

***Living Narrative(s):*
Cinematic Corporeality, Sonicity
and Negotiating the Cinesomatic
Experience**

Alison Walker
B. Media (Hons) Macquarie University, 2003
B. Media Macquarie University, 2002

This thesis is submitted for the degree of Master of Research
Department of Media, Music and Critical Cultural Studies
Macquarie University
9 October, 2015

Abstract

This study seeks to translate the cinematic into the *cinesomatic* through a discussion of cinema sound design. Sound is an ideal starting point to rethink the binary opposition of film and spectator, and to examine sonic storytelling in specifically corporeal terms. It is only in recent decades that film scholarship has begun to address the palpable ‘absence’ of the body in theory. Prior to this, many studies applied psychoanalytic and linguistic frameworks for analysis, which often by-passed the role and position of the body in the creation of meaning. While a large number of scholars have identified this lapse, and developed new paradigms for analysing the body, it is observable that these attempts are still overwhelmingly ocular in their focus. Media scholars such as Vivian Sobchack, Laura Marks and Jennifer Barker, among many others, have drawn on phenomenology to analyse perception and bodily affect within the context of media texts; however, I argue that this has been overwhelmingly drawn from visual cues. There is considerable scope within the studies of film sound to address this lack.

Living Narrative(s) seeks to analyse film sound via the body. Specifically, it asks: what is the relationship between film sound, narrative and the body of the ‘audience’ member? How can we understand the audience’s experience of the filmic narrative as ‘lived’ via the sound design? Can we reframe the experience of sitting in the cinema, and walking away afterwards, as having embodied sonic value? How does film sound consummate the lived experience of self, past and present, with the cinematic narrative? How can we hear, and conceptualise, the resonating intersections between spaces, memories, bodies and amplitudes of

inter-sensory fusion? By conducting an analysis of *Gravity* (Cuarón, 2013) and *Wild* (Vallée, 2014) this study seeks to contribute to investigations into *sonic* cinematic bodily experience, and participate in the theoretical movement towards articulating and validating creative somatic realities.

Acknowledgements

I firstly would like to gratefully and sincerely thank my supervisors, Dr Nicole Matthews and Dr Catherine Simpson for their intelligent guidance, encouragement and endless patience. You rallied my spirits at every juncture. Also thanks goes to Dr Virginia Madsen for her helpful insights.

Another enormous loving thank you goes to my parents – Brian and Denise Walker, whose support has been beyond measure, despite some very difficult challenges over the past year. This is for you – I made it!

Colossal thanks to my partner Michael James for his unfaltering love and support, for the comfort cooking (for just *cooking*, actually!) and for resisting the urge to run when I suggested reading passages aloud to him.

Thanks to Peter Weekly for his insightful and generous proof reading. You are a literary machine, comrade!

And a final thank you to my fellow MRes students for sharing the journey and gozleme. You reminded me how fun it is to be a student again.

DECLARATION

I declare that:

-I am the creator of all or part of the whole work(s) (including content and layout) and that where reference is made to the work of others, due acknowledgment is given.

-This work is original and has not been submitted for a higher degree to any other university or institution.

-The work(s) are not in any way a violation or infringement of any copyright, trademark, patent, or other rights whatsoever of any person.

-That if the work(s) have been commissioned, sponsored or supported by any organisation, I have fulfilled all of the obligations required by such contract or agreement.

-This thesis was produced under the Research Training Pathway (RTP) Scholarship at Macquarie University.

Signed:

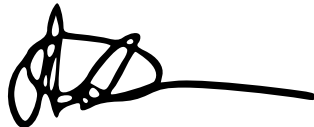
A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

TABLE OF CONTENTS

| | |
|--|-----------|
| Abstract | ii |
| Acknowledgements | iii |
| Table of Contents | v |
| Prologue | 1 |
| Introduction: Lend an Ear to the Flesh | 2 |
| Chapter One. Sounding Out Bodies: Towards a Theory of Embodied Film Sound | 9 |
| 1.1. Theory Incarnate: Phenomenology's Contribution to Philosophy | 9 |
| 1.2. The Rise of Cine-Soma: Theories of Cinematic Corporeality | 12 |
| 1.3. Inside the Sensate and Sensual: Affect and Sense Experience | 19 |
| 1.4. Rumbblings, Ruptures and Critical Resonance: Sound Studies | 25 |
| Chapter Two. Sonic Space and Echoes of the Flesh: Textual and Phenomenal Readings of <i>Gravity</i> | 33 |
| 2.1. Vertigoes and the Void: Configuring the Body in Space | 36 |
| 2.2. Inside, Out: Establishing Body Consciousness | 37 |
| 2.3. Sound and the Body: Echoing Flesh and Distending Narrative Space | 41 |
| 2.4. The Sounds of Gender | 42 |
| 2.5. The Critical Turn: 'Soundless' Chaos | 46 |
| 2.6. Post-Gravity: The Sonic Imprint | 51 |
| Chapter Three. The Walking Cure: A Sonic Pathway to Self in <i>Wild</i> | 53 |
| 3.1. Teeth, Nails, Skin: Sonic Fabrics of the Lived Self | 55 |
| 3.2. The Character and I: Sonic Identification with Screen Bodies | 57 |
| 3.3. Touching, Being Touched: How Sonic Minimalism Creates Tactile Experience | 60 |
| 3.4. Sonic Anchors: Placing Bodies and Memories | 64 |
| 3.5. The Sound of Thirst and Hunger: Visceral Empathy In Living the Narrative | 66 |
| 3.6. Walking Towards <i>Wild</i> : Contextual Considerations | 69 |
| Conclusion: From the Cinematic to the Cinesomatic | 72 |
| Epilogue | 76 |
| Bibliography | 77 |
| Filmography | 89 |

Prologue

I shift in my padded, yet strangely uncomfortable chair, holding the paper cup of soft drink. It gives slightly muffled watery clunks, as the ice cubes move around in it, bouncing off the cup walls, responding to the swirling motion of my hand. A scratchy soft murmur, as the straw pushes further down through the lid, guided by my lips. I instinctively draw closer to the warm body beside me as I recoil against the images onscreen. I realise I have been holding the drink in my mouth, and swallow quickly. Then the sound – horrific and gut-wrenching, somewhere between a groan from the bowels of a great ship, and the mutated roar of some toothed beast. As it curls around the room, it sends my knees rising and my insides plummeting. My body registers this awful sound in a moment of suspended time. I am held, already exhausted, even as I watch the figures on screen in flux. It is exquisitely frightening, and the seconds seem to stretch and hover. Then, the resistance, a push for self-preservation – I cover my ears.

Introduction: Lend an Ear to the Flesh

“...I am at the center of my auditory world, which envelopes me, establishing me at a kind of core of sensation and existence” (Ong, 2002:71)

Ong’s words capture the inherently immersive, sensory experience of audition, analogous to the cinematic experience. They provide a portal into the questions this study seeks to address: to what extent do audiences live an experience of cinematic narrative through sound? Can we reframe the experience of sitting in the darkened cinema - listening and watching - and then walking away afterwards, as having embodied sonic value? How does film sound weld the lived experience of self, past and present, with the cinematic narrative? How can we hear, and conceptualise, the resonating intersections between spaces, memories, bodies and amplitudes of inter-sensory fusion? In other words, how might theory elucidate the way listening bodies are affected by film sound, and how might this physical response carry across bodily zones, bodily memory and the other senses? A primary purpose of cinema sound is to give life, depth and expression to a narrative world. More specifically, it is the crucial ingredient that gives a phenomenal reality to the bodies of the diegetic world. A shortcoming of this description, however, is that it constructs sonic significance in relation to the depicted world of the narrative. While this is unarguably one of the primary ways of understanding film sound, I suggest that the experience of film sound is a complex process that, for the audience, is inherently embodied.

In placing the body at the heart of discussions of cinema, Vivian Sobchack (1992; 2004) employs a critical perspective and methodology informed by

phenomenology. She argues for the carnality of the cinematic experience, and this study adopts her definition of embodiment as the “radically material condition of human being that necessarily entails both the body and consciousness, objectivity and subjectivity, in an irreducible ensemble” (4). Developing the theory of embodied film sound is necessary for film sound scholarship. It is my contention that the experience of sound is far more phenomenologically rich than is often portrayed in many discussions of film sound. While few theorists will deny the tactility, intimacy and immersive power of sound, still few have pursued this to the point of asking: how does the body become implicated in the sonic narrative unfolding? How does film sound invoke sensory affect and memory in an embodied experience that renders the filmic narrative as undeniably corporeal? In this sense, film sound scholarship lags behind the broader arena of cinema’s body scholarship. As Mark Evans and Bruce Johnson (2011) note, it is curious that theories of the physical reception of sound are largely ‘absent’ from film sound theory (122). Therefore, by placing the body ‘in the mix’, understandings of cinema, sound and embodiment necessarily thicken and deepen.

This study explores the relationship between film, sound and embodiment using two case studies with aesthetically different sound designs, to demonstrate how the body collaborates with sonic narrative. This immediately implies a question of multiplicity, as the ‘bodies’ of the characters, actors, technicians and audience are all implicated in a creative exchange. Many physical bodies contribute to a film’s production, distribution, exhibition and reception. However, as a comprehensive discussion of all associated bodies is far beyond the scope of this

study, the discussion focuses on character and audience, asking how portrayed embodiment coalesces with actual audience embodiment via sound. More specifically, this analysis narrows its focus to the embodiment of each film's lead female protagonist. This offers particular insight into how female embodiment is imagined and portrayed in sonic terms, often in ways that run counter to the depicted male counterparts. In terms of audience experience, this study does not aim to describe a universal or ideal experience, for as Jenny Chamarette (2015) has shown, while film and body are "mutually involved", this does not equate to a universal bodily experience, or suggest that every film creates a relation to the body in the same way (293). Further, the specifically subjective interpretations of sounds presented in this analysis are not intended to represent how sound is experienced by all responders. Rather, this discussion aims to contribute to phenomenological discussions of film sound by presenting two specific film case studies that draw attention to their own sound design, and demonstrate how sonic experience is embodied.

Living Narrative(s) traverses the theoretical gap between film sound and the body by applying two approaches of analysis. Firstly, by using textual analysis to isolate and analyse selected soundtrack elements of the filmic texts. This enables closer scrutiny of the ways in which a character's subjective embodiment has been depicted sonically. Secondly, by using phenomenological introspection, it aims to identify the personally lived and affective experience of each cinematic encounter, demonstrating how film sound works on a profoundly somatic level, and forces us to rethink the boundaries and definitions of an experience of cinema. This two-fold analytical approach initially suggests an apparent

contradiction, for, as Salome Voegelin (2010) has noted, “Sound is the solitary edge of the relationship between phenomenology and semiotics, which are presumed to meet each other in the quarrel over meaning” (27). However, this project does not seek to perpetuate an epistemological ‘quarrel’, but rather to interrogate the range of meanings produced in the lived cinematic encounter. In this way it bridges the textual model and the ‘embodied’ approach offered by the phenomenological model.

By attending to film sound, this study also mitigates the overtly scopic discussions of corporeality that dominates much of the scholarship of cinema and embodiment. Instead, it argues for the visceral power of sound to render film narrative powerfully material, and suggests that the audience’s inherent embodiment is the indispensable constituent of this narrative gestalt. In this way, it also challenges the persistent assumption that Hollywood cinema audiences are “comfortably inactive” (Sergi, 2001:121). Further, as these case studies confirm, this relationship between film sound and audience “lives on”, even after the spectator physically leaves the theatre (Mayne, 1993:2-3).

The two film case studies presented here are divergent in terms of genre and style, yet linked by their distinctive relevance for a discussion of sonic embodiment. These films foreground the embodiment of the protagonists as being significant, due to the extreme physical difficulties both endure. Consequently, the films employ sound design in fascinating ways in order to creatively convey this subjective embodiment. I argue that the success of these films is very much dependent on somatic empathy, and that the extent to which

an audience ‘feels’ the film, both physically and emotionally, is acutely influenced by the sound design. Therefore, these films were also selected because of their personal somatic impact. The analysis draws on my unique experience of their sound design, which resonated and endured beyond the closure of each film. By examining *Gravity* (Alfonso Cuarón, 2013) and *Wild* (Jean-Marc Vallée, 2014) this study describes and theorises the lived experience of sound design in both textual and corporeal terms, and demonstrates how this produces what I term the *cinesomatic experience*. In this formulation, affect, memory and artistry coalesce to create a vivid, richly lived experience, which in so many ways exceeds the cinematic text - temporally, spatially and creatively.¹ Due to limitations in space, these analyses will be restricted to a few key scenes. These arguably critical scenes were selected for two main reasons; firstly, as noted above, because the compelling use of sound in each underscores the embodiment of the characters in a way that is critical to accessing the emotional potential of the narrative. Secondly, these scenes demonstrate how the corporeal nature of sound can physically affect a responsive, embodied listener who is engaged and emotionally invested in the experience.

Chapter One engages with the diverse range of literature that informs this endeavour, negotiating a conceptual pathway through the interdisciplinary thought that foregrounds the significance of the body and sound. Welding together philosophy, sensory and affect theory, and sound studies, this chapter draws on this myriad of conceptual influences to suggest the *cinesomatic*. It situates this as a composite concept that describes the embodied experience of

¹ Elizabeth Stephens (2012) also uses this term, however Stephens describes a “cine-somatic loop” to define the body as a technological object when engaged with the cinema (356).

cinema sound, a phenomenon that disturbs dualistic descriptions of spectatorship and purely textual readings of film sound. The theoretical framework that forms the basis of this project is necessarily broad, as I demonstrate how these core arguments and concepts can expand an understanding of the embodied cinematic/sonic encounter.

Chapter Two presents the first case study in *Gravity* (Cuarón, 2013), a film that thematically and sonically strikes at the heart of human embodiment. As the conditions of human physical existence are so dependent on Earth's environment, space becomes an inhospitable backdrop, and (human-created) space debris is the antagonist playing against the lives of the characters. As I will demonstrate, the sound design in this film aligns character agency with gender, as well as simulating the physical 'reality' of being in space in order to provoke a specifically corporeal anxiety. It also constructs a consciousness of embodiment in the audience via the sound design, a factor that inescapably implicates the sensory and visceral participation of the audience's body.

By examining the second case study *Wild* (Vallée, 2014), Chapter Three explores how cinematic embodiment can be realised in a radically different soundscape, with a very different sonic palette. Like *Gravity*, *Wild* is also a survival narrative focused on an emotionally troubled female protagonist, who experiences physically challenging conditions in an attempt to 'rescue' herself. Unlike *Gravity*, however, *Wild's* narrative unfolds against the backdrop of earth-bound wilderness, and is driven by a protagonist who externalises her emotional difficulties through physical action. In this chapter, I explore how sound invokes

somatic memory and how the comparatively minimalistic sound design of *Wild* engenders a very different, but nonetheless emotive, response to the filmic encounter. What both these case studies demonstrate is that, regardless of genre, cinema is powerfully and richly affective, and that audiences live film narratives in a visceral, material way in a large part because of film sound.

Chapter One

Sounding Out Bodies: Towards a Theory of Embodied Film Sound.

1.1. Theory Incarnate: Phenomenology's Contribution to Philosophy

Philosophy is not the reflection of a pre-existing truth, but, like art, the act of bringing truth into being. (Merleau-Ponty, 2002: xxii-xxiii)

In establishing the theoretical context for *Living Narrative(s)*, it is useful to begin with phenomenology, the branch of philosophy that seeks to prise open the ontology of being through perception. A comprehensive overview of phenomenology in its many incarnations is far beyond the scope of this chapter. Nonetheless, for this study, it is critical to begin by noting how and why phenomenology cross-pollinated between philosophy and film studies. At the core of this thesis are film theorists who examine perceptual experience in the cinematic encounter, and they draw their main conceptual tools from phenomenology, in particular the work of existential phenomenologist Maurice Merleau-Pont.² As such, the first part of this chapter will outline this relationship, and some critical concepts that now inform a growing branch of film scholarship, introducing the core assertions that are relevant for this study. In contextualising the body, I later go on to examine both sensory scholarship and sound scholarship, weaving together these disparate branches of theory to situate the cinesomatic as a critical concept useful for film sound analysis.

One of Merleau-Ponty's main contentions is that, contrary to the Cartesian equation of thought-with-being, instead the *body* is central to being (and

² This is to be distinguished from the transcendental phenomenology of Immanuel Kant (1899), and Edmund Husserl (1929); transcendentalism differs in that it offers a model of subjectivity that transcends the body and is beyond the subject's capacity to know.

therefore, knowing).³ He writes, “the world is not what I think, but what I live through” (2002: xviii) and compares the body to, “a work of art. It is a nexus of living meanings” (2002: 175). One of his major theoretical moves was to shift the locus of ‘truth’ to the embodied conscious subject. In doing so, subjectivity is no longer transcendently a priori, but is found “in the perceptual beginning of reflection, at the point where an individual life begins to reflect on itself” (72).⁴ This centrality of the perceptual from the first-person perspective gave unprecedented credence to the lived body, and is a cornerstone of Merleau-Ponty’s contribution to philosophy.⁵

Many scholars across the humanities found Merleau-Pontian phenomenology useful because of his emphasis on lived experience, and of this defining role of the body in subjectivity. Elizabeth Grosz (1994) articulates the broad feminist critique of philosophy when she argues that it has established itself as a form of knowing and rationality, “only through the disavowal of the body...” (4). She also demonstrates how Merleau-Ponty’s challenge to binary thought “places his interests very close to those of many feminists, especially those working in philosophy who regard logocentrism as fundamentally implicated in and complicit with phallogentrism” (1993: 39). Other prominent feminist scholars also saw phenomenology as liberation from the mind/body dualism pervading Western thought, and used it to examine the political and ideological struggles,

³ For an insightful exploration of Cartesian thought and its place within the development of Western thought, see Bordo, S. (1987). *The Flight to Objectivity: Essays on Cartesianism and Culture*.

⁴ Merleau-Ponty opposed the Kantian ‘intellectualism’ that equates ‘perception’ as judgement. He believed that ‘judgement’ is secondary (Cerbone, 2006: 111).

⁵ This ‘centrality’ of self is not without criticism, and as Paul Rodaway (1994) has shown, a persuasive complaint against phenomenology is its inherent anthropocentrism.

particularly for women, on a bodily level.⁶ Iris Marion Young (1990) in particular notes that existential phenomenology aims to speak from the point of view of the constituted subject's experience, in ways that complement but do not duplicate the observational or interpretive methods of Foucault, Butler or Bourdieu (8). Young therefore affirmed phenomenology's value for feminist theory in conjunction with other canonical body philosophers.⁷

The turn to phenomenology is symptomatic of a wider shift in the humanities towards the body/embodiment, where as Sara Ahmed & Jackie Stacey (2003) note, 'bodies' have become a privileged focus of attention (3). In pointing out how this somatic shift is paramount for feminist theory, they demonstrate that women's marginalisation from philosophical discourse results from the association between masculinity and reason, and femininity and the body (3). Feminist phenomenology offered new ground for philosophical reflections about film, and as Jenny Chamarette (2015) argues, resituated the body within philosophical discourses on film (292). However, for film studies this theoretical shift to include the body was not necessarily overt or assured. Spencer Shaw (2008) has asserted that theories directly linking phenomenology and film have been surprisingly uncommon (22). Phenomenology was therefore not immediately nor collectively embraced and applied within film studies. For Robert Baird (2000), this attitude reflects, "an obstinate and defensive

⁶ See Iris Marion Young (1990), Moira Gatens, (1996), Sandra Lee Bartky (1990), Luce Irigaray (1985), Judith Butler (1988) Christine Battersby (1998), Margrit Shildrick & Janet Price (1998), Susan Bordo (1998), Rosi Braidotti (1994), Donna Haraway (1991), and Gail Weiss (1999).

⁷ Even among philosophers, the salience of phenomenology has not gone uncontested. Michel Serres (2008) concedes that the philosophy of language "has the upper hand over phenomenology; we must declare it the winner" (112). Laura Marks has shown how other influential philosophers, including Gilles Deleuze, questioned its usefulness in understanding perception and consciousness, particularly in relation to cinema. According to Marks, for Deleuze, consciousness and the world are indistinguishable (2000:150).

rationalism that would deny our experience of film space and film objects any of the phenomenological depth we bring to reality.” (18). Nonetheless, some film theorists identified how fundamental concepts of phenomenology are apt for analysis of cinema. Jennifer Barker (2009) articulates its methodological merits for film theory when she writes:

Existential phenomenology and its method...gives us a means of embodied analysis that respects the co-constitutive reciprocal relationship between the perceiver and the perceived. A phenomenological approach to the cinematic experience, then, focuses neither solely on the formal or narrative features of the film itself, nor solely on the spectator’s psychic identification with characters or cognitive interpretation of the film. Instead, phenomenological film analysis approaches the film and the viewer as acting together, correlationally, along an axis that would itself constitute the object of study. (18)

In line with Barker, this study does not partition the cinema ‘text’ from the audience ‘body’. Rather, it argues that they are mutually dependent, and engaged in a decidedly complex configuration. In the following section, I explore in closer detail theoretical concepts of embodiment, and in doing so clarify how they are potentially useful for a discussion of film sound.

1.2 – The Rise of Cine-Soma: Theories of Cinematic Corporeality

The world is not what I think, but what I live through.
(Maurice Merleau-Ponty, 2002:xviii)

Thomas Csordas (1994) notes that from the 1970s and increasingly in the 1980s, many disciplines were implicated in the move toward the body (1). As argued earlier, the body has a central place in feminist theory, which critiqued

philosophy for being “somatophobic” (Cataldi, 1993:127).⁸ However, scholars do not agree on what defines and differentiates concepts of corporeality. The body is evidently problematic for theorists, and debate continues about fundamental definitions, placements and configurations of experience in terms of the body. The body, its sensorium, the emotions, cognition and consciousness all become invoked in discussions of the body and embodiment, following very different theoretical trajectories.⁹

Within film studies, this corporeal shift is significant because the canons of linguistic and psychoanalytical theory that had dominated film scholarship to this point came to be seen as problematic. Stephen Shaviro (1994) argued that semiotic and psychoanalytic film theory is a “phobic construct” (15), because its theorists open their discussions “promising to resist the insidious seductions of film” (10). He critiques its practice of abstracting cinematic experience to the purely psychical. For Shaviro, psychoanalysis is a theory of fantasy and mental illusions, and he asks film scholarship to reconsider the engagement of the body (256).

Consonant with Shaviro, other scholars argued for recognition of the material nature of our encounter with the world, a premise that is founded upon the presence and participation of the body. Shaviro’s critique takes on an even broader stroke, as he asserts, “Postmodern Western culture is still more traditional, more Cartesian, than it is willing to admit; it is still frantically

⁸ Agnieszka Piotrowska (2014) noted how the majority of proponents of the phenomenological approach to cinema have been and still are women and feminists (4).

⁹ For a comprehensive outline of these, see Blackman, L. (2008; 2012); Turner, B. (ed) (2012)

concerned to deny materiality, to keep thought separate from the exigencies of the flesh” (15). This attempt to problematise Cartesian dualism is a major impetus for much of the investigations of embodiment, and as Grosz demonstrates, this theoretical move was motivated by a need to devise non-dualist accounts of subject (1995:83). Significantly, in film theory this was not without precedent, for as Torben Grodal notes, the earliest film theorists did include the sensate body in their writings on cinema:

The linguistic turn has been especially problematic for film and media studies because it marginalized previous approaches such as those of Munsterberg, Eisenstein, Arnheim, and Mitry, which described audiovisual processes as having important perceptual, emotional, and embodied components. The linguistic turn also marginalized the influence of phenomenology, especially that of Merleau-Ponty... (2009:15)

In the wake of this critical shift, film scholars therefore began to argue for a somatic-logic inherent in the cinematic encounter, in ways that, as Grodal suggests, rekindles much earlier thought about the perceptual, embodied and emotional elements of the film experience.

This shift towards embodiment enabled film critics to re-examine models of spectatorship in a way that encompasses the material, the lived and the enfleshed. Echoing Merleau-Ponty, philosopher Mark Johnson (1987) demonstrates that the architecture of meaning, reflection and comprehension for humans is not only contained by the body, but is determined by the body:

The centrality of human embodiment directly influences what and how things can be meaningful for us, the ways in which these meanings can be developed and articulated, the ways we are able to comprehend and reason about our experience and the actions we take. (xix)

This argument has significant implications for a philosophy of film spectatorship. If the body dictates the structures of meaning accessible to us, it becomes clear that any division between the perceiver and the perceived is problematic. As Elena del Rio (1996) demonstrates, using a phenomenological perspective suggests a shared materiality between the lived-body and the objective world. This therefore blurs the barrier erected by metaphysics between self and other, subject and object (103). What such a change ultimately demands is a reconfigured understanding of the cinematic experience, one in which neither mental abstractions or binary divisions between self and film are adequate. In this way, phenomenology therefore (re)locates the body as a valid site for theorising the lived experience of cinema.

Vivian Sobchack is one of phenomenology's most important advocates within cinema studies.¹⁰ Like Shaviri, Sobchack cited the limitations of linguistic and psychoanalytic approaches to understanding the cinematic encounter:

[R]ather than providing the mediating bridge between the image and its comprehension by the viewers lived body, the signifier and the psyche just reproduce the binary split between image and body and thus they still cannot account for a *somatic intelligibility* of the film image or a *somatic intelligence* of the spectators' body that is more than primitive reflex. (2000:NP)

In assembling her theory of corporeal cinema spectatorship, Sobchack directly addresses the accusation that phenomenology is ahistorical and universalising. She counters such claims by arguing that the aim is not to essentialise or prescribe experience, but rather, to address the 'thickness' of the both incarnate

¹⁰ Sobchack cites her loss of a leg to cancer as a major reason for her insights into the limitations of earlier theories of spectatorship, see Sobchack, V. (2006). 'A Leg To Stand On: Prosthetics, Metaphor, and Materiality' in Smith, M. & Morra, J. (eds) *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, Cambridge: MIT Press.

being and its representation (1992:7). She also demonstrates how the medium of cinema is especially appropriate as its language uses “*modes of embodied existence* (seeing, hearing, physical and reflective movements)” and the “*structures of direct experience*” as the basis for the structures of its language (1992: 4-5, emphasis in original).¹¹ In other words, the language of cinema captures and transposes a sense of ‘direct experience’ for its audience, situated and occupied as ‘here’. However, the majority of Sobchack’s focus examines how bodily existence is implicated through vision. She does make a brief contribution to a phenomenology of sonic experience,¹² but *Living Narrative(s)* suggests further revision of the vision-based frameworks for embodied cinema experience, to one where entire bodily existence is implicated through hearing.

By placing the body and lived experience as central to the cinematic experience, it is also significant to examine how the perceiving ‘self’ participates. The argument for active perceptual construction has strong implications for a theory of the cinematic encounter, and becomes indispensable to a theory of embodied cinema via sound. David MacDougall (2006) argues,

Neuroscientists, art theorists and phenomenologists have all observed that we do not perceive objects in any complete or unitary way...we make inferences about them....This means that we actively construct objects in a manner that suggests they are as much projections of our own bodies as independent of them. (21)

Such a configuration suggests that the act of perception is fundamentally corporeal and generative, an act of projection as much as reception. Going further here, Jennifer Barker (2009) has specifically articulated the way the body

¹¹ Sobchack uses the neologism ‘*cinesthetic*’ to denote the particular model of the subject engaged in the sensory cinematic encounter.

¹² See Sobchack, V. (2005). ‘When the Ear Dreams: Dolby Digital and the Imagination of Sound’ in *Film Quarterly*, 58(4), 2-15.

becomes implicated – how haptic, kinaesthetic and visceral responses are part of the cinematic encounter. In vivid corporeal detail she invokes the body, where “muscles, tendons, and bones that reach toward and through cinematic space; and viscerally, in the murky recesses of the body, where heart, lungs, pulsing fluids, and firing synapses receive, respond to, and re-enact the rhythms of cinema” (3). Such a description suggests a corporeal synchronicity between film and viewing body. Going further here, Brigitte Peucker (2007) argues that spectatorial affect is ‘real’ even when produced by a film, and in this way, the emotional and bodily responses of the spectator “extend textuality into the real world” (1). In other words, through the act of perceiving, the embodied spectator becomes an extension of the film. This is certainly a persuasive idea, considering how, as Barker has shown above, the very biological substance of our bodies is affected by cinema. These arguments are extremely useful for this present study, however, I suggest that the notion of audience as ‘extended text’ is still limiting. As I demonstrate in my case studies, the perceiving embodied audience is even more collaborative and creative than a textual extension model allows for.

As mentioned earlier, a general shortcoming of this field of scholarship is its preoccupation with vision. In appropriating MacDougall’s notion of ‘projection’ and Peucker’s model of extension, this study contends that the experience of film sound can be defined as creative and constructive, incorporating embodied responses and memory. Rather than perpetuating visual based metaphors such as projection for this study, the term *cinesomatic* suggests a process and a space – all embodied, sensually lived, mobile and multi-layered. This also gives salience to the audience’s active production of narrative. This production, taking place in

a living body, is in excess of the cinematic narrative, and demonstrably functions on a sonic level.

All aspects of physicality can, and are, invoked and engaged in the cinematic encounter. The role of embodied memory becomes significant, a marker and a trace of previous lived experience. Barker demonstrates that the body's muscular and kinaesthetic memory resonates with the film's body as a result of lived experience (75). Sensory theorist Laura Marks (2000) argues that perception is a "minefield of embodied memory" (153), and her theory of cinematic hapticity examines how the eyes become "organs of touch", responding to visual textures in a way that converts image into sensation (2002:2). She emphasises that this is highly individual, and that each audience member has unique embodied memory (122). Even within the field of memory studies, however, it is apparent that embodied memory has been overlooked. Instead, memory studies has tended to focus on what Nicholas Chare and Liz Watkins (2013) describe as 'intellectual memory', which is unconcerned with "archives of physical feeling" (78).¹³ In comparison, within dance theory there has been considerable effort to conceptualise body memory in conjunction with the living, moving body. Dance theorist Jaana Parviainen (2002) has described an "*associational kinaesthetic body memory*", where physical and emotional phenomena are stored in body memory until triggered (640). Such a concept translates well to cinema, a medium that is kinaesthetic and which can provoke

¹³ Due to space restrictions, this study is unable to explore the vast area of memory studies in any substantial detail. Edward Casey (2000) has done significant work on a phenomenological approach to memory where he places body memory at the apex of inquiry. Significantly, for Casey, "there is no memory without body memory" (172). Similarly, Jeffrey Toth (2000) argues current memory research has shown that non-conscious memory even more valuable than previously thought. For Toth, understanding memory is to "understand the phenomenal awareness of memory" (246).

reflexive physical movements from its audience. The study of memory as embodied therefore is demonstrably relevant for exploring the ways audiences may physically respond to the cinema.

Living Narrative(s) is positioned in line with the scholars who adopt an embodied approach to perception, appropriated from phenomenology. Such a perspective emphasises the centrality of the body and facilitates new understandings of an embodied encounter with cinema sound. In the following section, I consider in further detail this sensory contract suggested by cinematic engagement, in particular focusing in more detail on the intricacies of sense perception.

1.3 – Inside the Sensate and Sensual: Affect and Sense Experience

Cinema is not only about telling a story; it's about creating an affect, an event, a moment which lodges itself under the skin of the spectator.
(Rutherford, 2003:NP)

In re-placing the sentient subject at the centre of enquiry, this project subscribes to the perspective that the cinematic experience is a wholly embodied sensory experience. This section therefore addresses more closely the 'sensory turn' in theory, the intellectual movement that developed within, and adjunct to, studies of embodiment. Steven Brown & Ian Tucker suggest that as academic thought became "...bogged down in the linguistic or semiotic turn" (237), new theory shifted toward the sensorial, across the disciplines. In this way, as Barbara Kennedy argues, subjectivity was also re-theorised into "a more complex

relationship between the concepts of *affect* and *sensation...*" (2000:29, italics in original).

It is necessary to do some critical unpacking here, since discussions of sense, affect and emotion become perilously difficult to navigate. These polysemic terms are used in multiple contexts to suggest similar phenomena, but in ways that do not necessarily align. How, and to what extent, the senses mediate, define and constitute consciousness continues to be discussed by experts in fields as disparate as neuroscience, psychology, anthropology, philosophy and sociology. As a result, interesting dialogues have opened up between scientific disciplines and the humanities, at times offering a scientific legitimacy to philosophical questions.¹⁴ This section aims to outline how some of these arguments are relevant for an investigation into the sensory experience of film sound.

One of the central concerns in recent studies of sensory experience is the relationship between the senses, a focus that disrupts the hierarchical model in which sight sits at the apex of the human sensorium. This has particularly poignant implications for film studies, which has been largely considered as a visual medium. The notion of vision as central to Western knowledge, objectivity and rationality has been extensively critiqued,¹⁵ and recent investigations into

¹⁴ One of the most visible neuroscience researchers, Antonio Damasio (1994; 2000; 2003) has argued for a closer dialogue between science and the humanities, making a case for the brain and body of a human as an "indissociable organism" (1994:xvii). This supports 'body' scholars who argued against mind/body dualism and its legacy of devaluing and marginalising bodily 'knowledge'. Further, it gives scientific legitimacy to the argument that the 'body' is an integral aspect of 'mind'. Damasio himself suggests some Cartesian disembodiment behind the thinking of those neuroscientists who insist the mind can be fully explained solely in terms of brain events (250-251).

¹⁵ See Crary, J. (1992). *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Cambridge: MIT Press; Levin, D. (ed) (1993). *Modernity and the Hegemony of Vision*, Berkeley: University of California Press.

sense experience depicts the senses as far more fluid and synesthetic than a hierarchical model allows for.¹⁶ In deviating from the hierarchical model, David Howes (2005) argues “the multidirectional character of intersensoriality means that no one sensory model can tell the whole story” (12).¹⁷

As argued earlier, somatic memory is critically significant for the construction of sensory experience. Susan Stewart (2005) has shown that the senses themselves are shaped and modified by culture and experience, and that the body bears a somatic memory of its encounters with what is outside of it (61). In arguing for the *cinesomatic experience*, this study contends that sensory experience of the cinema not only utilises, but depends upon, embodied sense memories and plasticity of perception to create what Susan Stewart describes as, “a synthesis of imagined and material experiences” (2005:64). This synthesis lies at the heart of the cinesomatic experience, a union of textual narrative and embodied narrative.

That perception is amalgam has been articulated by Brian Massumi, who contends, “Perception is never only impression. It is already composite. Studying each impression are shards of intentions and conscious memories...” (2000:74). In examining the scientific perspectives on embodied memory, David Levin (2002) asserts, “we do know from our own (phenomenological) experience that traces of memory are borne by our body’s unconsciousness, and that these traces can speak to us of our past through our retrieval and clarification...” (154). In other words, Levin suggests that memories that sit just outside consciousness

¹⁶ James Gibson (1968) was instrumental in dismantling the hierarchical view of the senses, see his book *The Senses Considered as Perceptual Systems*, Boston & London: Allen & Unwin.

¹⁷ Howes suggests the term ‘emplacement’ to denote the sensuous interrelationship between the body, mind and environment. Due to his anthropological focus, environmental location is emphasised.

still communicate previous experience. His argument suggests a dialogue between memories and bodies, a useful model when considering the sensory experience of cinema sound. Emphasising that this relationship between bodies and memories is also deeply individual, Susanna Paasonen (2013) posits the body as a 'somatic archive'. For her, however, the orientation of affective responses is individually shaped by historically layered skills and experiences (360-364).

At this point, it is necessary to more specifically address the concept of affect, which has been so pervasive in much recent literature that it has often been bracketed off as the 'affective turn'. Definitions and descriptions of affect differ among scholars, despite its recurrence in academic discussions of the body. Melissa Gregg & Gregory Seigworth (2010) note that there is no 'single' theory of affect, but instead a "methodological and conceptual freefall" (4). That it involves the body and its physical states is evident; its value for scholarship, however, becomes even more apparent as Marianne Liljestrom & Susanna Paasonen (2010) contend that affect is now a site for rethinking a wide range of theoretical concerns, from mind-body dualism, to critiques of identity politics and practices (1). Furthering this, Carolyn Pedwell & Anne Whitehead (2012) argue that the affective turn is bound to the wider debates around "ontology, embodiment and the neurosciences" (124). Affect scholarship is therefore a locus of cross-disciplinary discussion, and neuroscience in particular is producing research that both challenges and supports many philosophical claims about affective

experience.¹⁸ In an account that legitimises a philosophy of embodied perception, Melba Cuddy-Keane (2010) asserts that psychologists, cognitive scientists and neuroscientists all offer “empirical evidence that the body thinks” (680).

In marrying a discussion of sense and affect to film theory, this project suggests that the experience of film sound is no less affective, engulfing and provocative than image. Steven Shaviro deems cinematic perception as “a kind of physical affliction” (51) and notes there is still much work to be done on the “psychophysiology of cinematic experience” (52). That affective, sensory experience is psychophysical is articulated by Isobel Armstrong, who argues that “affects cross categories.... they belong to mind and soma, straddling conscious and unconsciousness just as they straddle mind and physiology...” (108). In terms of film theory specifically, Paul Elliott (2010) demonstrated how recent developments in neuroscience actually support the perspective of the cinema as an “immersive perceptual event”(12).¹⁹ Along the lines of immersion, the model of ‘transmission’ is also useful for the cinematic context. In her theory of affect, Teresa Brennan (2004) dissolves boundaries between individual and environment and posits ‘feeling’ as profoundly communal. Like Peucker, she argues for the direct physical impact of visual images and auditory traces, but bases her understanding of reception at a neurological and vibrational level

¹⁸ Brian Massumi (2002) specifically calls theorists to borrow from science in order to make a contribution to the humanities (11). Others such as Francisco Varela (1992) argue that sciences are shifting in a way that accommodates this emerging view of knowledge of embodied and incorporated (320).

¹⁹ Elliott used a study of mirror neurons to explore how movies produce ‘real’ affected results in humans. Richard Shusterman (2012) emphasises the specificity of such, arguing that an individual’s nervous system, or “repertoire of neural pathways” is largely a product of individual experience and cultural conditioning (29).

(10).²⁰ Such a model is intriguing in considering the ‘communal’ experience of cinema’s exhibition and reception spaces and it also reiterates the neuroscientific perspectives developing behind theories of emotional and sensory experience.

Critics of affect theory and phenomenology, however, find the celebration of materiality problematic on epistemological grounds. In her critique, Eugenie Brinkema (2014) condemns the ‘performative dimension’ of the theory:

[T]hat repeatedly traces spectatorial movements, ruptures, rumblings and passions – but this performance is also always a solipsism. As a result, a great deal of contemporary work on cinema and affect relies on an excessive use of ‘I’ expressions in relation to experienced emotions or personal narratives of sensorial disequilibrium...The turn to affect thus risks turning every film theorist into a phenomenologist... (31-32)

However, such an argument suggests that theorists ‘should’ be invisible to their research, that a subject should (or even could) transcend the cinematic engagement, and that awareness of sense experience is somehow arrived at independent of the body. Jenny Charmarette (2015) points out that film phenomenologies retain “looseness” and “lightness of foot” which is often described as lack of disciplinary rigor (290). However, Sobchack had already stalled such a complaint when she argued:

[G]rounding broader social claims in autobiographical and anecdotal experience is not merely a fuzzy subjective substitute for rigorous and objective analysis but purposefully processual, expansive, and resonant materialistic logic through which we, as subjects, can understand...what passes as our objective historical and cultural existence... (2004:6)

²⁰ Brennan develops this argument with an intriguing critique of the ‘emotionally contained individual subject’, a “residual bastion of Eurocentrism in critical thinking, the last outpost of the subject’s belief in the superiority of its own worldview” (2004:2).

Therefore, as Sobchack suggests, materialist logic that finds voice through self-reflexivity is still relevant and useful for film theory. Therefore this study does not aim to transcend lived experience of cinema sound, but to acknowledge and examine it, to incorporate it within a discussion of the film itself.

Conceptualisations of the cinematic sensory experience are still developing, with considerable input from a range of disciplines external to the humanities. Studying the sensual experience of perception is paramount for considering the embodied cinematic experience. The next section moves more specifically into a discussion of sound theory, in order to arrive at a context for studying sonic embodiment in cinema.

1.4 – Rumblings, Ruptures and Critical Resonance: Sound Studies

Why is thunder like scratching? (Hull, 2001: 10)

This study argues that the majority of scholarship on cinema and embodiment has ignored or understated the significance of the aural experience. As Steven Connor (2013) contends, “film theory has done its best to bring to life a phenomenological film-body in which everything is commuted into the narrow channel of visual perception” (119). In opposition to this lack, I propose that a vividly embodied experience of cinema narrative arrives through the corporeal experience of film sound. This section examines some bridges scholars have made between sound and embodiment within the overall trajectory of sound studies. It aims to align these findings to the objectives of film sound studies, a sub-discipline that seeks to augment discussions of cinema from visual to audio-

visual. Hence, while this project falls within *film sound studies*, it also draws theoretical material from this wider scope of sound studies.²¹

It is significant to note that as film sound scholarship began to expand internationally, its seminal theorists, including Michel Chion (1994, 2009), Mary Ann Doane (1980), Rick Altman (1992; 2004), Kaja Silverman (1988), Philip Brophy (1999; 2000; 2001) and Anahid Kassabian (2001) brought a diversity of insights and methodologies to the discipline, based on their own research backgrounds which range from composition, to phenomenology, to psychoanalysis, to musicology.²² While the study of music is a long-established discipline, many ‘sound’ theorists (not defined in the musicological sense) cite the ‘ocularcentrism’²³ of Western culture and theory as major impetus for their research. Further, in academia there has often been a separation of discussions

²¹ Sound Studies is a nebulously defined area questioning relationships between sound, space, identity, technology and listening. Gaining traction in academia from the 1970s onwards, ‘sound studies’ reaches from acoustic ecology (Schafer, 1977; Truax 1996; Blesser, Salter & Blauert, 2007; Cox, 2014;), to archaeoacoustics (Scarre & Lawson, 2006), psychoacoustics (Truax, 2001; Howard & Angus, 2009), audio technologies (Greene & Porcello, 2005; Altman & Handzo, 1995; Bull, 2000), the history of aurality (Sterne, 2003; Richardson, Gorbman & Vernallis, 2013; Pinch & Bijsterveld, 2013; Thompson, 2004), as well as sound art (Ouzounian, 2006; d’Escriván, 2009; Augoyard, 2005; Kahn, 1999; LaBelle, 2006).

²² It is vital to note here the overlapping distinctions between ‘sound’ and ‘music’, a discussion that is beyond the scope of this present study. For an astute study that traverses this crossover in genre films, see Hayward, P. (ed) (2009). *Terror Tracks: Music, Sound and Horror Cinema*, London: Equinox; Hayward, P. (ed) (2004). *Off the Planet: music, Sound and Science Fiction Cinema*, Eastleigh: John Libbey in association with Perfect Beat Publications.

²³ Ocularcentrism as understood as the privileging of sight over other senses. Theorists such as Marshall McLuhan (1964) and Walter Ong (2002) detailed the cultural shift from orality to visualism. Steven Connor (1997) locates another shift alongside the development of audio technologies, noting how the singular space of the visual is transformed by the experience of sound to a plural space (206-207).

about 'sound' and 'music', which speaks to the wider debates about 'high art'²⁴ as well as reflecting the industry division of sound roles.²⁵

Sound studies continues to harbour disagreements and controversies over its situation within wider scholarship, and its methodological specificities. While some theorists such as David Toop (2004) contend that sound studies is a marginalised intellectual pursuit, others cite its percolation throughout the academy, to the point that any discipline could develop a sub-discipline to the study of sound (Drobnick, 2004:9). This has led Jonathan Sterne (2003) to lament during the early stages of its development that sound studies is conceptually fragmented with no overarching, shared sensibility (4). However, as the field continued to develop and diversify, he acknowledges that there is no a priori methodology for sound studies; rather methodology should arise from the questions asked and the knowledge fields engaged, not the other way around (2012:6). Indeed, as a model of research, Helmi Jarviluoma and Noora Vikman (2013) describe sound studies as a "multisensory methodology", lauding its research of "spaces and materialities" (655). *Living Narrative(s)* argues that using the multisensory approach to film sound facilitates new insights into the relationship between sound and the sensate users of cinema, a relationship that is profoundly corporeal.

²⁴ Sergi (2004) has argued that this is due to perceptions of composers as auteurs, and of music being a culturally sanctioned art form, therefore more worthy of study (78)

²⁵ Such a division has been reflected in the practices of the film industry, as sound designers and composers generally do not collaborate and in the competition for screen prominence, music is given preference. Hollywood sound professional David Yewdall (1999) noted how some composers use their own 'brand' of sound effects, working them into the score. However, some composers, unnamed by Yewdall, have deliberately scored pictures to 'torpedo' the sound effects track (243).

As stated earlier, the link between phenomenology, the body and film sound is largely an under-developed area of theory. Rick Altman (2012) argues:

If we are fully to restore a sense of sound's role in creating our sense of the body, we must depend on historically grounded claims and close analyses of particular films rather than on ontological speculations that presume to cover all possible practices. (228)

Thus, in extrapolating the embodied experience of the sonic in cinema, it is significant to note how studies of sound began to align with the broader phenomenological approach to experience and knowledge.²⁶ Early influential sound theorist Christian Metz had an ambivalent relationship to phenomenology, as his writing on sound was at the height of the linguistic and psychoanalytic intellectual movement.²⁷ Metz attacks the descriptive methodology of phenomenology by asserting, "to understand a perceptual event is not to describe it exhaustively but to be able to classify and categorize it..." (1980:156). Nonetheless, he goes on to admit:

[W]e are all, at some time, phenomenologists, and those who declare themselves as such have the merit of admitting to a kind of relationship to the world, which is not the only possible relationship, nor the only desirable one, but one which exists in everybody, even if it is hidden or unknown. (159)²⁸

Critics such as Salome Voeglin (2010) challenged Metz by noting how sound mediates phenomenology and semiotics (27). Significantly, in deviating from Metz, Voeglin describes the sonic event as a "reciprocal inventive production"

²⁶ This is despite the fact that, as Amy Cimini (2012) points out, Merleau-Ponty is "overwhelmingly" concerned with vision rather than sound (356).

²⁷ I use 'early' cautiously here – for while Metz was influential for the 'film sound' movement that took flight from the 1980s, and early relative to the bulk of sound writing from the 1990s onwards, he was not the earliest to write about film sound. He has been emphasised here because of his relationship to phenomenology. It is more historically accurate to note the early film theorists, including Rene Clair, Sergei Eisenstein, Siegfried Kracauer, Bela Balazs, Vsevolod Pudovkin, Grigori Aleksandrov and Rudolf Arnheim produced the first scholarly thought on film sound as early as the 1920s, see Weis, E., & Belton, J. (1985). *Film Sound: Theory and Practice*, New York: Columbia University Press.

²⁸ Grodal (2009) notes how Metz actually gave up his phenomenological interests in the "hard-core linguistic cultural climate" of the 1960s (15).

(5), whereby rather than working submissively under images, sound actually invents, produces and generates (13). Here we uncover a model of aural sensory experience that is not interested in fixing the meaning in the visual text. Rather, Voeglin demonstrates the active 'creative' power of sound, and I argue that in a cinematic context this configuration implicates and incorporates the body in an interpretation that is necessarily unique to each responder.

The seminal work of Don Ihde was particularly influential for liberating sound from semiotics to phenomenology. Ihde's major contribution was to introduce a language and method to articulate and explore the embodied and physical nature of sound experience, and he writes:

[T]he auditory dimension from the outset begins to display itself as a pervasive characteristic of bodily experience. Phenomenologically I do not merely hear with my *ears*, *I hear* with my whole body. My ears are at best the focal organs of hearing. (2007:44)

His concept of auditory aura emphasised the physical relationship that results between bodies producing sound and such a formulation has useful applications for the study of the cinematic experience. Similarly, Veit Erlmann (2010) offers the term of 'resonance' to articulate this concept, describing how "where reason requires separation and autonomy, resonance entails adjacency, sympathy, and the collapse of the boundary between perceiver and perceived"(10).²⁹

Following on from this, some critics have considered how physicality is invoked and engaged through sound, and argued that this is concomitant with emotional

²⁹ He also makes a provocative suggestion that Descartes' philosophy "enacts an uneasy truce between *cogito* and *audio*..." (2010:31). This certainly goes further than the blanket hostility many theorists demonstrate towards Cartesian thought.

response. Yvon Bonenfant (2008) suggests that the sound experience means a conscious or unconscious flurry of membranous material, interstitial fluid and muscle tissue. By invoking the material of our bodies, he argues, that perception of sound is therefore a physical experience, regardless of whether or not we can be aware of its subtleties. For Bonenfant, sound experience can closely resemble, and perhaps be, that of emotional states (9). In a somatic vein, Steve Goodman (2010) writes of sound's "seductive power to caress the skin, to immerse, to soothe, to beckon, to heal, to modulate brain waves and massage the release of certain hormones within the body" (10).³⁰ Others, such as Anne Cranny-Francis (2008) suggest that sound is perhaps best understood as haptic, "...as much a touch as a hearing percept – and, further, that it is the intimate relationship between sound and touch that makes sound such a powerful means of expression and communication" (1). Such intimacy between sound and touch is a useful way of considering the cinesomatic experience. What all these descriptions imply is the participatory, responsive nature of the body to sound. However, I suggest that the cinesomatic experience is not just physiological or emotional responses to sound waves. It is this, but I argue that through this, the body of the audience becomes a site of narrative significance – both as a resonance of the filmic narrative, and a product of a personal lived narrative, reinvoked at the moment of sound.

In arguing for the intimate, emotional relationship between the body and sound, it is useful here to go further in exploring sound's place in the human

³⁰ Steve Goodman has written a philosophy of vibrational force, but warns against 'naïve physicalism' that suggests all vibrational affect can be quantified scientifically. He argues that this neglects 'incorporeal affects' (2010:82)

sensorium.³¹ Steven Connor (2013) argues that of all the senses, hearing is more inclined to enter into “synesthetic exchanges” (117). For Steven Feld (2005) such synaesthesia is marked by a complexity of sensory ratios (181). Judy Lochhead (2012) presents a synaesthetic model for sound and the body, where all the senses are woven together in the totality of lived experience. In this way, sonic meaning is informed by sight, as well as other senses (67). In compiling such understandings into a comprehensive model of self, Greg Corness (2008) suggests:

Through the perception of the sensation, we build knowledge about the lived experience, which includes physical acoustics but also includes a self-awareness. Incorporated in the self-awareness is the act of hearing, encompassing the physical, cultural and personal context of our self. The listener’s perception includes the vast array of available sensations, all being understood pre-cognitively through the body. (22)

This is why a phenomenological approach to sound analysis holds so much potential for insight into how sound creates knowledge, and how we may know the body through sound. Indeed, Brandon LaBelle (2012) argued for the associative dynamic of sound, which lends greatly to triggering *associate* forms of discourse and knowledge (xix). This is furthered by Francis Dyson (2009) who notes how hearing is not a discrete sense, but part of a somatic whole. She uses the examples of the feeling of low sounds vibrating in stomachs, or involuntary flinches provoked by sharp sudden sounds to demonstrate how listening is simultaneously physiological and psychological (4). The affective powers of sound are therefore clearly manifold; that they necessarily are framed by, and incorporated within, the body suggests that an embodied theory of film sound is necessary for scholarship.

³¹ Darrin Verhagen (2009) tells us that at every moment, each sense is gathering and delivering different amounts of information to the brain. Bundled, it amounts to about 1.1 meg each second, with hearing 100,000 bits (1).

In this chapter I have drawn from a wide range of theoretical material in order to assemble a context for theorising the embodied experience of film sound. In the following chapters, a discussion of two case studies will present an examination of embodiment as it is depicted sonically, as well as self-reflexive analysis of an embodied response to these film's soundtracks. By doing so, I demonstrate why film sound theory needs to explore the embodied experience of sound in closer detail.

Chapter Two

Sonic Space and Echoes of the Flesh: Textual and Phenomenal Readings of *Gravity*.

The critically acclaimed box-office success *Gravity* (Alfonso Cuarón, 2013) is Cuarón's "love song to space" (Brody, 2013:NP). Publicized, and then lauded, as a high-quality special effects film which broke new ground for technological innovation,³² this film crossed the threshold from 'science fiction' into art film, garnering an artistic legitimacy with ten Oscar nominations and winning seven, including Best Sound Mixing, Best Sound Editing and Best Original Score.³³ As such, it has been compared to iconic science fiction art films such as *2001: A Space Odyssey* (Kubrick, 1968), *Destination Moon* (Pichel, 1950) and *Solaris* (Tarkovsky, 1972)³⁴. It is the story of biomedical engineer Dr. Ryan Stone (Sandra Bullock) on a NASA research mission gone awry. While installing new equipment that she had developed onto the Hubble telescope, a satellite elsewhere in orbit was deliberately shattered by the Russian space agency. This created a chain reaction of multiple space debris collisions, which eventually leave Stone as the sole survivor of the NASA crew, with the seemingly impossible task of getting back to earth alive.

³² In order to convincingly portray both weightlessness and the swiftly changing sunlight in space, Director of Photography Emmanuel Lubezki invented a 'Light Box' of 196 panels, containing 4096 LED lights, which allowed instant and smooth lighting changes on the actors. This also meant the filmmakers could avoid hanging the actors from wires in a way that showed their bodies, particularly veins and muscles, straining against gravity.

³³ There is some difficulty in categorizing *Gravity* as 'science fiction', as it was based on a real-life scenario, rather than fantasy or futurism. For a comprehensive discussion of science fiction as a genre, see Sobchack, V. (1997). *Screening Space*, New Brunswick: Rutgers University Press.

³⁴ See Richards Cooper (2013). 'Weightless *Gravity*' in *Commonweal*, Nov 15, Vol.140 (18), p.29 (2); Luckhurst, R. (2013). 'Space is the Place' in *Sight and Sound*, 23(12), 24-28; Weddle, J. (2014). 'Orbiting Mother: Archetypal Motifs and Symbols of Modern Story in *Gravity*' in *Culture & Psyche*, 8(2), 48-55. doi: 10.1080/19342039.2014.899424.

In this chapter, *Gravity* will be analysed with a dual focus. On the one hand, it examines how the sound design establishes and reinforces the narrative as it is depicted audio-visually. More specifically, it examines how the embodiment of the lead character Stone is constructed and conveyed through sound. This chapter uses textual analysis to examine how the concepts such as physicality, gender and subjectivity are sonically constructed and performed in relation to the bodies on screen. Additionally, through phenomenological analysis this chapter postulates a *cinesomatic* encounter, demonstrating how an audience's lived experience of the 'text' can exceed and problematize it.

It is important to note here that this discussion of *Gravity* will not be conducted as a 'musicological' analysis, isolating out the musical score and examining the musical structures and notation. In noting this, it also does not intentionally impose a distinction between music and sound. Scholar Mark Kerins (2011) identifies how film sound scholarship often collates a definition of 'soundtrack' as synonymous with score and/or dialogue. Similarly, for Philip Brophy (2004) the soundtrack is a world caught in "eternal disequilibrium" between the meta-forces of film score and sound design. Despite critical separation, score and sound design continue to combine in a "unique, mutative and hermetic logic..." (1). *Gravity* is a film that deliberately blends score and sound effects seamlessly, defying the analytic tendency to separate and distinguish between these elements. I argue that it would not only be limiting, but inaccurate, to separate out a concept of 'pure sound effects' that work independently of the music.³⁵

³⁵ Gianluca Sergi (2005) presented a compelling argument that definitions of 'sound effect' are problematic, and questions the assumptions that posit sfx as essentially 'vulgar' and therefore lowest in the film sound hierarchy, see <http://www.filmsound.org/articles/sergi/sound-effects-place.htm>

Indeed, James Buhler, David Neumeyer and Rob Deemer (2010) suggest that in action and science fiction films particularly, music and effects “dovetail to create what often seems like a continuous strand of sound”(3). Therefore, the score, as a vital component of the overall sonic experience of the film, will be present in the discussion. However, these elements of the score will be discussed in terms of the way they are used *as* ‘effects’, thereby reinforcing the argument that definitions of what constitutes musical or non-musical sound remains appropriately ambiguous and complex.³⁶

This hermeneutic difficulty makes analysis challenging, for as Paul Theberge (2008) has noted, the academic study of soundtracks often reproduces the division of technological process in order to create discrete categories of knowledge. While this may be helpful for the analyst, it does not necessarily do justice to the holistic sound experience of a film:

What is still lacking...is an integrated approach to the study of the soundtrack that allows us to examine the various sound elements in their distribution and relation to one another and to narration. That is, we do not have a framework that allows us to hear the ‘multiplane system’ as the sound designer conceives it, as the mix engineer realizes it, and as the audience hears it... (66)

This present study is restricted in its ability to analyse a holistic, multiplane system of cinema sound, but suggests that building film sound scholarship to the level of complexity suggested by Theberge may be akin to the process of building a soundtrack. In other words, film sound theory can only reach a desirable level

³⁶ Supervising Sound Editor Glenn Fremantle noted that the score helped focus what wasn’t being described by the sound design (Unattributed, 2014). Due to the challenge of balancing realism with impact, *Gravity* presents an example of a film where both sound and music production teams worked collectively and in necessarily close dialogue. Due to the premise of sound in a vacuum, *Gravity* uses subtle underscoring to “musically replicate visual elements”, a technique that according to Hans Beller (2010) is utilised most often in animated films.

of intricacy through the focused contribution of many perspectives. Consideration of the characteristics and limitations of each listening environment is also significant for the analysis of the embodied experience of film sound. Sonic detail and spatial impact is to a large extent affected by the medium and space through which the sound is transmitted. This thesis bases its analysis on the listening environment of a well-equipped surround sound cinema. Further, it is also important to acknowledge that in an attempt to describe certain sounds, the issues with a sound-specific critical vocabulary become apparent. Gianluca Sergi (2004) has noted how film sound analysis lacks a unified, comprehensive vocabulary, despite the efforts to develop one, such as exemplified in the works of seminal theorists Rick Altman (1992) and Michel Chion (1994).³⁷ As a result of this difficulty, this analysis occasionally employs similes in an attempt to articulate a sonic phenomenon textually. Further, the rendering of sonic space in *Gravity* is inescapably ideological, and to a certain extent meets aesthetic expectations set up during the genre's infancy, where as William Whittington (2007) argues, "...the body of sound effects and music tended to emphasize elements that were electronic, mechanical, and ethereal..." (100). However, this chapter deliberately moves beyond a discussion of genre specifically, something which science fiction film sound writing has already done with success.³⁸

2.1 Vertigoes and the Void: Configuring the Body in Space

³⁷ Mark Kerins (2011) and Jonathan Sterne (2012) have critiqued the lack of clear methodology for analysing sound, Kerins presenting his own methodology for breaking down the soundtrack for clear study.

³⁸ See Philip Hayward (ed) (2009); William Whittington (2009); Robert Spadoni (2007); Rick Altman (1981; 1992; 2004); Vivian Sobchack (1997).

“[S]onic experience constitutes and generates distinctive orientations to the world.” (Johnson, 2008:51)

Gravity addresses core ideas about the fragility of human life, played out against inhospitable ‘space’. In this section, I examine the ways in which the scientific concepts and realities relevant to astrophysics, such as zero gravity, are realised through the sound design in a way that particularly invites a psychophysical response, and is productive of a distinctive somatic anxiety. Concomitantly, this chapter asks how the subjective embodiment of the main protagonists is depicted sonically and how this depiction may become ‘echoed’ in the bodies of the audience. As Sobchack argues, “Experiencing a movie, not ever merely ‘seeing’ it, my lived body enacts this reversibility in perception and subverts the very notion of *on-screen* and *off-screen* as mutually exclusive sites or ‘subject positions’” (2000:NP). While she is drawing on Merleau-Ponty’s concept of reversibility,³⁹ what is essentially at stake in Sobchack’s claim is the dissolution of ‘borders’. As argued in Chapter One, the cinema and the body are mutually constituted, with perception being the intermediary act, and this may or may not be a comfortable space. In creating a decidedly *uncomfortable* experience, *Gravity* is the intersection between sonic concept, execution and reception, which argues for a fluidity of the cinematic encounter.

2.2 Inside, Out: Establishing Body Consciousness

In examining *Gravity*, it is instructive to first consider how the film sound constructs a body consciousness, or somatic frame, for the audience. In other

³⁹ For Merleau-Ponty, reversibility, concomitant to his concept of ‘flesh’, is the unification and mutual constitution of the perceiver and the perceived. See Merleau-Ponty, M. (1968) (trans. Lingis, A.). *The Visible and the Invisible*, Evanston: Northwestern University Press.

words, in what way does the film establish a narrative reality that audiences can grasp intellectually, but that is somatically heard and felt? Setting up this premise is necessary to condition our engagement with the embodied reality of the characters and to further facilitate the affective exchange that takes place in the cinematic encounter. The film's introduction begins with the succession of inter-titles:

At 600km above planet earth the temperature fluctuates between +258 and -148 degrees Fahrenheit. There is nothing to carry sound. No air pressure. No oxygen. Life in space is impossible.

This immediately raises a 'body-consciousness', as the filmmakers establish and reinforce the hostility of space to the human subject. But as important here is the way that sound is used to place the audience in a visceral and unsettling soundscape, one that is an unfamiliar composite of sounds, both disorienting and uncomfortable. Across this textual introduction, we are exposed to the manipulated sounds of blasting air with rising pitch and layered vibrations, like a jet engine, in a pulse alongside a synthesized score. As this intensity reaches a 'critical' high pitch, it suddenly cuts to a brief true silence,⁴⁰ over the image of earth in rotation filling the frame. Suddenly, audiences, initially pushed to discomfort by this layered sound, are now placed in a sonic encounter that is intimately 'sound-of-self', juxtaposed against transcendental images of earth. Michel Chion (2003) articulates this significance of cinematic silence, when he notes how "any silence makes us feel exposed, as if it were laying bare our own listening, but also as if we were in the presence of a giant ear, tuned to our own

⁴⁰ 'True' or 'pure' silence is the absence of any soundtrack whatsoever, and is rare in mainstream cinema. Buhler, Neumeyer & Deemer (2010) argue that this rarity is due to its effect of instilling doubt and confusion about a film's physical world and thus drawing audiences away from the narrative, something which classical cinema traditionally avoids (16).

slightest noises” (151). Hence, the film demands the corporeal implication of the audience’s bodies by unexpectedly removing overt audio stimulus and creating a brief moment where the self becomes the soundtrack and becomes corporeally woven into the fabric of the film.⁴¹ Arguably intended to echo the actual experience of an astronaut on a space-walk, this sequence demonstrates how cinema sound, and more specifically its absence, can create a hyper-aware experience of embodiment.

Visually, the swirling shots of the curve of the earth are unavoidably disorienting, and as I experience them, I am aware that my body wants ‘earth’ and my feet want the ground. This resonates with what Sue Cataldi (1993) argued about the body’s senses in relation to vision. Building on the work of James Gibson, she argues “at the site/sight of a cliff, we are simultaneously placed...evocatively ‘in’ danger and emotionally ‘in’ fear. It is not simply that we passionlessly see cliffs as ‘falling off places’; it is also the case that we sense cliffs are dangerous...” (96-97). However, in applying this logic to sound, it becomes evident that the body processes fear and anxiety through sound in a similarly corporeal way. As Sean Redmond (2011) has argued, hearing is a carnal activity, and audiences undergo physical changes to make sense of the sound, and to confirm awe and terror (44). How we place our bodies in relation to a perceived sound, and how we relate our bodies to these sounds becomes of paramount importance.

⁴¹ Contrary to popular conceptions, such as depicted in *Gravity*, of space flight as meditatively silent, Trevor Cox (2014) revealed that in reality, shuttles and space stations are so loud, due to the machinery necessary to sustain life, that astronauts wear earplugs. Even sleeping stations at the ISS are at 65 decibels (217).

After reacquainting the audience with their own bodies through this opening sequence, the film then introduces its characters in ways that portray different states of embodiment. As further analysis will demonstrate, a gendered embodiment is also enacted through depictions of varying physical comfort, agency and movement within the screen and diegetic space, much of which is produced and reinforced sonically. After the introductory filmic pause described above, 'radio' voices, crackly and distant, are gradually eased in and move closer in the mix. A low 'rumble' increases and moves up into the front speakers, as the shuttle gets closer. Eventually we can discern Lieutenant Matt Kowalski (George Clooney) bantering with Houston Mission Control. Significantly, Kowalski is the first body and the first voice to present in the film. Kowalski is given the greatest narrative agency and freedom within the visual and aural space, as he alone floats around freely, passing the other astronauts and playing with his jetpack. Oddly mediated, 'tinny' country music comes through his radio, which strikes an odd sense of banal familiarity, juxtaposed against the deeply disorienting images of earth from space.⁴² Through sound, it also performs a conversion of universal space into *American* space, and arguably enacts a sonic colonisation of the universe for a white American audience. Acoustic ecologist Gernot Bohme (2000) has described how the feeling of 'home' is "strongly mediated by the *soundscape* of a region, and...is fundamentally determined...by acoustic space. This means that one's conception of what a landscape is can today no longer be restricted to what one sees..." (16). *Gravity* invokes this juxtaposition to

⁴² The track, 'Angels are hard to find' by Hank Williams Jnr, is also an example of a generic convention connecting country music with science fiction. For a more detailed discussion of this, see Hayward, P. (2004). 'Introduction: Sci Fidelity – Music, Sound and Genre History' in Hayward, P. (ed) (2004) *Off the Planet: Music, Sound and Science Fiction Cinema*, Eastleigh: John Libbey in association with Perfect Beat Publications.

reinforce narrative tension - space clearly is not 'home', and the music employed here is intended to perform an act of facilitation, to mitigate against the alienating and disorienting visuals. In this way, it also works to reassure the audience after the initial discomforts of being with no sonic anchor.

2.3 Sound and the Body: Echoing Flesh and Distending Narrative Space

The affective power of sound in the opening scene demonstrably implicates the body of the listener. As the sequence develops, disembodied but foregrounded radio voices continue, and there is a constant low rumble in surround that is the aural bed of the scene. On the one hand this functions as a sonic marker of abnormality - the narrative space is not normal or safe. It also gives a phenomenological reality to the space, and to 'space', equating presence *in* this diegetic world with a specific sonic presence. In other words, the diegetic space itself becomes an affect. Supervising sound editor Glenn Fremantle described the function of this "subsonic layer of sound" as giving the screen presence and weight. He contends "You don't necessarily hear it but you feel it in your stomach" (Unattributed, 2014). Through this, the body of the audience is already continually implicated in the acoustic architecture, for as both Sobchack (2005) and Kerins (2011) have demonstrated, audiences become part of an immersive acoustic space that is not so much about realism as sensual investment.⁴³ Going further here, such low-pitched sound as deployed in this scene can have direct physical effects on the audience. Bruce Johnson (2008) argued, "...low

⁴³ Both these authors have given extensive and insightful discussions of surround sound: Sobchack focusing on the Dolby trailers, and Kerins exploring the trajectory of Dolby technological developments which he argues produced a distinctive aesthetic and influenced filmmaking practices.

frequencies activate the body's potential as a set of resonating chambers, generating such pathologies as motion sickness..." (54). This 'rumble' is clearly used for aesthetic effect rather than realism. As Johnson has suggested, this type of sound works directly on the body, subtly creating an altered physical state. Therefore, the sound design supports a narrative that depends on the sonic investment and embodied engagement of the audience.

It is poignant to also examine the personal phenomenological experience of this sequence, and the confused and troubling participation of my body as an example of how bodies become caught up in this cinematic encounter. This opening sequence had a powerful physical affect on me, provoking an experience simultaneously 'within' *and* 'away' from my body. The design and execution of sound created a sense of alienation and vulnerability, which ironically resulted in a heightened awareness of my physicality. By engaging with the discomfort produced, I also sought to escape it, to 'pull away' from the film, to distance myself from its physical affects, to be less in the narrative by reminding myself of my actual surroundings. It can be said, then, that the body does something more than participate in sound design by (not so) simple acts of perception – rather, it *responds*, and as I will demonstrate later, begins a process that suggests that we literally live cinema narratives.

2.4 The Sounds of Gender

As noted above, in *Gravity* there is clearly a gendered power dynamic that is

constructed and performed sonically.⁴⁴ Kowalski largely controls the acoustic space, and as the narrative develops, this power becomes even more pronounced and played out through the character's bodies. The expositional exchange between Kowalski and lead female protagonist Stone reveals that she has only had 6 months training by NASA,⁴⁵ establishing her inexperience and setting up the relationship between the two that will continue for the rest of the film. Indeed, Kowalski verbally coaches or directs her through every significant crisis within the narrative, even when he is not visually present, or through a hallucinatory apparition when his character has been killed off.⁴⁶

After already gifting the character Kowalski with ease, comfort and the luxury of aimlessness, the film's depiction of Stone is defined by her bodily state, her capabilities, and her weaknesses. The film introduces her with Houston making verbal notes about her physical state. A male voice (Ed Harris) says: "Dr Stone. Houston. Medical now have you with a temperature drop 35.9 and a heart rate rise to 70. How are you feeling?" Stone's reply demonstrates her physical discomfort: "Houston I'm fine. Just keeping your lunch down in zero-G is harder than it looks." Therefore, the introduction to Stone emphasises her physical and

⁴⁴ The filmmakers fought to keep the lead protagonist a female character, see <http://www.theverge.com/2013/7/21/4542974/gravity-director-alfonso-cuaron-defends-casting-sandra-bullock-female-lead-sci-fi>. This is baffling when one researches the current NASA slate of astronauts, which currently has 12 women. According to Kukil Bora (2013) of the *International Business Times*, in 2013, NASA had it's highest ever intake of female astronauts, accounting for 50% of accepted applicants, see <http://www.ibtimes.com/nasas-eight-new-astronauts-include-four-women-highest-percentage-women-candidates-ever-selected>. For NASA's information on its female astronauts, 'Women in Space', see <http://history.nasa.gov/women.html>.

⁴⁵ According to Craig Offman (2014), retired astronaut Chris Hadfield critiqued the film based on this premise of an inexperienced astronaut. He questioned why Stone couldn't have had 10 years training to make the premise realistic, but I argue that this is because Hollywood narratives are still overwhelmingly patriarchal, needing the female 'heroine' to be 'weak', naïve and fragile to reinforce its ideological assumptions about gender.

⁴⁶ Roger Luckhurst (2013) humorously compares the can-do American attitude in science fiction to the 'depressive' European arthouse science fiction, writing "Who better to talk you out of certain death than silky-voiced George Clooney?"(28).

emotional condition, one that is clearly at odds with Kowalski's, and which sets up a gendered division of narrative agency. Nonetheless, it is with Stone's subjective embodied experience that we are pressed to identify.

Significantly, during these exchanges, there is limited visual access to the actors' faces within in their space suits. Consequently, the sonic work is vital here, and characters express emotional states, effort and movement vocally and through their breath. While she works on Hubble, Stone's speech is quiet and 'breathy', and clearly ill at ease. Kowalski 'grunts' as he catches a floating bolt that Stone inadvertently and clumsily released. This grunt, in Clooney's signature gravelly voice, conveys physical effort and strength. Comparatively, when Stone bumps something unexpectedly with her body, she releases an uncomfortable, higher-pitched 'Mmm', a reflexive noise, caught in the throat, that functions to express her distress. The difference between their involuntary noises shows how, non-verbally, one character is considerably more comfortable in their body than is the other. In a line that arguably intends to mask this power disparity, Kowalski calls Stone a genius, self-deprecatingly claiming that he "only drives the bus". Nonetheless, Stone is sonically depicted as insecure, inexperienced, and problematically disobedient. After initially seeking reassurance from Kowalski ("Should we be worried?"), she is also insubordinate at a moment of crisis, forcing Kowalski to take a very different tone with her ("I'm not gonna ask you again. Shut it down. That's an order"). Her insubordination, while not responsible for the inevitable demise of the mission, is nonetheless suggestive of

the negative consequences of inexperience and disobedience.⁴⁷ The gendered character representation in *Gravity* is evidently constructed and performed sonically.

In constructing the embodied experience of astronauts, as well as conveying the physical reality of a vacuum, the sound designers faced a challenge of creating foley sounds that reflect this.⁴⁸ As the narrative focuses on Stone at work, the sonic focus shifts to 'movement' sounds, which are the sounds attached to the physical actions. The way these sounds have been constructed is significant, and a particularly useful concept is that of 'sonic stroke' as articulated by Vincent Meelberg (2008), which is the use of sound that produces 'affects' or bodily phenomena in the listener (63). Supervising sound editor and designer Glenn Freemantle stated that the driving concept behind the sound design was 'touch' (Unattributed, 2014). This demonstrates how the sound design was intended to articulate physicality, and I argue this deliberately produces somatic resonance.⁴⁹ As Stone works with technical equipment on Hubble, the equipment noises themselves, such as the drill, have a unique 'heaviness', sounding like it is water, not air, which carries the sound. The bass in the sounds has been increased, and the frequency altered to sound muffled.⁵⁰

⁴⁷ Upon examining the wreckage of the Shuttle and the dead crew inside, Stone apologises to Kowalski for her disobedience, taking responsibility for the calamity.

⁴⁸ For an insightful discussion of the practical art of foley by a foley artist, see Ament, V. (2014). *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation*, Burlington: Focal Press.

⁴⁹ Freemantle also emphasised the importance of foley, performing underwater recording sessions, and also using hydrophones (underwater microphones) and contact mics, designed to record vibration through objects. For more detail, see <http://soundandpicture.com/2014/02/defying-gravity-with-sound-designer-glenn-freemantle/>

⁵⁰ According to Bryan Bishop, Foley editor Hugo Adams had a contact at NASA who provided invaluable insight into the types of tools used in space, which also used in car manufacturing and operating theatres. The foley artists used this information in how they approached and created the unique foley.

That acoustic signals such as reverb have a psychoacoustic response is articulated by Trevor Cox (2014), who writes: "Evidence suggests that the size of a room, sensed through reverberation and other audio cues, affects our emotional response..." (28). I wish to go further here, suggesting that audio cues such as reverberation, also profoundly affect our physical response. For example, when Stone is turning the 'tap-like' instrument on Hubble, this specific sound provoked in me an undeniable nausea. The lack of satisfying and natural reverberation alludes to an uninhabitable space devoid of oxygen. Arguably, when we process sounds, it is not simply processing information, but in fact we are unconsciously seeking a certain validation. In other words, we don't simply hear sounds; we seek in sounds validation of our healthy world, of normal conditions and bodily equilibrium. In aural terms, the movement sounds, at times sounding like heartbeats, press me inward into my own body. As the sounds simulate an underwater acoustic environment, I felt a sense of constriction or 'pressure' in my lungs, as my body takes on this simulation of reality in a holistic way. It invokes physical memories of being underwater, due to the similarity to an underwater soundscape. Seth Horowitz (2012) tells us that water is 8 times denser than air, similar to the density of inner ear fluids and the body's tissues (49). Concomitantly, this sound produces the sense of pressure on limbs and lungs, the difficulty of moving quickly, and the awareness of its restriction to breathing. As I listen closer to these sounds, I begin to feel an aural vertigo. The sound design thus intentionally creates a unique and hostile diegesis in line with its textual narrative, while at the same time provoking a body narrative within me, that runs on its own tangent.

2.5 The Critical Turn: 'Soundless' Chaos

This section examines one of the most physically challenging sequences of the film, both for characters and audience. It occurs at the critical narrative turn, when Houston demands the mission be aborted. Here the score begins with an increase in the flurry of radio voices. Notably, in this sequence it is very difficult to separate score from synthesized sound effects. Hannan & Carey (2004) have explored the blurring relationships between music and effects in *Bladerunner* (Scott, 1982), considering how this abstract use of musical sound effects is prominent in science fiction and their insight is relevant for *Gravity*, a film made over 30 years after *Bladerunner*.

Once the threat of debris is established within the narrative, the following sequence becomes a mosaic of sound and visual effects that are, on a bodily level, intensely anxiety provoking.⁵¹ A synthesised pitch starts rising, with 'electricity' sounds as the debris starts hurtling into view. The instruments mixed in here are also morphed to sound electric. When the first large piece of debris passes the characters, the key and the rhythmic pace of the score changes. The visual 'impact' shots are eerily silent and Stuart Bender (2014) suggests that this has a defamiliarising effect that encourages audiences to watch the image with greater apprehension (8). I contend that the musical effects and sound design are used to isolate key moments and suggest impact in a way that actually encourages audiences to feel their own bodies with greater perspicuity.

⁵¹ This premise is based on the real 2007 Chinese anti-satellite missile test, which according to the European Space Agency (ESA) created more than 3300 tracked fragments of debris, see http://www.esa.int/Our_Activities/Operations/Space_Debris/FAQ_Frequently_asked_questions

There is a short laser-like pitch to punctuate the moment when Shariff (Phaldut Sharma) is hit and instantly killed by a piece of debris. His body suddenly releases all resistance and is only held to the shuttle by a tether. The shuttle's arm has its own sound, like air being blown through a straw. When the debris strikes the shuttle with a heavy, deadened thud, collateral force sends Stone, still attached to the arm, into a dizzying spiral with the piped-air sounds sliding in and out. The score here is metallic and synthesized, blending seamlessly with, and as, sound effects. There is a metallic note rising in pitch, cutting out as Stone releases her belt and is propelled out into space. After Stone disconnects from the shuttle, the sound design shifts to be more focused on her subjective experience of freewheeling into space. Stone's voice is very distant, vocally repeating "Argh, Argh, Argh" while her body is spinning and writhing. Here her difficult breathing and repetitive vocal gasps continue, and I experienced a sensory empathy with this sound; I feel my own throat dry and constrict. I feel a certain resonance from my own lungs, for while they continue to function, soaking up oxygen as I watch, there is a nagging feeling of discomfort pressing against them.

For sound production in cinema, Francis Dyson (2009) has noted, "...the mic[rophone] gave the listening experience a particular kind of authenticity, through its ability to close the physical gap between sound and the listener" (52). Following Dyson, I argue that miking techniques used in *Gravity* facilitate a somatically intimate connection, one that is inescapably embodied. By representing certain sounds as close, the experience of the audience does not only hear and know the character or space from this unique perspective; it also

facilitates the coalescing of character and audience into a palpably lived narrative. As the perspective changes, Stone's voice moves closer to the speakers, and we hear her panicking through her breath, repeating with difficulty, "I can't breathe, I can't breathe". As the camera moves closer to her face, we hear the score and metallic circular sounds pulsing, but her breath is foregrounded, becoming more and more strained, before ceasing altogether. There is an agonising pause, while we see her face panicked, before she gaspingly starts to breathe again. Then there is an aural shift, we move inside her space suit and hear her breath and voice reflecting off her suit from the inside. Significantly, this aural shift to point of audition (POA)⁵² is emphatically *embodied*, crucial for engaging audiences on a somatic level. It shifts again to the external sound perspective when Stone attempts to communicate with the Explorer. The electronic radio 'tuning' sounds, distorted beeps and muffled metallic rumbles accompany Stone as she tumbles further into space.

After Stone is rescued by Kowalski and tethered to him, we are granted an even closer POA experience of her embodiment. Acoustically we move into the space suit again and hear her breathing very closely. As the pair travel towards the International Space Station (ISS) the character's bodies and their movements become linked by a distinctive sound, underwater rumbling sounds and a muffled 'tug'. This force is shown to have such a strong physical effect on the characters that they both grunt in response. Clearly intended as an umbilical cord metaphor, the sound was deeply provocative for a physiological identification with the characters. It is remarkable that I experienced this sound

⁵² Point of Audition as defined by Rick Altman (1992) denotes sound that is understood to represent the subjective hearing experience of a particular character (251).

in my stomach region, and it is clear that sound can provoke a physical sensation that is not necessarily based on anything other than implication. Significantly, we can also hear Stone's heartbeat, and it has been manufactured to sound 'enclosed', arguably continuing the womb theme. Therefore, in *Gravity*, the narrative juxtaposes sensory deprivation against sensory overload. In doing so, it uses sound in a way that depicts the body, to intensify and problematise the experience of embodiment for the audience.

Significantly, the sound mix in these disaster scenes has a *cyclical* rhythm, and I argue that this is intended to simulate the Doppler effect: of sound bending due to movement. This clearly reinforces the sense of vertigo - of movement and disorienting 'groundlessness', portraying unnatural embodiment without earth. There is also a fast-paced thudding, suggestive of a distressed heartbeat, and working with the score, softens a little but does not cease. All sonic elements in this scene have been conceptually designed and mixed in a way that evokes this 'circularity', to create a sense of vertigo, which has a direct impact upon my physical response to the scene. This is repeated again later in the narrative, when Stone is attempting to manually free her escape pod at the ISS. Initially, we hear the thick, heavy, thudding movement sounds. We also hear an intermittent echoed and distorted violin, creating a 'buzzing' effect. For a few tense seconds we see debris passing behind her soundlessly. However, as impacts begin, movement is cleverly evoked with the whipping electric sounds and sharp, fast metallic 'slices'. The overall pulse of sounds intimates circularity. There is the thudding like a heartbeat, and thumping underwater sounds, with a rising frequency and synthesised pitch as the tension builds. When the debris actually

destroys the ISS, there is a change in key and rhythm of score, with thumping, high and low whirring effects, bass sounds and discordant notes passing up and down the surround sound.

2.6 Post-*Gravity*: The Sonic Imprint

In discussing the cinematic experience, it is also vital to acknowledge that the experience does not necessarily finish or cease with the ending of the film itself. A phenomenon I want to briefly examine is what may best be described as the ‘sonic imprint’ of *Gravity*. By this, I denote the experience of walking away *after* a film, a phenomenon that has gained almost no critical consideration in film sound scholarship, arguably because many film sound analyses have focused on the film text itself, more so than the body of the audience. Sergi (2001) acknowledges the cinema theatre’s own soundtrack, and goes some way to examining the sonic experience of cinema as not defined by the film’s sound specifically. Indeed, he argues that ‘audience soundtracks’ can support, contradict or undermine the film’s own soundtrack (127). Altman (1992) also argued for the heterogeneity of the cinema-as-event, a perspective which takes into account the ‘non filmic’ components of film exhibition, and the inherent multiplicity of all aspects of film production and reception. After *Gravity*, I noticed, as I often do with complex, affective sound films, a heightened sense of my own soundscape and bodily movements, an awareness that continued with me for some hours after walking away from the cinema. I contend that the post-film experience is still inherently sensory, and that the audio-visual materials can be thought of as ‘echoing’ through the flesh. How long this experience continues, or how it resurfaces individually cannot be prescribed, but I suggest that this

means the 'narrative', in a sense, continues and morphs into the embodied memory of the filmgoer. In other words, the sonic imprint demonstrates what is at the core of the cinesomatic experience. The filmic narrative ignites a separate story of sensation drawn from the body, which continues living, in the body, and this is the core of the cinesomatic experience.

Conclusion

In this chapter I have explored the notion of an embodied cinematic experience through the sound design of *Gravity*, a film that aims to achieve an affective, emotional experience for the audience. By exploring the use of sound in this film, I have examined how the filmmakers establish a somatic awareness, a body consciousness that is necessary for audiences to reach a state of investment that extends to their own bodies. As *Gravity* is a space disaster film, I have also examined the way that 'chaos' has been achieved against the restrictions of realism, and how this has been executed in a way that deliberately evokes pathologies of the flesh and sensory system. I have also given a brief thought to the way the embodied experience of film sound continues after the text. This reinforces the argument that textual analysis is not sufficient means to explore cinema sound, and that there is much scope still to be done in discussing the holistic, embodied experience of cinema. In the following chapter, the analysis moves to an earth-bound counterpart, examining the way 'naturalistic' sound portrays and invokes an embodied cinematic encounter in *Wild*.

Chapter Three

The Walking Cure: A Sonic Pathway to Self in *Wild*

Wild (Jean-Marc Vallée, 2014) is the biographical narrative of Cheryl Strayed, a woman coming to terms with personal loss, grief and addiction. After a spiral of self-destruction, Strayed sets out to walk the Pacific Crest Trail from California to Washington State in an effort to reclaim a sense of self and come to terms with her demons. The film was based on Strayed's 2012 memoir *Wild: From Lost To Found on the Pacific Crest Trail*. The film received positive critical reviews, in particular for the performances of the two leads, Cheryl Strayed (Reese Witherspoon) and her mother Bobbi Grey (Laura Dern). *Wild* also features sound work by female sound designer, Ai-Ling Lee, who has an impressive resume of sound design and effects editing for major Hollywood productions. Most recently Lee has worked on *The Sea of Trees* (Van Sant, 2015), *The Maze Runner* (Ball, 2014), *Percy Jackson: Sea of Monsters* (Freudenthal, 2013), *Man of Steel* (Snyder, 2013), *Tangled* (Greno & Howard, 2010) and *Snow White and the Huntsman* (Sanders, 2012), and is professionally distinguishing herself in an industry role that is still overwhelmingly represented by male personnel.⁵³

Wild was produced by Witherspoon's production company Pacific Standard, where the professional aim is to produce more films about women.⁵⁴ It was lauded by some as a feminist film, depicting what Lois Pryce (2015) describes as

⁵³ According to Martha Lauzen (2015) women comprised 1% of all composers and 5% of all sound designers working on the top 250 films of 2014.

⁵⁴ Jenelle Riley (2014) details how Witherspoon paired with Australian producer Bruna Papandrea to create female-driven content, see <http://variety.com/2014/film/features/reese-witherspoon-production-company-female-driven-material-1201323117/>

the “all too rare” story of female solo travel.⁵⁵ Many films feature the solo travel experience of male characters, such as *Into the Wild* (Penn, 2007), *The Motorcycle Diaries* (Salles, 2004), *One Week* (McGowan, 2008) and *The Secret Life of Walter Mitty* (Stiller, 2013) to name a few. Comparatively, female solo travel narratives on film are considerably more infrequent. More significantly, in these female solo travel films, such as *Tracks* (Curran, 2013) or *Eat, Pray, Love* (Murphy, 2010) the women themselves often become attractions of novelty or bemused confusion for the other characters.⁵⁶

This chapter explores how sonic depictions of the character’s embodied subjective experience meet the audience in a cinesomatic encounter. While strikingly different, *Wild* and *Gravity* share thematic parallels, as both films feature the epic and lonely journey of a female protagonist, pushed to physical and emotional extremes. The premise of *Gravity* facilitated a sound design that stylises space into an audible phenomenon, giving an aesthetic voice to a narrative reality without being overly concerned about realism. The very premise of *Gravity* gave the filmmakers scope to take a highly abstract approach to sound design. However, *Wild* achieves its emotional and artistic goals through a more subtle approach to sound design. For re-recording mixer Andy Nelson, the internal journey of the character was as important as the external journey (*Soundworks Collection*, 2014). While pursuing the theme of isolation and

⁵⁵ Pryce presents an interesting article about female adventurers historically and narratively, and examines the assumption that women must have a ‘spiritual’ reason to travel, unlike their male counterparts, see <http://www.independent.co.uk/travel/activity-adventure/reese-witherspoon-in-wild-an-all-too-rare-story-of-a-woman-on-a-solo-adventure-9971130.html>

⁵⁶ In *Tracks*, to her discomfort, lead character Robyn Davidson (Mia Wasikowska) becomes a tourist attraction, with people traveling specifically to intercept her journey and take photos of her. Similarly, in *Eat, Pray, Love*, lead protagonist Elizabeth Gilbert (Julia Roberts) meets cynicism from close friends when she decides to travel.

physical hardships, it uses a markedly different sonic palette to *Gravity* in order to convey and invoke embodiment. And while many sequences in *Wild* are heavily stylised musically, the use of foley and atmos⁵⁷ are designed and used in a way that provides an interesting ‘earth-bound’ comparison to *Gravity*. This chapter demonstrates how *Wild* conjures connections between sounds, memories and physicality, and how bodies of both the characters and the audience meet at an intersection of narrative and sensory experience. Film sound here is implicitly and explicitly material, and in examining this across a spectrum of filmmaking styles and genres, we equip film sound scholarship to move beyond discussions delimited by genre.⁵⁸ Indeed, by writing the embodied audience into the cinematic encounter, we are reinforcing the specificity of such an encounter, and arguing for the richness of narrative that the audience brings to any film.

3.1 Teeth, Nails, Skin: Sonic Fabrics of the Lived Self

“The heat was so intense that my memory of it is not so much a sensation as a sound, a whine that rose to a dissonant keen with my head at its very centre” (Strayed, 2012:84)

Wild is a film in which sensual memories are juxtaposed against gruelling physical affliction and the challenge of endurance.⁵⁹ The ‘hallucinogenic’ is juxtaposed against the ‘banal’, and it is the construction of this so-called

⁵⁷ Also known as buzz track, or ambient track, ‘atmos’ here is not to be confused with Dolby Atmos™, the latest Dolby technology that enables cinema soundtracks to feature up to 128 separate audio tracks as part of the overall mix, to be played in specially fitted cinemas with up to 64 unique speaker feeds.

⁵⁸ Mark Evans and Bruce Johnson (2011) have argued that ‘genre’ studies of film sound are based on visual delineations of genre, and ask scholars to consider *sonic genres* as a means of advancing film sound theory (121).

⁵⁹ According to Tim Masters (2014), Witherspoon cited *Wild* as the most difficult of her career, both physically and emotionally. Director Jean-Marc Vallée went as far as properly loading her backpack so it would look realistically heavy and the physical movements of actress and prop were convincing.

'banality', that invites closer analysis. By 'banal', I refer to a soundscape that depicts narrative reality as viscerally present, where the extraneous score is removed or diminished to allow this soundscape to both familiarise and unsettle the audience. Indeed, I argue that the minimalist sonic aesthetic ironically produces a *heightened* physicality in its own right, and suggests another way that sound creates a phenomenologically rich cinematic experience for the filmgoer.

In asking how the sound in *Wild* particularly engages the body, how it provokes, suggests and incites a somatic response, I argue that the narrative world becomes extended and exceeded through its 'living' counterpart – the audience. Gianluca Sergi (2001) has already shown that our experience of cinema-going is "informed and aided not only by past cinema attendance, but also by culturally specific understandings of sound and images and the way they interact" (122). I would add here that the deeply personal engagement with sound - the somatic narrative of our lived selves to date, may or may not align with culturally coded understandings of audio stimuli. In other words, how we personally respond to sounds, and the extent to which we do, is dependent on our individual sensibilities. I argue that this is also aided by the quality and nature of sound itself, which has a plasticity and fluidity that enables meanings to shift, transpose and evolve. The range and scope of how a sound may be used and manipulated is vast, and as Elsaesser & Hagener (2010) argue, sound is "profoundly polysemic" in how it creates emotional affect (138). The following analysis of *Wild* demonstrates how sound is polysemic in the way it creates a specifically somatic experience.

3.2 The Character and I: Sonic Identification with Screen Bodies

I argue that the way audiences sonically identify with a character or narrative space is framed by how or if their own bodies are somatically engaged. To demonstrate this, it is useful to begin with the opening sequence of the film, where we first enter the narrative world through a long, wide shot of wilderness, and the sound of high wind. Significantly, we are first introduced to the main protagonist Cheryl Strayed sonically, which sets up a particularly close aural relationship to her character. Audiences are invited to enter the diegesis, and establish a connection with the central character, through an evocative identification with bodily, or body-produced, sounds.

As James Lastra (2008) has argued, soundtracks bring the auditor more fully *into* the film “by constructing a total environment that included the audience who would perceive the film as if it were his or her own world or by asking that auditor to identify with the perspectives of another” (124). Such a configuration already implies the body as part of this movement in to the filmic world, both on an emotional level, and by the actual physical immersion in a sound space. I would go further than Lastra here, firstly by suggesting that sound actually enables *both* of the experiences he describes, simultaneously. Secondly, I argue that it is not only the filmic narrative, but also the auditor’s, that is engaged. On one layer, we identify with the lead character and incorporate her diegetic reality into our own. On the next layer, this identification becomes meaningful because of our body’s visceral response to these sounds, which is dependent on our own lived experience.

In this opening scene, we hear rhythmic footsteps getting closer, high-pitched female panting, and the thud of an object dropped upon rock. Our vision is still held on this unyielding wilderness, yet the human presence has been animated through two of the most fundamentally recognisable human sounds - footsteps and breath. There is an interesting paradox happening – without a visual anchor of a human face or body, we attach to these sounds with greater clarity and focus. In the face of wilderness, the body and its presence becomes, ironically, even stronger. And this is arguably analogous to the actual experience of being alone in the wilderness, acutely aware of one's own humble place in such solitude.

What is also interesting here is the way Strayed's vocalisation of movement and effort, produced through the body and expressive of the body, was also redolent of sexual activity. As the scene continues to unfold, the still unseen Strayed lets out a relieved sigh, which falters under suggested strain, before releasing again in relief. In this collage, there is ambiguity as to whether the vocaliser is experiencing pain, or pleasure, or both, but the sound is uncompromisingly 'physical', evocative of physical action and state. As is revealed later in the narrative, this link is not arbitrary, with many of the character's sexual memories triggered by physical prompts. After this aural micro-story, a hand comes into frame and slams a hiking boot down on rock with an earthy thud, before finally the image reveals Strayed with a bloodied sock and bruised legs, sitting on the edge of a ravine. In this short introduction the sound has therefore already performed two major functions. Firstly, it gives depth and acoustic reality to the diegetic world, in conjunction with the emotional tone of the film. Secondly, it

performs a sonic introduction to the main protagonist that, in the absence of visuals, facilitates a physical and embodied connection that depends on visceral work by the audience. In invoking, but not immediately showing, the physical state of the character, the audience has become somatically engaged.⁶⁰

Steven Connor (2013) has argued that “Soundstuff is not simply sonic gravy....it is form informed, a kind of thinking through things” (119). This affirms that the sonic detailing of a character’s embodiment is a crucial element in the audience’s experience of a narrative as viscerally lived. In this introductory scene, Strayed’s gasps of pain create a crescendo of sounded sensation that is transferred from sound to flesh. Indeed, sonically this prepares us to see her badly injured toenail with a heightened affectivity. Our bodies cannot help but respond to this sound, in a resonant movement of fear – one depicted and one drawn from empathic imagination and/or physical memory. Further, I argue that without this aural lead-up, our physical response to the image of her damaged toenail would not be as vivid. Interestingly, for this author, multiple viewings of this scene still engendered a reflexive wince, a strange amorphous discomfort, experienced physically, yet in a vague location, involving both legs and solar plexus.

After verbally ‘psyching’ herself up, repeating ‘Okay, Okay,’ Strayed rips off her toenail with a guttural cry. Witherspoon’s performance here conveys a muscular tension in her throat and body, and in a strange way, this sound produced in a

⁶⁰ It is also fascinating to experience the film with English subtitles, and notice the selection of sound descriptions translated to text, and what elements of the mix were considered most relevant to the narrative. Also pertinent is the content of these descriptions, and the vocabulary choices used, which often contradicted my own interpretation, or actually clarified what certain sounds were. While beyond the scope of this present discussion, it would be an interesting future study to consider this different experience of the soundtrack.

performer's throat, speaks to our whole body. Further, the urge to echo - the irrepressible murmur that wants to respond, from the audience, from me, is testament to the way this sound creates multiple narratives and multiple soundtracks. It demonstrates that the cinematic experience is both individual and composite. Strayed's gasps don't merely articulate, they become the sonic equivalent of the actual pain that the character is experiencing, which contacts and catches our bodies. Drew Leder (1990) has argued that pain is an 'alien presence', meaning the body in pain can be experienced as "foreign to the self" (76). How then might we understand the sonic experience of pain as it is depicted in film? If with Leder we consider pain to be an unbearable encounter of 'other', sound does not merely indicate pain, but sound performs pain through the body. In other words, the character's vocal expression of physical pain tells a narrative of her bodily state. But more than this, it plays through the audience's bodies in affective resonance. As this passage demonstrates, as far as bodies are concerned, there is patently more at work than simple visual identification. It is evident that sound is central for entering the physicality of a character, and more than this, it is a key ingredient for affective response.⁶¹

3.3 Touching, Being Touched: How Sonic Minimalism Creates Tactile Experience

Perhaps one of the greatest features of film as an aesthetic form is its ability to capture and render simplicity or banality as something significant. A film need not feature grand, hyperbolic sound design to provoke a visceral engagement.

⁶¹ According to Scott Bowles (2015) director Jean-Marc Vallée tells that Witherspoon "really went through hell; she's really falling, getting bruised, struggling". Although unable to explore at length here, it is pertinent to consider how the physicality of the actor, embodying the character, becomes implicated in the somatic entanglements of film production and reception.

Wild is a film focused on the isolated experience of its lead character, walking a long-distance hike. Within such a context, the sweeping wilderness plays against the minutiae, rendering the solitary human experience even more pronounced and pointed. When the 'heightened' is juxtaposed against the 'banal' it is constructive to consider the ways the body of the audience can become materially engaged through such a configuration. In the following section, I demonstrate how sonic minimalism achieves a unique physical encounter with the story, creating a sensory experience that exceeds the filmic text. By stripping back and honing the foley, in the absence of music, something else emerges, a presence and awareness that is not obscured by a distracting non-diegetic score.⁶²

Sergi (2001) has argued, "The contemporary Hollywood aural experience elevates the spectator to a state which we may define as that of a super-listener, a being (not found in nature) able to hear sounds that in reality would not be audible or would sound substantially duller..." (125). Sergi's point was in relation to special effects films, but I invoke it here because I argue that the idea of 'super listener' is not only applicable to effects films such as *Gravity*. While it would be productive to apply this concept to films where sound is given special license to work figuratively, I argue that the 'super listener' might also equally describe the phenomenological experience of sound. While Sergi stresses the technological apparatus that facilitates listening and facilitates the aesthetic manoeuvres of the sound designers, I suggest that the super listener is also a

⁶² By emphasising the role of foley here, this point is not to undercut the significance of other sound effects that are often constructed through a variety of recording materials and sources.

product of a design that works to give narrative salience to the deceptively simple or understated, and inescapably implicates the body of the listener.⁶³

In examining the sonic minimalism in *Wild*, this discussion narrows its focus to the Mojave motel scene, where Strayed is preparing to launch her hike. In terms of the narrative trajectory, this is a highly significant scene. It contains no music, and as a result, through the foley, allows a satisfying sonic *tactility* to bring this scene into a fusion between the narrative's bodies, and bodies experiencing it audio-visually. Indeed, Whittington (2007) has argued, "Foley sounds provide pivotal sonic anchors to the body and unify the space in which the body moves" (159). This does something more than simply consolidate the narrative world of the film, and attach character bodies to depicted spaces. Rather, this also creates an active relationship between the depicted and the lived, filmic and phenomenological, and it does so by playing upon an often-unacknowledged layer of soundscape.

In *Wild*, physical movement, and the relationship to physical objects, are rendered tactile and animated in a decidedly sonic way, which affectively engages us. Indeed, Elsaesser & Hagener (2010) stress the bridging nature of sound, arguing, "...the new prominence of sound helps to recover the so-called loss of the indexicality of the image, because it makes direct contact with the body and thus acts as a physical link to material reality" (147). In the Mojave motel, we are presented with a series of detail-oriented actions as Strayed prepares her equipment and supplies. Here, the rustles and crackles of food bags,

⁶³ As Sergi points out, the super-listener is facilitated through the range of microphone tools and mixing processes that allow isolation and manipulation of selected sounds.

the clunk of books being stacked on the table, the flappy sounds of nylon and the sharp, metal clunks of her mini saucepans create a deceptive simplicity, a falsely mundane series of sounds that work to impress a closer sense of being present. These sounds are focally of human movement and touch, such as the hiss of air as Strayed kneels on her inflatable sleeping pad, distinctive plastic clunks and wheezes of the water purifier pump. As Strayed attaches a sack of water to her pack, foregrounded 'slops' sound, like a hot water bottle. The hiss-like whisper of nylon rubbing is again foregrounded as she attempts to lift the pack and put it on. This turns into an amusing moment as she unsuccessfully endeavours to get to her feet, but instead, becomes pinned under her bag, a vocalisation literally squeezed out of her.

My response to the tactility of this scene was provoked primarily through the sound effects, by allowing the foley to 'speak' as the loudest element in the scene. This stripping down of soundscape and allowing objects to be sonically alive and present, re-establishes a tactile connection to our lived world.⁶⁴ Tactility necessarily implicates the body and also suggests the trans-sensorial nature of the cinematic encounter. John Richardson and Claudia Gorbman (2013) have articulated the trans-sensory by noting: "Close-ups and uses of food might invoke both smell and taste; the dynamics of camera movement or editing in tandem with sound can even render sensations such as wetness and coolness" (21). Further, such a configuration suggests the somatic memory can be triggered in a way that is manifold. For some, these sounds may provoke actual

⁶⁴ This also provokes an interesting question of the relationship between implicated (yet obscured) bodies of the foley artists themselves, who through physical action, construct sound-action. While beyond the present discussion, it is pertinent to note that this additional layer of bodies and sound complicate and enrich the scope of how to understand embodied cinema sound.

lived memories of camping; for others, it may be the building blocks for a new experience, a future experience, or a certain verisimilitude. For this responder, it evoked memories of solo travel that were profoundly sonic and tactile, for in all travel, senses are heightened and banality becomes transformed into 'experience'. This demonstrates that filmic narrative is an encounter that uses, indeed relies upon, the audience's ability to perceive and contribute to the sensory. Therefore, even in films that use scaled-back sound design, the embodied experience of the audience is evidently complex.

3.4 Sonic Anchors: Placing Bodies and Memories

Elsaesser & Hagener (2010) configure the filmic experience as one of mutual occupation between parasite (film) and host (spectator), resulting in, "one reality that *unfolds* as it *enfolds*..."(11). Such a metaphor emphasises the concept of coexistence and co-dependency in a singular unfolding, where the body is the main locus of the cinematic experience. I argue this cinematic intimacy is very much reliant upon the use of sound within each film, as well as the audience's particular receptivity to sound. Indeed, the way that sound functions as an anchor, attaching to, and moving bodies, places and memories, is crucial to the experience of film narrative. My conscious awareness of a strangely visceral enjoyment – a somatic satisfaction in certain sonic details was the impetus to attempt to understand this from a theoretical perspective. What this analysis suggests is that willing, and wilfully, our bodies engage, empathise, and embark on their (our) own *internal* narratives, as much as we take pleasure in the identification with a film character's experience.

Jennifer Barker (2009) argued, “The film experience is predicated upon a kind of ‘ambidexterity’ of the body’s self-perception...the film experience rests on the viewer’s simultaneous ability to *not feel where I am*, and to *feel where I am not*” (84). While I agree with Barker’s formulation here, I believe she overlooks the ability to *feel where I am* in a way that might suggest both a heightened awareness of the body while experiencing the film, as well as an ability to *feel where I was*, drawing upon previous lived experience and bringing this into the filmic encounter. Indeed, Pallasma contends, “Perception, memory and imagination are in constant interaction” (2007:67). And while it has been long understood by scholars and filmmakers alike that these elements are central to our experience of cinema, it begs further analysis along a specifically sonic axis.

This can be demonstrated through examining the scenes where Strayed is forced to eat cold, uncooked meals. Witherspoon’s performance conveys a body struggling to eat, yet clings to the habit out of necessity. Strangely, I found a somatic satisfaction in the musical, metallic scrapes of the spoon in the saucepan, the scrape of spoon against teeth, the rustle of fingers in the plastic bag of nuts and the satisfying crunch of Strayed eating them. But what was fulfilling was not just the aesthetic rendition of these sounds themselves, which are constructed to be foregrounded, clear and crisp. Also piquant was the way these sounds anchored and connected each scene, accumulating a sense of sequence and repetition that is tracked through sonic markers. They are prioritised within the

mix and provide a familiar sonic handle that the body grasps, allowing the viewer to 'partake'.⁶⁵

3.5 The Sound of Thirst and Hunger: Visceral Empathy In Living the Narrative

In looking at the depiction of food and eating in more detail, the scene in which Strayed shares dinner with farmer Frank (W. Earl Brown) and wife Annette (Jan Hoag) also demonstrates the visceral link between sound and the somatic. Contextually speaking, at this point in the narrative Strayed has gone a period of time without food. We are then not only invited to share this experience from Strayed's point of view, but to experience this scene from a pointedly embodied place. I argue that in this eating scene in *Wild* the absence of extraneous music or sounds brings the focus again to the foley, all of which is deliciously foregrounded. The sonic details of this scene perform the satiation of hunger, and somewhere amidst the clink of serving cutlery, the scrape of a fork on a plate, the clatter of BBQ rib bones against ceramic, and the scrunch of the foil, my body registers a craving for coleslaw and ribs. All three characters talk through the food in their mouths, Frank actively licking his fingers. Again here the sound performs the body and the subjective experience of eating.

Further, the domesticity of these sounds offer both Strayed, and the audience, a relief from the previous deprivation, and I argue that this creates a cinematic

⁶⁵ This film also depicts physical realities with refreshing honesty, such as Strayed disposing of her excrement. This is why *Wild* may be considered a feminist film, in its refusal to depict a 'sanitised' female protagonist. This body realism attenuates what Iris Marion Young (2005) describes as 'normative femininity', which masks the "raw facts of embodiment, to make the body 'pretty'" (5).

embodiment that is literally *fulfilling*.⁶⁶ Antonio Damasio has argued for the literal physical connection between cinema and the body, stating, "...sooner or later the viscera are made to react to the images you are seeing, and to the images your memory is generating internally, relative to what you see" (1994: 225). While his argument clearly pertains to vision, this nonetheless suggests that in film sound scholarship, there is considerable scope to explore this relationship between sound and the body, and as shown in Chapter One, now scientific research is beginning to support what filmmakers intuitively know about how an audience becomes emotionally and physically invested in a film.⁶⁷

Acoustic Ecologist Steven Feld (2005) has argued, "the experience of place potentially can always be grounded in an acoustic dimension" (185). Without collapsing an understanding of 'body' into 'place', it is productive to understand the body as a site where multiple sensations, knowledges, and narratives are encountered, performed, internalised and retrieved. And most importantly, these configurations take place through, and because of, sound. Indeed, as Sobchack (1992) argues, the lived body is not merely a place, but performs a bilateral commutation between perception and expression (41). For Sobchack, the body is active in producing the (aesthetic) experience in cinema.

⁶⁶ Some film fans become so enraptured by a food depicted in a particular film and so somatically invested that they devote books, blogs and online discussions about how to re-create the food as they imagined it. In some cases, food in films seen in childhood become the nostalgic basis for attempts to 'capture' this food, and somehow create an experience akin to the one in the narrative, for an example see: <http://www.cookingwiththemovies.com>

⁶⁷ There is also a burgeoning area of market research specifically for the US film industry dedicated to a neuroscientific approach to audience response, termed by Seth Horowitz (2012) as 'Neurocinema' (164)

In a particularly intense way, we are taken into a subjective somatic relationship with Strayed during the water crisis scene in the film. Here we are simultaneously experiencing a sound design of interiority and exteriority at a point where Strayed's life is in genuine danger due to dehydration. The stylised use of sound is designed to be particularly body-provocative as it performs this dual-aspect sonic depiction of thirst. As Strayed drinks the last of her water, we hear heartbeat effects, with foregrounded drinking and swallowing effects, played slightly in slow motion. In his discussion of auscultation, Tom Rice (2012) has described the heartbeat as a "sonic icon of human life" and points out that hearing heartbeats creates an encounter of the bodily interior as a unique acoustic space.⁶⁸ In cinema sound design, this artistic externalisation of internal physical activity engages the audience on a profoundly physical level, one that arguably operates above and below conscious recognition. As Strayed drinks the last of her water, pours drops on her head and gasps, the external world of the hot desert heat intrudes on this moment, with harsh insect trilling coming in very loudly. The gasp has been rendered sonically to emphasise the dryness of her mouth and the aching discomfort of extreme thirst.

As Strayed discovers the trail water tank is empty, the nature atmos fades out, replaced by stylised heartbeat effects. Again, here we are brought into the sonic interiority of the character, and this particular rendering of a heartbeat is reminiscent of ultrasonic blood pumping through veins. This then cuts to quiet atmos, barely audible as Strayed is shown in her tent, watching with glassy eyes

⁶⁸ Tom Rice points out how medical students learning to listen with a stethoscope are required to internalize a new semiotics of heartbeats, and change their *own* bodies in the cultivation of this new type of listening and aural sensitivity. Such a model of sonic-somatic engagement is useful to consider in the cinema.

the condensation sparkle in the gauze vent. We then hear the rustle of nylon as Strayed licks the condensation off the outside of her tent. Here, we are caught up in the physical predicament with Strayed, and the use of atmos and foley convey a painful present. As the dehydrated Strayed returns to walking, whispering to herself “Don’t die”, the insect trilling atmos becomes very intense over her shuffled footsteps. Against her thirst, nature is brought in close as a sonic antagonist and the sound mix is peeled back to evoke the intense and aching physicality of dehydration.

3.6 Walking Towards *Wild*: Contextual Considerations

When examining *Gravity*, I briefly raised the idea of a sonic imprint, identifying how the sound design of a film can continue to affect an audience member even after the film has finished. Comparatively, with *Wild* it is also instructive to consider the intentionality, pre-film knowledge and prior somatic experience that lead into a film experience.⁶⁹ A film’s trailer is useful for providing prospective audiences with an insight into the film’s content, style and tone, often constructed in a way that emphasises the affective power of the film. The trailer for *Wild* condenses some of the most visceral, physically punishing aspects of the film into a package with a closely miked voice over of Strayed’s internal dialogue. However, while in many cases this pre-film experience establishes a level of somatic expectation, this author was ignorant of the trailer

⁶⁹ It may also be particularly useful to consider questions such as why a person is drawn to a particular film, how did the publicity for the film construct the ‘promise’ of an experience that may or may not have been delivered? And what did the audience ‘know’ about the film previously that would contribute to the way in which they engage with it?

prior to attending the film.⁷⁰ It was instead the knowledge that the narrative was about walking in wilderness, which produced a pre-emptive somatic resonance, a sort of calling, which determined how I eventually watched and heard this film. Any experienced walker has particularly intense somatic memories, as well as a particular relationship to subjective awareness of their bodies. I therefore approached *Wild* with a definite bodily awareness and a readiness that impacted the way the experience unfolded, and the way that I internalised the soundtrack. James Lastra (2008) has argued that it is impossible to speak of sound or hearing in a pure state, as both are necessarily defined in specific cultural and social terms (126). I would add to his formulation the argument that sound and hearing also are defined in somatic terms. Such a consideration forces the acknowledgement that the cinesomatic experience is not limited to, or defined by, the experience of physically sitting in a cinema theatre. Instead, it is as much a process guided by lived, past experience and somatic expectations as it is by the cinematic text itself.

Conclusion

Wild is a film that enacts a pilgrimage, portraying one character's walk through the wilderness as both a cleansing and a spiritual act. In shifting into this journey of physical deprivation and difficulty, somatic experience becomes even more marked. In this chapter, I have examined how the sound design has invoked the physical body in ways that render the filmic experience as tactile, unsettling and satiating. I have demonstrated that seeming sonic 'banality' is still surprisingly

⁷⁰ An interesting research trajectory would be to ask how a film's advertising material incorporates, invites or establishes a somatic relation to a film before it has even been experienced in full narrative form.

evocative of a bodily presence. Further, I have demonstrated how narratives use sound to facilitate a particularly affective relationship to the narrative world. Visceral empathy is more than empathy – it becomes another layered narrative, a physical journey that the audience concocts in conjunction to the filmic narrative. The audience lives the journey, in their bodies, through the sound design.

Conclusion: From the Cinematic to the Cinesomatic

Living Narrative(s) opened with a passage describing my experience watching, and more importantly, listening to a sequence from *Gravity*. As Dr. Ryan Stone escaped the malfunctioning and dangerously ignited International Space Station, I experienced the onslaught of a soundtrack so frightening to me, I instinctively protected my body from it. Elizabeth Stephens (2012) has argued that the search and desire for physical reactions and sensory experience is one of the main reasons audiences go to the cinema (529). My decidedly physical responses to the soundtracks of films such as *Gravity* and *Wild*, responses that endured with time, prompted the questions at the core of this study. Film theory's shift toward the embodied and the sensory, means that the body as 'sensory envelope' has become more than a heuristic device or aesthetic metaphor - it is the ontological, epistemological and phenomenal 'ground' for the respective theories of film and cinema today (Elsaesser & Hagener, 2010:11). However, while much theoretical gain has been made by this scholarly attention to the body, I argue that this work has still been framed in overwhelmingly visual terms. And while sound studies has now mitigated the initial poverty of discussions of sound in academic research, it is evident that there is still much scope to develop a theory of embodiment through cinema sound, grounded in the individual, embodied experience of the analyst. This provides an interesting challenge to theory, for as Bruce Johnson (2010) asserts, a phenomenology of sound confounds categorizations based on a visual epistemology (3). Therefore, exploring the sensuous experience of sound requires new vocabularies, new critical perspectives, a phenomenologist's awareness of the body's perception, and a tuning of the ear to the flesh.

This study has demonstrated how, as Philip Brophy (2004) argues, sound attains a “bodily presence” (6). *Living Narrative(s)* has postulated an experience of the cinema that is both somatic and sonic, a conjunction between living audience and artistic sonic narrative. In tentatively naming this experience ‘cinesomatic’, this study therefore reinforces the role the body plays in the cinematic encounter. This encounter is not only a perceptual, sensory feast that engages in the ‘here and now’. It is demonstrably far more complex, traversing sensory borders and degrees of conscious awareness, extending into somatic archives of memory, and continuing to resonate after the film experience.

Chapter One identified and contextualised the major areas of theory that necessarily form the basis of a discussion of embodied cinema. It noted how particular philosophical questions about the nature of sense perception, and the perceiving body, were appropriated and applied to the experience of cinema. It also explored how developing understandings of sensory experience and perception contributed to a changing understanding of how cinema and the audience engage. Furthermore, it examined how sound studies developed as a critique of ocularcentrism, and demonstrated how discussions of sonic affect on the body can be usefully applied to a discussion of film sound and embodiment.

Chapter Two examined the first case study of *Gravity*, a film selected not only for its award-winning sound design, but the way the concepts of embodiment are performed directly through the sound design. By examining this, Chapter Two also sought to implicate the author’s presence and body in this mix. By asking how the sound portrays experiences of characters, invokes bodily anxiety and

simulates physical movement and kinaesthetic sensation, I also concomitantly question how it resonates with the listener – how the lived physical experience of the audience becomes another ‘living’ dimension of the narrative.

Chapter Three examined the second case study of *Wild*, a film selected as a striking counter to the hyperbolic aesthetic of *Gravity*. Despite this difference in sonic palette, *Wild* was nonetheless somatically engaging and in subtle ways which invite closer inspection. By examining the construction and deployment of foley and atmos in particular, this chapter made the overall argument for sonic identification with screen bodies, and a somatic experience of tactility – a ‘quiet’ phenomenon that is considerably under-explored in much contemporary film sound theory. By making a case for visceral empathy, this chapter ultimately suggests that the embodied memories of the audience are vital to a rich experience of cinema sound, and that cinema sound draws its salience from its living, embodied audience.

On the one hand, we understand how the cinema theatre space works with multiplicity, physically fusing bodies in an experience of sound that is both unified, and singular. Brandon LaBelle (2012) describes this as an inherently corporeal process that creates a myriad of listening points and possibilities. On the other hand, we can understand how the *lived* experience of sound in the cinema offers a multiplicity of personal sonic-somatic experiences, based on the embodied narratives of its audience. By placing the body at the centre of film sound enquiry, scholarship can give voice to new insights into how audiences incorporate, construct and perform sonic renderings. In this study I have used

phenomenological introspection to demonstrate the corporeal effect of film sound. By presenting an individual account of the somatic experience of sound in film, and terming this a *cinesomatic* experience, I argue that studying film sound from an embodied perspective opens the door to diverse accounts and nuanced interpretations of film sound. By demonstrating my own affective embodied engagement across a variety of sound stylings, this study affirms the soundtrack's relevance for body scholarship, and the body's relevance for film sound scholarship. For this study, the cinesomatic experience is our bodies' willing and wilful involvement as we engage with our own internal narratives, synchronous with the film's journey. To adapt Vivian Sobchack's (1992) phrase, the soundtrack is meaningful because of our bodies.

Epilogue

I rise out of my chair, clutching my empty cup with clawed fingers. My companion and I don't speak; we just wordlessly shuffle down the tiered steps, and emerge from the cavernous dark room. Disoriented, we wander into a dazzling maze of lights, colours, smells, moving bodies. Voices catch on the air and whip around us, as we move through the crowds. I feel sounds still vibrating through me, sounds I can no longer hear, but only recall. I feel edgy and tense, nearly recoiling against the muzak blaring overhead, flinching at the high-pitched shouts of excited children barrelling past. Finally, we move past the undulating waves of people. We find a quiet spot and pause, looking at each other. He asks me, in a voice so hushed it barely leaks out past his lips, "Well?"

I take a deep breath and nod slowly.

"I felt that."

Bibliography

- Ahmed, S. & Stacey, J. (2003). *Thinking Through The Skin*, New York: Routledge.
- Altman, R. (1992). 'The Material Heterogeneity of Recorded Sound' in Altman, R. (ed) *Sound Theory, Sound Practice*, New York: Routledge, pp. 15-31.
- Altman, R. (1992). 'A Baker's Dozen of New Terms for Sound Analysis' in Altman, R. (ed) *Sound Theory, Sound Practice*, New York: Routledge, pp. 249-254.
- Altman, R. & Handzo, S. (1995). 'The Sound of Sound: A Brief History of the Reproduction of Sound in Movie Theaters' in *Cinéaste*, 21(1/2), 68-71.
- Altman, R. (2004). *Silent Film Sound*, New York: Columbia University Press.
- Altman, R. (2012). 'Four and a Half Film Fallacies' in Sterne, J. (ed) *The Sound Studies Reader*, New York: Routledge. pp. 225-233.
- Ament, V. (2014). *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation*, Burlington: Focal Press.
- 'And the Award Goes To...11 Top Contenders for Best Sound Editing and Mixing', available at *Soundworks Collection*, see <http://soundworkscollection.com/news/and-the-award-goes-to-11-top-contenders-for-best-sound-editing-and-mixing>, last accessed 18 September, 2015.
- Armstrong, I. (2000). *The Radical Aesthetic*, Malden: Blackwell Publishers.
- Augoyard, J. (2005). *Sonic Experience: A Guide to Everyday Sounds* (trans. McCartney, A. & Paquette, D.), Montréal & London: McGill-Queen's University Press.
- Baird, R. (2000). 'The Startle Effect: Implications for Spectator Cognition and Media Theory' in *Film Quarterly*, 53(3), 12-24.
- Battersby, C. (1998). *The Phenomenal Woman: Feminist Metaphysics and the Patterns of Identity*, New York: Routledge.
- Barker, J. (2009). *The Tactile Eye: Touch and the Cinematic Experience*, Berkley: University of California Press.
- Bartky, S. (1990). *Femininity and Domination: Studies in the Phenomenology of Oppression*, New York: Routledge.
- Beller, H. (2010). 'Between the Poles of Mickey Mousing and Counterpoint' in Daniels, D. & Naumann, S. (eds) *See This Sound: Audiovisuology Essays: Histories and Theories of Audiovisual Media and Art*, Cologne: Buchhandlung Walther Konig GmbH & Co. KG. Abt. Verlag, pp.102-119.

- Bender, S. (2014). 'There is Nothing To Carry Sound: Defamiliarisation and Reported Realism in Gravity' in *Senses of Cinema* (71), see <http://sensesofcinema.com/2014/feature-articles/there-is-nothing-to-carry-sound-defamiliarization-and-reported-realism-in-gravity/>, last accessed 17 September, 2015.
- Bishop, B. (2013). 'How the Sound Masters of *Gravity* Broke The Rules To Create Sound in a Vacuum' available at *The Verge*, see: <http://www.theverge.com/2013/10/10/4822482/the-sound-design-of-gravity-glenn-freemantle-skip-lievsay>, last accessed 2 Oct, 2015.
- Blackman, L. (2008). *The Body: The Key Concepts*, Oxford & New York: Berg.
- Blackman, L. (2012). *Immaterial Bodies: Affect, Embodiment, Mediation*, London: Sage.
- Blessner, B., Salter, L.-R. & Blauert, J. (2007). 'Spaces Speak, Are You Listening? Experiencing Aural Architecture' in *The Journal of the Acoustical Society of America*, 121, 1820. doi: 10.1121/1.2537427
- Bonenfant, Y. (2008). 'Sound, Touch, the Felt Body and Emotion: Toward a Haptic Art of Voice' in *Scan: Journal of Media Arts Culture*, 5(3).
- Bordo, S. (1987). *The Flight To Objectivity: Essays on Cartesianism and Culture*. Albany: State University of New York Press.
- Bordo, S. (1993). *Unbearable Weight: Feminism, Western Culture and the Body*, Berkeley: University of California Press.
- Bowles, S. (2015). 'The Make-Under Artist', available on *Deadline.com*, see <http://deadline.com/2015/01/jean-marc-vallee-wild-interview-reese-witherspoon-oscars-1201341713/>, last accessed 18 September, 2015.
- Braidotti, R. (1994). *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*, New York: Columbia University Press.
- Brennan, T. (2004). *The Transmission of Affect*, Ithaca, Cornell University Press.
- Brinkema, E. (2014). *The Forms of the Affects*, Durham: Duke University Press.
- Brophy, P. (ed) (1999). *Cinesonic: The World of Sound in Film*, St Leonards: Allen & Unwin.
- Brophy, P. (ed) (2000). *Cinesonic: Cinema and the Sound of Music*, St Leonards: Allen & Unwin.
- Brophy, P. (ed) (2001). *Cinesonic: Experiencing The Soundtrack*, North Ryde: Australian Film Television and Radio School.

- Brophy, P. (2004). *100 Modern Soundtracks*, London: BFI.
- Brown, S. D. & Tucker, I. (2010). 'Eff the Ineffable: Affect, Somatic Management and Mental Health Service Users' in Gregg, M. & Seigworth, G.J. (eds), *The Affect Theory Reader*, Durham: Duke University Press, pp. 229-249.
- Bull, M. (2000). *Sounding Out The City: Personal Stereos and the Management of Everyday Life*, New York & Oxford: Berg
- Butler, J. (1988). 'Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory' in *Theatre Journal*, 40(4), pp. 519-531.
- Casey, E. (2000). *Remembering: A Phenomenological Study* (2nd ed), Bloomington: Indiana University Press.
- Cataldi, S. (1993). *Emotion, Depth, and Flesh: A Study of Sensitive Space: Reflections on Merleau-Ponty's Philosophy of Embodiment*, Albany: State University of New York Press.
- Cerbone, D. (2006). *Understanding Phenomenology*, Chesham: Acumen.
- Chamarette, J. (2015). 'Embodied Worlds and Situated Bodies: Feminism, Phenomenology, Film Theory' in *Signs: Journal of Women in Culture and Society*, 40(2), 289-295. doi: 10.1086/678144.
- Chare, N. & Watkins, L. (2013). 'The Matter of Film: *Decasia* and *Lyrical Nitrate*' in Barrett, E. & Bolt, B. (eds), *Carnal Knowledge: Towards a 'New Materialism' Through the Arts*, London: I.B. Tauris, pp. 75-88.
- Chion, M. (1994). *Audio-Vision: Sound On Screen*, New York: Columbia University Press.
- Chion, M. (2009). *Film; A Sound Art* (trans. Gorbman, C.), New York: Columbia University Press.
- Cooking With The Movies Website*, see <http://www.cookingwiththemovies.com>, last accessed 17 September, 2015.
- Connor, S. (2013). 'Sounding Out Film' in Richardson, J., Gorbman C. & Vernallis, C. (eds) *The Oxford Handbook of New Audiovisual Aesthetics*, New York: Oxford University Press, pp. 107-120.
- Corness, G. (2008). 'The Musical Experience Through the Lens of Embodiment' in *Leonardo Music Journal*, 21-24. doi: 10.1162/lmj.2008.18.21
- Cox, T. (2014). *The Sound Book: The Science of the Sonic Wonders of the World*, New York: WW Norton & Company.

- Cranny-Francis, A. (2008). 'Sonic Assault to Massive Attack: Touch, Sound and Embodiment' in *Scan: Journal of Media Arts Culture*, 5(3).
- Crary, J. (1992). *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Cambridge: MIT Press.
- Csordas, T. (1994). 'Introduction: The Body as Representation and Being In The World' in Csordas, T. (ed) *Embodiment and Experience: The Existential Ground of Culture and Self* (Vol. 2), Cambridge: Cambridge University Press, pp. 1-24
- Cuddy-Keane, M. (2010). 'Narration, Navigation, and Non-Conscious Thought: Neuroscientific and Literary Approaches to the Thinking Body' in *University of Toronto Quarterly*, 79(2), 680-701.
- Damasio, A. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*, New York: G.P. Putnam.
- Damasio, A. (2000). *The Feeling of What Happens: Body, Emotion and the Making of Consciousness*, London: Vintage.
- Damasio, A. (2003). *Looking for Spinoza: Joy, Feeling and the Human Brain*, London: Heinemann.
- del Río, E. (1996). 'The Body As Foundation of the Screen: Allegories of Technology in Atom Egoyan's Speaking Parts' in *Camera Obscura: A Journal of Feminism, Culture, and Media Studies*, 38, 93-115.
- d'Escriván, J. (2009). 'Sound Art (?) on/in Film' in *Organised Sound*, 14(1), 65-73. doi: 10.1017/S1355771809000090
- Doane, M. (1980). 'The Voice in the Cinema: The Articulation of Body and Space' in *Yale French Studies*(60), 33-50. doi: 10.2307/2930003
- Elliott, Paul (2010). 'The Eye, the Brain, the Screen – What Neuroscience Can Teach Film Theory' in *Excursions*, 1(1), 1.
- Erlmann, V. (2010). *Reason and Resonance: A History of Modern Aurality*, New York & Cambridge: Zone Books.
- Evans, M. & Johnson, B. (2011). 'Hearing Loss: Theoretical Absence and Visual Bullying' in Montano, E. & Nandi, C. (eds) *Situating Popular Musics: International Association for the Study of Popular Music*, Grahamstown South Africa, 27 June - 1 July 2011, Grahamstown: IASPM, pp. 119-126.
- Feld, S. (2005). 'Places Sensed, Senses Placed: Toward a Sensuous Epistemology of Environments' in Howes, D. (ed) *Empire of the Senses: The Sensual Culture Reader*, Oxford & New York: Berg, pp. 179-191.

- Gatens, M. (1996). *Imaginary Bodies: Ethics, Power and Corporeality*, London and New York: Routledge.
- Gibson, J. (1968). *The Senses Considered as Perceptual Systems*. Boston London: Allen & Unwin.
- Goodman, S. (2010). *Sonic Warfare: Sound, Affect, and the Ecology of Fear*, Cambridge: MIT Press.
- Greene, P. & Porcello, T. (eds) (2005). *Wired For Sound: Engineering and Technologies in Sonic Cultures*, Middletown: Wesleyan University Press.
- Gregg, M. & Seigworth, G. J. (2010). 'An Inventory of Shimmers' in Gregg, M. & Seigworth, G.J. (eds), *The Affect Theory Reader*, Durham: Duke University Press, pp. 1-27.
- Grodal, T. (2009). *Embodied Visions: Evolution, Emotion, Culture, and Film*, Oxford & New York: Oxford University Press.
- Grosz, E. (1993). 'Merleau-Ponty and Irigaray in the Flesh' in *Thesis Eleven*(37), 37-59. doi: DOI: 10.1177/072551369303600103
- Grosz, E. (1994). *Volatile Bodies: Toward a Corporeal Feminism*, Bloomington: Indiana University Press.
- Grosz, E. (1995). *Space, Time, and Perversion: Essays on the Politics of Bodies*, New York: Routledge.
- Haraway, D. (1991). *Simians, Cyborgs and Women: The Re-invention of Nature*, London: Free Association Books.
- Hayward, P. (2004). 'Introduction: Sci Fidelity – Music, Sound and Genre History' in Hayward, P. (ed) *Off the Planet: Music, Sound and Science Fiction Cinema*, Eastleigh: John Libbey in association with Perfect Beat Publications.
- Hayward, P. (2009). 'Introduction' in Hayward, P. (ed), *Terror Tracks: Music, Sound and Horror Cinema*, London: Equinox, pp. 1-13.
- Howard, D. & Angus, J. (2009). *Acoustics and Psychoacoustics* (4th Edition) Oxford: Focal Press.
- Howes, D. (2005). 'Introduction' in Howes, D. (ed), *Empire of the Senses: The Sensual Culture Reader*, Oxford & New York: Berg, pp. 1-17.
- Hull, J. (2001). 'Sound: An Enrichment or State' in *Journal of Acoustic Ecology*, 2(1), 10-15.

- Husserl, E. (1969). *Formal and Transcendental Logic*, [1929], (trans. Cairns, D.), The Hague: Nijhoff.
- Ihde, D. (2007). *Listening and Voice: Phenomenologies of Sound* (2nd ed), Albany: State University of New York Press.
- Irigaray, L. (1985). *Speculum of the Other Woman* (trans. Gill, G.C), Ithaca: Cornell University Press.
- Jarviluoma, H. & Vikman, N. (2013). 'On Soundscape Methods and Audiovisual Sensibility' in Richardson, J., Gorbman, C. & Vernallis, C. (eds) *The Oxford Handbook of New Audiovisual Aesthetics*, New York: Oxford University Press, pp. 645-658.
- Jeffries, A. (2013). 'Gravity Director Defends Casting Sandra Bullock After Pressure For A Male Lead' available at Wired.com, see <http://www.theverge.com/2013/7/21/4542974/gravity-director-alfonso-cuaron-defends-casting-sandra-bullock-female-lead-sci-fi>, last accessed 17 September, 2015.
- Johnson, B. (2008). 'Quick and Dirty': Sonic Mediations and Affect' in Birdsall, C. & Enns, A. (eds) *Sonic Mediations - Body, Sound, Technology*, Newcastle: Cambridge Scholars, pp. 43-60.
- Johnson, B. (2010). 'Introduction' in Johnson, B. (ed) *Earogenous Zones: Sound, Sexuality and Cinema*, London: Equinox, pp. 1-11.
- Johnson, M. (1987). *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*, Chicago: University of Chicago Press.
- Kahn, D. (1999). *Noise, Water, Meat: A History of Sound in the Arts*. Cambridge: MIT Press.
- Kant, I. (1899). *Critique of Pure Reason*, (trans. Kemp Smith, N), New York: Palgrave Macmillan.
- Kassabian, A. (2001). *Hearing film: Tracking Identifications in Contemporary Hollywood Film Music*, New York: Routledge.
- Kennedy, B. (2000). *Deleuze and Cinema: The Aesthetics of Sensation*, Edinburgh: Edinburgh University Press.
- Kerins, M. (2011). *Beyond Dolby (Stereo): Cinema in the Digital Sound Age*, Bloomington: Indiana University Press.
- LaBelle, B. (2006). *Background Noise: Perspectives on Sound Art*, New York: Continuum.

- LaBelle, B. (2012). 'Auditory Relations' in Sterne, J. (ed) *The Sound Studies Reader*, New York: Routledge, pp. 468-474.
- Lastra, J. (2008). 'Film and the Wagnerian Aspiration: Thoughts on Sound Design and the History of the Senses' in Beck, J. & Grajeda, T. (eds) *Lowering the Boom: Critical Studies in Film Sound*, Urbana: University of Illinois Press, pp. 123-138.
- Lauzen, M. (2015). 'The Celluloid Ceiling: Behind-the-Scenes Employment of Women on the Top 250 Films of 2015', *The Center for the Study of Women in Television and Film*, San Diego State University, see http://womenintvfilm.sdsu.edu/files/2014_Celluloid_Ceiling_Report.pdf, last accessed 2 Oct, 2015.
- Leder, D. (1990). *The Absent Body*, Chicago: University of Chicago Press/
- Levin, D. (ed) (1993). *Modernity and the Hegemony of Vision*, Berkeley: University of California Press.
- Levin, D. (2002). *The Body's Recollection of Being: Phenomenological Psychology and the Deconstruction of Nihilism*, London: Routledge.
- Liljeström, M. & Paasonen, S. (2010). 'Introduction: Feeling Differences – Affect and Feminist Reading' in Liljeström, M. & Paasonen, S. (eds) *Working with Affect in Feminist Readings: Disturbing Differences*, London & New York: Routledge.
- Lochhead, J. (2012). 'Visualizing the Musical Object' in Selinger, E. (ed) *Postphenomenology: A Critical Companion to Ihde*, Albany: State University of New York Press, pp. 67-86.
- Luckhurst, R. (2013). 'Space is the Place' in *Sight and Sound*, 23(12), 24-28
- MacDougall, D. (2005). *The Corporeal Image: Film, Ethnography, and The Senses*, New York: Princeton University Press.
- Marks, L. (2000). *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*, Durham: Duke University Press.
- Marks, L. (2002). *Touch: Sensuous Theory and Multisensory Media*, Minneapolis: University of Minnesota Press.
- Massumi, B. (2002). *Parables for the Virtual: Movement, Affect, Sensation*, Durham: Duke University Press.
- Masters, T. (2014). 'Reese Witherspoon says *Wild* role was 'hardest' of her career', *BBC News*, see <http://www.bbc.com/news/entertainment-arts-29600400>, last accessed 18 September, 2015.

- Mayne, J. (1993). *Cinema and Spectatorship*. London & New York: Routledge.
- McLuhan, M. (1964). *Understanding Media: The Extensions of Man*, London: Routledge & K. Paul.
- Meelberg, V. (2008). 'Touched By Music: The Sonic Strokes of *Sur Incises*' in Birdsall, C. & Enns, A. (eds) *Sonic Mediations - Body, Sound, Technology*, Newcastle: Cambridge Scholars, pp. 61-77.
- Merleau-Ponty, M. (1968). *The Visible and the Invisible*, (trans. Lingis, A.), Evanston: Northwestern University Press.
- Merleau-Ponty, M. (2002). *The Phenomenology of Perception*, (trans. Smith, C.), London: Routledge.
- Metz, C. (1980). 'Aural Objects' in Weis, E. & Belton, J. (eds) *Film Sound: Theory and Practice*, New York: Columbia University Press, pp. 154-161.
- NASA (2015) 'Women in Space', available at <http://history.nasa.gov/women.html>, last accessed 17 September, 2015.
- Offman, C. (2014). 'Chris Hadfield Praises *Gravity* to the Stars, and Brings It Down to Earth', *The Globe and Mail*, see <http://www.theglobeandmail.com/arts/film/hadfield-praises-gravity-to-the-stars-and-brings-it-down-to-earth/article16630501/>, last accessed 17 September, 2015.
- Ong, W. (2002). *Orality and Literacy: The Technologizing of the Word* (2nd ed.), London & New York: Routledge.
- Ouzounian, G. (2006). 'Embodied Sound: Aural Architectures and the Body' in *Contemporary Music Review*, 25(1-2), 69-79. doi: 10.1080/07494460600647469
- Paasonen, S. (2013). 'Grains of Resonance: Affect, Pornography and Visual Sensation' in *Somatechnics*, 3(2), 351-368. doi: 10.3366/soma.2013.0102
- Pallasma, J. (2007). *The Eyes of the Skin: Architecture and the Senses*, London: Wiley Academy.
- Parviainen, J. (2002). 'Bodily Knowledge: Epistemological Reflections on Dance' in *Dance Research Journal*, 34(1), 11-26. doi: 10.2307/1478130
- Pedwell, C. & Whitehead, A. (2012). 'Affecting Feminism: Questions of Feeling in Feminist Theory' in *Feminist Theory*, 13(2), 115-129. doi: 10.1177/1464700112442635
- Peucker, B. (2007). *The Material Image: Art and the Real in Film*, Stanford: Stanford University Press.

- Pinch, T. & Bijsterveld, K. (eds) (2013). *The Oxford Handbook of Sound Studies*, Oxford: Oxford University Press.
- Piotrowska, A. (2014). *Embodied Encounters: New Approaches to Psychoanalysis and Cinema*, London & New York: Routledge.
- Pryce, Lois (2014). 'Reese Witherspoon in 'Wild': An all too rare story of a woman on a solo adventure', *The Independent*, see <http://www.independent.co.uk/travel/activity-adventure/reese-witherspoon-in-wild-an-all-too-rare-story-of-a-woman-on-a-solo-adventure-9971130.html>, last accessed 16 September, 2015.
- Redmond, S. (2011). 'Sounding Alien, Touching the Future: Beyond the Sonorous Limit in Science Fiction Film' in *New Review of Film and Television Studies*, 9(1), 42-56, doi: 10.1080/17400309.2011.521717.
- Rice, T. (2013). 'Sounding Bodies: Medical Students and the Acquisition of Stethoscope Perspectives' in Pinch, T.J. & Bijsterveld, K. (eds) *The Oxford Handbook of Sound Studies*, Oxford: Oxford University Press, pp. 298-319.
- Richards Cooper, R. (2013). 'Weightless Gravity' in *Commonweal*, Nov 2015, Vol.140 (18), p.29 (2).
- Richardson, J. & Gorbman, C. (2013). 'Introduction' in Richardson, J., Gorbman, C. & Vernallis, C. (eds) *The Oxford Handbook of New Audiovisual Aesthetics*. New York: Oxford University Press, pp. 3-35.
- Riley, J. (2014). 'Reese Witherspoon, Bruna Papandrea Push for Female-Driven Material With Pacific Standard', available at *Variety.com*, see <http://variety.com/2014/film/features/reese-witherspoon-production-company-female-driven-material-1201323117/>, last accessed 17 September, 2015.
- Rodaway, P. (1994). *Sensuous Geographies: Body, Sense and Place*, London: Routledge.
- Rutherford, A. (2003). 'Cinema and Embodied Affect' in *Senses of Cinema* (25), see http://sensesofcinema.com/2003/feature-articles/embodied_affect/, last accessed 17 September, 2015.
- Scarre, C. & Lawson, G. (2006). *Archaeoacoustics*, Cambridge: McDonald Institute for Archaeological Research.
- Schafer, M. (1993). *The Soundscape: Our Sonic Environment and the Tuning of the World*, New York: Knopf.
- Shaw, S. (2008). *Film Consciousness: From Phenomenology to Deleuze*, Jefferson & London: McFarland & Co.

- Shaviro, S. (1994). *The Cinematic Body*, Minneapolis, University of Minnesota Press.
- Shusterman, R. (2012). *Thinking Through the Body: Essays in Somaesthetics*. Cambridge & New York: Cambridge University Press.
- Serres, M. (2008). *The Five Senses: A Philosophy of Mingled Bodies* (trans. Sankey, M. & Cowley, P.), London: Continuum.
- Shildrick, M. & Price, J. (1998). *Vital Signs: Feminist Reconfigurations of the Bio/logical Body*, Edinburgh, Edinburgh University Press.
- Silverman, K. (1988). *The Acoustic Mirror: The Female Voice in Psychoanalysis and Cinema*, Bloomington: Indiana University Press.
- Sergi, G. (2001). 'The Sonic Playground: Hollywood Cinema and its Listeners' in Maltby, R. & Stokes, M. (eds) *Hollywood Spectatorship: Changing Perceptions of Cinema Audiences*, London: BFI, pp. 121-131.
- Sergi, G. (2004). *The Dolby Era: Film Sound in Contemporary Hollywood*, Manchester & New York: Manchester University Press.
- Sobchack, V. (1992). *The Address of the Eye: A Phenomenology of Film Experience*, Princeton: Princeton University Press.
- Sobchack, V. (1997). *Screening Space: The American Science Fiction Film* (2nd ed) New Brunswick: Rutgers University Press.
- Sobchack, V. (2000). 'What My Fingers Knew: The Cinesthetic Subject, or Vision in the Flesh' in *Senses of Cinema*, (5), see <http://sensesofcinema.com/2000/conference-special-effects-special-affects/fingers/>, last accessed 23 September, 2015.
- Sobchack, V. (2004). *Carnal Thoughts: Embodiment and Moving Image Culture*, Berkeley: University of California Press.
- Sobchack, V. (2005). 'When the Ear Dreams: Dolby Digital and the Imagination of Sound' in *Film Quarterly*, 58(4), 2-15.
- Sobchack, V. (2006). 'A Leg To Stand On: Prosthetics, Metaphor, and Materiality' in Smith, M. & Morra, J. (eds) *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, Cambridge: MIT Press, pp. 17-41.
- Spadoni, R. (2007). *Uncanny Bodies: The Coming of Sound Film and the Origins of the Horror Genre*, Berkeley & Los Angeles: University of California Press.
- 'Space Debris', available at *European Space Agency*, see http://www.esa.int/Our_Activities/Operations/Space_Debris/FAQ_Frequently_asked_questions, last accessed 17 September, 2015.

- Stephens, E. (2012). 'Sensation Machine: Film, Phenomenology and the Training of the Senses' in *Continuum: Journal of Media & Cultural Studies*, 26:4, 529-539, DOI: 10.1080/10304312.2012.698033.
- Sterne, J. (2003). *The Audible Past: Cultural Origins of Sound Reproduction*, Durham: Duke University Press.
- Sterne, J. (2012). 'Sonic Imaginations' in Sterne, J. (ed) *The Sound Studies Reader*, New York: Routledge, pp. 1-18.
- Stewart, S. (2005). 'Remembering the Senses' in Howes, D. (ed) *Empire of the Senses: The Sensual Culture Reader*, Oxford & New York: Berg, pp. 59-69.
- Strayed, C. (2013). *Wild: From Lost to Found on the Pacific Crest Trail*, London: Atlantic Books.
- Theberge, P. (2008). 'Almost Silent: The Interplay of Sound and Silence in Contemporary Cinema and Television' in Beck, J. & Grajeda, T. (eds) *Lowering the Boom: Critical Studies in Film Sound*, Urbana: University of Illinois Press, pp. 51-67.
- Thompson, E. (2004). *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900-1933*, Cambridge: MIT Press.
- Toth, J. (2000). 'Non-Conscious Forms of Human Memory' in Tulving, E. & Craik, F. (eds) *The Oxford Handbook of Memory*, Oxford: Oxford University Press, pp. 245-261.
- Toop, D. (2004). *Haunted Weather: Music, Silence and Memory*, London: Serpent's Tail.
- Truax, B. (1996). 'Soundscape, Acoustic Communication and Environmental Sound Composition' in *Contemporary Music Review*, 15(1-2), 49-65. doi: 10.1080/07494469608629688
- Truax, B. (2001). *Acoustic Communication* (2nd ed) Westport: Greenwood Publishing Group.
- Turner, B. (2012). 'Introduction: The Turn of the Body' in Turner, B. (ed) *Routledge Handbook of Body Studies*, Oxon & New York: Routledge, pp. 1-17.
- Unattributed. (2014). 'Defying Gravity with Sound Designer Glenn Freemantle', *Sound & Picture*, see: <http://soundandpicture.com/2014/02/defying-gravity-with-sound-designer-glenn-freemantle/>, last accessed 16 September, 2015.
- Varela, F. (1992). 'The Reenchantment of the Concrete' in Crary, J. & Kwinter, S. (eds) *Incorporations*, New York: Urzzzone, pp. 320-338.

- Verhagen, D. (2009). 'Audiovision, Psy-Ops and the Perfect Crime: Zombie Agents and Sound Design' in *Scan: Journal of Media Arts Culture*, 6(2).
- Voegelin, S. (2010). *Listening to Noise and Silence: Towards a Philosophy of Sound Art*, New York: Continuum.
- Weddle, J. (2014). 'Orbiting Mother: Archetypal Motifs and Symbols of Modern Story in *Gravity*' in *Culture & Psyche*, 8(2), 48-55. doi: 10.1080/19342039.2014.899424
- Weis, E., & Belton, J. (eds) (1985). *Film Sound: Theory and Practice*, New York: Columbia University Press.
- Weiss, G. (1999). *Body Images: Embodiment as Intercorporeality*, New York and London: Routledge.
- Whittington, W. (2007). *Sound Design and Science Fiction*, Austin: University of Texas Press.
- Yewdall, D. (1999). *The Practical Art of Motion Picture Sound*, Boston: Focal Press.
- Young, I. (2004). *On Female Body Experience: Throwing Like A Girl and Other Essays in Feminist Philosophy and Social Theory*, Oxford: Oxford University Press.

Filmography

Destination Moon (1950) Dir. Irving Pichel. George Pal Productions. Distributed by Eagle-Lion Classics Inc.

Bladerunner (1982) Dir. Ridley Scott. The Ladd Company & Shaw Brothers. Distributed by Warner Bros. Pictures

Eat, Pray, Love (2010) Dir. Ryan Murphy. Plan B Entertainment. Distributed by Columbia Pictures.

Gravity (2013) Dir. Alfonso Cuarón. Esperanto Filmoj & Heyday Films. Distributed by Warner Bros. Pictures.

Into the Wild (2007) Dir. Sean Penn. River Road Entertainment, Square One C.I.H. & Linson Film. Distributed by Paramount Vantage.

Man of Steel (2013) Dir. Zack Snyder. DC Entertainment, Legendary Pictures, Syncopy & Cruel and Unusual Films. Distributed by Warner Bros. Pictures

The Maze Runner (2014) Dir. Wes Ball. Gotham Group, Temple Hill Entertainment & TSG Entertainment. Distributed by 20th Century Fox.

The Motorcycle Diaries (2004) Dir. Walter Salles. FilmFour & BD Cine. Distributed by Buena Vista International & Focus Features.

One Week (2008) Dir. Michael McGowan. Mulmur Feed Company. Distributed by Mongrel Media.

Percy Jackson: Sea of Monsters (2013) Dir. Thor Freudenthal. Fox 2000 Pictures, Sunswept Entertainment, 1492 Pictures & TSG Entertainment. Distributed by 20th Century Fox.

The Sea of Trees (2015) Dir. Gus Van Sant. Netter Productions & Waypoint Entertainment. Distributed by Lionsgate Roadside Attractions.

The Secret Life of Walter Mitty (2013) Dir. Ben Stiller. Samuel Goldwyn Films, Red Hour Films, Blind Wink, New Line Cinema & TSG Entertainment. Distributed by 20th Century Fox.

Snow White and the Huntsman (2012) Dir. Rupert Sanders. Roth Films. Distributed by Universal Pictures.

Solaris (1972) Dir. Andrei Tarkovsky. Creative Unit of Writers & Cinema Workers Kinostudiya Mosfilm & Unit Four. Distributed by Asociace Českých Filmových Klubu, Artkino Pictures & Magna.

Tangled (2010) Dir. Nathan Greno & Byron Howard. Walt Disney Animation Studios. Distributed by Walt Disney Pictures.

Tracks (2013) Dir. John Curran. See-Saw Films. Distributed by Transmission Films.

Wild (2014) Dir. Jean-Marc Vallée. Pacific Standard. Distributed by Fox Searchlight Pictures.

2001: A Space Odyssey (1968) Dir. Stanley Kubrick. Produced and distributed by Metro-Goldwyn-Mayer.