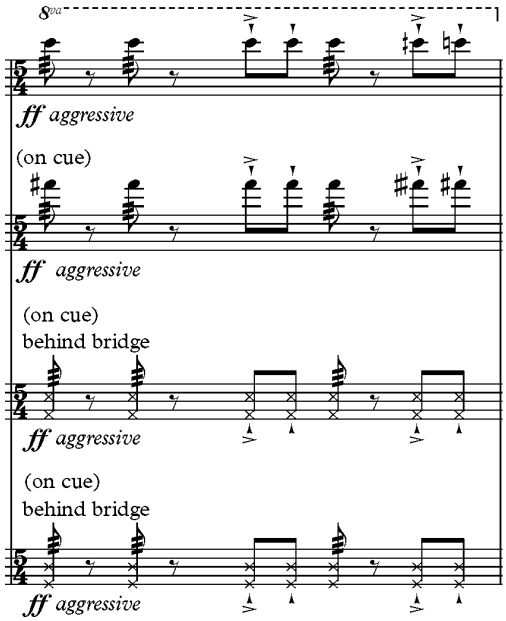
consultation process ensued which saw a number of editions and modifications made to the script in the service of making it better suited to having its contents incorporated into an integrated artistic piece. This process also involved the composing and refining of musical sketches in response to key moments in the script. Once a final script was approved and the music fully composed, a number of brainstorming and recording sessions were held with the actress in which a suitable interpretation of the script was developed and the musically notated vocal parts of the script were rehearsed and recorded for the performance of the piece.

Foley Music

A fundamental aspect of this piece is the quasi-musical application of foley sounds as discussed at length throughout the Take 1 of the thesis: that is to say, the deployment of foley sound in roles commonly fulfilled by film music. As discussed in the first chapter these include the creation of mood and the establishing of atmosphere, the shaping of narrative, the fashioning of emotional responses (at times complex emotional responses), the unifying of sequences, the provision of rhythm and meter to a scene, and the encouraging of audience absorption into the film world (Kalinak 2010: 1-8). Given this intention, the preliminary stages of the compositional process involved recording and gathering various sonorities from the acoustic environments found within various taxi trips in and around Johannesburg. Thereafter, these sounds would be used as inspiration or 'real-world anchors' in composing musical materials that would simultaneously connote the diegetic acoustic environment as imagined by the protagonist as well as express the fear she feels in relation to taxis, thus inciting the same fear in the audience members.

The recordings that were made of taxi soundscapes revealed three primary sound objects: the high-register squeaking of unsecured hinges, the mid-range clanging and rattling of loose metallic parts and the low to mid-range upward pitch bends made by the vehicle's acceleration. Using these sounds as inspiration, I composed a variety of a themes and motifs around which much of the music is be based. The first motif occurs in the second bar following the acted or spoken phrase: "…Rra Ditiro's taxi's are too old!". This theme, occurring frequently throughout the piece, stands as a violent exaggeration of the source sound (high-register squeaking). This was achieved by combining the rough aural texture of aggressive bow strokes behind the bridge of

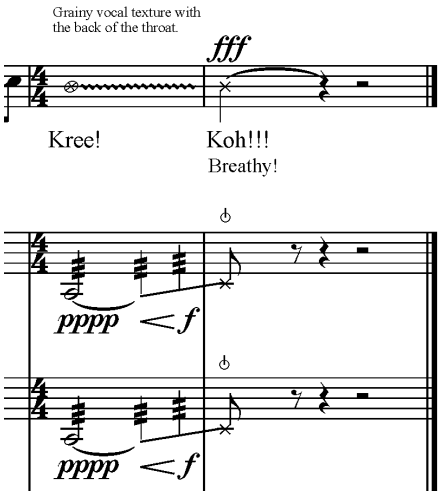
the string instruments with the shrill cries of equally aggressive high-pitched strokes close to the bridge. The resultant aural structure is employed within the piece in a similar way to stinger chords in a horror film, shocking the listener into attention from the outset while simultaneously providing an abrasive imitation of a sonic feature belonging to the environmental soundscape within a moving taxi. The concept of the protagonist's irrational fear feeding her imagination with highly augmented images and sounds as she speaks herself into increased fear and hatred of taxis is implemented in this way.



Mus. Ex 9 – Squeaking Horrific

The materials mimicking the sound of a motor vehicle engine revving as it accelerates is another common feature of the piece. These gestures, much like the stinger chords mentioned above, occur frequently in cues A and C and are achieved through the use of slow glissandi covering a pitch area of roughly a third. These phrases are often positioned in the low to mid frequency range and performed with tremolo. Dissonance is also an important component of this material. These features are employed primarily to establish a sense of the environmental aural reference. However, they are also well suited to creating anxiety and unease and therefore cooperate with the exaggerated squeaking sounds in acoustically illustrating the degree of excess with which Didi expresses dread in relation to taxis while she visualises a variety of horrific scenarios. Cue B illustrates this point well. The music, performed *tutti* by the quartet, rises in pitch and volume thus elevating in intensity, which is also created by

the *tremolo* bowing technique. A sudden acoustic imitation of a loud crash sounded out by the voice accompanied by *ricochet* bowing action and snap *pizzicati* in the strings brings this gesture to an abrupt halt thereby emphasising the severity of the crash as imagined by Didi.



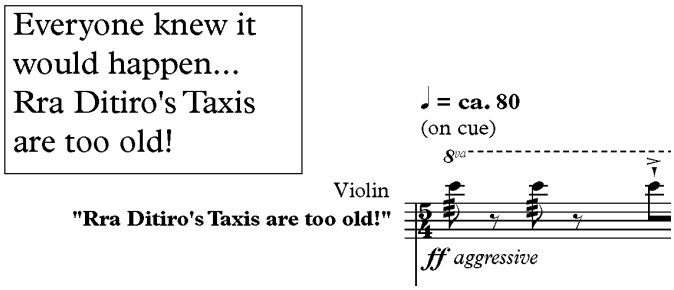
Mus. Ex 10 – Kree! Koh!

Another sound that features prominently within the natural soundscape inside a moving taxi is the constant rattling and clanging of metal produced by the instability of loose parts, mainly in the chassis of the vehicle. These sounds are imitated by a rattle-like instrument comprising three tiers of small sheets of old thin metal suspended on wire. Though the music scored for this instrument does not involve the same amount of excess and exaggeration as the previous materials, its presence helps to add a marked timbral colour to the overall milieu of the piece further evoking the acoustic atmosphere inside an old half-broken taxi.

Scoring for Voice

As alluded to in the sections above, the main skeleton of the piece is constituted by the script to which the music was written. Composing the piece was a process that involved working closely with the text, selecting passages to be musically shaped and designed with the intention of emphasising specific words and phrases, enhancing their significance within the narrative. In addition to this, I also intended that various sections of the script be acted out by the actress in accordance with the performance tradition and techniques of her artistic profession. Under the direction of the script

writer, these passages were performed and recorded in studio. Careful consideration was given to the interpretation of the text and the vocal intonation (as described by Mladen Dolar in the fourth chapter of Take 1 of the thesis) with which these passages were performed and recorded. These parts of the script are identifiable through the use of text boxes in the score.



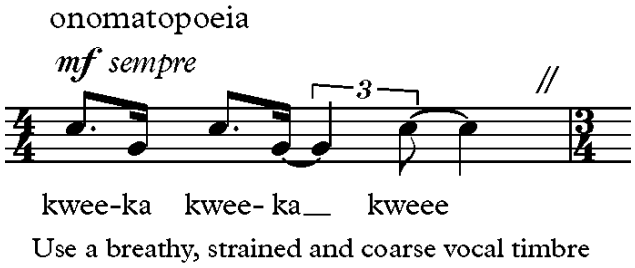
Mus. Ex 11 – Text box music

I used material of this kind as I desired to make use of the 'acting' or 'speaking' voice (as opposed to the singing voice) in this piece to preserve the tension between its dramatic and musical aspects. I also desired to work with the distinct aural features of the dramatic speaking voice in a compositional setting as a way of exploring its musical potential. In so doing, I intended to advocate for its use in this way within film and theatre.

In keeping with the idea, I endeavoured to shape the pre-mentioned select parts of the script in a way that would retain the aural and rhythmic patterns that are evocative of the flow of speech. The vocal performance direction of sprechgesang or sprechstimme as introduced by Engelbert Humperdinck in the work *Koenigskinder* (1897) provides a relative point of departure in this regard.[15] It can be loosely defined as a form of 'speech-song' or a vocal performance technique that rests somewhere between song and speech (Griffiths 2015). Paul Griffiths mentions how well renowned composer Arnold Schoenberg's application and notation of this performance direction proves to be inconsistent throughout his repertoire (ibid.). This seems to show that there is a lack of clarity in relation to how the term is to be understood and interpreted. Nevertheless the consensus is that a fair degree of fidelity to the notated rhythms and pitches is required and the given phrases are to be intoned with a speech-like timbre (Isherwood 2013: 24).

[15] Sprechstimme is most associated with the seminal operatic works *Pierrot Lunaire* (1912) and *Wozzeck* (1925) as composed by Arnold Schoenberg and Alban Berg respectively.

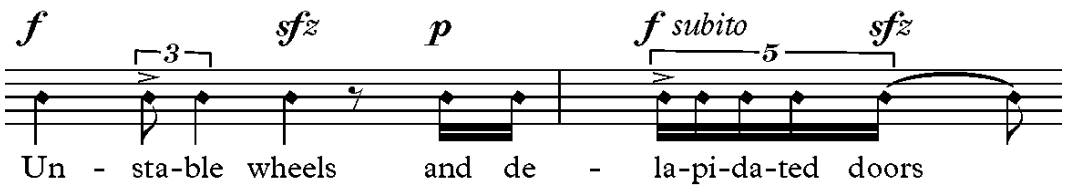
Sprechstimme is used in *Tin Can Transport* at points where Didi imitates the various sounds of a taxi using onomatopoeic expressions.



Mus Ex 12 – Kwee, ka

The importance of using a variety of vocally produced sounds in the script was highly stressed during the consultation process. Didi (The lead charcter) had to be characterised as a highly expressive person who makes use of sound imitation in her telling stories. I specifically insisted that scriptwriter incorporate such moments into the script so as to make use of sprechstimme in this way and thus shape the phrases such that they might resonate musically without resembling a form of song. I also ensured that this phrase be performed with rough vocal texture not only as a way of hinting at the brokenness of the vehicle but also to draw attention to the voice as a sound object baring the capacity to signify in a musical manner as discussed in the fourth chapter of Take 1. This topic will be considered further in the Epilogue.

An alternate way of producing musicalised speech can be referred to as rhythmic speech. This involves notating specific rhythms to which the performer ought to remain faithful without specifying pitch information (ibid.). This particular technique allows the spoken phrase to bare musical significance while maintaining a distinctive spoken quality that differentiates it from singing. This feature is used in cues A and C of the piece. In the example below, I make use of it to draw attention to the details regarding the inefficiencies of the taxis. The metrical layout of the phrase makes it aurally memorable allowing it to be used repetitively as a kind of leitmotif.



Mus. Ex 13 – Unstable Wheels

Epilogue

I conclude this thesis by reflecting on the process of composing these works focussing on, what I consider to be, the relative success of these works in achieving the aims expressed in the notes on the compositions that prefaced them, as well as considering the various links (and sometimes missed opportunities) the compositions made with the concepts and analyses presented in the first part of the dissertation.

The Interior Castle - Reflection

As mentioned earlier in the thesis, the first use of the term 'sound design' referred specifically to the dissemination of sounds within the cinematic space. *The Interior Castle* (and in particular the movements "Light Phases" and "Crystal Structures") is an attempt to explore the possibilities of sound design from this perspective: the dissemination of sound within a given space. Furthermore, these pieces investigate the potential for sound objects to semiotically reflect impressions that lie beyond the physical parameters of sound. As explained in the extended programme notes, various aural objects were composed and subsequently disseminated through eight speakers configured into two sound screens. Both screens are comprised of four speakers, each one placed at one of the four corners of the screen. The movements of the various sound objects through the screens were designed to create images such as crystal pillars, blinding light and incense smoke.

The concert was conceived largely as an opportunity for experimentation and practical research in the area of sound spatialisation especially with regards to the question of whether or not the semiotic abilities of aural objects could extend to the level of representing relatively concrete visual materials. Consequently, there are a number of successes that can be highlighted from the performance of the piece. One particular success that can be noted was the decision to position the panels at a slant above the audience. This configuration meant, for example, that the top of the front panel could be positioned directly overhead whilst the top of the back panel would be placed in front of the audience allowing for the adequate separation of various screen locations. This facilitated our being able to differentiate between immediate sounds and distant sounds as well as sounds that were at the top and sounds that were at the bottom of the screen. Another success that can be drawn upon was the

choice of instrument timbras in relation to the suggested images. The relationship between high-register violin and flute materials and the visual impression of light proved successful due to the sense of brightness that is often associated with both instruments. Furthermore, as discussed in the programme notes, the hard and percussive nature of extremely high-pitched piano music is able to create aural impressions of crystalline imagery. This particular aspect of the piece stood out quite strongly in the performance of 'Crystal Structures'.

However, there were a number of concerns regarding the final realisation of this work that require deeper consideration and resolution in a future rendering thereof. These relate more specifically to music spatialisation, which is fundamental element of the piece. In pursuing my aims, I adopted a simple approach to realising visual images relying on the locations and movements of sounds within the sound screen together with aural parameters such as timbre, pitch register and dynamic levels to connote the aforementioned images. However various nuances and complexities involved in disseminating sound within a space were overlooked in my attempt to achieve the desired effect.

Ewan Stefani and Karen Lauke have noted some of the difficulties faced by composers working with music spatialisation. They specifically focus on the scenario in which most composers work detailing how the compositional process occurs largely within an environment that is separate from the space in which the performance is to take place with basic estimations regarding the dissemination of sound through the speakers in the space being made with little reference to the actual acoustic parameters that the space offers (2010: 251-252). As a result, typically at the first performance of the piece various parameters require substantial adjustments compromising the desired musical result (ibid.). In response they propose that a considerable amount of work should be undertaken within the dissemination space well in advance of the performance of the work:

> …techniques for acousmatic spatialisation will function most effectively when developed 'on location', with concepts and strategies for spatiomorphology arising from prolonged exploration of the diffusion system within a particular space. Despite the fact that there may be some potential transferability of materials and practice developed for the work to another location, such works are a product of one listening space; a musical counterpart to that environment (ibid.).

David Malham sheds light on other principles regarding the physics of sound spatialisation highlighting the complexity involved in the way that sound waves move within a given space. He details how factors such as the difference in size between the sound emitting body and the sound waves produced by it as well as the number and nature of objects in the dissemination space that can either reflect, diffract or absorb sounds within the space greatly affect the result achieved in terms of the way in which the music is perceived by the audience (2000: 167-169). Consequently Stefani and Lauke's insistence that composers endeavor to work within the performance space well in advance of the performance of a piece is all the more justified.

The performances of 'Light Phases' and 'Crystal Structures' suffered greatly on account of the difficulties encountered relating to the above observations. Finding a suitable space in which to stage the performances proved a challenge. A number of venues were considered yet were found inappropriate to produce the required results as a considerable amount of height and dry room acoustics were important factors in the decision making process. Much of the proposed spatialisation had to be devised well in advance of acquiring a venue thus inhibiting the possibility of adequate interaction with the space prior to the concert. In addition, the space eventually chosen (Television Studio One at the University of the Witwatersrand) offered further difficulties in relation to the testing process. Being a teaching space, access to the venue was limited to the day of performance thus extensively compromising the time in which to interact with the space. Initial tests and amendments were therefore held on the day of performance and numerous concessions had to be made regarding the accuracy of the envisaged audio-images, particularly the different light movements in the 'Light Phases'.

The concept for this particular piece involved contrasting the audio-image with the acoustic sounds emanating from the live instruments. Originally, the instrumentalists were to be positioned behind the audience with the audio screens or panels placed in front of the 'audio-viewers'. Due to the insufficient length of the venue, the performers had to be conventionally positioned in front of the audience together with the audio panels. Regrettably, the occurrence of cross-pollination between sounds emanating from the acoustic instruments and those emanating from the speakers could not be avoided resulting in the frequent 'blurring' of the audio-image. In retrospect, it could also be conceded that an attempt to spatialise music

performed live would require greater consideration of the need to negotiate adequate separation of sound sources in the space. 'Light Phases' suffered particularly in this regard due to the size of the ensemble combined with the intention of amplifying each instrument individually so as to move those peculiar sounds produced by each instrument about the audio-screens. It is likely that microphone bleed between ensemble members compromised the desired level of detail in the spatialisation of the individual sounds thus compromising the integrity of the envisaged audio-images.

Ultimately, I think that the intention to use sound to represent visual images proved somewhat ambitious as the complex set of acoustic factors requiring attention in order to more closely approach the audio-visual results desired were insufficiently satisfied. As part of his discussion on the physical parameters of the acoustics of a given space Malham notes the following:

> At this stage it is worth noting that whilst it is common practice to employ visual analogues when dealing with sound and hearing, they should be treated with extreme caution since the differences between light and sound far outweigh the similarities (2000: 167-169).

The error that Malham highlights in the above quote contributed largely to the problems encountered in the final rendering of the spatialised movements of 'Light Phases'. Simultaneous movements between the two panels contributed to the lack of clarity of the given images, which compromised the integrity of the piece. In 'Crystal Structures', the result was substantially favourable. The isolation of the piano allowed for individual movements to be perceived clearly due to the lack of acoustic competition. The Crystal pillars and their movements were easily perceivable as compared to the clarity of the direction of the incense smoke materials.

Finally, greater consideration for the semiotic possibilities made available through the various methods of signal processing should be made in future to augment the music's capacity to impress the suggested images upon the audio-viewer. For example, Manuel Cirauqui points out that sound recordings are able to convey a sense of the space in which the recording was retrieved. In addition, spaces that don't really exist can also be created using audio processing techniques (). As discussed in the first chapter, this particular element was manipulated by Ren Klyce, who in imitating Alvin Lucier's re-recording techniques as featured in the making of his seminal work *I'm Sitting in a Room* (1969), sought to convey the experience of living

in a claustrophobic inner-city tenement apartment (Albrechsten 2013). Audio processing such as reverb can be used to create a greater sense of depth in the audio-image as well as to acoustically hint at various features relating to the given images through mimetic discourse. For example, in "Crystal Structures" the room acoustics of the corridors containing the piano chord crystal pillars could be imitated separately and played through the speakers to help solidify the intended image.

Tin Can Transport

During the composition process I encountered a range of restrictions in the conventional radio play format so far as the interaction between dialogue and music is concerned. Environmental foley tends to take precedence as a non-dialogue feature while music is often reserved for overtures, interludes and occasionally as an emotional trigger. As a result, the plan to compose a radio play was readjusted such that the eventual end product more closely resembled a kind of 'dramatic string quartet': a piece of music composed for string quartet, voice and percussion in which the structure and direction of the piece is defined by the dramatic context as scripted by the writer and acted out by the vocal performer. One of the main aims of this piece was to allow the voice to contribute aurally to the overall musical product.

A traditional radio play tends to feature rather strict divisions between music and dialogue. Cues A and C of *Tin Can Transport* feature musical material inspired by montage and snap editing so as to encourage linear interplay and cooperation between dialogue and the music. Such interaction grew out of the work I presented in the second chapter of the thesis in which linear relationships between foley sound design and non-diegetic music were examined and subsequently shown to be effective in enhancing the narrative processes of the film.

There were further difficulties that arose in the composing of this piece. One aspect is related to dialogue's seemingly stubborn resistance to being framed within a context that allows the aural qualities of the voice to ascend in significance over and above language. The fourth chapter of the thesis focussed on the various cinematic devices that allowed for the voice in its material and acoustic form to take centre stage over language in communicating meaning thus likening its application in the examples explored to the conventional application of film

music. I sought to make use of such devices in this radio play-inspired composition to emphasise the sonorous quality of the voice. The use of a non-English language, musically notated onomatopoeic expressions as well as a variety of vocal sounds such as breathing and tongue clicking were employed to enhance the aural dimensions of the voice and thus employ them as musical gestures.

It must be noted that it was originally intended that the vocal parts of the piece be performed live together with the instruments. But the desire to work with an actor as opposed to singer ultimately resulted in the decision being taken to use prerecorded vocal parts. A fair degree of dramatic and musical coaching was needed during the recording process in order to produce the required aural results. Given the time constraints of the project as well as the inevitable challenge of negotiating the availability of both the performer and script-writer for rehearsals, prerecording the voice became the most sensible way of producing the part. That being said, recording the vocal parts contributed substantially to my being able to use it in semi-acousmetric manner; even if the total absence of images in the composition does not allow for the voice to operate fully as an *acousmêtre* as discussed in chapter four.

Audio processing also allows for the application of sound design expressionism. The dramatic context of the piece details in a monologue the concerns of a young girl relating to the safety of taxi transport in the city. The music is meant to represent the sounds (both foley and abstract) that resonate within her mind as she slips into a daydream and envisages some of the scenes that have traumatised her. The use of distortion to embolden the aural impact of a recent taxi accident in which she was involved is one such example. Cues A, B and C all feature material composed largely from rough transcriptions of audio recorded from within a taxi. As such the music stands as a kind of foley-music in so far as it is ‘musical sounds’ produced by traditional musical instruments (albeit through extensive use of extended techniques for the sake of availing a variety of timbres) that are applied such that they mimetically convey the relevant foley sound environments as she imagines them. Here a reversal of the relationship dynamic as presented in the first chapter of the thesis (where foley sounds extend beyond their remit so as to operate in lieu of film music) is used to produce a piece of concert music.

Final Remarks

The findings and insights uncovered in this research largely confirmed the suspicion that foley sound often operate in ways evocative of film musical functions. One may argue that previous writers such as Underwood and Whittington have already detailed the ability for foley to function in this manner within a film. As such I specifically intended at the same time to highlight and categorise with some specificity the various ways in which foley sound objects are applied so as to function in this way. The analyses presented in the first chapter helped to shed light on how foley sound design is able to operate in lieu of music. Central to its capacity to fulfil both the roles of film music and foley sound design is the identity that individual foley sounds have as sound objects. As such they are deployed throughout the film ordinarily mandated to express the validity of a prescribed diegetic setting. However, as sound objects bearing aural qualities, that in genres such as *musique concrète* attract musical evaluation, enabling them to signify metaphorically in relation to a film's narrative and the on screen images, foley sounds can also take on various roles and responsibilities commonly associated with film music even in film music's absence.

The following chapters were based largely on this principle and expanded on foley sound design's quasi-musical capabilities. In the second chapter the various forms of direct relationship that occur between conventional film music (largely non-diegetic) and foley sounds were brought into focus. The central issue concerning whether or not the exchange and interaction of various sound events within a film amount to the formation of an overall soundtrack took centre stage. In particular, from my analysis it could be argued that foley sound design's ability to reach beyond its ordinary remit poses a threat to the integrity of the sound mix in the event that the timbral relationship between music and foley is so poised that they become indistinguishable from one other. Buhler insists that a positive tension between the varying elements of the soundtrack needs to be maintained and that a confusing of soundtrack elements diminishes its efficacy (2001: 54). Nevertheless, through filmic examples from *Apocalypse Now* and *The Matrix*, I moved to show that interactivity between foley sound and music – even at the level of measured timbral blending – can enhance the quality of their relationship as well as the significance that each one has in relation to the onscreen images including the development of the plot.

Building upon the insights revealed in the first two chapters, the third chapter helped to uncover how through the acoustic flexibility provided by 'otherworldly' diegetic contexts,

foley sound design's capacity to play a role more suited to film music is augmented as compared to the examples discussed in chapters one and two where the diegetic framework restricted the choice of aural objects to those that are able to mimetically reference sounds that are more common to everyday environments. Given the freedom to deploy foley sounds in unconventional ways that seem to defeat the laws of ordinary physics as well as being able to invent the acoustic accompaniment for visual representations as yet un-encountered in non-cinematic reality, sound designers and editors are able to infuse layers of meaning into foley sound objects greatly enlarging their quasi-film musical potential. Finally, chapter four sought to explore how the aural characteristics of the voice and dialogue, crucial components of the soundtrack often neglected in discussions of filmic sound and music, can be highlighted through the use of various cinematic mechanisms which help to focus attention on the value of the voice as an aural object (rather than semantic vessel) having the same capacity to signify emotively, likening its function in the examples discussed with those of film music.

In closing I wish to re-iterate the plea expressed by writers such as Mark Underwood, Danijela Kulezic-Wilson and Larry Sider that, given the capability of foley sound design as emphasised in this thesis, a far more integrated approach to film sound ought to be considered in the making of films. What I have attempted to show is that the examples discussed constitute perhaps only a fraction of what is possible in terms of such an approach should the relationship between foley sound and film music and the potential for foley to be used as a sound object with musical value be taken full advantage of. Certainly the pieces composed in response to theories and concepts discussed in part one of the thesis represent a first personal attempt at responding to the possibilities availed by foley sound's dual capacity to be evaluated musically and at the same time mimetically reference acoustic emissions of everyday life. My hope is that going forward foley sound design may routinely be considered as a parameter of film that deserves the kind of exceptional consideration given to it by the likes of the film world's most inventive sound designers Walter Murch, Ren Klyce and Dane Davis.

Bibliography

Albrechsten, Peter. 2013. "An introduction to Alvin Lucier – and his impact on the sound of *Se7en*". http://designingsound.org/2013/08/an-introduction-to-alvin-lucier-and-his-impact-on-the-sound-of-se7en/ (Last accessed 29 December 2014).

Altman, R., ed. 1992. *Sound theory, sound practice*. New York: Routledge.

Altman, Rick, McGraw Jones, and Sonia Tratoe. 2000. "Inventing the Cinema Soundtrack: Hollywood's Multiplane Sound System". In James Buhler, Caryl Flynn and David Neumeyer, ed., *Music and Cinema*, 339-359. Hanover, NH: University Press of New England.

Aristotle. 2001. *De Anima*, 420b 28-37.

"An Interview with Mercedes McCambridge (The Exorcist)". https://www.youtube.com/watch?v=zHkMA8hsBEg (Last accessed 22 September 2015).

Antani, Jay. 2010. "The Passion of the Christ" http://cinemawriter.com/2010/08/24/the-passion-of-the-christ/ (Last accessed 22 September 2015).

Barthes, Roland. 1977. "The Grain of the Voice". In Stephen Heath trans. and ed., *Image, Music, Text*, 179-89. London: Fontana Press.

Bergan, Ronald. 2004. "Mercedes McCambridge" http://www.theguardian.com/news/2004/mar/19/guardianobituaries.film (Last accessed 22 September 2015).

Bierma, Nathan. 2004. "The Jesuit scholar who translated 'The Passion'". http://articles.chicagotribune.com/2004-03-04/features/0403040033_1_aramaic-life-of-jesus-christ-latin (Last accessed 22 September 2015).

Boyer, Peter. 2003. "The Jesus War: Mel Gibson Discusses his Controversial Movie". *New Yorker*, 15 September: 58-71.

Buhler, James. 2001. "Analytical and Interpretive Approaches to Film Music: Analysing Interactions". In K.J. Donnelly, ed., *Film Music: Critical Approaches,* 39-61. Edinburgh: Edinburgh University Press.

Buhler, James, and Neumeyer, David. 2001. "Analytical and Interpretive Approaches to Film Music: Analysing the Music". In K.J. Donnelly, ed., *Film Music: Critical Approaches,* 16-38. Edinburgh: Edinburgh University Press.

Buskin, Richard. 1998 "The Matrix Young Guns, New Tricks". http://filmsound.org/studiosound/post_matrix.html (Last accessed 10 March 2015).

Cage, John. 1937. *The Future of Music: Credo*. http://www.arts.rpi.edu/~century/MMC11/JohnCage_Silence.pdf. (Last accessed 29 November 2013).

Chion, Michel. 1994. *Audio-Vision: Sound on Screen*. New York: Columbia University Press.

Chion, Michel. 1999. *The Voice in Cinema.* New York: Columbia Univesity Press.

Cirauqui, Manuel. 2014. "The Room Trick: Sound as Sight". *Performing Arts Journal,* 36(3): 1-13.

d'Escrivan, Julio. 2007. "Imaginary Listening". *Electroacoustic Music Studies Network* http://www.ems-network.org/IMG/pdf_EscrivanRuskinEMS07.pdf (Last accessed 22 September 2015).

Davis, Dane A. 2013. "Big Movie Sound Effects". http://mpse.org/events/sound-shows/matrix/ (Last accessed 10 March 2015).

Davis, Dane. 1999. "Interview with Dane Davis, Sound Designer, 'The Matrix'". http://filmsound.org/editorsnet/matrix1.htm (Last accessed 10 March 2015).

Deemers, Joanne Teresa. 2010. *Listening Through the Noise: The Aesthetics of Experimental Electronic Music*. Oxford: Oxford University Press.

Dolar, Mladen. 2006. *A Voice and Nothing More*. Cambridge, Mass: MIT Press.

Deutsch, Stephen. 2007. "Editorial". *The Soundtrack*, 1(1): 1-13.

Donnelly, K.J., ed. 2001. *Film Music: Critical Approaches.* Edinburgh: Edinburgh University Press.

Droney, Maureen. 1999. "Dane Davis and Danetracks: Jacked into the Matrix and Wired into the Next Generation". http://www.mixonline.com/news/profiles/dane-davis-and-danetracks-jacked-matrix-and-wired-next-generation/372348 (Accessed 10 March 2015).

Ebert, Roger. 2004. "The Passion of the Christ". http://www.rogerebert.com/reviews/the-passion-of-the-christ-2004 (Last accessed 22 September 2015).

Emmerson, Simon. 1986. "The Relationship of Language to Materials". In Simon Emmerson, ed., *The Language of Electroacoustic Music*, 17-39. London: Macmillan.

Emmerson, Simon, and Denis Smalley. 2015. "Electro-acoustic music". *Grove Music Online*, ed. Deane Root. Oxford University Press.

Greene, Liz. 2004. "Ambiguity: Walter Murch and the metaphoric use of sound in *The Godfather*, *The Conversation* and *Apocalypse Now*". *Film and Film Culture*, 3: 107-113.

Grifiths, Paul. 2015. "Sprechgesang". *Grove Music Online*, ed. Deane Root. Oxford University Press.

Hammond, Wally. 2006. "The Passion of the Christ". http://www.timeout.com/london/film/the-passion-of-the-christ (Last accessed 22 September 2015).

Harrison, Rob. 2012. “The Narrative Use of Sound and Music in Apocalypse Now”. http://abstractedaudio.blogspot.com/2012/09/the-narrative-use-of-sound-and-music-in.html (Accessed 29 December 2014).

Herbert, Daniel. 2006. “To Mock a Killingbird: Martin Arnold's Passage à l'Acte and the Dissymmetries of Cultural Exchange”. http://mfj-online.org/journalPages/MFJ45/Herbertpage.html, last accessed 29 September 2015

Holmes, Tom. 2008. *Electronic and Experimental Music: Technology, Music and Culture*. New York: Routledge.

Hugill, Andrew. 2007. “The Origins of Electronic Music”. In Nick Collins and Julio d’Escriván, ed. *The Cambridge Companion to Electronic Music,* 7-23. New York: Cambridge University Press.

Isherwood, Nicholas. 2013. *The Techniques of Singing.* London: Bärenreiter

Jackson, Blair. 2010. “Christopher Nolan’s *Inception*”. http://www.mixonline.com/news/films-tv/christopher-nolans-inception/369267 (Last accessed 22 September 015).

Jarrett, M., and Murch, W. 2000. “Sound Doctrine: An Interview with Walter Murch”. *Film Quarterly*, 53(3): 2-11.

Kalinak, Kathryn. 2010. *Film Music: A Very Short Introduction.* New York: Oxford University Press.

Kulezic-Wilson, Danijela. 2008. “Sound Design is The New Score”. *Music Sound and the Moving Image*, 2(2): 127-131.

Landy, Leigh. 2007. *Understanding the Art of Sound Organisation*. Cambridge, Mass: Massachusetts Institute of Technology Press.

Lerner, Neil, ed. 2010. *Music in the Horror Film.* New York: Routledge.

Languagehat. 2004. “Translating the Passion”. http://languagehat.com/translating-the-passion/ (Last accessed September 2015).

Malham, David. 1998. “Approaches to Spatialisation”. *Organised Sound,* (3)2: 167-177.

Mancini, Marc. 1985. “The Sound Designer”. In Elisabeth Weis and John Belton, ed., *Film Sound: Theory and Practice*, 361-368. New York: Columbia University Press.

Metz, Christian. 1985. “Aural Objects”. In Elisabeth Weis and John Belton, ed., *Film Sound: Theory and Practice,* 154-161. New York: Columbia University Press.

Murch, Walter. 2000. “Stretching Sound to Help the Mind See”. http://filmsound.org/murch/stretching.htm (Last accessed 29 December 2014).

Ondaatje, Michael. 2002. *The Conversations: Walter Murch and the Art of Editing Film*. London: Bloomsbury Publishing.

Palmer, Christopher. 1973. *Impressionism in Music*. London: Hutchinson University Library.

Pendergrast, Mark. 2003. *The Ambient Century: From Mahler to Moby – The Evolution of Sound in the Electronic Age*. London: Bloomsbury.

Popp, Richard K. 2006. "Mass Media and the Linguistic Market Place: Medial, Language and Distinction". *Journal of Communication Inquiry*, 30(1): 5-20.

Rosenbaum, Jonathan. 2008. "The Passion of the Christ". http://www.chicagoreader.com/chicago/the-passion-of-the-christ/Film?oid=1052224 (Last accessed 22 September 2015).

Sergi, Gianluca. 2004. *The Dolby Era: Film Sound in Contemporary Hollywood*. Manchester: Manchester University Press.

Shaheen, Jack G. 2003. "Reel Bad Arabs: How Hollywood Vilifies a People" *The Annals of the American Academy of Political and Social Science,* 588(1): 171-193

Sider, Larry. 2003. "If You Wish to See, Listen: The Role of the Sound Designer". *Journal of Media Practice*, 4(1): 5-16.

Sonnenschein, David. 2001. *Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema*. Studio City, CA: Michael Wiese Productions.

Starr, Marcelo. 2006. "Performance Design: An Analysis of Film Acting and Sound Design". *Journal of Film and Video*, 58(1): 59-70.

Sragow, Michael. 2000. "The Sound of Vietnam: How Wizard Walter Murch Created a Soundtrack of Horror for Francis Ford Coppola's Apocalypse Now". http://www.salon.com/2000/04/27/murch/ (Last accessed 10 March 2015).

Stefani, E. and Lauke, K. 2010. "Music, Space and Theatre: Site-specific Approaches to Multichannel Spatialisation". *Organised Sound*, 15 (3): 251-259.

Teresa of Avila. ed. Zimmerman, Benedict. 1921. *The Interior Castle or The Mansions*. London: Thomas Baker

Underwood, Mark. 2008. "'I Wanted an Electronic Silence…' Musicality in Sound Design and the Influences of New Music on the Process of Sound Design for Film". *The Soundtrack*, 1(3): 193-210.

Van Leeuwen, Theo. 1999. *Speech Music Sound*. London: Palgrave Macmillan Press.

"Walter Murch on Editing". https://www.youtube.com/watch?v=WcBpXLNmS3Q (Last accessed 22 September 2015).

Weis, Elisabeth, and Belton, John, ed. 1985. *Film Sound: Theory and Practice*. New York: Columbia University Press.

Whittington, William Brian. 2007. *Sound Design and Science Fiction*. Austin, TX: University of Texas Press.

Winters, Ben. 2010. "The Non-Diegetic Fallacy: Film, Music and Narrative Space". *Music and Letters*, 91(2): 224-244.

Wishart, Trevor. 1986. "Sound Symbols and Landscapes". In Simon Emmerson, ed., *The Language of Electroacoustic Music,* 41-60. London: Macmillan.

Filmography

Carpenter, John. 1982. *The Thing.* Universal Pictures.

Coen, Ethan, and Coen, Joel. 2007. *No Country for Old Men.* Miramax Films and Paramount Vantage.

Coppola, Francis Ford. 1979. *Apocalypse Now Redux*. Zoetrope Studios and United Artists.

Coppola, Francis Ford. 1974. *The Conversation*. American Zoetrope and Paramount Pictures.

Coppola, Francis Ford. 1972. *The Godfather*. Paramount Pictures.

Coppola, Francis Ford. 1974. *The Godfather Part II*. Paramount Pictures.

Crosland, Alan. 1927. *The Jazz Singer.* Warner Bros.

Demme, Jonathan. 1991. *Silence of the Lambs.* Orion Pictures.

Fincher, David. 1995. *Se7en*. New Line Cinema.

Friedkin, William. 1973. *The Exorcist*. Warner Bros.

Gibson, Mel. 2004. *The Passion of the Christ.* Icon Entertainment International.

Kershner, Irvin. 1980. *Star Wars The Empire Strikes Back*. Lucasfilm and Twentieth Century Fox Film Corporation.

Kubrick, Stanley. 1968. *2001: A Space Odyssey.* Metro-Goldwyn-Mayer.

Lucas, George. 1974. *Star Wars a New Hope.* Lucasfilm and Twentieth Century Fox Film Corporation.

Nolan, Christopher. 2010. *Inception*. Warner Bros. and Legendary Pictures and Syncopy.

Siegel, Don. 1956. *Invasion of the Body Snatchers.* Walter Wanger Productions.

Wachowski, Andy, and Wachowski, Lana. 1999. *The Matrix*. Warner Bros.