Film sound: Applying Peircean semiotics to create theory grounded in practice

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This thesis is presented for the degree of Doctor of Philosophy of Murdoch University

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I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

Leo Murray
Abstract

This thesis examines the theoretical approaches to the use of sound in film. It argues that there is a gap between film sound theory and film sound practice and seeks instead to formulate sound theory which is based on sound practice which can therefore be applied to both the product and the process: the soundtracks themselves and the processes which create them.

This thesis argues that the analytical methodologies typically applied in other areas of film studies do not readily lend themselves to the analysis of sound, or sound/image combinations. A semiotic model developed by Charles Sanders Peirce is proposed as being adaptable to the purposes of sound critique supporting both the practice of sound and the analysis of the language of sound.

A tripartite research approach involving traditional textual analysis, interviews with a number of industry practitioners and self-reflection on my own industry practice was adopted in order to test the chosen model as a means of analysing the soundtrack, as a way of analysing industry practice, and as a measure of the usefulness and applicability of the model in informing and influencing practice through my own experience as a film sound practitioner.

This approach to the analysis of both the soundtrack itself and the creative processes involved in its production allows for sound to be discussed in relation to the functions it performs. As such the model can provide a comprehensive and powerful tool for the analysis, practice and teaching of film sound.
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0. Introduction and Thesis Overview

This thesis began with the desire to improve the alignment of the teaching of film sound theory with film sound practice. For those wishing to integrate the analysis or theory of film sound with the practice of film sound there remains a gap in the existing literature between the analysis of the finished article and the practice that creates it. Working as a practitioner in the creation of soundtracks for documentary and drama productions presents an array of challenges and requires a range of skills, both technical and artistic, which deserve articulation in their own right. Apart from purely theoretical disquisitions on sound, industry practice may be conveyed by practitioners themselves reflecting on their own work or by interviews with practitioners in more academic texts. However, currently there are few texts that tie theory and practice together. This is what this thesis intends to do.

Previous generations of film sound practitioners learnt their craft through an apprenticeship model in which the student sat at the teacher’s side gradually soaking up experience from real world examples. The artistic and technical demands of the work could be learned side by side with the expert. Contemporary training is more likely to be through technical and tertiary institutions, rather than through a master-apprentice model, and this should ideally provide the opportunity for teaching theory alongside practical instruction.

Teaching film sound practice involves a range of approaches to the treatment of sound. Sounds may be authentic recordings, or may be replaced in a studio, or even designed from scratch. Music may be written for the film or the film may be edited to fit the music. Sometimes the focus is on accurate and faithful recordings, and other times on the wholesale replacement or careful editing of the original recordings in such a way as to hide the artifice of the process. The real coexists with the fabricated. The synchronous coexists with the asynchronous. Each and every sound element can be subsumed by the needs of the story. When combined with the images, subtle or major changes in meaning or emphasis are routinely discovered, discarded or built upon.

In this environment, this thesis intends to illuminate the processes at work in the creation of the soundtrack in such a way as to make it of practical use to both practitioners in industry, and to those engaged in studying, analysing and teaching sound in film. Where traditional analytical approaches focus on the product, the aim of this more practitioner-based approach is also to give attention to the process. A practice-centred model has been adopted with the theory being tested and reflected upon in the context of the practice of a number of industry professionals in film and television sound, and against my own practice. The research aim is
therefore to devise a theory of film sound based on the actual practice of film sound practitioners.

0.1 Thesis overview

0.1.1 Chapter 1. Research area and methodology

The thesis, being partly practice-based, is a form of action research. Chapter 1 presents the project aims and the methodology employed. As Zuber-Skerrit and Fletcher (2007) point out this form of research combines two research processes in one. The production of the thesis as a physical artefact is a product-oriented activity, whilst doing the research is a process-oriented activity. Whilst the former appears to be a logical and coherent process, the research process that runs alongside it is often far from coherent. The thesis itself, like a soundtrack, attempts to present a coherent finished product, and represents the process that has created it, as a natural and seamless thread leading to an inevitable conclusion. However, both the research on the topic of film sound and the practice itself (creating film soundtracks) often involve “lots of exploration, experimenting, and trying out ideas – keeping some and rejecting others” (Zuber-Skerrit and Fletcher 2007, 427).

The aim of the research is to see whether an analytical model exists that can integrate the theory and practice of film sound. It has three foci: the film itself, film sound as an industry process, and personal professional practice. Peirce’s concepts will be adapted to provide a vocabulary for critical film sound analysis. The model will first be applied to a number of case study films to illustrate its usefulness in action. It will then be applied to the concepts of sound production that emerge from the industry itself. A number of professional practitioners will be interviewed to discuss their work on specific productions, their approach, methodologies, personal philosophies and practices. The interviewees’ views are divided broadly on their perspective of the role of the sound practitioner, and the roles and functions that sounds have in the soundtrack. As with the analysis of the film artefacts, the responses from the interviews will then be mapped against the Peircean model, in order to test its usefulness in describing the process involved in creating the artefact.

Finally, the model will be used self-reflexively to see how far it helps a practitioner understand his/her own practice. This will involve the researcher’s self-reflexive examination of his own work as a sound producer on a number of productions undertaken concurrently with this research project. Here both process and product can be minutely examined from the inside, using my own practice as the research material. It is here that the
action research method is most in evidence with practice and research informing and influencing each other.

0.1.2 Chapter 2. Literature review

The literature review in Chapter 2 covers a range of eras and disciplines, and is in two halves. The first half covers film sound theory and practice. This encompasses early film sound theory, the period up to and including the transition to sound films; middle period sound theory, the period from the mid 1930s to the early 1960s; and later sound theory, the period from the 1960s to the present day. It includes texts written by or about experienced practitioners, and their voice and representation in the industry press. Here the content is concerned with actual practice, and its origins and history, rather than theory. The texts range from comprehensive ‘how to’ guides, to thoughtful treatises on the role of sound in film. This part of the literature review also scrutinises the academic journals, reflecting on the increased recent popularity of and critical attention paid to sound and music as they are used in cinema and other audiovisual forms. Then it looks at forums and blogs, illustrating the growing range of web-based materials and discussion forums that centre on sound, particularly in film. Finally, in this section is a review of the available literature on sound in non-fiction film genres, particularly covering the documentary, but also including areas such as television news reporting and televised sport.

The second half of the literature review is concerned with semiotics, and how this has been applied in film theory and film sound theory. First, the influential models of semiotics will be discussed, with reference to the work of Saussure and others (1960), Peirce and Hoopes (1991), Peirce (1998), and Eco (1979). The application of semiotics to meaning and signification explores contributions from Bakhtin (1986), Metz, Barthes, Halliday and Kristeva. The section on truth and fiction looks at the work of Chandler, Ruthrof, Altman, Bordwell, Carroll and Baudry. The application of Saussurean inspired semiotics to the analysis of film sound is discussed, as is the advocacy of Peirce as an alternative by Wollen, Deleuze and Silverman. The two semiotic models are compared, contrasting Saussure’s bipartite structure of the sign with Peirce’s tripartite structure. While the Saussurean model is attractive in its simplicity, it is arguably the very complexity of the Peircean model that gives it the adaptability to extend beyond verbal language into the language of sounds. The hypothesis is that the Peircean model may open the way to a deeper and more comprehensive analysis of sounds as they are used as meaningful signs. In the context of a film soundtrack, this is of great interest.
Chapter 3. Peirce’s model of the sign

Chapter 3 addresses the Peircean semiotic model in more detail, investigating the extent to which the model may be a suitable tool for film sound analysis. This explores how the Peircean model of the sign provides a number of elements that can be applied to the analysis of sound generally, and film sound in particular. Both the signs themselves (sounds or sound/image combinations) and the process of creating them can be analysed using the concepts of this semiotic model. The main elements of the model are outlined in “Some Consequences of Four Incapacities” (Peirce, Hartshorne and Weiss 1960, 5.448), as well as his ideas of the Universal Categories of Firstness, Secondness and Thirdness (Peirce, Hartshorne and Weiss 1960, 8.328). Having established the model, those aspects that apply particularly to the analysis of sound are introduced. Broad categories of sound signs are considered, including examples of both natural and arbitrary sound signs. Other theoretical models of film sound from Altman, Chion, Murch and Holman are also integrated with the Peircean model of semiotics.1

Chapter 4. Applying Peirce’s semiotic model to film sound

Having established the potential of the Peircean model in analysing sound in general, in Chapter 3, it is now applied particularly to film sound. Sound signs are discussed, including examples of both natural and arbitrary sound signs. Context and ambiguity are discussed, along with the ideas of lapsed and emergent sound signs, and the function of sounds is revisited in light of the semiotic analysis. Film sound realism is then explored through the lens of Peircean semiotics, along with the development of conventional sound codes and their socio-cultural dimensions.

The Peircean concept of abduction is illustrated with an example from the film Once Upon a Time in America (Leone 1984). Peirce’s model is then applied more specifically to some broad areas of film sound, such as dialogue, music and effects. Some of the functional aspects of sound are explicated in the discussion of sonic realism and the metaphorical uses of sound.

Chapter 5. Soundtrack analyses using the Peircean model

The Peircean semiotic model is deployed more in Chapter 5, in a detailed analysis of two films, King Kong (Cooper and Schoedsack 1933) and No Country For Old Men (Coen and Coen 2007), to illustrate its usefulness as a tool for appreciating the role of sound in film. First, the individual sound design elements and musical score for King Kong are analysed,

1 For a list of Peircean semiotic terms and definitions, see Glossaries – Peircean semiotic terms.
using the model to explain individual sound and music choices through the semiotic concepts of icon, index and symbol. The Peircean semiotic analysis can be shown to correlate with the descriptions of the practice by those responsible for the productions: Spivack for sound and Steiner for music.

As a tool for creating meaning within a text, *No Country for Old Men* is used to illustrate the concepts and use of the dynamical object, dynamical interpretant, and the design of sound and image combinations to encourage abductive reasoning in gradually creating meaning. The soundtrack can be shown to help the audience create meaning and construct the narrative from the sounds and sound/image combinations presented to them. Again the practitioners’ descriptions of the processes involved are mapped against the concepts of Peircean semiotics in practice.

0.1.6 Chapter 6. A snapshot of industry practice

In order to create a sound theory grounded in practice, the perspective of industry practitioners must inform the theory. In Chapter 6, sound practitioners are given the opportunity to discuss sound production in their own terms to provide a snapshot of the realities of industry practice. A number of practitioners were interviewed over a period of three years. The two broad areas of concern were the role of the sound practitioner, and the role of sound in film. The sound practitioner focus included planning, communication, typical workflows, governing principles, personal philosophies, experimentation and creativity. The focus on the roles of sound in film included the metaphorical use of sound, emotional uses of sound, the interdependence of sound and image, point of view sound, audience perception and manipulation.

Through the interviews the subjects gave their perspectives on film sound in a range of areas, often using examples of their own work to illustrate a particular point. The interviewees’ experiences, concerns and philosophies were discussed in a semi-formal setting either face-to-face, by telephone, or via Skype. The themes that emerged, and the differences and commonalities in approach are discussed, as are aspects of the soundtrack using Holman’s (2002, vi-vii) classification of the roles of sounds, literal narrative, subliminal narrative and grammatical. This enabled convenient grouping when describing particular tasks involved in the production of the soundtrack. ²

As in the film case study analyses in Chapter 5, the practitioners’ own views correlate closely with aspects of the Peircean model of the sign. The practitioners’ own descriptions of

² For a list of film and sound terminology and definitions, see Glossaries – Film and sound terms.
their practice are mapped against the ideas and concepts from Peircean semiotics. This reveals commonalities of approach that are both logically consistent and widespread within the industry, and that provide a theoretical basis and rationale that underpins industry practice. Aspects of the Peircean semiotic model can thus be applied to the film itself, and the processes that go into sound production, illuminating areas of practice that were previously under-theorised.

0.1.7 Chapter 7. Self-reflexive practice

In Chapter 7, the researcher becomes the research subject, as I examine my own practice in four films. The background of each project, and a description of the processes and particularities for each production is examined, echoing many of the same concerns shared by the practitioners involved in the interviews for this research. The collaborative nature of the film production process is highlighted alongside the problematic nature of the authorship of the soundtrack.

The accompanying DVD contains the films on which this critical analysis is based. It contains the four productions and supplementary material that are of use in deconstructing the elements of the soundtrack. The soundtracks are presented here as they appear in the final version of the film. Where available, they are also presented in their component forms as ‘stems’ (such as, dialogue, music and effects), which can be selected as separate DVD audio tracks as an alternative to the main mix (full version) of the film. Removing the sound context for the elements, for instance hearing dialogue in isolation, helps to highlight the processes involved in creating the soundtrack. The sounds or groups of sounds are components that can be selected, replaced, modified, removed or isolated in the final soundtrack depending on the needs of the film.

The Peircean model is then applied to both self-reflexive practice and the product. Four films are examined: Weewar (Kearing and Stasiuk 2005), Footprints in the Sand (Stasiuk 2007), The Road Not Taken (Fasolo 2011) and Eleven Thirty (Ciallella 2012). The two most recent films, The Road Not Taken and Eleven Thirty, are examined, first, as a means of explaining the processes and decisions taken in light of the Peircean model, and second, to show how this semiotic model can be used to frame discussions about the soundtrack with others involved in the film’s production, such as director, editor or producer. Weewar, which predates the adoption of the Peircean models, is examined with the Peircean model overlaid to explain individual sound uses as well as the overall design of the soundtrack. Decisions that were previously creative or artistic hunches could then be framed and theorised using concepts borrowed from Peircean semiotics. The final example of my own work is the
ethnographic documentary, *Footprints in the Sand*. As the Peircean model was gradually adopted during the course of the research project it influenced the conceptualisation of the process used in creating the soundtrack.

### 0.1.8 Chapter 8. Findings and conclusions

The thesis concludes by revisiting the research aims to examine the usefulness or otherwise of the model being proposed. Potential criticisms of the model or the way in which it has been utilised in this research are given attention and response. The usefulness and applicability of the Peircean model are discussed along with the potential advantages it brings to the analysis, teaching and practice of film sound. The terminology of the Peircean model and its capacity to serve as a metalanguage of sound will be reviewed. An attempt will be made to integrate the Peircean model into existing models of the soundtrack developed by Murch, Holman and Chion.

Recommendations that arise as a result of this research will include suggestions for working practices that enhance the status of sound as a creative partner in the production of films and other audiovisual media, and an outline of the benefits of particular working practices and methodologies. This research offers illustrations of the potential of the Peircean model and suggests applications outside the realm of film sound.
1. Definition of Research Area and Methodology

1.1 Research question

In working on film productions and in teaching the practice of film production I have found many enlightening works of theory written from the perspectives of the critic, analyst or theorist, as well as interviews and articles from practitioners. However, the two rarely correlated and there appeared to be a disconnection between the theory and the practice. This was particularly true in the area of film sound, which has been comparatively neglected in film theory. There appeared to be an opportunity to address two issues simultaneously by articulating a theory of film sound, firmly grounded in industry practice. This thesis therefore addresses the following research question:

How can a theory of film sound be devised based on the actual practice of film sound practitioners?

1.2 Aims of the thesis

The soundtrack and the depth of work that leads to the creation of the soundtrack are often ignored altogether, reduced to a series of seemingly purely technical stages. The quotation below, from 1938, illustrates the long-held view that from an outside perspective the production of the soundtrack is seemingly pre-occupied with the technical details of microphones, mixers, equalisers and the like:

When you hear a famous violinist in Carnegie Hall you think of him only as a great creative artist—certainly not as a mechanical technician. Yet, if you were to spend hour after hour with him during practice, it is probable that you would become quite conscious of the meticulous placing of his fingers on the strings, his bowing, and even the kind of strings used on the violin. If, during all this time he appeared by necessity to be engrossed with technique, it is quite possible that when you went to the concert you would still think of him as a fine technician and of his violin as a mere mechanical tool. His concert would actually be just as beautiful a creation, but your point of view would have spoiled your appreciation of it.

It is fortunate that the audience seeing a finished picture has not seen it being rehearsed over and over again in the re-recording rooms. If the re-recorder is successful, the audience is not conscious of his technique but only of the result achieved. The director and producer watching the re-recorder work out the details, however, may think him and his tools very mechanical, for in spite of what is going on inside his head (the important part of re-recording), his hands are performing a multitude of mechanical operations, and his conversations with his assistants are in terms of machines (Research Council of the Academy of Motion Picture Arts and Sciences 1938, 72).
The musical analogy is a useful one. In order to produce anything approaching a pleasant sound, one must first master the mechanical and technical aspects of the instrument so that they become invisible to the listener. Sound practitioners are all too aware that often the better their work the more invisible it becomes. To the audience there may be no appreciation at all that any work has gone into the production of the film soundtrack.

To those involved in film, but not directly in sound, the process could be seen as mysterious, technical or irrelevant. During filming, the majority of the film crew are concerned with the production of image, including the camera, gripping, lighting, art, hair, make-up and so on. Their work is visible, particularly where on set video playback shows the fruits of their labour. Conversely, the sound crew typically comprises just two people and often only they are aware of what is being recorded, with the other crew being in the sonic equivalent of ‘the dark’. Their headphones give them access to a separate world denied to the others. The work of other departments is visible first hand, and also through the camera’s lens and onto the playback screen. Any problems, solutions or changes in the sonic world are all but hidden.

It is readily accepted that the photographer (or cinematographer) must fully understand and master the technology and techniques of the camera in order to produce artistic work. The means of producing the art become irrelevant once the art is exhibited. Sound could and should be perceived in a similar way. However, due to a lack of awareness, knowledge and understanding of its processes it is relegated to a secondary, subsidiary or worse still purely technical series of processes, rather than an artistic enterprise. Akin to the photographer’s camera or the violinist’s instrument, the sound practitioner uses techniques and technologies that need to be understood and mastered in order to create the artwork, which is hidden once the work is performed or exhibited.

This thesis intends to form a theoretical foundation to the practice of film sound, which is too frequently seen as a ‘technical’ or secondary part of the film production process. It is hoped that this will facilitate a means of analysing and describing the ways in which sound, in its broadest sense, can be used to ‘create meaning’. As well as being of some practical use to those engaged in the study and practice of film sound, it is also hoped that delineating the theoretical underpinnings of film sound practice will contribute in some way to the perception of film sound as a creative enterprise, rather than purely technical.

### 1.3 Methodology strategy

The research question will be answered using an approach comprising three main strands:
1. To examine theory to date, in order to select the most appropriate critical language for film sound.

2. To examine current industry practice, in order to capture theory from what film sound practitioners are actually doing in the field.

3. To use my own work as a testing ground for the ‘new’ theory, in order to explicate my own practice.

Whilst I was researching film sound theory, film theory and film criticism, I was also working on films, watching films and reading various practitioners’ own opinions and descriptions of their methods and approaches. In reading the practitioners’ opinions and descriptions of their working practices, it seemed that there were commonalities and methods of work that were partly attributable to schools of thought or industrial and organisational structures. There also appeared to be commonalities in their working methods that seemed to reveal a consistent and meaningful approach to the production of the film soundtrack. Their approach was not concerned with the technical details or the minutiae of the sonic elements, but with the overall effect of the whole sound and picture combination. There was an overriding emphasis on the story, and how the sound helps to tell the story. The function of the soundtrack, rather than its components, increasingly became the focus of my research. What does each part do, in terms of the overall story? How are the effects achieved? How do film sound professionals see their role and their work?

Taking this seemingly common-sense, but altogether necessary, starting point that if the fundamental role of the soundtrack is to help tell the story, then accordingly the fundamental role of the film sound practitioner is also to help tell the story. The sound choices, whether they are about the clarity of a line of dialogue, the choice and timing of music against a sequence of images, the suggestive possibilities of the background ambiences, or the realistic portrayal of an event, are all concerned with how they help to tell the story.

This led to an examination of theories that had been used in film, thus far, to see what might be most suited to the particular function of explaining film sound. The Saussurean model of the sign, or an adaptation of it (Barthes 1968, 1972; Metz 1974a), is most frequently used in film analysis. The Saussurean model, developed from a study of linguistics, takes into account the arbitrary nature of signs and the importance of the sequential order of signs to create or modify meaning. Since the visual perspective of films can be easily divided into scenes, shots and still frames, there is a temptation to use the analogy of a filmic language, whereby the film’s structure is the equivalent of the words, phrases and sentences of a language. There has been less success in adapting this model adequately to describe sound in film. However, the work of Wollen (1998) indicates that there might be another semiotic
pathway. The model of the sign proposed by Peirce takes account of a great many of the functions, properties and uses of sound, which cannot be accommodated in the linguistic, Saussurean model. Further study gave me confidence to argue that the Peircean model of the sign and its related concepts provide a comprehensive and generally applicable method of analysing how sound is used, whilst also providing a language that can be adapted to describe how sound is used. This semiotic model is described in Chapter 3.

The research itself and the productions that form part of the research can be viewed as working in parallel, where one informs the other (Arnold 2008, 133). The work has not changed fundamentally because of the Peircean model. Instead both the process and the product can be revealed and described in Peircean terms, making visible what has been largely invisible until now.

1.3.1 Qualitative research methods – A three-pronged approach

This thesis attempts to make a contribution to the field of film sound by using practice-related methods to reveal the conceptual models and assumptions that drive the making of the film soundtrack, and in doing so to provide a meta-language to describe the process. Having selected the Peircean semiotic model, the methodology chosen to illustrate its potential for this research comprises a three-pronged strategy involving: (a) an analysis of case study films using Peircean semiotics to illuminate theory from a practice-based approach; (b) interviews with professional practitioners to reveal theory from a practice-led approach, and to discern the extent to which there are commonalities in approach that might be described using the language and concepts of Peircean semiotics; and (c) reflection on my own professional practice, applying the Peircean semiotic model to both the finished soundtrack and the processes involved in its creation.

First, a case study analysis of a small number of films was undertaken to illustrate both the diversity of film texts and the flexibility of the Peircean model. The films were selected on the basis of being widely accepted exemplars of creative film sound. Second, a number of research interviews were undertaken with practitioners involved in key areas of film or television sound production. Each interviewee was selected on the basis of their experience and standing in the industry. A semi-structured interview method was adopted that covered specific topics, whilst being flexible enough to allow other fruitful topics to be pursued as they arose. Prior to the interview a range of general questions relating to film sound were prepared as well as questions that were specific to the individual or their area of expertise, addressing their role, experiences and perspectives on particular films.
The individuals interviewed have worked across multiple roles in their careers that span specialist areas, including production sound recording, sound editing, sound rerecording, ADR recording, dialogue editing, and sound design. Directors were also interviewed, in order to provide a broader perspective from an authorial standpoint beyond the soundtrack. Indeed, the area covered in the research would hopefully be of interest to other film professionals not directly or solely involved in sound, such as directors, producers, picture editors and writers. In describing their own work in their own words, their different working practices, approaches and underlying philosophies and methodologies could be examined in light of the proposed theoretical model. The theory could then be adjusted to ensure it aligned with real-life practice.

Third, I examined my own practice in relation to several films or programs that I have been involved in since the commencement of the research. These films tend to involve a smaller crew than is typical in the industry at large, and my role was often either as one member of a small group, or as the sole sound person involved in the entire production covering all the roles in both the production and post-production of the soundtrack. As a result, I was in a relatively privileged position in the sense that I could often work on a project through its entirety from pre-production to the final ‘print’.

For a study of this kind a quantitative research method would be inappropriate. Instead qualitative information was required to build up a realistic picture of the elements of film sound production. However, even where there is a rejection of the quantitative or scientific models of inquiry, the validity of the data is critical if the research is to be deemed relevant and applicable. It is necessary to be critical and objective in the handling of the data gathered to enable the twin aims of reliability and validity (Silverman 1993, 145).

It is recognised that the qualitative research process is an iterative one (Candy 2006; Williamson 2006). In gradually proceeding toward a theoretical model that adequately describes and informs the film sound production process, the three methods of qualitative analysis were spread over a period of several years. As a result, each of the interviews, film analyses and my own production work influenced subsequent research and practice as they developed over time.

1.3.2 Practice as process rather than product

In film theory and especially film sound theory the creative process is not routinely examined. According to Smith and Dean (2009, 2), traditionally ‘theory, criticism and...

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historical investigation have been heavily prioritised over arts practice.” This research attempts to focus on both theory and the creative processes. The practices that contribute to the creation of the soundtrack are examined in order to expose the philosophies that underpin the production practices. With primarily qualitative research comes an inevitable level of interpretation by the researcher. The practitioner interviews, film clip analyses and self-reflection are all, to some degree, based on subjective interpretation.

Ryle’s (1949) influential discussion on ‘knowing how’ suggests that simply doing something need not necessarily point to an inherent reasoning process. The justification for the practice comes from a formalised reasoning of it, rather than from the work itself, which points to the deliberative process that led to the final result. However, this view of production risks overlooking the extent to which reasoning may be ongoing and embedded in the process itself (Pakes 2004). I argue, and hope to demonstrate, that the work that shapes the soundtrack is a meaningful and consciously designed process that arrives at a finished piece not because of “sheer habit, blind impulse or in a fit of absence of mind” (Ryle 1949, 40), but through a succession of decisions that are part of a method of working, which is coherent in its own terms, and has its own distinctive logic and rationale. By interviewing various practitioners about the processes involved in their work and the reasoning that led to particular examples of their work, and by reflecting on my own practice, it can be shown that there is a consistent and generalised conceptual basis that can be extracted from the practice and can contribute to a theory of film sound.

Perhaps inevitably there are problems with the generation of an artwork and the role of subsequent self-generated commentary about it (Smith and Dean 2009, 6). It is not my intention to compare my own creative works with those of the practitioners who have contributed their time to this research. The purpose of reflecting on my own creative works is rather to compare my own creative processes with the processes of other practitioners on other films, in order to reveal any correspondence of ideas across different films and roles, regardless of the film being made.

In addition, in terms of film sound, the notion of authorship is problematic. There is no single author of the soundtrack. Even where one person oversees the entire soundtrack the overall control usually resides with others, including the director, producer and picture editor, either in a distinct hierarchical structure or in a more democratic system with each having substantial input. It should be recognised that usually no one individual is responsible for the content of the soundtrack, although they may be accountable. Rather it is the product of the work of a number of people, whose decisions either directly or indirectly affect the finished result.
1.3.3 Practice-based and practice-led research

In attempting to derive theory from practice, the research has adopted two complementary practice-related approaches: practice-led research in the form of practitioner interviews, and practice-based research in the form of a reflection on my own productions. I have adopted Candy’s (2006, 1) definitions of practice-related research: in practice-based research the creative work acts as a form of research, whereas practice-led research is about practice informing research. This allows a “double-articulation”, whereby the practice informs the theory and the theory informs the practice. In choosing and applying these two practice-related strategies, the focus of the research shifts beyond the finished work and considers the process of creating the work (Lindgren 2011, 15-16).

Whilst there are practice-based elements of the research, for example my films, which are included as appendices to this thesis, the larger component is practice-led. The actual practice of creating a soundtrack informs the thinking and theorising about the processes that inform it. Both the practitioner case study interviews and the self-reflexive components of this research use practice itself as the starting point for the creation of new knowledge.

By concurrently conducting this research project and continuing to work on film projects over a period of several years, the research inevitably informed the practice just as the practice informed the research. Bolt’s (2006) example of Hockney’s practice-led research illustrates the potential of using a practitioner whose sustained and sustaining practice creates new knowledge and allows for a different starting point for theoretical explanations of artistic practice. Working on film sound requires a different type of thinking from simply writing about film sound. To use Bolt’s (2006, 5) phrase, there is “a knowing that arises through handling materials in practice.”

This methodology serves to inform the theory since the practice is critical to its development. By interviewing industry practitioners as well as reflecting on my own industry practice a deeper insight into the process can be uncovered. The final product can then be examined in light of the knowledge of the practice that created it. It allows the practitioner to describe, in their own words, what was being attempted and what other options were explored on the journey toward the end product. Rather than being viewed as an inevitable and predetermined consequence, it shows the soundtrack to be the result of a number of creative decisions and artistic choices, made in response to practical problems and sometimes conflicting requirements.
1.4 Part 1 – Film analysis, sound-image analysis

1.4.1 Analysis of the soundtrack

Whilst the main purpose of this thesis is to extrapolate sound theory from sound practice, it is also essential to apply the theory ‘after the fact’ to the completed film, in order to illustrate the flexibility of the theoretical model being used. The analysis intends to demonstrate how the Peircean model can be applied to the finished text to explain the meaning created by the audience from the material presented in the film.

1.4.2 Applying the Peircean model

In a traditional narrative analysis the whole text is the subject, and its focus is the structure of the story (Stokes 2003). In this research, the analysis relates only to the soundtrack, and therefore a whole-of-text analysis is not used. Instead, a number of case study films are discussed to ascertain how sound is used in conjunction with images to create the narrative. The films discussed are King Kong (Cooper and Schoedsack 1933), No Country for Old Men (Coen and Coen 2007), and Once Upon a Time in America (Leone 1984). The soundtracks are analysed at both macro and micro levels to highlight the flexibility of the approach: from the specifics of the individual representative sounds (and musical motifs) in King Kong, to the unfolding of sound-image relationship and subsequent creation of meaning in No Country for Old Men, to the simultaneous but contradictory sound and image tracks in Once Upon a Time in America. Whilst the analyses are primarily based on the actual film texts, supporting data is also used from published accounts of those who worked on the films.

1.5 Part 2 – Practitioner interviews

1.5.1 Interviews

Interviews are one of the most widely used data-collection methods in media research. The long-form ‘conversational’ interview is well suited to elicit the perspectives on a specific subject (Jensen 2002, 240). In addition, using spoken language as a means of determining the thoughts and perspectives of interview subjects serves a dual function in this research, highlighting the difficulty in discussing ideas about sound. Conversations often revert to comparison or analogy as a means of arriving at a common understanding. In the absence of a suitable language of sound, discussing the use of a particular sound-image relationship, or
the overall ‘feel’ or approach of a soundtrack inevitably involves comparison with a known film or everyday use.

The interview process followed Stokes’ (2003, 118-120) model’s sequence:

- Selection of interviewees;
- Decision on how to conduct the interviews;
- Background research;
- Planning the interview;
- Conducting the interview;
- Transcription of the interview.

1.5.2 Selection of interviewees

The selection process for the interviewees was based on the need for a sufficiently varied range of sound practitioners with particular expertise in one or more aspects of film or television sound. Eight professionals from the United Kingdom (UK) and Australia were selected because these were the countries where I had a wide network of industry contacts. Whilst the selection was not randomised, as would be the case in a sampling procedure, the aim was to select subjects who were appropriate because of their experience, expertise and standing within the industry.4

The interview subjects were selected as representative sound practitioners based on their work and role in various methods of production: film and television, dramatic and documentary films, big budget and smaller budget (and their respective crews), and independent and ‘mainstream’. Each interview subject was given a description of the research project and was given the right of anonymity, but was asked to consent to be identified since they were selected on the basis of their industry standing. Given that the discussions centred on their work and roles on particular productions they would be easily identifiable in any case. Each interview subject was given the opportunity to view their direct quotations and an opportunity to amend these where they judged this necessary or appropriate.

1.5.3 The research interview

Having selected the interview subjects as a representative sample of industry practitioners, an appropriate means of interview was necessary. A semi-structured approach was selected

4 See Appendix E – Biographical Information on Interview Participants.
for the interviews (Wisker 2001), as it allowed respondents to depart from a series of set questions and topics to explore other areas of interest. This form of interview would also be best at eliciting the types of response that contain “information based on insider experience, privileged insights and experiences” (Wisker 2001, 165), which was the aim of this part of the research. By adopting a qualitative interview approach, rather than a questionnaire or rigidly prescribed set of questions, there are several benefits as outlined by Seale (2012, 211):

- Gives access to attitudes, values and feelings;
- Offers flexibility;
- Allows for exploration of views;
- Allows for sensitive issues to be broached;
- Achieves depth in responses;
- Reflects complexity;
- Allows respondents to answer in their own words.

There are potential pitfalls in simply transcribing recorded interviews without detailing the nuances of inflection in a flowing extended conversation (especially in more sensitive research areas). In this case, the interviews were more factually-based. The interview subjects were selected on the basis of their standing as professionals, and the tone of respondents was not a fundamental element. As such, the transcripts supplied sufficient information for the purpose of the research.

The interviews were face-to-face where possible, via Skype using audio and video (with only the audio portion of the interview being recorded), or by telephone. Prior to each interview, the researcher viewed or reviewed particular films that the interview subject had worked on. Questions were also prepared related to these particular films, in addition to more general questions that related to all aspects of film sound production. Appendix F – Sample of Interview Questions contains the list of generic questions that formed the framework common to each of the interviews.5

1.5.4 The interview structure

Since the interviews were intended to ascertain the individual practitioner’s perspectives, working philosophies and methodologies, a prescribed set of questions would have been too

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5 See also Appendix E – Biographical Information on Interview Participants, and Appendix G – Sample Interview Transcript.
inflexible. Instead, the interviews were designed to be semi-structured and open-ended with no set time limit, other than that which was imposed by the interview subject. The interviews began with questions relating to particular films or programs on which the interview subject had worked. This was used as a springboard for further discussion. As well as giving a concrete topic on which to begin the interview, it allowed the researcher to demonstrate an interest, a familiarity with the work of the interview subject, and some level of experience with the work that goes into the production of the soundtrack. Answers were therefore as long as were necessary, and follow-up questions could be asked to expand on a particularly fruitful or interesting avenue of discussion.

1.5.5 The interview subjects

The interview subjects comprise a cross-section of practitioners working in small to large budget productions, film and television, drama and documentary, various roles including sound recordist, dialogue editor, ADR recordist, sound designer, sound rerecording mixer and director. Brief biographies of the participants are included in Appendix E – Biographical Information on Interview Participants.

1.5.6 Data analysis

The interview itself, whilst laden with the common-sense justification that ‘the best way to find out what people think is to ask them’, should be tempered by the knowledge that people do not always say what they think, or mean what they say. However, in this case, the respondents are speaking in-depth on a subject about which they are knowledgeable and experienced. Since the participants were selected as exemplar practitioners, the analysis of the interviews follows a journalistic model of analysis in which relevant representative quotes are used, rather than a more in-depth discourse analysis. Whilst a breadth of information can be transmitted through the use of transcription symbols (Silverman 1993, 118) or an analysis of the conversation itself (Drew and Heritage 2006; Sidnell 2010), for this research a simple transcription was sufficient.

1.5.7 Ethical considerations

The interviews were conducted in accordance with the rules of the revised Australian National Statement on Ethical Conduct in Human Research (Australia. NHMRC 2007). All participants were given the right of anonymity, but were asked to consent to be identified since they were selected on the basis of their status, position and professional experience.

6 See Glossaries – Film and sound terms for a description of these roles.
Given that the discussions were centred on particular films on which they had worked, they would be easily identifiable in any case. Where a participant was quoted in the thesis, they were given the opportunity to check and verify, amend or clarify their remarks where they judged this necessary or appropriate.7

1.6 Part 3 – Self-reflexive research

1.6.1 Film sound practice as research – Content and process

After first focusing on the content in the film case studies and second on the process in the practitioner interviews, it is then possible to focus on both content and process through a self-reflexive analysis of my own practice. This constitutes the third component of the research. Recently, arts researchers have begun to recognise the potential for practice to inform research. In particular, Smith and Dean (2009, 2) have pointed out that in the humanities broadly “...theory criticism and historical investigation have been heavily prioritised over arts practice.” The creative process itself is not routinely examined. The object is that which is studied, rather than the process.

This research is as concerned with the creative processes that go into the creation of the soundtrack as with the soundtrack artefact itself. The working philosophies that underpin the production practices are as important as the outputs that are generated. As a result, the reflection on my own productions involves discussion of the various decisions, iterations, comparisons, edits, changes of approach, and rejections of approach that are involved in the course of the gradual creation of a soundtrack.

Reflecting on my own work in several productions highlights a number of issues regarding the analysis of film sound. Re-listening to work inevitably means listening to mistakes and, with the benefit of hindsight, contemplating how one would ‘improve’ a film that has long since been completed. It requires ways of describing what was/is being attempted, as well as describing what can be heard in the soundtrack. The insider view makes it possible to describe what has been deliberately left out of the soundtrack, or the reason for a particular course of action. As with film sound criticism, this requires a meta-language to describe sounds themselves and the practice of manipulating sounds, as function and as meaningful representation. Through self-reflection there is the opportunity to demonstrate how the model of Peircean semiotics can be applied to flesh out the meaning of existing terms in

7 See Appendix C – Information Letter, and Appendix D – Consent Form for Interview.
current use and add to the lexicon of sound terms to describe simultaneous and specific functions, achieved through the use of sound and specific uses of sound synchronised with pictures. Whilst the Peircean terminology is at times arcane, its specificity allows for a clearer understanding of the various functions and roles of sound, and the processes involved in harnessing these to best effect.

1.6.2 Content – Examining the finished article

The DVD that accompanies this thesis includes four productions on which I have worked since beginning this research. Each film contains the finished soundtrack as the default audio track. Where possible separate tracks for dialogue, music, effects and narration are also included, which can be selected using the DVD audio menu. It is hoped that the product (the films on the DVD) can be used in conjunction with the reflection on the process.

Listening to and watching the films, and reflecting on the practice involved in their creation allows for a discussion on the narrative and non-narrative functions of sound, as well as a discussion on the function of sound as a way of creating meaning. The focus can range from a ‘whole of soundtrack’ narrative analysis to individual sound elements, their combination with images, and their particular function in the overall narrative. Whether examining my own practice retrospectively, or using the research to assist my understanding of present practice, the Peircean model gives both a vocabulary with which to discuss sound ideas and functions, as well as a range of mental concepts that help frame the rationale for future production choices.

1.6.3 Authorship for sound ideas (writer, director, sound practitioners)

Much of the work that appears in the finished soundtrack of the films included with this thesis is a result of my own endeavours. For some parts I can take credit, for other parts the end result was out of my control. There are things that I would change given the chance, whether they were my own creative choice or the creative choice of others with whom I disagreed. Equally there are things that arose as a result of collaboration or serendipity, which have resulted in a better outcome than what I would have reached individually. Film is both a collaborative and a large scale artistic endeavour. The fact that many individuals have input into the process does not negate that there is a method and rationale to the approach.
1.6.4 A note on the accompanying DVD

This thesis includes a DVD of four productions that constitute the practice-based research component. They are included here to support the self-reflexive components of the thesis in Chapter 7. The DVD includes each film in its final form as well as alternative soundtracks that are used to illustrate particular points under discussion.

The main menu of the DVD contains links to sub-menus for each of the four productions. Each sub-menu contains links that enable the reader either to play the film directly or select particular chapters, or to select alternative audio tracks including dialogue only, music only, and narration only. Pressing the title menu button at any time will return to the main menu. For details of the films included, see Appendix H – Accompanying DVD of Productions.

In reading the thesis it is hoped that some of the complexities of authorship in the production of the soundtrack are brought to light, even where the sound credit is given to one sole individual. The hierarchical nature of film production dictates that the soundtrack is the servant of the film. In reality, it is the product of multiple authors and the final say does not reside with the sound practitioner. In practical terms this normally means that the sound practitioner is at the service of the director, producer or picture editor. Their input to the soundtrack is not only noteworthy but often overrides that of the sound department. Therefore, it is not intended that the productions be formally assessed as part of the thesis, but rather that they are treated as case studies that illustrate the discussion, and wherein the usefulness of the model under consideration can be better gauged.

1.7 Validity and reliability

1.7.1 Potential criticisms of the research

It could be argued that this research being primarily qualitative rather than quantitative might suffer as a result of its inevitable subjectivity. To lend some degree of validity to the research a triangulation of research methodologies is used, which applies the model in three different contexts.

It could also be argued that the small sample of mainstream films analysed is an insufficient dataset on which to base a model and amounts to ‘cherry-picking’ the most appropriate films to the task. The purpose of the film analysis was not to duplicate a method but to test its adaptability to different aspects of sound production. The analysis provides a way of testing its suitability for both the micro analysis of individual, particular sound elements including
sound effects and music cues in the case of *King Kong*, as well as the narrative/textual level analysis used for the creation of meaning in the case of *No Country For Old Men*.

Similarly, it could be argued that the use of a comparatively modest, non-random interview sample amounts to another kind of ‘cherry-picking’ and makes it difficult to form claims about the industry as a whole. The influence of the researcher on the format and content of the interviews must also be taken into account. However, the eight interviewees are not intended to be a representative sample but rather indicative of a range of perspectives to which the model can be applied. Each of the practitioners describes methods of using sound that are mapped to the concepts of the Peircean model. The thesis aims to show that the strength of the Peircean model is that it is both comprehensive and general. It applies to any type of sign system. As such, whether discussing the music in a feature film drama or the use of dialogue narration in a documentary, the model can be applied to help explain the signifying function of the individual sonic elements, their combined uses, their use with the images, and the impact of socio-cultural conventions, individual experience and subsequent reflection. This small but diverse sample of industry practitioners reveals that there is a widespread and common rationale for the way that sound practitioners approach their work, illustrated by the recurrent theme that all decisions regarding sound, as with all other elements, are typically concerned with their use in the service of the story. On the basis of this universal aim the various processes involved can be viewed through the semiotic lens in order to analyse how this can best be achieved.

Another potential criticism is that the research is of ‘academic’ rather than practical use. Whilst to those in the academy this might well be no valid criticism at all, one of the principal aims of the research is to create a theory of sound grounded in practice. As a result it is hoped that the model, in addition to being a pedagogical tool, may have application for practice itself. My own experience is offered as an illustration of the model and how the capacity to conceptualise the soundtrack benefits from its functional analysis.

A further legitimate claim that could be made regarding the research concerns the complexity of model being adopted. Whilst Peirce’s writing is at times dense, the model being advocated and adapted to sound is relatively clear. Whilst this thesis focuses on the aspects of the semiotic model that particularly apply to the use of sound in film (including the separation of the object, its signifier, and its interpretant, the signifier/object relationship, and so on), there are other aspects of the model that this thesis does not address directly. However, this does not mean that they do not apply or have the potential to be of use, but only that they were unnecessary to fulfil the research, which was to help explain film sound using a model that is grounded in practice.
1.7.2 Limitations of this research

It should be acknowledged that whilst the focus of this research is concerned with ‘the soundtrack’, it is not about the analysis of music. There is extensive literature on the musical aspects of the soundtrack, especially when compared with the non-musical elements. In this thesis music is considered mainly in terms of its cultural meanings, its learned associations and its part in the process of the creation of the wider soundtrack.

Another potential criticism of this research is that it is Anglophonic. With a relatively small sample of practitioner interviewees from two English-speaking countries, film analyses of English language films, and predominantly English language self-reflexive works, there is an obvious bias toward English language films and Anglophone filmmaking cultures. Whilst this is unarguable, the theoretical underpinnings, which describe both the texts and the process that creates them, is largely independent of the language. It is argued that the model can be applied to films of any language and the filmmaking practices from any country or culture.

Charles Sanders Peirce was a prodigious writer and theorist, and his work on signs ran as a recurring thread throughout his writing over the course of his life. This research does not incorporate every element of the massively complex full model. Only those elements sufficient to explain the concepts have been used here. However, it does not preclude the possibility that other areas of the model might also be applicable to create a more comprehensive model of sound than the one being undertaken in this research.

1.7.3 Reliability and validity in qualitative research

Whilst it can be argued that the idea of reliability, in the sense of reproducibility, in qualitative research is somewhat irrelevant (Golafshani 2003), there are good reasons to adopt such measures in a qualitative research project, although they may be framed in different terminology such as credibility, neutrality or confirmability. The validity of the research can similarly be framed as its rigor or trustworthiness. In seeking to answer the research question, which is concerned with the practical usefulness of the theory, the usefulness of the research is thus determined to a great extent by its reliability and validity.

There remains the problem of reliability of the method of analysis, in that the wrong answer can be attained repeatedly using the same method, thereby producing repeatability without validity. As with the interpretive nature of the research, this can only be countered or at least alleviated by the triangulation approach. There is also a potential possibility of a kind of self-fulfilling prophecy in that any model that is applied to any film soundtrack would be
able to explain it to some extent. For example, a psychoanalytic approach or a classical film studies approach (using Saussurean semiotics), dealing with concepts such as connotation and denotation, would shed some light on the film’s soundtrack and the practice. However, in the industry, neither of these approaches, or indeed any other approach stemming from a theoretical or film criticism origin has been widely adopted as being of actual practical use to those engaged in the creation of the soundtrack, either as a way of describing the process itself, the ideas contained within the process, or the functions of the various sounds contained within the soundtrack.

It is hoped that one of the major strengths of the Peircean semiotic approach, namely its versatility, can be demonstrated, in that it can be applied to any type of film style or genre. Its generality means that it can also work equally well whether applied from the perspective of the audience, critic or analyst, the practitioners engaged in the work, or as a self-reflection. Since the Peircean model is concerned with signs in all their forms, rather than simply languages, the application of the model is possible to virtually any form of sign system. Film soundtracks are specific in that they are one type of usage of sound signs in conjunction with images, but also general in that they permit an analysis of the full range of sounds imaginable, across the full range of genres and styles, fiction and non-fiction.

By applying the approach outlined in this chapter in three different scenarios – first, to films as texts in a straightforward analysis, second, through practitioner interviews, and third, through self-reflexive practice – it is hoped that the validity of the model is seen to have merit. The validity of such an approach can also be readily tested, in that it can be applied to any kind of sound and any kind of soundtrack, as well as the process of creating the soundtrack. Its validity and practical usefulness can be gauged or verified by applying it to actual examples.
2. Literature Review

2.1 Introduction

This literature review presents an overview of the influential sources of film sound theory from the beginnings of the sound cinema to the present day, and comprises two main parts.

Part A comprises sections on film sound covering academic books and journals, practitioner theorists and industry press, and more recent areas including web forums and blogs, which have contributed to the theoretical discussion on film sound. The subsections included are:

- Early film sound theory, which emerged around the time of synchronous sound to the cinema.
- Later film sound theory, from the mid 1930s, to the early 1960s, to the present day.
- Sound in non-fiction, including documentary theory, broadcast journalism and television sport.
- Academic journals on the subject of film sound and related areas.
- Practitioner texts and industry press, relating to the practice of film sound.
- Forums and blogs, which have emerged since 2000 and in which discussion can take place between academics and practitioners, both experienced and novice, around particular examples, techniques and theory.

Part B comprises an overview of semiotic theory and semiotic film theory. The subsections included are:

- Semiotic discourse, which examines the main semiotic theories that underpin film semiotics.
- Meaning and signification, which details the main theories that examine the role that signs and sign systems have in creating meaning.
- The representation of truth and fiction, which covers areas of reality, metaphor, genre theory and mediation.
- Saussurean semiotic theory applied to sound.
- Peircean semiotic theory applied to film.
- Peircean semiotic theory applied to music.
2.2 Film sound theory

Within two years of the release of *The Jazz Singer*, in 1927, everything in the film industry changed and silent films had all but vanished. By the 1930-1931 season, there were no asynchronous theatrical films in production (Cameron 1980, ix; Gomery 1980, 25-26). Few film practitioners straddled the eras of silent and talking pictures with success. Actors were required to speak, directors were required to tell the story without use of cue cards, and camera operators were required to remain virtually immobile.

*Singin’ in the Rain* (Kelly and Donen 1952) illustrates some of the issues facing the industry in flux. Whilst fictitious, this film tells the story of the transition from silent to talking pictures through three characters: silent star couple Doc Lockwood (Gene Kelly) and Lina Lamont (Jean Hagen), and chorus girl Kathy Selden (Debbie Reynolds). Lockwood manages the transition, whereas Lamont is hamstrung because of her grating voice, which requires replacement by the more vocally talented Selden. The previously unheard music comes to the forefront, as their production *The Duelling Cavalier* becomes *The Dancing Cavalier*. In *Singin’ in the Rain* the audience is allowed a glimpse at the sound portion of the fast developing filmmaking process, including the new importance placed on the words of the script, the replacement of voices, and the use of music to enhance storytelling.

### 2.2.1 Early sound theory

The advent of dialogue in film created a new set of questions, for example, around the artistic purpose of film as compared to the theatre. Before the advent of sound the medium could never aspire to full-blown realism, and so filmmakers had headed off in the opposite direction, creating a new stylised representational art form. Critics were divided on whether the advent of sound would enhance or destroy film as an artistic medium. Many of the classical era theorists of the new sound film were sceptical of talkies, and hoped they might fade away once the public’s initial fascination with synchronous sound had worn off.

Still there remained the notion that audiences would not be able to concentrate on the visual image if they had to concentrate too much on dialogue (Kracauer 1985). Some audiences were well used to booming voices though. In American cinemas a master of ceremonies (MC) was often employed to read and interpret the films as they were projected (Fielding 1980, 4-5), providing a link between the familiar music hall and the new cinema. The MC would read the subtitles to the audience, many of whom would not be able to read, or at least, not be able to read in English. Lastly, and perhaps most importantly, he was there to
explain the film to the audience. The increasingly sophisticated editing and camera positioning were therefore mediated to an audience more used to live theatre than seeing stories presented on screen.

Sergei Eisenstein, along with Vsevolod Pudovkin and Grigori Alexandrov in 1928, were more fearful of the introduction of dialogue to a mature cinema stating that “actual language posed a threat to figurative language that had evolved…” (Eisenstein, Pudovkin, and Alexandrov 1985, 75). The threat sound posed was obvious. The ornate visual language that had been developed for silent cinema was under attack. These ideas took hold of filmmakers in the UK and France, more so than those working in the United States (US). Eisenstein proposed the theory of montage in which the sequencing and juxtaposition of cinematic elements provided the distinctive difference that marked out cinema as a new art form. He accepted that sound could be used in cinema, using the analogy of music to describe the polyphony of cinematic streams that affect each other: “It is interesting to note that in principle these sound-picture relationships do not differ from relationships within music, nor do they differ from relationships within the structure of silent montage” (Eisenstein and Leyda 1986, 68). Pudovkin (1985) also accepted the sonic component of film but particularly argued against the idea of dialogue driven films. Pudovkin saw sound films as a legitimate avenue to pursue as long as the principle of asynchronism was adopted.

The isolation of dialogue as the problem, rather than sound as a whole, was also taken up by René Clair, in 1929. He was pragmatic enough to recognise that the adoption of sound in film was here to stay but was careful to delineate between sound films and the derided talking pictures:

The talking film is not everything. There is also the sound film – on which the last hopes of the advocates of the silent film are pinned. They count on the sound film to ward off the danger represented by the advent of talkies, in an effort to convince themselves that the sounds and noises accompanying the moving picture may prove sufficiently entertaining for the audience to prevent it from demanding dialogue, and may create an illusion of “reality” less harmful for the art than the talking film (Clair 1985, 92).

In 1929 cinema faced a choice between the old and the new. Two articles featured in Close Up exemplified the two contradictory views: ‘Why ‘Talkies are Unsound’ (Betts 1929) alongside ‘The Sound Film: Salvation of Cinema’ (Lenauer 1929). A mere two years after the first talkie camera movement was already regaining some of the ground initially lost because of the size of camera blimps required to allow for sound recording. Clair writing in 1929 commented: “The immobility of planes, that curse of talking films, has gone” (Clair 1985, 93). He saw a clear distinction between the ‘talking film’ and the ‘sound film’,
astutely describing the sound film as the last hope of the silent film champions, and that they may be assuaged by sound effects and music without the need for dialogue (Clair 1985, 92).

Basil Wright in 1934 looked sceptically on the coming of sound to an already mature cinema, believing that “the perfect film should be satisfactory from every point of view without sound” (Wright and Braun 1985, 96). For Wright sound was seen as powerful but dubious. He recognised that music especially had the power to override the images and did not hide his distaste for its inclusion in the fabric of the film:

> The use of sound imagistically, the crosscutting of sound and visuals (counterpoint) can undoubtedly be effective, but this does not mean to say that good visuals could not get the same effect more legitimately – in fact I begin to wonder if sound has any advantage at all (Wright and Braun 1985, 97).

Despite the fundamental change that sound brought to films the idea remained that sound was merely an addition to what should be an already complete art. It was an illegitimate intruder into a purely visual form.

By 1938 Rudolf Arnheim contended that film dialogue makes storytelling easier, as “a device for saving time, space and ingenuity”, and whilst he could accept that opera as an art benefits from the libretto, as it provided a “skeleton of the dramatic action”, he dismissed the idea that dialogue could have a similar function in film (1985, 112). Rather than modifying the art form, Arnheim viewed dialogue as ruining the existing art form by interfering with the expression of the image.  

8 Indeed, the gloomy outlook of sound is highlighted in the title of the essay “A New Laocoön: Artistic Composites and Talking Film”, a reference to G.E. Lerssing’s 1766 essay “Laocoön” which highlighted the differences between painting and poetry (Dalle Vacche 2003, 166). Laocoön refers to the Trojan priest who tried to warn his countrymen about the dangers of the Greek horse. For Arnheim, sound is the gift that cinema is foolish to accept.

Theorists, such as Alberto Cavalcanti writing in 1939, argued convincingly that sound could be used as the “medium of suggestion”, an idea that has grown in acceptance over the years as the use of sound became less functional and literal (Cavalcanti 1985, 109). Being able to hear a sound without being able to immediately see its origin allows the filmmaker to create suspense, fear or confusion. In doing so, the audience can be less aware of the mechanics of film, since sound is not as directly attributable to its source as visual information: “That is why noise is so useful. It speaks directly to the emotions” (Cavalcanti 1985, 109).

Béla Balázs, in 1949, saw the creative potential of sound in film, which had on the whole been unfulfilled. He described some of the dramaturgical possibilities in sound, which “can intervene to influence its course” rather than simply accompanying images in the story (Balázs 1952, 200). He described how tension and surprise could be achieved and
maintained by manipulation of the soundtrack. Where a sound is diegetic, but not visible to the audience, the actor may hear the sound, see its source and understand what it is before the audience. Conversely, the audience may see the origin of the sound before the character (Balázs 1952, 209-210). Whether creating suspense, tension or surprise, the ability to have the characters and audience not necessarily listening to the same thing or seeing the same thing, puts the audience or the actor in the privileged position of prior knowledge. He also highlighted the dramatic usefulness of visible reactions to sounds rather than their origin, as well as the potential for sound metaphors and similes to become obvious or stereotypical (Balázs 1952, 218).

Writing in 1960, Siegfried Kracauer’s (1985, 1997) initial fears that sound would mean an end to camera movement had proved true in the short term, although technology would come to the aid of cinema, as it would time and again. With necessity being the mother of invention, quieter and more mobile cameras were developed, microphones became better and smaller, and the two could work together rather than one having the upper hand. Early ‘photographed performances’, namely theatre plays that were photographed (Kracauer 1985, 126) and that privileged dialogue over camera, did not last long, and the ingenuity and movement of the silent era returned over time. Kracauer’s criticism of Olivier’s Hamlet, as an example of dialogue and picture ‘neutralizing’ each other, appears to be more a criticism of the decision to adapt Shakespeare for the cinema rather than a criticism of dialogue per se. Indeed, Kracauer brought attention to the material qualities of the voice, such as Eliza Doolittle’s voice in Pygmalion, whose “shift of emphasis is cinematic because it alienates the words” (1985, 129-132).

Kracauer did respond to one of the genuine complaints of early critics of sound films by advocating that film dialogue should be reduced to that of normal speech. Theatre audiences were typically treated to a booming voice that had to reach the back row and thus was far from what people regarded as everyday speech: “Practically all responsible critics agree that it heightens cinematic interest to reduce the weight and volume of the spoken word so that dialogue after the manner of the stage yields to natural, lifelike speech” (Kracauer 1985, 130).

Dialogue, for some, and synchronised sound, for others, were the specific threats rather than sound in itself although sound as a whole became the target of the distrust. Whether one considers the silent era of cinema a mature and pure form of art, or a preface to real

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9 For example the studio arc lights used in silent films produced a humming noise and so could not be used for synchronous sound filming, requiring instead less bright tungsten lights. By 1930 a means of silencing the arc light had been achieved but camera operators continued using tungsten lights for certain effects (Salt 1976, 22-23).
cinematic greatness, there is little disputing the effect that the introduction of sound (and with it dialogue) had on the way films were written, acted, directed and received. The prevailing view amongst many early theorists was that the introduction of sound brought cinema closer to reality and therefore further from art. Many of the classical era theorists of the new sound film were sceptical of talkies and hoped they might fade away once the public’s initial fascination with synchronous sound had worn off. However, audiences were now used to seeing and hearing films. Taking sound away, or even simply the dialogue, was not an option.

After the wholesale adoption of sound in films by the 1930s, the discussion moved on, to the type of sound component that should be used, rather than whether sound should be in films at all. Both Dziga Vertov (Russia) and Paul Rotha (UK) were early adopters of sound in film, for both documentary and drama, and were accepting of sound recordings made during filming, rather than exclusively asynchronous sound. Charlie Chaplin, who was famously reluctant to adopt sound in his own films, was impressed with Vertov’s *Enthusiasm* (1930), a film about the lives of coal miners in the Donbass region of Ukraine:

> Never had I known that these mechanical sounds could be arranged to sound so beautiful. I regard it as one of the most exhilarating symphonies I have heard. Mr. Dziga Vertov is a musician (Hicks 2007, 126).

Directors such as Monta Bell were wary but encouraged by the possibilities that sound films could have on the medium:

> I like the idea of showing the face of one player, while the voice of another is heard. In such an instance, we are able to attain both cause and effect. Hearing one player giving everything he has in his voice and showing the attitude of the listening player, with his reactions to the voice of the other player, gives us a two-ply effect (Bell 1930, 231).

Once the Vitaphone system had been developed, to such an extent that synchronism between pictures and sound was achievable and therefore transparent, the talking pictures were off and running. Filmmakers could then begin using the sound component of their films creatively, rather than as a mere marketing instrument to declare that their films ‘talked’. Alfred Hitchcock, whilst defining ‘pure film’ as film that expresses its meaning visually, specifically through montage, used sound in his films as another creative input whose purpose was to hold the audience’s attention (Weis 1978, 42). This pragmatic approach exemplifies the emerging bifurcated approach to the introduction of sound, on the one hand

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10 Vitaphone is the system of sound synchronised to pictures developed by Warner Bros. Although used to provide a synchronised score for *Don Juan* (1926) it was made famous by the Warner Bros. first partially talking picture, *The Jazz Singer* (1927).
holding the view that pure cinema is visual, whilst at the same time proceeding to utilise sound to create films beyond what was possible with the purely visual.

2.2.2 Later sound theory

Later film sound theorists have taken some of the ideas of the early theorists and developed the ideas from the picture-dominant era into a more philosophical and holistic view of what films represent through their use or practices of sound in film. Film semiotics became an important area of theoretical research, adapting the framework of Saussure to the analysis of cinema. With semiotics came the problem of describing sound in relation to film. The language of cinema is rooted in the visual, emphasising the visual-ness of the art form rather than its audio-visual-ness. Whilst seemingly a petty point this nonetheless has profound implications for the framing of sound in film.

Christian Metz (1964) wrote about the problematic conception of film as a language or language system, identifying film as a language of sorts, and at the same time entirely different from a language (Metz 1974a, 44). Metz also pointed out that the language of film tends to undermine the “aural dimension” since “sounds are more often classified according to the objects which transmit them than by their own characteristics” (1985, 156). In talking about the problem of defining film sound in terms of ‘the seen’ Metz entered into an area where film sound overlaps psychoacoustics and perception, language and metaphysics. For example, ‘off-screen sound’ is the sound emanating from an object that is off-screen. There is no natural boundary to sound as there is with the cinematic image. The frame of the picture is determined and rigid. The sounds that accompany the image are not bound in the same way. The way that we describe film sound has an impact on how we choose to use it. One cannot advance without the other, in the same way that thought and language are intertwined.

André Bazin (1967, 1972), one of the co-founders of the influential Cahiers du Cinéma, wrote in defence of sound arguing that the onset of sound need not be seen as the dividing line between the true art form and its demise. Rather than Eistenstein’s montage and plastic composition being the fundamental elements of cinema, the real difference was the distinction between those “who put their faith in the image and those who put their faith in reality” (Bazin 1967, 24). Bazin also recognised that cinema had a tendency “to give the

11 “The art of plastic composition consists in leading the spectator’s attention through the exact path and with the exact sequence prescribed by the author of the composition. This applies to the eye’s movement over the surface of a canvas if the composition is expressed in painting, or over the surface of the screen if we are dealing with a film-frame” (Eisenstein 1986, 148).
spectator as perfect an illusion of reality as possible within the limits of the logical demands of cinematographic narrative and of the current limits of technique… But realism in art can only be achieved in one way – through artifice” (Bazin 1972, 26).

Like Bazin, Mary Ann Doane (1985) also described film as a kind of search for a lifelike experience, arguing that pictures without sound can never attain the level of immersion of a sound film. The audience engages and is immersed in the film if what is presented, both visually and aurally, sufficiently constructs the world in which they are asked to believe. However, for Doane, dialogue is privileged in the soundtrack, both in the use of actual dialogue rather than the use of intertitles, and also the privileging of dialogue with respect to other sound elements such as music and sound effects, and its rerecording where necessary.¹² The realism of the scene is manipulated in order to guarantee intelligibility, preserving dialogue in the hierarchy of the soundtrack (Doane 1980, 49).

David Bordwell and Kristin Thompson (2000, 2010) highlighted the soundtrack’s ability to guide the viewer’s perception of the image. Sound can make meaning and, with different soundtracks, can create conflicting interpretations of the same image (Bordwell and Thompson 2010, 270-273). Sound contains all the creative possibilities of the picture, but because of its invisibility it is much harder to spot. They also compare sound with photography, and its relationship to silence. Quoting influential critic and theorist V. F. Perkins, Bordwell and Thompson (1985, 184) point out that it is only after the invention of colour photography that black and white can be interpreted as a deliberate artistic decision. Likewise with sound, only when there is a choice does silence in a soundtrack become meaningful. Al Pacino’s silent scream at the finale of The Godfather Part III (Coppola 1990), resonates as a cinematic moment precisely because it is silent.

Rick Altman (1992, 2004) has written comprehensive histories of silent film sound and numerous articles on sound’s place (and absence) in film theory. Altman (1980c) identified the “material heterogeneity of recorded sound.” In describing cinema as ventriloquism, Altman provided a novel approach to the positioning of the sound/image/meaning construct. For Altman (1980d, 76), the sourceless sound is a distraction, and “…we are so disconcerted by a sourceless sound that we would rather attribute the sound to a dummy or a shadow than face the mystery of its sourcelessness….” The visual image of a person speaking is a redundant duplication, yet the shot/reverse shot is still the staple of filmmaking.¹³ In “Four and a Half Film Fallacies”, Altman (1980b) highlights the twin aims of early sound cinema, namely persuasive illusion and intelligibility, as borne out of necessity in terms of the

¹² See Glossaries – Film and sound terms: ‘intertitle’.
¹³ See Glossaries – Film and sound terms: ‘shot/reverse shot’.
technology available. He also addresses the development of cinema where sound technology began to be used to deliberately construct reality, rather than just to observe it (Altman 1980a, 7).

Altman (1980a, 12) closely examined the language of film theory, which is based firmly in visual terms, tracing its origins to the early theorists who were distrustful of sound (including Kracauer, Pudovkin, and Arnheim) and who consequently framed cinematic theory in visual terms, sometimes ill-suited for application to the soundtrack. He described a number of fallacies, historical, ontological, reproductive, nominalist and indexical, which permeated much of the early (and subsequent) writing on cinema as a whole that sought to diminish or ignore sound’s place in cinema theory (Altman 1980b, 65).

Daniel Percheron (1980), in *Cinema/Sound*, also made important points about sound and diegesis. Those advocating contrapuntal sound, as opposed to synchronous sound, necessarily define sound in terms of its relationship to the visible, the on-screen source of the sound.¹⁴ Therefore, asynchronism condemns sound “…to come from the edges of the image, while everything within the frame was to remain as mute as possible” (Percheron 1980, 16). For Percheron, such a binary definition of sound, as off-screen or on-screen, proves problematic for sound, with many sounds straddling both concurrently, such as effects, music or voiceover.

James Lastra (1980) highlights the commonplace but false theoretical assumptions that pervaded much sound theory, and which as a result justified its lack of scrutiny. Quoting directly from Béla Balázs, Jean-Louis Baudry and Christian Metz, Lastra swiftly punctures the false premise that sounds are essentially reproductions, indistinguishable from the reality. For example, Metz stated that “auditory aspects, provided that the recording is well done, undergo no appreciable loss in relation to the corresponding sound in the real world: in principle, nothing distinguishes a gunshot heard in a film from a gunshot heard in the street” (cited in Lastra 1980, 65). Therefore, Metz is open to the criticism that he accepts that the sound heard actually corresponds to the visible object on screen. In fact, this type of sound, as used in a film, bears no relation to the actual, real sound of the gun (or prop gun) that appears on screen. It is merely a sonic representation of a gun, or a more powerful gun, which we accept as the sound of the gun.

Theo van Leeuwen (1999), in *Speech, Music, Sound*, applies methodologies and concepts from Halliday’s model of social semiotics to sound. Van Leeuwen perceives speech, music and sound as not mutually exclusive, but that music can be thought of as a language, or

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¹⁴ See Glossaries – Film and sound terms: ‘contrapuntal’.
sounds as music. Van Leeuwen (1999, 11) uses the terms “semiotic value”, which could also be described as a kind of meaning potential. Van Leeuwen (1999, 15-16) cites Murray Schafer, E. E. Beeby and Walter Murch to distinguish between foreground, mid-ground and background soundtrack elements, noting that only the foreground sounds are designed to be listened to, whilst the mid-ground and background sounds are only heard.

Kaja Silverman (1988), in *The Acoustic Mirror: The Female Voice in Psychoanalysis and Cinema*, particularly addresses the voice, and applies a Freudian psychoanalytic lens to the treatment of voices and the meanings that are embedded, whether deliberately or unconsciously. Silverman used films, such as *Singin’ in the Rain*, *Touch of Evil* and *The Conversation*, to highlight specific gendered meanings and interpretations.

Michel Chion has written extensively on sound and the cinema, his influential books including *Audio-Vision: Sound on Screen* (1994) and *The Voice in Cinema* (1999). Like Doane, Chion sees cinema as inherently vococentric, with the voice being the constant throughout production whilst other sounds are the accompaniment. Chion coined a number of useful phrases relating to some of the phenomena of sound in film. In what he calls the ‘audiovisual contract’ sound and image work together to create the perception of a unified whole. Chion (1994, 5) describes the idea of “added value” in which sound enriches an image without appearing to do so, wherein the immediate or remembered experience comes naturally from the image by itself: “that sound merely duplicates a meaning which in reality it brings about.” For Chion (1994, 12), sound is often used to guide the eye, either by synchronising particular sounds to visual movements or creating a sleight of hand effect by providing a sound to an event that did not actually happen (such as a punch or a quickly opening door). Chion (1999, 17-29) highlights the power of the *acousmêtre* in cinema, the unseen voice, by deliberately withholding the visual source of the voice. He also created the term *synchresis*, a melding of synchronism and synthesis, to describe the in parallel occurrence of auditory phenomenon and visual phenomenon to become one single object (Chion 1994, 63).

In addition, Chion (1994, 89-92) discusses the question of off-screen space and point of audition, highlighting the difficulty in isolating a single point in contrast to the visual point of view. Indeed, it is the image that largely determines the supposed point of audition, typically either through close-up on the character whose point of audition we share, or through a subjective image of the character’s viewpoint. Chion also describes different listening modes, originally described by Pierre Schaeffer (1967), which relate to the purpose of the listening. For example, ‘causal’, which seeks to gather information, ‘semantic’, which
seeks to decode the sounds, and ‘reduced’, which focuses on the characteristics of the sound itself, rather than the meaning or cause (Chion 1994, 25-31).

Chion has also examined the lack of critical attention to synchronous sounds, such as dialogue in film. He argues convincingly that synchronous sounds tend to be swallowed up by the visual element, where the meaning of the combined sound-image becomes attributed solely to the image, and the sound itself becomes thought of as redundant (Chion 1999, 4). This partly explains why there has been more critical attention on musical and voiceover elements of the soundtrack since they are not tied to visual elements. Chion also recognised that a principal problem for sound analysis is the lack of a common language, and its dependence on blurred terminology and concepts. He chastises theorists who complain that “the vocabulary is too poor to describe the sound, but never think to use more specific words that exist in their language” (Chion 2012, 9 [my translation]).

More recently, William Whittington (2007), in Sound Design and Science Fiction, examines the concept of sound design, which he defines in four ways: relating to the creation of specific sound effects, the conceptual design of the overall soundtrack, the deployment of sound in the exhibition space, and as a model and method for critical analysis to examine ideology, production practices, and technology. He examines sound design in conjunction with the picture elements, such as his case-study comparison between the original and directors cut versions of Blade Runner (Scott 1983, 1994), which highlight the possibilities of other sound-image relationships to come to the fore as a result of the removal of the voiceover (Whittington 2007, 173). This emphasis on the sound-image relationship aims to instigate discussion and analysis about the meaning making possibilities and choices of sound in practice, as well as its analysis as a finished article.

It is possible that the early pessimistic views and fears around sound in film were, and still are, a liberating impetus for film sound. It is precisely because sound is imagined to be absolutely joined to an image that the filmmaker has such creative licence in the sound that they actually attach to an image. It is primarily because we do not consciously question the

15 Whilst the terms are often used interchangeably, there is a distinction in practice between voiceover and narration, particularly in documentary production, where “voiceover is a disembodied voice derived from a character in the interview material. Narration is usually studio-recorded and not directly linked to a field recording” (Purcell 2007, 347).

16 La seconde question est que le son est un domaine où règne encore un grand flou terminologique et conceptuel, que tout le monde peut constater, et que ma recherche depuis longtemps vise à réduire. Cependant, ce flou, ne s'y complait-il pas un peu trop, chez les chercheurs et les intellectuels? En effet, ils vont se plaignant que le vocabulaire soit trop pauvre pour désigner les sons, mais ne s'ont jamais à se servir de mots plus précis qui existent bel et bien dans leur langue - qui certes ne disent pas tout, mais sont tout de même plus satisfaisants, moins passe-partout que ceux de “bruits” ou de “sons”.

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sound associated with an image, because we see with our eyes, and our eyes confirm and reinforce what our ears are telling us. It is this intertwining of perception and meaning through our visual and aural senses that opens the door for manipulation of the soundtrack and resultant creative possibilities that arise. Balázs (1952) in particular highlighted the ways in which sound could be utilised to help tell the story more elegantly than through images alone, or with sound simply acting as accompanist to the picture.

Much of traditional film theory fails to incorporate sound to any meaningful degree. The work of some recent theorists, most prominently that of Altman, has led to a reconceptualisation of the terms of film sound history and analysis, so that sound’s legitimacy in cinematic discourse is no longer seriously questioned. At the same time, it is important to remember that each technological development or new technique serves to further hide the artifice from both the audience and, perhaps inadvertently, from the cinema theorist. In rejecting the simple synchronous/asynchronous binary and acknowledging a more complex amalgam, there has evolved within most films a broader and more nuanced appreciation of the functions of the different elements of the soundtrack. Chion’s (1994, 1999) ideas of the acousmêtre, synchresis and the audiovisual contract have introduced analytical tools, as well as a language and vocabulary for the sound-specific elements of film theory, which had hitherto been lacking. This paved the way for a more comprehensive discussion of the way sound is used in film. It is recognised that the sounds that emerge from the cinema speakers are not necessarily the actual sounds that they appear to be, but instead are often constructions made through artifice. Nevertheless, there is as yet no overarching theory that explains how sound is used to create meaning, either alone or in conjunction with the images. The challenge now is to build on this foundation to find a framework that can be used to describe both the soundtracks themselves and the practice of soundtrack creation.

2.2.3 Sound in non-fiction

Sound in non-fiction, like sound in film generally, remains a relatively under researched field. It is dealt with here as it introduces a series of production and ethical challenges that will be addressed later in this thesis. Whilst there are a number of authoritative texts on non-fiction sound in radio and in the growing field of auditory culture (Hammer 2007; Ihde 2007), there are relatively few theoretical texts on sound in documentary, sound in non-fiction generally, or the ethics of sound in non-fiction in particular. Although Bill Nichols (1991, 1995, 2010) has written extensively on aspects of sound in documentary and the integration of sound into the filmmaking apparatus, there has been relatively little attention paid to the specifics of manipulation within the soundtrack.
Much documentary theory involves concepts of trust, realism and authentic portrayal. For example, *Trust and Observational Documentary* (Mercer 2011), “Documentary: Artifice in the Service of Truth” (Sklar 1975), and *Trust and TV Documentary* (Woolwich 2011) underline the expectation of truthfulness whilst acknowledging the constructed nature of the representation. A number of documentary theorists highlight the inherent fakery involved in the documentary-style production as a whole (Juhasz and Lerner 2006; Sklar 1975). John Ellis (2009) and Paul Woolwich (2011) raise important questions about the status of sound in non-fiction, and its potential to mis-present and to misrepresent. “Conventions of Sound in Documentary” (Ruoff 1993) was instrumental in drawing attention to what was previously seen as an inevitable and normalised process of creating the documentary soundtrack. Chris Palmer (2010), in *Shooting in the Wild*, brought to the fore the subject of fakery in natural history documentary making.

As well as documentary, other areas of non-fiction have begun to attract critical attention. Preben Raunsberg and Henrik Sand in “TV Sport and Rhetoric: The Mediated Event” (1998), examine televised sport and illustrate the mediated nature of sound in a supposed objective and realistic portrayal of live sporting events. Arndt Maasø (2006, 23-26) extends the discussion, highlighting the creative techniques behind the construction of modern soundtracks to large-scale televised sporting events.

The issue of presumed authenticity in non-fiction genres inevitably raises the issue of ethics. However, from the perspective of some practitioners the issue of ethics is relatively minor. For example, John Purcell (2007, 294) includes a chapter on “Editing Production Sound for Documentaries” and acknowledges the potential for ethical problems, but indicates that these are largely the domain of the picture editor. Dane Davis and Gary Rydstrom (2004), and Gary Rizzo (cited in Bullins 2004) have described an approach to documentary sound that shares many of the same techniques used in fiction films, where the needs of storytelling allow dramatic license to overtake absolutely truthful representation. In the world of televised sport, there are researchers and practitioners who are beginning to lift the veil on some of the ways that sound is manipulated, which underscores its potential to create a sense of drama whilst presenting itself as a truthful storytelling component (Andrews, Baxter, and Whiston 2012; Maasø 2006).

Industry bodies have created a code of ethics for non-fiction reporting, such as the Australian Media Entertainment and Arts Alliance (MEAA 2012), which includes broadcast and documentary journalism, but the target audience is the journalist/producer rather than the picture or sound editor. The British Broadcasting Corporation (BBC, 2010), in its *Editorial Guidelines*, has few guidelines relating to sound or its ethical treatment.
Recommendations are restricted to the use of sound effects that might increase the impact of violence (5.4.27), or the reporting of parliament where there should be “no manipulation of the pictures or sound” (10.4.9). Other industry bodies that include guidelines on ethical practice specifically relating to sound, such as the Canadian Radio Television Digital News Association (RTDNA, 2012a), issue guidelines to journalists that recommend that they should not “manipulate images or sounds in any way that is misleading” or “present images or sounds that are re-enacted without informing the public.” Building on these two basic and broad ranging principles, the RTDNA (2012b) also provide guidelines for ethical video and audio editing with particular attention to some of the common usages of sound with general principles: “do not reconstitute the truth”, “be judicious in your use of music and special sound effects”, and “apply the same careful editing ethics standards to your newscast teases, promotions and headlines that you do for your news stories” with each principle illustrated by examples.

An increasing number of texts illustrate the creative use of sound in non-fiction. Many of the techniques of fiction filmmaking work equally well in a non-fiction setting and, as with fiction films, the soundtracks in non-fiction are routinely designed to be taken as natural and unmediated. Whilst there are some broad journalistic guidelines in place, there is little discussion on the role of sound in non-fiction, and the potential ethical dimensions and implications of their work.

2.2.4 Academic journals

The literature review also covered academic journals, and includes a number of these to give an idea of their scope and approach to sound. Cinema journals have tended to overlook sound for long periods, instead preferring special issues. The *Yale French Studies* issue on “Cinema/Sound” (Altman 1980a) was an important milestone in the development of field sound studies and film sound studies in particular. Many of the works that made up this special issue have become standard texts in the field, including “Cinema/Sound” (Altman 1980a), “Moving Lips: Cinema as Ventriloquism” (Altman 1980d), “Is Sound Recording Like a Language?” (Williams 1980), and “Sound in Cinema and its Relationship to Image and Diegesis” (Percheron 1980). *Screen* also released a special issue on sound in 1984, including “The Acoustic Dimension: Notes on Cinema Sound” that highlighted the ontological fallacy of sound recordings as being no different from the original sound (Levin 1984, 55-56).

In recent years, a number of academic journals have emerged that focus solely on sound in audiovisual media. *Music, Sound, and the Moving Image*, a UK journal that began in 2007,
is “devoted to the study of the interaction between music and sound with the entirety of moving image media – film, television, music video, advertising, computer games, mixed-media installation, digital art, live cinema, et alia” (Gardiner 2012). Its inaugural editorial board included academics in a broad range of fields and contributions from respected authors, such as Karen Collins and Rick Altman.

The Soundtrack, which emerged in 2008, is “a multi-disciplinary journal which brings together research in the area of music and sound in relation to film and other moving image media” (Tincknell and Filimowicz 2012). Its editorial board primarily comprises university-based academics from the UK and the US, with some representatives from New Zealand (NZ) and Canada. It has produced issues that have emerged from the UK based Sounding Out series of conferences. In the first issue of The Soundtrack, Stephen Deutsch (2007) outlined a model of the soundtrack, which was defined as ‘intentional sound’, containing sounds that are categorised as ‘literal’ or ‘emotive’ at either extreme of a continuum. This is similar to Murch’s model, which will be described later. Speech fits in the literal end of the spectrum where music more typically resides in the emotive, while sound effects can straddle the range depending on their usage (Deutsch 2007, 4-5). Whilst the main focus of Deutsch’s editorial is cinematic music, the model proposed has broader use as it applies to the entire soundtrack.

The New Soundtrack began in 2011 and is published twice yearly, focussing “on the aural elements which combine with moving images” (Deutsch, Sider and Power 2012). Its editorial board comprises a number of respected academics in the field, including Rick Altman and Claudia Gorbman, as well as a number of prominent practitioners and practitioner/writers, including Walter Murch, Randy Thom, Michel Chion and Gustavo Constantini. Recent articles pay attention to aspects of film sound process, such as the manipulation of voices in film (Pauletto 2012), which has been frequently overlooked in film sound discussion, and perspectives on particular practitioners, such as the sound aesthetics of David Lynch (Greene 2012).

ScreenSound, an Australian journal that began in 2010, aimed to “investigate, analyse and document sound as it occurs in relation to screen images, on the large or small screen, in installation or online” (Coyle 2010, 6). It initially focussed on the specific region of Australasia, including Australia, NZ and the Pacific islands, but has grown to incorporate East Asia, including Hong Kong and Japan. Many articles focus on musical aspects of the soundtrack, although articles on the whole soundtrack have also appeared, such as “More Than Noise: The Integrated Soundtrack of Noise” (Hadland 2010).
Each of these sound specific journals offers a broad range of analyses and essays on particular films and filmmakers, as well as offering alternative ways to approach our conceptions of listening and of the potential areas for future soundtracks to explore. The *Yale French Studies* and *ScreenSound* special issues on sound were instrumental in bringing together a range of theoretical perspectives on film sound. Whilst all of the journals seek contributions from both theorists and practitioners, few have yet bridged the gap between practice and theory.

### 2.2.5 Practitioner texts and industry press

Although largely unrepresented in academic literature, industry practitioners have not been silent in debates about the role of sound in film and their observations have added a dimension to the critiques offered by film theorists. Their views are found in their own books or in the industry press.

Practitioners are in the privileged position of writing from the perspective of creator, whereas the analyst and theorist can only examine the finished results. Understanding the processes and technologies, rationales and methodologies that go into the production of the soundtrack adds a new dimension to film sound criticism. By explicitly describing their working methods, practitioners enable us to better understand the contribution of sound to the creation of a story. As well as discussing sound as a discrete and isolated element, it can also be discussed in terms of the hierarchy of filmmaking, the practicalities of the industry, and the decision-making processes, which affect how sound is used and could be used.

There are a number of texts written by industry practitioners containing in-depth interviews with practitioners. For example, *Film Sound: Theory and Practice* (Weis and Belton 1985), and *Sound and Music in Film and Visual Media* (Harper, Doughty and Eisentraut 2009) comprise a collection of interviews and profiles. There are also a number of books written by experienced practitioners who have not received widespread acclaim or influence. As with any text, their impact is dependent on the prominence of the author within the industry. For example, *The Art of the Sound Effects Editor* (Kerner 1989), *Sound Effects: Radio, TV, and Film* (Mott 1990), and *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation* (Ament 2009) cannot point to such high profile or high status films as some of their contemporaries. For instance, practitioners from television have less status than those from film. Hence, both Kerner (*The Man From U.N.C.L.E.*) and Mott (*Days of our Lives*), being associated with television drama suffer in comparison to their feature film cousins. In addition, Ament, who works in an area (foley) that is far from glamorous
moviemaking, suffers in comparison to her colleagues writing on other aspects of soundtrack production.

Robert Bresson (1975, 2), an prominent French director and a significant influence on the auteur movement. He wrote in *Notes on Cinematography* about cinema as a whole, sound in particular, and how it can be best exploited in his philosophy of cinema, where “Cinematography is a writing with images in movement and with sounds.”17 Many of his maxims are enigmatic yet thoughtful: “A Sound must never come to the help of an image, nor an image to the help of a sound” (Bresson 1975, 28). Whilst Bresson’s book is inspirational and widely respected, due to his reputation as one of cinema’s most original directors, it lacks a cohesive theoretical rationale that links each idea.

David Lewis Yewdall (2003), in *Practical Art of Motion Picture Sound*, presents various anecdotes and examples. As a veteran sound editor and frequent collaborator with director John Carpenter (*Halloween, The Thing, Christine*), Yewdall (2003, 1) wanted to write a book where “the practical and experienced craftsperson who had down his or her thought and advice from which others could learn”, which he had searched for when starting out at his craft. In its foreword, Yewdall (2003, 3) decries the number of filmmakers who have gone through film school, and have sufficient theory, but are without the practical skills to put the theory into practice. He emphasises the art and the forethought required to take advantage of sound, and outlines the routine battles that many sound professionals repeatedly fight to be able to create the sound to help the film. For example, whether it be involvement in pre-production planning and proper budgeting, or the on-set battles of the production sound recording team in an often hostile environment. Yewdall covers the entire filmmaking process, including sound, with examples illustrating the reasons particular workflows and practices have evolved and become standard.

Randy Thom (2000), another veteran sound editor, sound designer and current Director of Sound at Skywalker Sound, takes up many of the same themes as Bresson.18 In the influential paper, “Designing a Movie for Sound”, he suggests that starving the eye of information forces the brain to use the ear for information (Thom 2000, 8).19 Thom puts forward some refreshing views for those working within and alongside film sound. He stresses the importance of visual ambiguity, such as darkness, camera movement, slow

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17 *Notes sur le cinématographe* – ‘Cinematography’ here refers to the entire film making enterprise, rather than the purely camera-oriented definition of cinematography.

18 Skywalker Sound is a large and prestigious post-production facility created by George Lucas and takes its name from a character from his *Star Wars* series of films.

19 Later amended and republished in *Soundscape: The School of Sound Lectures, 1998-2001* (Sider, Freeman and Sider 2003), and in an updated form as “Screenwriting for Sound” (Thom 2011).
motion, black-and-white photography, and subjective camera angles, to provide room for expression (Thom 2000, 8). Conscious that we are rarely as aware of sound as we are of images, Thom (2000, 10) argues that “movies are about making connections between things that couldn't possibly be connected in a single real life moment or, at least, in a way that you could be aware of in any sense. Sound is one of the best ways to make those connections.” He also makes a good case for the early involvement of sound producers in the film production and is distrustful of the tyranny of competence, the idea that “as a professional you should know what you are going to do – which is anathema to the creative process” (Thom 2000, 16).

Tomlinson Holman (2002, 2010) is one of the few widely known figures in film sound, and in Sound for Film and Television covers the technical aspects as well as a brief theory of film sound. Holman is a professor at the University of Southern California combining the technical expertise with the theoretical.20 With a career spanning audio engineering and film theory, Holman covers much of the same territory as Yewdall, but also provides insights regarding the theoretical rationale for particular practices. Holman (2010, xi-xii) describes sound as having a narrative role, comprising direct narrative and subliminal narrative functions and a grammatical role that is used as a form of “connective tissue” in the filmmaking process in producing meaning. Dialogue is an example of a sound with a direct storytelling role, while music is typically an example of subliminal narrative. Particular sounds, such as background ambient sounds, which straddle picture edits to indicate continuity, perform a grammatical role.

David Sonnenschein (2001), a sound designer and educator, provides a unique and comprehensive guide to sound design bringing together ideas of sound and narrative theory, with psychoacoustics, music, voice and image. Departing from more conventional guides, he splits the development of the soundtrack into various areas of focus, for example, chronological, acoustic, perceptual, phonetic, emotional, descriptive, and so on. Preferring the term voice to dialogue, Sonnenschein (2001, 133) also highlights the difficulty we have in listening to the characteristic sounds of a voice in speech that is in our native language, as the “involuntary urge for understanding” will take over, mirroring Chion’s delineation of different listening modes. Similarly, he draws attention to the non-language speech elements, such as prosody, the tonal inflections and emphases, which add meaning to the words. Sonic hierarchies and sounds in general are related to Gestalt principles, such as figure and ground, closure, common fate and belongingness, which can then be used or

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20 Holman previously developed the Lucasfilm THX system and gave the name ‘5.1’ to the common multichannel sound system.
manipulated (Sonnenschein 2001, 79-83). In addition, Sonnenschein (2001, xxi-xxii) takes account of the audience and the meanings that are derived from the physical, emotional, intellectual and moral elements of the soundtrack.

Walter Murch is perhaps the most respected film sound writer/practitioner. In interviews and his own articles, he explains and develops his theory of film, and the place of sound within it. As a highly respected and successful practitioner, Murch is able to quash some sound myths. He points out that anyone who is aware of the processes of film sound soon realises that “there is no necessary connection between ends and means” (Murch 2005b). He overturns the idea that filmic sound is somehow no different from the actual sound being represented. Nor is film necessarily a realist medium, or at least it should not aim to be so. Arguing against the idea of completeness, Murch suggests that the “best sound is the sound inside somebody's head” (cited in Kenny 1998). In order to engage the audience, there should be some room for sense-making, to “provoke the audience to complete a circle of which you've only drawn a part” (Jarrett and Murch 2000, 8).

Several ideas flow from this deliberate artistic restraint. Rather than literal representation, sound can act as a metaphor from which meaning is made:

This metaphoric use of sound is one of the most flexible and productive means of opening up a conceptual gap into which the fertile imagination of the audience will reflexively rush, eager (even if unconsciously so) to complete circles that are only suggested, to answer questions that are only half-posed (Murch 2005b).

The metaphorical use of sound extends into both the blending of sounds and the actual search for representative sound elements, which isolate the essential quality being sought: “I always try to be metaphoric as much as I can and not to be literal. When you’re presented with something that doesn’t quite resolve on a normal level, that’s what makes the audience go deeper” (Jarrett and Murch 2000, 8).

Murch (2005b) comes closest to a practical theory of sound when describing sound as being on a continuum between coded and embodied: “The clearest example of Encoded sound is speech. The clearest example of Embodied sound is music.” As both a sound editor and picture editor, Murch is in a privileged position to judge the relative importance and synergies between sight and sound:

I see sound and picture as natural allies, the flip side of the same coin. In football terms: I’m able to pass the ball to myself. When I’m editing picture I can think of something in sound that will help me with the picture: I can leave an idea ambiguous in the image, knowing that I can complete or amplify it later with the right sound (Cowie and Murch 2003).
It is evident from this review that sound practitioners do not tend to have as a high a profile as sound theorists. Instead, their views are more typically found in the industry press. The practitioners of film sound are generally not as well known, or as commercially exploitable, as actors and directors, and neither are they held in the esteem enjoyed by cinematographers, composers or picture editors. Relatively few sound practitioners have the status to be interviewed on their own merit in magazines that are geared toward cinema. Instead, magazines, such as *Mix: Professional Audio and Music Production* and *Audio Technology*, often only interview prominent sound mixers and editors when the film they are discussing is a blockbuster or Oscar hopeful (Jackson 2010a, 2010b). The quoted material typically involves a description of the approach as it relates to the story itself and how that approach integrated with the director’s wishes. Similarly, interviews with those working on high status television series typically cover technical topics, such as the peculiarities of large scale period production in *Boardwalk Empire* (Jackson 2011a) or the use of particular recording technologies in *Game of Thrones* (Jackson 2011b). As a result, the content is more journalistic, whereby the ‘angle’ and point of interest of the article is the film itself rather than the practitioner and their work.

Both Murch and Thom have been influential partly because of their commercial and critical success and standing within the industry. Each gives a thoughtful and rational explanation for their personal philosophy, illustrated with examples of their own work. In particular, Murch has gained enormous respect through his filmmaking, both in picture-editing and sound, which give weight to his ideas on cinema and how sound can be used most effectively in cinema. Thom emphasises the creative aspects of the soundtrack and encourages other filmmakers, in particular writers, to experiment with the narrative possibilities of sound. Whilst Holman articulates a meta-analysis of the functional aspects of cinema sound, Sonnenschein provides a methodology and strategies for sound along the lines of Edward de Bono’s ‘thinking hats’, which can be used for creative ends.

Each of the practitioners outlined offer either an explanation for the range of sounds that inhabit the soundtrack or guidelines for their creative construction illustrated with examples of their own work, which highlight both the applicability and usefulness of their approach. Whilst the models are sparse, their simplicity and flexibility is key to their success. Both Murch and Holman delineate between different functions or attributes of sounds that perform different narrative functions. Both Thom and Sonnenschein articulate a rationale for a particular approach or a range of creative possibilities that allow sound to be further embedded in the fabric of the film or to be a more meaningful partner in the filmmaking process.
2.2.6 Forums and blogs

The practitioner’s perspective is immensely useful in analysing the ways that sound in film is used to create meaning. Whilst there are relatively few who manage to get their thoughts and personal philosophies into print, there are increasing opportunities for practitioners to publish their thoughts and ideas online, and to engage in a discussion that is not geared toward technical or commercial interests. Online forums and blogs have quickly become places where practitioners can discuss their work and ideas in a collaborative setting.

During the last decade, the website FilmSound.org has become a repository for a huge number of articles and interviews on sound theory and practice, not strictly limited to film sound, but including television, games and other interactive media. It has an excellent collection of articles, both original and those originally published elsewhere, on film sound history and theory, including classic articles from Balazs, Clair, Pudovkin and Kracauer, and more contemporary works from Gustavo Constantini, Gianluca Sergi and Jeffrey Ruoff. FilmSound.org also includes significant written works, such as “The Emotional Sound of Star Wars” (Burtt 2005), as well as collections of articles on the use of sound by particular filmmakers, such as Alfred Hitchcock in “The Sound of One Wing Flapping” (Weis 1978) and “Alfred Hitchcock and the Making of Psycho” (Rebello 1999).

This review of the available literature occurred over a period of years, during which I was also an avid reader of online forums (and occasional contributor) regarding sound in film. Increasingly, online forums and blogs provide an opportunity for practitioners, educators and theorists to discuss theory and practice. Long-running Yahoo groups, such as Sound Article List, regularly provide practitioners a space to discuss their own and their peers’ work with academics and others with an interest in film sound theory and practice.21 This group brings together theorists and practitioners from several countries. Current practitioners, such as Randy Thom (2009), are frequent contributors as well as originators, whether discussing his own work, stimulating discussion on incorporating sound in the script stage, or giving examples of the serendipitous use of sound that heightens the drama. Many talented professional practitioners freely and generously give their time and insights, in order to foster a sense of professional camaraderie, and a wish to see the profession, study and practice of film sound develop and evolve.

Blogs that focus on sound have successfully extended this movement, such as Designing Sound: Art and Technique of Sound Design (Isaza 2012), which combines practitioner articles, and technical how-to guides and videos augmented with regular sound design

21 See http://groups.yahoo.com/group/sound-article-list/.
challenges for both novices and more experienced practitioners to compare styles and treatments. Frequently, there is a focus on contemporary guest practitioners who discuss their work in detail in articles and interviews, and take part in online question and answer sessions that more deeply explore the rationale for particular approaches or treatments. As well as more established names, other interesting and influential industry figures have been the subject of month-long specials, such as Ann Kroeber, Paul Davies and Rob Bridgett, which involve extended interviews, question and answer sessions from blog participants, and articles written by the particular practitioner.22

2.2.7 Assessment of film sound theory

As is evident from this literature review there is a wide range of disparate sources that inform discussion on film sound. The film sound theory that initially emerged came largely from cinema theorists concerned for the future of silent film and who attempted to stake out the area that sound would be allowed to occupy in the visual medium. For some, dialogue and synchronous sound of any kind were initially frowned upon as they were thought to take cinema further away from art. Whilst the theorists put their case, the practitioners got on with the business of making films, including dialogue and synchronous sound alongside music and other sounds. Books and journal articles from pioneering film sound theorists have enabled sound to be critically examined, although it remains an under-theorised area of cinema. The practitioners’ perspectives, whether in interviews, their own texts, or online forums and blogs, provide an invaluable and broad range of source material that can inform the discussion on film sound and the development of film sound theory.

The divide between theory and practice, which typified the relationship in the early years of sound theory, remains to some extent to this day. Not only do the two camps view sound differently, but there is also no common language to assist with the analysis of sound. Neither is there, as yet, a satisfactory conceptual model of the soundtrack that unites theory and practice taking account of how sound actually works to create meaning. Whether discussing sound alone or in conjunction with the moving image, a model that adequately describes both function and process would have the potential to be adopted by both theorists and practitioners.

22 Paul Davies is best known for his collaborations with Lyn Ramsay (Ratcatcher, Morvern Callar, and We Need To Talk Talk About Kevin). Rob Bridgett is the game sound designer and author of Designing a Game for Sound, written as an extension of Randy Thom’s original article Designing a Movie for Sound. Ann Kroeber was the partner and collaborator of Alan Splet, and worked on several films with Splet and/or David Lynch (Elephant Man, Blue Velvet, Star Wars trilogy, and Dead Poets Society).
The area of semiotics, the study of signs, has been successfully adapted to many areas of film theory. The question now to be addressed is whether it may also provide a suitable analytical framework and language that can be adapted to sound specifically.

## 2.3 Semiotic theory and semiotic film theory

Since the inception of cinema, film theorists who are not specifically concerned with sound have adopted a number of theoretical models for the analysis of films. Formalist theorists consider the synthesis of the elements of film that create meaning. Auteur theory, as described by Andrew Sarris (1962) who was inspired by Truffaut (1954), viewed the film as the product of a single creative mind, originally to give legitimacy to cinema as an art form on par with literature, music and painting. Psychoanalytic theorists focussed on aspects of the filmmaker’s, character’s or audience’s unconscious. Feminist film theorists, such as Laura Mulvey (2009), drew on psychoanalytic theory and Marxist screen theory to examine the gendered aspects of cinema, such as the male gaze.

All forms of communication rely on the use and interpretation of signs. Semiotics, being concerned with signs, sign systems, communication, symbolism and communication, provided film theory with an alternative conceptual model that has been widely adopted. Therefore, it is also a potentially fruitful avenue to explore when discussing film sound. Three main areas of semiotic theory will be outlined: (a) semiotic discourse; (b) meaning and signification; and (c) the representation of truth and fiction.

### 2.3.1 Semiotic discourse

The founding fathers of modern semiotics, Ferdinand de Saussure in Switzerland and Charles S. Peirce in the US, independently described the fundamental nature of signs, although their work appeared almost simultaneously. Saussure and others (1960), in *Course in General Linguistics*, proposed a simple dyadic structure of the sign, namely the relationship between that which is signified and its signifier. Importantly, he analysed the sign as not merely the ‘name’ of a ‘thing’ but instead as a concept along with its sound-image (Saussure et al. 1960, 66). Saussure also described a fundamentally important characteristic of linguistic signs, that they are arbitrary; for example, the English and French words ‘Dog’ and ‘Chien’ refer to the same thing. Saussure (1960, 68) viewed language as the ideal example of the arbitrary sign system: “That is why language, the most complex and universal of all systems of expression, is also the most characteristic; in this sense linguistics
can become the master-pattern for all branches of semiology although language is only one particular semiological system.”

Saussure and others (1960, 72-76) also pointed out a paradoxical element in the use of signs in language, that they are at once fixed and forever changing, and display immutability and mutability. They are immutable in the sense that signs are fixed as far as the individual is concerned, yet mutable in the sense that language changes and evolves. Saussure separated language into langue (the system of language) and parole (the spoken language), thus placing emphasis on the speaker of the language rather than the listener.

In contrast, Peirce proposed a three-way (triadic) structure to describe the nature of the relationship between the representamen or signifier (the sign vehicle, the form of the sign), the object (that which is being represented), and the interpretant (the sign in the mind or the ‘receiving end’, how the object is interpreted). He highlighted the difference between the idea and the sign: “A sign receives its meaning through its subsequent interpretation” (Peirce and Hoopes 1991, 7). Therefore, his focus was not simply on signs but on semiosis or meaning-making. Where Saussure focused on language, Peirce’s theories encompassed any type of sign, including natural signs. For Peirce, the interpretation of a sign was not necessarily the end of the process, but perhaps the beginning of another set of signs, with the interpretant being a representamen of another sign, and so on.

Umberto Eco (1979, 69) developed Peirce’s principle that one sign might beget another, naming the process “unlimited semiosis”. Following Peirce’s groundwork, Eco (1979, 9) stated that “…every act of communication to or between human beings – or any other intelligent biological or mechanical apparatus – presupposes a significiation system as its necessary condition.” Furthermore, it is not necessary for signs to be intentionally emitted, any more than they are intentionally interpreted. Eco also described the polysemy of the sign, the fact that multiple interpretations were possible from the same sign or text depending on the reader/interpreter of the sign/text.

The multiplicity of sounds that exist outside formal languages, yet still contain meaning or alternatively contain the characteristics that allow meaning to be created, implies that sound as a whole is indeed a sign system. To infer that this sign system is equivalent to a formally structured language, characterised by a limited number of letters/sounds and grammatical rules, would seem a long bow to draw. However, sound as a sign system does share some characteristics of formal language, in terms of the parole (usage) rather than the langue (its structure), in that the spoken language acts not as a static object or set of procedures but instead as a socially-constructed and plastic system that develops and changes through use and over time.
2.3.2 Meaning and signification

Several semioticians have examined the role that signs and sign systems have in creating meaning. Their approaches range from the macro/structural level to the micro/specific instance of individual signs. Their approach also influences how they view the creation of meaning, as primarily by the author of the message by the recipient.

Mikhail Bakhtin provided an alternative and fruitful view of the semiotic enterprise in which he criticised the Saussurean focus on stability and formalisation. Whilst Saussure separated language into the langue (the rules or system of the language) and parole (the concrete examples of its usage), he tended to focus on the langue and dismissed the parole. Bakhtin (1986, 74) instead embraced the parole since it was here that account could be taken of the utterances, their author, addressee and context. Rather than a simple, stable language system, Bakhtin’s idea of heteroglossia meant that language, with its multiplicity of uses and meanings, was fundamentally important since communication is a social phenomenon as much as a linguistic one.

Christian Metz’s early work on film analysis applied a semiotic approach to film to determine whether film could be seen as a language. Much of Metz’s work involved the search for structures in film since a Saussurean semiotic analysis almost inevitably required a linguistic approach. Building on the Saussurean idea of the syntagm (in which words acquire meaning through their chaining together, and where the syntagm acquires value because its stands between that which precedes it or follows it, or both), Metz described the film as a “grand syntagmatique”. However, he was distrustful of the idea that everything in the film was part of a code: “Film is too obviously a message for one to assume that it is coded” (Metz 1974a, 40). Film was therefore like language. Whilst not the exact equivalent of words and sentences, it is made from discrete units that go some way to describing basic filmic elements, which organise narrative space and time. However, according to Metz (1964), unlike a spoken/written language film was a “langage sans langue”. In terms of film sound, Metz also noted that sound tended to be used adjectivally where vision is the noun (1985, 155).

Roland Barthes’ work, especially on visual forms such as photography, advertising messages and fashion showed that in everyday life we are surrounded by signs. Barthes (1988, 101) highlighted different levels of meaning that are at work in a sign, with the connotative meaning sitting alongside the simple denotative meaning that a sign represents, both of which are often in the same place at the same time. Barthes also highlighted the role of the reader in the production of meaning from the sign. Myths, according to Barthes (1972) are the development of cultural metaphors that help construct the way a culture describes parts
of itself, and serve an ideological function. That something ‘goes without saying’ could indicate that there is a metaphor or myth created that has become naturalised to the extent that its signs and connotations are hidden.

Michael Halliday’s social semiotics tried to overcome the deficiencies of the Saussurean model to account for the codes of language and communication that appear to be formed by social processes. Examining the development in children, who are ‘learning how to mean’ through their personal developing language, Halliday (1975) emphasised the *parole* rather than the *langue* of the language system. Halliday described semiotics not as the study of signs themselves but rather the study of systems of signs and the network of relationships between signs, and this emphasised meaning (Halliday and Hasan 1985, 3-4). Halliday (1996, 112), in “Language as a Social Semiotic”, proposed that language operates as a system of “meaning potential” and comprises three metafunctions, namely interpersonal, representational and textual.

Julia Kristeva (1980) adopted a post-structuralist perspective that acknowledges context and prior knowledge. She argues that we can never stand outside our sign systems. Her work on intertextuality is a powerful means of analysing films as texts. Following Bakhtin’s dialogism, intertextuality occurs where each text has two axes of relationships: (a) the connection between the author(s) and the audience; and (b) the relationship between the text and other texts (Kristeva 1980, 66). Thus, every reading of a text, such as a film, book or advertisement, is informed and modified by the other texts and codes that the reader brings with them.

Whilst Metz presented a macro analytical view and described the cinematic product as a whole, Barthes examined examples at the micro level, such as still images, in order to tease out the multiple simultaneous messages and embedded meanings at work. Semiotic analysis of both the structures of cinema and cinematic elements can be examined, such as the soundtrack or the music in a soundtrack. For example, a cinematic practice, such as the introduction of a musical theme and its subsequent modification (or recall throughout the film), can be compared to the use of theme and variation in long-form musical pieces, such as symphonies, as a means of signification. Similarly, the individual sound elements that make up the briefest of sound events, such as a punch or footfall, can be examined for their signifying properties and embedded signifying information, such as weight, force, texture, material and so on.

As discussed by Barthes, here the role of the receiver of the message is also relevant. The role of the reader/filmgoer/viewer/listener is fundamentally important in the production of meaning. Whether there is inherent formal structure involved or whether the meaning is
created from a combination of supplied and extra-textual information that the individual brings with them, there are multiple and sometimes contradictory explanations for the development of sound in a signifying system. Spread across the streams of spoken language, music and other sounds in the soundtrack, the combination of mimetic/realist, metaphorical, extra-textual, coded and iconic sound elements, which can work simultaneously, makes it impossible to adopt a rigid or unilateral approach to the soundtrack as a whole. Instead, a nuanced approach is required in which the various aspects of each sound element can be examined, whilst acknowledging that the interpreter plays a key role in the creation of meaning.

2.3.3 The representation of truth and fiction

Whether cinema is viewed as a complete art form to which sound is added on one extreme, or as an incomplete art form that becomes whole with synchronised sound on the other extreme, will fundamentally affect how one’s definition of cinema is constructed.23 Analysing the different starting points, and thus biases, provides a framework in which to view the representations.

Daniel Chandler (2007) compiled a comprehensive overview of semiotic concepts, and has been influential in describing the tyranny of conceptual dichotomies in the analysis of literacy types (Chandler 1994a), such as prelogical/logical (Lucien Levy-Bruhl), literate/illiterate (Jack Goody), written/oral (Arthur Koestler), and visual/aural (Aristotle). He also emphasised the inevitable biases that can be brought to media analysis, such as ocularcentrism (the written/seen over the spoken/heard) and phonocentrism (spoken/written) (Chandler 1994a), as well as the blind spots that exist when analysing a medium once we are accustomed to it (Chandler 1996). This has an obvious relevance to film sound where the visible is privileged over the heard and creates an analytical blind spot in which the soundtrack is ignored. The soundtrack, largely designed to be transparent to the audience, is also ignored by theorists who instead attribute its role in helping to create narrative itself, and the sense of emotion, excitement, suspense and drama to other elements of filmmaking.

Arguing for a constructivist approach in which meaning is created between the text and reader, rather than wholly residing in one or the other, Chandler (1994a) advocates a more rationalist continuum approach to meaning creation and an awareness of the “ecology of processes of mediation”, which takes place in the creation of meaning. Chandler (1994b) is

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23 Alternative interpretations include: the advent of synchronised sound leading to the death of cinema (Clair 1985, 92); the creation of a fully-fledged mimetic art form; a means of bringing prestige to films, through the synchronisation of music, to rival opera; and the economic inevitability of a mechanised version of musical accompaniment (Altman 2004, 17).
also critical of the oversimplified transmission model of communication, which perceives meaning as simply the transfer of ‘information’ and takes little account of the role of the receiver, context, interrelationships, medium or meaning in the creation of the message. This is relevant for sound communication where the message sent may be designed to mean one thing but may actually be interpreted as something else by the audience, particularly where the message is non-verbal, culturally specific or unintentional, or may even go unnoticed.

Other critics, such as Horst Ruthrof (2009), have argued that a critical way of understanding how meaning is created is through the process of comparison. Comparison is fundamental in understanding genres and genre theory, but whether genres actually exist inside films, rather than being a convenient shorthand for describing a film and thus bypassing a good deal of interpretation, is still debated. Ruthrof (2009), writing primarily about language, argued against full-blown formalisation since it ignores context and cultural dimensions. Like Peirce, he saw the fundamental importance of the ability to compare things and thus to produce a functional ‘translation manual’ used to accommodate new information. This ability, *tertium comparationis*, the quality that two things being compared have in common, is useful in explaining how understandings are created, whether on a macro scale, such as comparing a new film to an understanding of ‘the Western’, or hearing a new sound and noticing similarities with a familiar sound. Without being able to make sense of symbolic signs, we would be in a circle of endless symbolism (Ruthrof 2009, 9). The resulting concept in the mind of the audience is described as the Vorstellung, rather than as an ‘image’ that suggests a visible manifestation. Ruthrof (2009, 9-10) also pointed out that whilst in the Saussurean sign the signifier is arbitrary, it does not follow that the signified and the sign itself also need to be arbitrary. The concept of *tertium comparationis* applies directly to sound design where a new sound is required, which borrows attributes from an existing sound in order to present something distinctive and new, but which also has recognisable properties. This is best exemplified by Ben Burtt’s use of source sounds for the various creatures, lightsabers and spacecraft in the *Star Wars Trilogy* (Lucas 2004).

Rick Altman was critical of genre theory, which he argued is rigidly determined and does not take full account of the cross-pollination of ideas, tropes and themes between genres and the inevitable mixing of genres. This located genre inside films, rather than it being a convenient label for the analysis and selling of films. Instead, Altman (1999, 1984) advocated a semantic/syntactic and pragmatic approach to genre. Meaning itself involved four parties, the author, the text, the audience and the interpretive community. For Altman (1987, 2-5), genres are not neutral categories to help the production of meaning, but are rather ideological constructions that help to bypass the interpretive community since they set the context for expectation and therefore interpretation. For Altman, similar to Kristeva, the
concept of intertextuality is fundamental to understand genre, since other texts are invoked in order to understand the current one, and the mixing of generic traits is a more observable basis for analysis. Altman (1999, 174) advocated a parole-based, rather than language-based, analysis of communication, because interpretation is created by the individual based on their experience, and each analysis is based on different examples and partial knowledge. Genres do not reside in the film but in the descriptions or framing of the film, and in their reception. Rather than identifying a genre from a group of recognisable signs, such as cowboys, guns and wagons for ‘the Western’, Altman also suggests that a genre only comes into being once the semantic meaning is recognised, that is the comprehension of the intended meaning, and once the syntactic meanings achieve sufficient consistency to be similar.

Altman (1980d) also put forward the idea of cinema using a kind of soundtrack ventriloquism where images can have no sound, but sounds need to come from an object. Therefore, in cinema, the source of the sound is hidden and instead is transferred to the image. Without the dummy the ventriloquist’s voice is tied to him/herself. Yet with the dummy, and the unreliable evidence of the eye, the source of the voice is transferred to the dummy (Altman 1980a, 67). Altman also noted film theory’s tendency to downplay the work of the writer in favour of the visual realm of cinema, whether due to its theatrical origins or auteur theory, which tends to privilege analysis of the visual realm over the unfamiliar original language of the soundtrack. This also tends also to reinforce the supremacy of the image over the soundtrack (Altman 1980a, 70).

Bordwell (1986, 9-16) is critical of the view of cinema as that which is witnessed by an invisible observer, as espoused by Pudovkin, and the analogy of film to the 19th century novel, as espoused by McCabe. Editing and point-of-view (POV) shots stretch the literary analogy and the narrator/audience relationship is transformed into a subjective positioning of the audience, which is neither ideal nor without pre-existing knowledge. The audience constructs meaning from three available schemata: their own perceptual capacities, their own prior knowledge and experience, and the material structure of the film itself (Bordwell 1986). Referential and explicit meanings are primarily concerned with the form itself, while implicit and symptomatic meanings require more from the audience to create the meaning (Bordwell and Thompson 2000, 55-57).

Noël Carroll (1988), writing on fads and fallacies in film theory, defines cinematic realism, not as a mirror of everyday life, but as a less cluttered version whose hallmarks are clarity and comprehensibility. In this sense, cinema is a subtractive medium tending to leave only the signs that are required through exclusivity of the image (given the camera’s inability to
see a full field of view), and in the soundtrack (through the removal of distractions and the artificial clarity and foregrounding of dialogue). Carroll (1988, 218) also discussed the functional use of music in film and its expressivity, pointing out that it may not necessarily arouse the same feeling in the audience that it projects.

The mimetic ability of the sound film, more than any other art form or medium, allows it to be taken as a realistic portrayal even where the audience knows that what is being seen is a fiction. Yet one person’s realistic portrayal is another person’s stereotype. How do filmmakers and audience members alike create meaning? In one sense, like most art forms, film is a subtractive medium whereby only the elements required to tell the story are included. The length of the film (its components sequences and scenes), the framing of the images, the dialogue and any expository information are only included because they are required. If we imagine a story existing in a story world, with its multiplicity of characters, perspectives, interpretations and events, what is required to show that story? Excess is removed in scripting, production and editing. In another sense, the story will also be constructed by the audience forearmed with their own experiences and understandings of conventions from other texts. The problem for the filmmaker is then finding a balance. How much information is too much, how much is sufficient for the audience to generate and construct the story or reality for themselves, and how much is too little?

Constructivist approaches allow for the design of sound elements, such as musical tracks, to work in conjunction with the images to produce meaning. Similarly, it is through comparison and no doubt some measure of adaptation that the audience receives such input and creates or modifies their understanding depending on their prior knowledge, beliefs, assumptions and experiences. The influence of intertextuality in the construction of the meaning of elements in the soundtrack, groups of sounds in the soundtrack, or the soundtrack as a whole is fundamental to understanding filmic realism, as well as the indication through the soundtrack of generic representations of romance (through music), science fiction and fantasy (through sound effects), or authority (through dialogue or voiceover).

The different semiotic analyses of the use of sound signs in film, and signs in broader social use, highlight the systems that govern their use, and the social institutions and conventions in which the meanings are created. Deciphering a photographic message or the turn of phrase in written work, is not only possible but observable and demonstrable. Its visibility tends to make the preliminary analysis attainable. However, sound is well hidden, being literally invisible. In film analysis and criticism sound is historically and ontologically irrelevant; a pollutant to the primacy of the image. Rick Altman’s idea of sound’s
ventriloquism is not simply a provocative inversion of the traditional origin of film meaning, but highlights the concealment of sound once an image is sharing the communication. Only where there is no visual counterpart or where sound is sufficiently foregrounded, as with scored music or voiceover, does sound become ‘visible’.

The seemingly obvious and taken-for-granted sound representations are routinely designed to appear to be natural. The mimetic sleight of hand that also occurs tends to attribute the manipulation or transformation of meaning elsewhere, for example, to the acting, directing, writing and cinematography. Even where there is explicit meaning, such as the language being spoken in dialogue, there are other characteristics of the voice and its treatment that contain supplementary information, which can be consciously acknowledged, intuited, partially perceived or ignored depending on the audience and other social, cultural and historical factors. Sound effects and music are often rich in meaning but are less easy to analyse since they are frequently overlooked, and indeed are designed to be overlooked. At other times, the designed-ness of the element is also hidden and it is meant to be taken as an unmediated representation, as though it somehow passed from the events being filmed directly to the audience.

Similarly, everything in an animation is there by choice, since there are no existing filmable elements to the *mise-en-scène*, and thus the soundtrack is there by choice. Any and all elements can be replaced for ones better suited to the task of telling the story. Whether we are looking at the macro level of genres and styles, or the minutiae of individual sound elements in a sequence, a semiotic analysis can shed light on the ways the particular sound representations work, and how explicit and implicit, overt and covert meanings are transmitted through the elements of the soundtrack, which are received by the audience.

### 2.3.4 Saussurean semiotic theory applied to sound

Semiotic film theory has traditionally paid little heed to the practice of film sound, even though logically it should since sound is an intrinsic part of the cinematographic experience. Instead, cinema has tended to be defined as a visual medium, and it is the visual that has been the prime focus of analysis. The implication has been that since the image was there first, and sound came second, *ipso facto* sound cannot be a fundamental to cinema (Altman 1980a). Altman has done much to reveal the various fallacies underpinning the idea of film as a ‘visual medium’. The other aspect of film critique is that semiotic film theory, which utilises a Saussurean approach, necessarily applies an analogy of language to the film (Metz 1974a). This inevitably leads to the representation of film in linguistic terms with the application of hierarchical elements that stand in for the units of language, such as image for
phoneme, shot for word, scene for sentence or phrase, and so on. This also means that the soundtrack has tended to be ignored, as it is difficult to describe in linguistic elemental terms. This necessitates a closer look at how critics have adapted the Saussurean semiotic schema to film.

A classical textual analysis of a film tends to break down the elements and arrangement of the image, from the still to the textual whole:

1. **Frame** – salient or representative still of a shot.
2. **Shot** – camera movement unedited.
3. **Scene** – camera remains in one time-space, but made up of multiple shots.
4. **Sequence** – camera moves with specific characters or sub-topic across time-spaces.
5. **Generic stage** – beginnings middles and endings, or orientation, complication, resolution.

By comparison, in Halliday’s (1996, 23-29) sociosemiotic theory of language the elements are converted into film text terms, in order to analyse the ways the message will be received:

1. **Text** – the film.
2. **Situation** – the context.
3. **Register** – for example, the way dialogue is said.
4. **Code** – which is decoded.
5. **Social structure** – social meaning/significance.

Gregory Currie (1993) argued against a language-based approach to cinema on the grounds that meaning in the cinema was not analogous to the way meaning is derived through language. The linguistic approach begged such fundamental questions, for example, whether meaning conveyed by cinematic images can correspond to the way that meaning is conveyed in language, by words and sentences. Indeed, after years of trying to fit the square peg of linguistics into the round hole of cinema, it appears enthusiasm for a linguistic-based approach is on the wane. However, it remains influential in film theory discourse, partly because of the influence of Bakhtin’s heteroglossia (Bakhtin and Holquist 1981), and the resulting differentiation between the system of language and the new emphasis on the utterance, and thus the separation of the structure from the form.
Whilst useful for the visual analysis of a film, and to explain elements of multiple paradigmatic and multiple syntagmatic relationships at work, a Saussurean-derived analysis of the soundtrack is ill-suited to explain the myriad of ways the soundtrack is created, edited and mixed. Unlike written texts, and to a large extent the image portion of films, the soundtrack usually consists of multiple simultaneous streams of information, rather than single streams that neatly end as another takes its place, and which are often not simple representations of what they appear to be.

Neither of the above two methods provide a means of deconstructing the way sound is used across film texts. In the first method, the inevitable hierarchical nature of the levels does not take into account the stable elements of the soundtrack, or the shifts that may take place as music is used or removed. Nor does it take into account the difference between visual and aural, in the sense that sound cannot be confined to a single stable moment, such as a frame, since sound does not exist except as part of a stream. It cannot be frozen in time, in the same way that an image captures a moment or represents a moment in a film. Neither does this model make any reference to the synchronised or non-synchronised elements of the audio-visual text. In the second method, the range of semiotic communications are not specific enough to be of particular value in determining how the filmmaker went about creating the sound elements.

Theo van Leeuwen’s (1999) adaptation of Halliday’s social semiotics is perhaps the preeminent implementation of Saussurean semiotics to sound. In *Speech, Music, Sound*, the stated aim is to “explore the common ground between speech, music and other sounds” (van Leeuwen 1999, 1), without using the language of mainstream musicology and linguistics. However, van Leeuwen (1999, 6) accepts that using this method to do so also proves difficult:

> A semiotics of sound should therefore not take the form of a code book, but the form of an annotated catalogue of the sound treasures Western culture has collected over the years, together with the present experience. A semiotics of sound should describe sound as a semiotics resource offering its users a rich array of semiotics choices, not as a rule book telling you what to do, or how to use sound ‘correctly’.

Whilst an ‘annotated catalogue’ is useful, it does not take us much farther down the road towards understanding how film sound works in practice or the decisions that practitioners take to create soundtracks. A ‘code book’ need not be prescriptive, but may provide both a language and range of concepts that can be applied to any use of sound. Van Leeuwen’s approach is both original and broad-ranging, but is not sufficiently specific or explicit that it can be easily adapted to an analysis of film sound theory or practice. What is required instead is a system that can be used for the analysis of the soundtrack elements both
individually and in combination with other elements, both sound and picture. This is where the Peircean semiotic model appears to present some interesting possibilities.

2.3.5 Peircean semiotic theory applied to film

Peter Wollen (1998, 166) describes the benefits of applying a Peircean semiotic approach to film analysis, rather than a Saussurean semiotic approach:

… I wasn't convinced that the Saussurean model was adequate for film. Peirce sees language as just one of many sign systems, each operating with different kinds of rules. I think that is plainly true of the cinema. It has a documentary and a pictorial aspect, as well as a symbolic or language-like aspect. I was interested in the way that the three main trends in film aesthetics seem to run parallel with the three types of sign which Peirce had isolated – the index, which is existentially linked to its object, like a thermometer reading; the icon, which signifies through resemblance to its object, like a picture; and the symbolic (sic), which has an arbitrary relation to its object, like a word. Realist aesthetics are a projection of the indexical, pictorialist aesthetics are a projection of the iconic, and what we might call ‘discursive’ aesthetics, with the stress on conceptual meaning, are projections of the symbolic.

Whilst Wollen’s account of the sign system of the film is primarily concerned with the visual, his points apply equally to the film’s soundtrack. As with film itself, the soundtrack can be thought of as a sign system, as a sub-system of the film sign system, or even as a set of sign systems. Peirce’s model of the sign allows for and helps to explain how sound can represent the things it does in the ways that it does. Spoken language is obviously a manifestation of a symbolic sign system, but its use in a film also points to an indexical usage since someone must have spoken the words we are hearing, and an iconic usage since the recorded sound is an iconic representation of the actual voice that is speaking. It is important at this stage to highlight the recorded sound in the example of the iconic voice. In film theory, the voice (and sound in general) is all too frequently dismissed as a real, actual, uncomplicated representation where the visual is an artistic/directorial/created/edited choice. The recorded voice may or may not be similar to the actual voice of its owner. It may be the synchronous, actual recording that matches the visual images, or a rerecording or another voice entirely. It may have been manipulated in one of several ways in order to lend it properties that will influence its interpretation.

The Peircean semiotic model could potentially allow a fuller examination of the meanings contingent on the whole of the soundtrack (and sound-image relationships) to be incorporated. These can include, but are not limited to, the culturally determined (or ‘embedded’) information in the sounds of dialogue from its pitch, authority, speed of delivery, accent, volume, closeness and so on. Although the exact origin of sound effects may not be known, they nevertheless contain subconscious clues to their source, which
affect the way we interpret what we see and have seen, and inform what we are experiencing both visually and aurally.

Similarly, music can be analysed not only in terms of its instrumentation, tempo, style and genre, but also the embedded associations that an audience has with that particular piece, that artist, or even that type of piece or that type of artist. Detailed prior knowledge is not necessary. There is a marked difference between recognising a particular classical piece of music, and recognising a piece as simply being classical. Both inform the fabric of the film, although the more informed listener will be able to make the more specific extra-textual connections between music text and film text. There are multiple levels of the representational onion that can be peeled given the appropriate analytical methodology.

Kaja Silverman (1983, 22) has written about several aspects of Peirce’s semiotic model, highlighting some of the advantages of the Peircean model over the Saussurean for cinematic analysis:

> By means of it we are able to note that whereas the relation of linguistic signifiers to their signifieds is primarily conventional, with elements of iconicity and indexicality, the signifiers of photography, editing camera movement, lighting and sound are characterized by a preponderance of indexical or iconic properties.

For Silverman (1983, 17), Peirce’s account of realism, a fundamentally important aspect of cinematic representation, is a crucial aspect of the semiotic model. For Peirce, since reality is ‘provisional’, the truth of a representation can be judged by three criteria: its insistence, its recognition by others, or by induction. In terms of the soundtrack, Silverman (1983, 23) appears not to apply the full breadth of the Peircean model, instead claiming that “[t]he sound track, exclusive of music, is primarily iconic, simulating the noises of speech, sirens, horns, screams, doors opening and closing, birds, barking dogs, etc... However, because these sounds often alert us to unsuspected or as yet unseen occurrences and objects, they also participate indexically.” Although the concepts of iconicity and indexicality are mentioned specifically, this analysis of sound does not sufficiently take into account the actual practice: the manipulation of sounds, their recording and highlighting, symbolic aspects, fabricated indexicality, and therefore the manufacture of realism.

Gilles Deleuze (1986, 69) also incorporates Peircean semiotics in an analysis of cinema, which in his view is created from images that give rise to signs: “For our part, a sign appears to be a particular image which represents a type of image, sometimes from the point of view of its composition, sometimes from the point of view of its genesis or its formation (or even its extinction).” Deleuze particularly explored Peirce’s concepts of Firstness, Secondness and Thirdness. For Deleuze (1986, 98), Firstness corresponds to what he describes as the
‘affection-image’, where Secondness is concerned with the real and the actual to produce the ‘action-image’. He applied these to both cinematic images and individual films or genres as a whole. In addition, for Deleuze (1986, 198), Thirdness creates the relation-image where Thirdness “...is an image which takes as its object, relations, symbolic acts, intellectual feelings” [original emphasis]. Deleuze (1986, 199) also makes an interesting analogy between the 1, 2 and 3 of Peirce’s triumvirate with Langdon, Laurel and Hardy, and The Marx Brothers: 1 being the affect corresponding to Langdon, Laurel and Harpo; 2 being the action corresponding to Hardy and Chico; and 3 being the interpretations, symbolic acts and abstract relations corresponding to Groucho. By 1989, in *Cinema 2*, Deleuze (1989, 31) criticises Peirce (rightly or wrongly) as being “as much of a linguist as the semiologists”, and suggests that had Peirce continued he “would thus not have maintained his original position for very long; he would have given up trying to make semiotics a ‘descriptive science of reality’ (logic).” Deleuze appeared to move away from Peircean semiotics, as a sufficiently general model, to analyse cinema and the cinematic image. He was particularly critical of the idea that since every sign could be reduced to a triadic relation, Thirdness was the limit of the system of signs: “We could no longer consider Peirce’s thirdness as a limit of the system of images and signs, because the opsign (or sonsign) set everything off again, from the inside” (Deleuze 1989, 34).24

### 2.3.6 Peircean semiotic theory applied to music

Recently, a number of theorists have begun to explore the potential application of Peircean semiotics in place of or in conjunction with Saussurean semiotics to particular types of music. In his unpublished doctoral thesis, “A Perceptual Approach to the Description and Analysis of Acousmatic Music”, Windsor (1995, 1.3.4) suggests that Peircean semiotics might provide a model useful to the study and creation of acousmatic music.25 *Organised Sound*, an international journal of music and technology, has included several articles on acousmatic music, which have discussed Peirce’s semiotics. For example, in “Sound and Sign”, Proy (2002) examines both Peircean and Saussurean semiotic models, finding Peirce’s approach potentially useful in analysing acousmatic music, whilst Saussure’s semiotic concept is useful in analysing Schafer’s theory of the soundscape. In “Graphical Representation: An Analytical and Publication Tool for Electroacoustic Music”, Couprie (2004, 109-110) favours an interpretation of Peirce that highlights the iconic and symbolic functions. In “Interpretation and Musical Signification in Acousmatic Listening”, Atkinson

24 Deleuze uses the terms *opsign* and *sonsign* to describe purely optical and acoustical images respectively.

25 See Glossaries – Film and sound terms: ‘acousmatic’.
(2007, 113) also highlights the potential of Peirce: “Consideration of the Peircean semiotic model in electroacoustic music (as well as the more widely used Saussurean one), tropology in the study of literature, and a much more widely comparative and culturally explicit approach to analysis are suggested as practical starting points.”

2.3.7 Assessment of the application of semiotics to sound

In reviewing the literature on film theory it becomes apparent that the field of semiotics, having been successfully adapted to the cinema in general, also has significant potential to be used in the analysis of the peculiarities of sound. The successful application of semiotics to visual imagery, such as photography (Barthes 1972) and the photographic aspects of cinema, resulted in the suggestion that such a model might be extended to further explore and incorporate film sound into film theory.

This chapter has shown how semiotics has been used by film theorists. The linguistic origins of the Saussurean semiotic model have important implications for its analysis to film. A number of film theorists, most notably Christian Metz (1974a, 1974b), have attempted to apply the linguistic model of semiotics to film, given its apparent similarities with language, to create a study of cinesemiotics. Its linearity, its paradigmatic and syntagmatic structure, and perhaps most importantly the ability for film to be reduced to scenes, sequences, shots and individual frames seems to imply a linguistic model and structure. Unfortunately, this reduction of elements into ever smaller subdivisions is not possible with sound. There is no sonic equivalent to a single frame of film. The construction of the soundtrack is largely concerned with creating meaning, or the conditions for the creation of meaning by the audience. Whilst the Saussurean model or variations of it have been adopted by a range of theorists, its applicability for an analysis of sound remains elusive. Van Leeuwin (1999, 1) has perhaps come closest to utilising this branch of semiotics to describe how sound is used, adopting a social semiotic approach to “explore the common ground between speech, music and other sounds”. Unfortunately, the Peircean model remains relatively underexplored and underutilised as a means of analysing sound in general and film sound in particular. Its fundamental difference from the Saussurean model is that it is a general theory of all sign systems rather than a model for language alone. Its focus is on the process of meaning-making with emphasis on the production of meaning. This includes not only the creator but the interpreter as well, who will use the sign, context and prior knowledge to derive meaning from the text. Peircean semiotic theory appears to provide a suitable framework and language with which to examine sound in film. In the next chapter, the Peircean semiotic model is examined in detail.
3. Peirce’s Model of the Sign

Charles Sanders Peirce (1839-1914) produced a huge amount of published and unpublished material. He wrote on many subjects, including the physical sciences, mathematics (especially logic), economics, psychology and other social sciences, but returned to the area of semiotics throughout his career and perceived all his work as related to his study of semiotics: “For, as the fact that every thought is a sign, taken in conjunction with the fact that life is a train of thought, proves that man is a sign” (CP, 5.253). Peirce held a pansemiotic view, in that we are surrounded by signs and it is through signs that we make sense of the world: “The entire universe is profused with signs, if it is not composed exclusively of signs” (CP, 5.448).

3.1 Importance of signs

In “Some Consequences of Four Incapacities” (W, 2.213), Peirce indicated the importance he attached to signs, and therefore his study of signs. Taking each of the incapacities in turn:

1. *We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts.*

This suggests the fundamental importance of the work of hypothesis in making sense of the world, rather than the Cartesian model that considers the thought as immediate perception. Instead, for Peirce, thought comes from an interpretation of the external world.

2. *We have no power of Intuition, but every cognition is determined logically by previous cognitions.*

For Peirce, there is no completely new cognition. Instead, every cognition is one of a series of cognitions with which we make sense of the world. Cognition is a process. Peirce used the analogy of a ‘train of thought’ to describe the continuous process, wherein “each former thought suggests something to the one which followed it, i.e. is the sign of something to this latter” (CP, 5.284).

3. *We have no power of thinking without signs.*

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26 Many of his works are brought together in edited collections, primarily *Collected Papers of Charles Sanders Peirce* (volumes 1-8) and *Writings of Charles S. Peirce: A Chronological Edition* (volumes 1-6 and 8). As is the convention with Peirce referencing, abbreviations are used: CP for *Collected Papers* and W for *Writings*, followed by the volume and paragraph number. For other sources standard referencing is used.
Here, Peirce explicitly states that signs are absolutely fundamental to understanding the world, and that instead of directly experiencing external reality we ourselves mediate it.\textsuperscript{27} Our eyes give us a sign, as do our ears, and all other sensory organs through which we conceive our world. This is what is meant by Peirce’s claim that we are, to ourselves, a sign (CP, 5.253).

4. \textit{We have no conception of the absolutely incognizable.}

For Peirce, not only are meaning and cognition directly related, but the incognizable can have no meaning because it cannot be conceived.

### 3.2 Universal Categories

Whilst acknowledging that there may be others, Peirce sought to define three basic phenomenological categories, which he called the Universal Categories: Firstness, Secondness, and Thirdness.

In “One, Two, Three: Fundamental Categories of Thought and of Nature” (CP, 1.377), Peirce defined these categories:

> It seems, then, that the true categories of consciousness are: first, feeling, the consciousness which can be included with an instant of time, passive consciousness of quality, without recognition or analysis; second, consciousness of an interruption into the field of consciousness, sense of resistance, of an external fact, of another something; third, synthetic consciousness, binding time together, sense of learning, thought.

In an alternative definition, he described the three categories more clearly:

Firstness is the mode of being of that which is such as it is, positively and without reference to anything else

Secondness is the mode of being of that which is such as it is, with respect to a second but regardless of any third.

Thirdness is the mode of being of that which is such as it is, in bringing a second and third into relation to each other (CP, 8.328).

As such, Firstness is an unreflected feeling, immediacy, or potentiality. Secondness is a relation of one to another, a comparison, an experience, or action. Thirdness is a mediation, synthesis, habit, or memory (Noth 1990, 41). Given Peirce’s own variety of definitions, it would be easy to misrepresent his intentions; however, at the risk of over-simplifying, we could say that:

\textsuperscript{27} Where Peirce’s semiotic terms are first mentioned they appear bolded in the text. For definitions of Peirce’s semiotic terms, see Glossaries –Peircean semiotic terms.
• Firstness is a raw feeling about something, a naïve, unanalysed impression.
• Secondness is an apprehension, or recognition of a cause or relation.
• Thirdness is the bringing together, mediation, or synthesis.

Thirdness is the sense made from the interaction of the three elements in a sign, the object, its signifier, and the interpreting thought of the sign: “In its genuine form, Thirdness is the triadic relation existing between a sign, its object, and the interpreting thought, itself a sign, considered as constituting the mode of being of a sign” (CP, 8.328). Therefore, in the Peircean model, signs are a phenomenon of Thirdness. Thirdness also gives rise to concepts such as context, meaning and significance:

I will only mention here that the ideas which belong to the three forms of rhemata are firstness, secondness, thirdness; firstness, or spontaneity; secondness, or dependence; thirdness, or mediation (CP, 3.422).  

### 3.3 The sign

Peirce defined the sign as consisting of three inter-related parts: a representamen, an object, and an interpretant. In Peirce’s own terminology, the word ‘representamen’ is used to describe the sign itself, as opposed to its signifying element or the object to which the sign refers. The representamen can be equated in some ways to the signifier from Saussure’s model or the sign vehicle from Charles Morris (1971):

A sign is an object which stands for another to some mind (W, 3.66).

Since Peirce chose different terms for the same idea (‘representamen’ and ‘sign’ are used interchangeably), in the interests of clarity, in this thesis the term signifier or sign vehicle will be used in place of the less familiar ‘representamen’ or ‘sign’ when discussing the actual signifying element of the triadic sign.

It is the relationship between the signifier, the object and the interpretant that determines how the sign will be interpreted. For example, on seeing smoke coming from a house a

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28 Rhemata, as the plural of rhyme: “A rhyme is any sign that is not true nor false, like almost any single word except ‘yes’ and ‘no’, which are almost peculiar to modern languages. […] A rhyme is defined as a sign which is represented in its signified interpretant as if it were a character or mark (or as being so)” (CP, 8.337 [original emphasis]).

29 Morris (1938, 6-7) adapted Peirce’s tripartite sign and focused his view of semiotics around semantic, syntactic and pragmatic levels of signs. Semantics relates to the comprehension of the preferred reading of the sign, with the syntactic level being the recognition of the sign and pragmatics being the interpretation of the sign. Morris used the term sign-vehicle in place of the Peircean representamen.
person may come to the understanding that there is a fire in that house. Smoke is the signifier. Fire is the object. The interpretant is the impact of the sign in the receiving mind: the connection of smoke with fire, therefore the understanding that there is fire in the house.

Another example is the sound or visual output of the Geiger counter in identifying the presence of radioactivity. The presence of radioactivity (the object) is inferred through the crackling sound or visual readout of the counter (the sign-vehicle), in order to create the interpretant (the danger of radioactive material nearby). The object is what is represented in the sign. The object of the sign need not be a physical object, but rather is simply whatever is being represented or signified, which could be an idea, a person, an inanimate object, a film or anything else:

An object is anything that can be thought (CP, 8.184).

The object determines the signifier. The interpretant itself acts as a signifier for a further triad, and thus semiosis is the never-ending process in which each interpretant acts as a sign-vehicle for the next sign:

An interpretant is the mental effect of the sign, the signification or interpretation of the sign (CP, 8.184).

The ability to create an interpretant requires some reasoning. Peirce suggested a new class of reasoning to add to the classifications of deductive and inductive reasoning, which he called abductive reasoning. Abduction is the first step in logical reasoning, in that it sets a hypothesis on which to base further thought:

I perform an abduction when I so much as express in a sentence anything I see. The truth is that the whole fabric of our knowledge is one matted felt of pure hypothesis confirmed and refined by induction. Not the smallest advance can be made in knowledge beyond the stage of vacant staring, without making an abduction at every step (cited in Brent 1998, 72).

Thus, the question is how to understand the relationship between the object and the sign, and between the sign and the interpretant, and the representation of the sign itself. For Peirce, there were “...three species of representations: copies, signs, and symbols” (W, 1.174):

A sign (or the representamen or the signifier) is anything which denotes an object.

A sign, or representamen, is something which stands to somebody for something in some respect or capacity (CP, 2.228).

For example, suppose there are painted human footprints on a pavement. The footprint could act as a sign that a foot has been there. The size, colour and other details do not, the existence of the footprint is the signifier that a foot has been there. The footprint acts as a
sign, being a representation of part of the foot or the shoe itself, as well as being an
evidentiary sign of the person walking. The footprint could also indicate symbolically the
instruction to walk in the direction indicated by the footprint. For example, a stencilled
footprint indicating a safe place for children to walk to school, or the particular pathway to
follow without need for written instructions.

3.3.1 Classification of signs in themselves

As the model of the sign developed, Peirce applied the Universal Categories to the three
elements of the sign. Each of the three elements of the sign (signifier, object and
interpretant) can be categorised according to the Universal Categories. The signifier (or
representamen) can in turn be subdivided using the Universal Categories of Firstness,
Secondness and Thirdness, which are described as being either qualities (qualisigns),
existential facts (sinsigns), or conventions and laws (legisigns):

- Qualisign (Firstness) – from immediate qualities of its own, for example, a chip
  of paint taken to a paint shop for a colour match.
- Sinsign (Secondness) – a real thing or actual relation with the object, for
  example, a molehill, footprints, smoke, a temperature reading.
- Legisign (Thirdness) – a convention, or something interpreted as a sign of the
  object, for example, traffic lights, words.

3.3.2 Classification of signifier-object relations

As Peirce states, objects determine their signifiers, the nature of the object puts constraints
or boundaries on the form of the signifier. This is a fundamental division of signs, namely
the relation between the signifier and the object:

- Icon (Firstness) – when the constraints determine a resembling quality.
- Index (Secondness) – when the constraints are an existential quality.
- Symbol (Thirdness) – when the constraints are conventional, from habit or rule.

The distinction is rarely absolute and, to a degree, there may always be elements of each
relation in a particular sign.

3.3.3 Classification of signifier-interpretant relations

As the signifier determines the interpretant, the nature of the signifier puts constraints on the
form of the interpretant.
• Rheme (Firstness) – when the constraints determine a qualitative interpretant.
• Dicent (Secondness) – when the constraints determine an existential interpretant.
• Delome or Argument (Thirdness) – when the constraints determine a law-like or conventional interpretant.

Therefore, theoretically there are 27 (3^3 or 3x3x3) possible classes of signs. However, some of them are not semiotically possible. For example, a qualisign can only be iconic and rhematic (Firstness – Firstness – Firstness) (CP, 2.254). The sign’s own phenomenological category determines the relation to the object and interpretant, where the object and interpretant cannot be of a higher order than the sign, and the sign-interpretant relation cannot be of a higher order than the sign-object relation. See Appendix J – Peirce’s Classifications of Signs.

For the purposes of this thesis (and the sake of simplicity), it is not necessary to use the 10 classifications. Instead, the focus will remain on the classifications of the signifier-object relations (icon index and symbol). In this research, the signifier is a sound, and it is the relationship between the sound and its object that is of particular importance.

### 3.3.4 Dividing the object

Peirce later emphasised an ‘end-directed’ process of inquiry rather than endless semiosis. The focus is then on the object as it stands at the end of the process, in light of collateral experience as opposed to the object referred to in the signification. The first object is the immediate object, where the subsequent object is the dynamical object. The immediate object is the initial object, what it first appears to be, an unmediated approximation. The dynamical (mediate) object is the result ‘at the end of the line’. The term ‘real object’ would also be used if it were not for the fact that the object might not actually be real:

> We must distinguish between the Immediate Object, – i.e., the Object as represented in the Sign, – and the Real (no, because perhaps the Object is altogether fictive, I must choose a different term, therefore:), say rather the Dynamical Object, which from the nature of things, the sign cannot express, which it can only indicate and leave the interpreter to find out by collateral experience (CP, 8.314).

This differentiation between the immediate object and the dynamical object is useful in that it accounts for a modification of understanding dependent on experience and other information or qualities possessed by the interpreter of the sign.\(^{30}\) It allows for the same

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\(^{30}\) It is important to note the distinction between the interpreter and the interpretant. The interpreter is the person, where the interpretant is the ‘effect produced in the mind’ of the interpreter.
object to be identified differently dependent on other external factors, such as the interpreter’s experience.

### 3.3.5 Dividing the interpretant

Having divided the object, thereby moving away from the necessity of an infinite chain of signs, and thus infinite semiosis, Peirce instead offers a differentiation of types of interpretant: the immediate interpretant, the dynamical interpretant, and the final interpretant.

The immediate interpretant can be thought of as a recognition of the syntax of the sign, including how to read it, a surface-level understanding, or “the total unanalyzed impression which the sign might be expected to produce, prior to any critical reflection upon it” (Savan 1988, 53) The dynamical interpretant can be thought of as “the effect produced in the mind” (CP, 8.343), which is reached in combination with collateral experience; or moving toward a final meaning. The final interpretant is the end of the process, once ‘all the numbers are in’, and can be thought of as the idealised end point. It is the interpretant “which would be reached if a process of enriching the interpretant through scientific enquiry were to proceed indefinitely. It incorporates a complete and true conception of the objects of the sign; it is the interpretant we should all agree on in the long run” (Hookway 1985, 139). The division of the interpretant allows for the gradual unfurling of meaning from the sign, although the sign itself need not change.

### 3.4 The Peircean model applied to sound

The following basic principles apply to the Peirce model:

1. A given sign need not be assigned to one and only one class.
2. A sign’s classification can change with its function, and with history, and with perspective and interpretation.
3. The focus is on the process of semiosis rather than the content of the sign.
4. The initial object may not be the same as the eventual object once the sign has been ‘mulled over’, and similarly the initial interpretant need not be fixed since the object determines the interpretant.
5. The Peircean model of the sign takes account of the role of the interpreter in coming to meaning.
Whilst such an exhaustive taxonomy might not immediately appear to be practically useful, its strength lies in its flexibility and universality, qualities that lend it to analyses that are otherwise either elusive or unworkable. The focus of this model is on the process of semiosis. The meaning of a sign is not entirely contained in it, but rather meaning arises through its interpretation. Each of the three principal elements of the sign, the object, signifier and interpretant, allow each sign to be examined using the relations between the elements. Each object-signifier can be thought of as being linked either through some immediate property (firstness), as a link to causality or evidence (secondness), or through convention or habit (thirdness). So how does this apply to the use of sound? Can sounds be interpreted as ‘sound-signs’?

This necessitates an examination of sound in light of each of the aforementioned Peircean basic principles:

1. A given sign need not be assigned to one and only one class.

Take the example of a ticking sound of a clock. Its relationship to its object can be iconic, indexical or symbolic, depending on factors described as the context. The sound of the clock is iconic in the sense that it represents the clock through imitation of the sound of the clock. We can recognise the sound here because of its iconic quality. The sound of the clock is also indexical, in that it is evidence of the presence of the clock that makes the sound. The sound of the ticking is thus symbolically linked with the idea of time.

2. A sign’s classification can change with its function, and with history, and with perspective and interpretation.

Continuing with the ticking clock example, we can show where this classification might change. Imagine the following three scenarios, where the only accompanying sound is the ticking of a clock:

A. A shot of a man lying in a darkened room staring at the ceiling.
B. A shot of a man racing through a crowded city street.
C. A shot of an unattended package at a railway station.

In each case, what is represented by the ticking (the origin of which may or may not be visible) is different through its contextual use. The first example might represent time moving slowly for someone staring at the ceiling (unable to sleep, nothing to do?). The second example might represent time moving quickly (running out of time?). The third example might be an indexical or symbolic sign for a bomb that may (or may not) be inside the package. The context of the sound-sign shifts the meaning.
3. The focus is on the process of semiosis rather than the content of the sign.

From the previous example we can see that the process of semiosis is critical in determining meaning from the sound-sign. The meaning of the sound-sign has changed but the sound-signifier has not changed in any way except in its context.

4. The initial object may not be the same as the eventual object once the sign has been ‘mulled over’, and similarly the initial interpretant need not be fixed since the object determines the interpretant.

What may begin as one interpretation (the initial interpretant) could be simply the iconic sound of the ticking, which may then lead to a modified interpretation that becomes an indexical link to an actual timepiece somewhere nearby. It can be further modified to the extent that the sound is actually not a clock at all, but a bomb, since the sound is symbolic (as well as indexical and iconic) of a bomb. This ‘mulling over’ of the interpreting mind creates meaning through a process.

Peirce described this hypothesising, when faced with a sign, as a mode of reasoning. The mode of reasoning in which possibility is the basis, rather than probability or necessity, he terms abduction. Abduction (the hypothesis stage) is used to make a guess to explain some phenomena, distinct from deduction (necessary inferences) and induction (probable inferences) as other modes.

The abduction stage is required to create new meaning though a new hypothesis, which is then tested, and is at work when we create meaning through comparison with another, allowing the incorporation of new signs into our schemata. The capacity to compare is used to create meaning. Literary devices, such as figurative language, depart from a literal meaning in order to compare the characteristics of one thing to another, through simile or metaphor.

5. The Peircean model of the sign takes account of the role of the interpreter in coming to meaning.

The interpretation of the ticking sound in all the ways suggested, requires a mind to interpret. The apprehension of the sound-sign, prior experience and mental processing is required to create meanings. Indeed, different minds might well make different meanings from the same sound-sign. Therefore, the role of the interpreter is fundamental not only in whether meaning is created, but also in relation to which meaning is created.
3.4.1 Adapting Peircean semiotics to sound

Peircean semiotics has been applied to sound in other areas of research, such as phonography, auditory display and product sound design. The changeover from analogue to digital representations of sound led some to apply Peirce’s classification of index and symbol to analogue and digital representations respectively (Rothenbuhler and Peters, cited in Maasø 2006):

The analog recording is an index of music because it is physically caused by it. The digital recording is a symbol of music because the relation is one of convention.

Whilst not an altogether convincing argument, one is a clear cut case of indexicality and the other is pure symbolism. The idea that the distinctions between types of signifier-object relations can be applied is useful. Since the interpretant is dependent on the role of the interpreter, for some it is possible that the analogue representation is a purer index, whereas the digital is missing any direct link with its original sound wave. On the other hand, to a recording engineer, the digital representation is as much an indexical representation as its analogue equivalent, distinctive only in relation to how the apparatus is used. This is similar to how in pre-digital photography a chemical process creates the photographic image. The unfamiliar can soon become accepted and the coded representation appears to be more natural.

In a recording, there is an iconic and indexical element. Iconic in the sense that it sounds like the thing it is representing and has inherent sonic properties, and indexical in the sense that it is evidence of the object making the noise. There can be manipulation of both digital and analogue representations. The recording can be thought of as distinct and independent of its storage medium. Indeed, the physical medium can be removed entirely. The data are still there and are still an indexical representation, which is a coded icon as well. The container for the data, an mp3 file or whatever the means, is the symbolic representation of the data in the sound recording, such as music, voice and so on. Even with the physical packaging removed, the data, picture, name of track, remain an iconic, indexical and symbolic representation of the recording. Sound can have all three components to some degree. Indeed, it is hard to think of purely iconic sounds that are not symbolic or indexical in some way.

Paul Vickers (2012) also suggests that Peircean definitions of sound as a functioning sign may be useful in its application to the field of auditory display.31 The Peircean triadic

31 A useful definition of ‘auditory display’ is given in Vickers’ (2012) paper, “Ways of Listening and Modes of Being: Electroacoustic Auditory Display”, as “a family of representational processes in which loudspeakers (or headphones) are used as information displays instead of visual display units”
conception of the sign is integrated with Schaeffer’s *quatre écoutes* (four ways of listening), in order to help understand the processes involved in representing data sets using aural rather than visual means. In auditory display terms, the data set being represented by the sound signal can be described using Peirce’s concept of a representamen (the sound), which is used to represent the data set (object) to create the understanding (interpretant) in the mind of the listener:

Écouter is the act of listening to something through the agency of a sound, that is, we are attempting to identify its source. This is an example of Peirce’s thirdness, for the sound brings us into relationship with the thing that made or caused it, and the sound is very much a sign in the semiotic sense (Vickers 2012, sec. 5, para. 3).

Vickers suggests that écouter is an example of thirdness, although it may be better thought of as an example of sound-object indexicality that creates the interpretant (which is itself a form of thirdness). “Attempting to identify its source” would suggest that there is a causal relationship between the source and sound, and therefore a secondness:

Comprendre is that mode in which, having identified the referent object of the acoustic sign through écouter, we attribute meaning to (or infer meaning from) the sign. We have gone beyond écouter’s identification of a source and instead are asking what the sound means (Vickers 2012).

It may be that Schaeffer’s two objective modes of écouter and comprendre, which are of concern to the field of auditory display, can be understood using the Peircean model, although with a reconception of the signifying sound as one whose relationship between the signifier and object is either indexical or symbolic.

Jekosch (2005), in “Assigning Meaning to Sounds – Semiotics in the Context of Product-Sound Design”, describes the means of deriving meaning from sounds in a process that is hypothesis-driven. First, the sound is heard, and is then divided into separate streams through comparison and verification, from which a series of ‘hypothesis generators’ attempt to make sense of the auditory streams. Leaving aside the psychoacoustic processes involved in the separation of sound streams, the hypothesis generation matches Peirce’s idea of abduction, wherein an attempt to make meaning from our sensory inputs is performed through a sequence of guesses, which can then be tested. It is important to note that, in this context, ‘sound quality’ refers not only to the signal itself (such as the quality of the recording), but also the characteristic ‘qualities’ that a sound possesses.

In functional examinations of sound, such as warning sounds for automobiles, three criteria are used to define the human machine interfaces (HMI): the reason for the sound, the

(83)
function of the sound, and the awaited behaviour of the driver (Suied et al. 2005, 4). Automotive sound designers attempt to use various sounds to communicate feedback to the driver, mapping the signifier-object relations to the type of feedback required:

...the relationship between the sign and the object must thus be iconic to be most comprehensible and as soon as possible. With the same reasoning, the cause “oversight of the driver” must be an indexical sign, and the cause “action by the driver”, obviously foreseeable (because voluntarily provoked), is a symbolic sign, i.e. it can have the most arbitrary relationship between sign and object (Suied et al. 2005, 5.2.1).

For example:

Table 1 – Nomenclature for signifier-object relations

<table>
<thead>
<tr>
<th>Sound’s representation</th>
<th>Relation of signifier / object</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory icons</td>
<td>Iconic</td>
<td>Failure of the vehicle</td>
</tr>
<tr>
<td>Simple earcons</td>
<td>Indexical</td>
<td>Oversight of the driver</td>
</tr>
<tr>
<td>Complex earcons</td>
<td>Symbolic</td>
<td>Action by the driver</td>
</tr>
</tbody>
</table>

(Suied et al. 2005, 5)

Therefore, there is a precedent for the use of Peircean terminology, in studies of sound design for the automotive industry (Blauert and Jekosch 2003; Jekosch 2005; Suied et al. 2005). However, in this study it is proposed that the original Peircean terms be retained for the different types of sound representation:

Table 2 - Suggested nomenclature for sound signifiers

<table>
<thead>
<tr>
<th>Sound representation</th>
<th>Relation of signifier / object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound icon</td>
<td>Iconic</td>
</tr>
<tr>
<td>Sound index</td>
<td>Indexical</td>
</tr>
<tr>
<td>Sound symbol</td>
<td>Symbolic</td>
</tr>
</tbody>
</table>

3.4.2 Firstness, Secondness and Thirdness in sound

Peirce’s Universal Categories of Firstness, Secondness and Thirdness are particularly relevant to sound, as opposed to vision, since sound only ever exists as a stream, rather than as a constant or static object. Our awareness of the sound develops as the sound develops. We can stare at a photograph and the photograph will remain the same, although our interpretation of it may change as we dwell on it. However, as we listen to a novel sound, first it begins, and we may initially only notice that it simply is a sound. Then it becomes a
sound with respect to some other sound or silence, or some physical thing, and thereafter some mediation and attribution of meaning, if the process gets that far.

Whilst the Universal Categories are difficult to pin down, the idea behind them highlights some phenomena that can exist prior to our eventual understanding, or before the process of semiosis is complete. There is a logical sequence from Firstness to Thirdness:

- **We notice something without conscious acknowledgement:** Imagine a sound X that one notices, but that is not recognised. It merely has vague characteristics, without pointing to any particular thing.\(^{32}\) This would be called a firstness, relating to the immediate properties or characteristics of a thing without reference to another.

- **Then we notice with respect to some other thing:** A sound that stops or starts does so in comparison to or with respect to silence. We now notice that sound X stops, or that it starts. We do not yet attribute any meaning to the sound but notice that it exists or ceases to exist, perhaps as a result of some other action. This would be called a secondness, directly relating to a second thing.

- **Finally we incorporate the knowledge into the broader understanding through reference to a third:** If we later notice sound X once more and realise a cause for the sound, link it with some action, or otherwise describe it in terms of a general rule, then this would be called a thirdness, a synthesis of meaning or mediation.

Alternatively, we can take the example of the three ‘pips’ from a speaking clock.\(^{33}\) The first pip indicates simply a pip, which has qualities of its own that are independent of any other thing. On hearing a second pip we may recognise it as being similar to the first, but which we only recognise as the reference once we hear a second pip. The second pip, identical in sound to the first pip, allows the inference that what we are hearing is a sequence, and establishes an interval tempo. The third, and altogether necessary, pip is identical in sound to the first two, and is the only one that signifies the exact time. It is then predictable and meaningful since the listener knows to expect a third pip, when to expect it and what the pip represents. The three pips illustrate Peirce’s categories. The first being the quality, the second being the fact, and the third being the habit or rule.

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\(^{32}\) For example, Peirce used the sense of a colour, which can exist without specific reference to another. Although this is only partially true, since we can only tell a colour in comparison to other known colours.

\(^{33}\) Thanks to Alec McHoul for this elegant example.
3.4.3 Sound signs

Whilst Peirce’s work primarily focuses on the classification of the signifier and the interpretant, it is important to also briefly address the classification of signifier-object relations, initially dealing with familiar sounds. Here are some examples of sound signs described using the Peircean typology:

- **Sound Icons** – onomatopoeia, a car’s horn, a car’s engine, a musical sound.
- **Sound Indexes** – a cry of pain, a spoken reply from an unseen addressee, the beep from an ATM, the sound of a car’s indicator, a footfall or footprint, the ‘crack of willow on leather’.
- **Sound Symbols** – a record scratch, spoken language, funereal music, Morse code.

Of course many sounds, if not all, will exhibit the properties of icons, indexes and symbols. For example, a telephone ring acting as indexical evidence of the phone being rung by someone, iconic as the sound of ringing is used to draw attention, and symbolic as a sound warranting attention in the first place.

3.4.4 Novel signs

How then can we apply Peirce’s model of the sign to the new or the unfamiliar? First, we revisit Peirce’s ideas in “Some Consequences of Four Incapacities” (W, 2.213). The first three are:

1. We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of the world.
2. We have no power of Intuition, but every cognition is determined logically by previous cognitions.
3. We have no power of thinking without signs (W, 2:213).

From these three incapacities, it can be surmised that we must arrive at understanding from our own reasoning, based on our knowledge of the world, and that our reasoning is based in signs, since our thinking comes through signs and their associations. Therefore, any new sign is determined by previous cognitions, and we can only arrive at new thoughts through other signs. When confronted with new signs, we arrive at new understandings through hypothesis and reasoning, an example of Peircean abductive reasoning, as distinct from inductive and deductive.
3.4.5 Natural(ised) and arbitrary sound signs

Natural signs are signs that appear in nature that we can recognise and get meaning from. Lightning and thunder are such natural signs. The sound of thunder in conjunction with lightning provides a literal sound representation of the storm. The sound of thunder without its visual representation of lightning also mimics the natural world, since we often hear thunder without seeing its lightning source, and so deduce that a storm is some distance away. When seeing lightning without hearing thunder we can also induce that the sound of thunder is about to arrive; and the smaller the time between the two, the closer the storm. Therefore, there is a sense of foreboding that accompanies a destructive event, such as a storm. In addition, we learn (a naturalised sound code) that loud rumbles tend to come from significant physical events or manmade events, such as explosions. We know from our own experience of sounds that loud, powerful sounds come from large powerful events.

Before thunder and lightning were scientifically explained as phenomena associated with the discharge of energy caused by the ionisation of storm clouds, they were simply recognised as a ‘sign’ signifying a storm. Further back in history they were interpreted as a sign that the thunder god was unhappy and was making his/her feelings known. Equally they could be taken as a positive sign if there had been a period of drought, with lightning and thunder indicating an end to the drought. Natural sound signs can have referential and explicit meaning (the sound of thunder, the accompaniment of lightning), and they can have implicit and symptomatic meanings (the gods are angry, the drought is over).

Whilst there are natural signs all around us there are also signs that are created that are not grounded in a natural occurrence but that are conventional signs designed for the purpose of communication (Cobley and Jansz 1999, 5). Both natural and conventional sound signs are used in film soundtracks; the natural sounds that the audience intrinsically knows and those that have to be learned through associations. Sometimes these associations are not obvious; for example, the pairing of music to particular characters, yet the effect of the symbolic link does its job nonetheless. Few audience members watching The Empire Strikes Back for the first time, would consciously recognise Darth Vader’s ‘theme music’ (Kershener 1980) but after linking his appearance on screen with the particular musical theme it becomes linked to his character. Thereafter, that particular music portends his imminent arrival.

34 ‘Literal’ here is used in the sense that it is non-figurative.
35 Thunder is caused by the explosive expansion of air during a lightning strike which causes a shock wave and is heard as thunder (see www.bom.gov.au/info/thunder/).
36 For example, Zeus (Greek), Jupiter (Roman), Thor (Norse), Lei Gong (Chinese), Xolotl (Aztec), Set (Egyptian) and Namarrkun (Australian Aboriginal) are all gods of thunder (Spence 2005).
Peirce’s definition of the symbolic representation largely coincides with Saussure’s ‘arbitrary signifier’, in that there is neither similarity nor direct connection through cause and effect, nor other evidence: “The symbol is connected with its object by virtue of the idea of the symbol-using mind, without which no such connection would exist” (CP, 2.299). For example, the word ‘dog’ has no natural connection with the concept of dog, but the order of the letters d-o-g creates the meaning for the concept of dog in English, just as the letters c-h-i-e-n create the meaning for the same concept in French. In this sense, it is a socially learned association, which points to a conventional link between the object and its sign (Chandler 2007, 28). The system only works because it is recognised or agreed that the sign represents the object. Similarly, a violin appears to have little intrinsically or naturally to make it representative of a romantic moment between lovers or of the many other things it represents. Instead, some types of music can be said to have acquired a socially-constructed meaning.

The symbolic relationship between signifier and object, leading to the principle that a signifier and its object need no natural connection whatsoever, can be illustrated in film sound. Once the simple association of sound and image is made, one can later be used to imply the other. For example, the double basses in Jaws (Spielberg 1975) are associated with the shark through the synchronisation of a moving underwater shot in the opening title sequence, and later during the first shark attack. The image takes the shark’s point of view (POV) and is used to indicate the shark rather than physically showing the shark itself in the first part of the film. Both times we are given the POV shot of the shark, we hear the accompanying double basses. By the second double basses/POV shot, an abduction can be made that one symbolises the other, or when one is heard the other is present and an attack is imminent. By the time the double basses are heard later in the film, the audience can induce (correctly) that another shark attack is likely, although visually nothing more than a calm ocean need be shown. The double basses now represent the shark without having to show either the shark itself or the shark’s POV. The visual image is therefore liberated from a simple functional representation. A sense of anticipation is created whilst showing little in the mise-en-scène, and the desired cinematic effect is produced in the most efficient manner possible.

Music is used in a similar way in Fritz Lang’s M, in which Peter Lorre’s character whistles two bars of a piece of music (Grieg’s ‘Troll Dance’). The music is thereafter used to symbolise the murderer of the film:

I seem to recollect quite clearly that this harmless little tune became terrifying. It was the symbol of Peter Lorre's madness and bloodlust. Just a bar or two of music. And do you remember at what points (toward the end) the music was most baleful and
threatening? I do. It was when you could hear the noise, but could not see the murderer (Cavalcanti 1985, 108).

3.5 Integration of Peircean semiotics and film sound theory

In some ways an example par excellence of Peircean semiotics, film sound demonstrates in practical terms how signs are manipulated, juxtaposed and combined in order to change meaning. The task now is to see how far Peirce’s model of the sign fits with existing film sound theory. Film sound theory from Altman, Chion (described earlier in section 2.2.2), Holman and Murch (described earlier in section 2.2.5) can now be re-examined to determine the potential of Peircean semiotics to integrate other aspects of film sound theory:

- Altman’s idea of sound ventriloquism and the fallacy of sound’s inherent indexicality.
- Schaeffer/Chion’s listening modes, which are determined by their function being either causal, semantic or reduced.
- Chion’s idea of the process of synchresis in which a new sound/image object is created by forging a link between the visible and the audible objects through synchronisation.
- Holman’s model of the three-way split between direct narrative, subliminal narrative, and grammatical functions of the soundtrack.
- Murch’s model of the soundtrack as a continuum between embodied sound and encoded sounds at either extreme.
- Murch’s idea of the ‘conceptual gap’ and its exploitation through the deliberate use of ambiguity..

Altman (1980b), in “Four and a Half Film Fallacies”, describes the myth of cinematic sound being always indexically linked to the original sound as a recording, in the same way that the photographic image in a portrait is an indexical ‘death mask’ of its subject. In fact, the sound reproduced is always achieved through the mediation of the technologies of recording and reproduction. Applying the Peircean model we can more accurately describe cinematic sound as retaining, reconstructing or creating an indexical link depending on, for example, whether the dialogue used was synchronously recorded, rerecorded as a replacement for the original synchronous recording, such as through ADR, or in the creating of the voice for an animated character. As far as the audience is concerned, each sound representation is indexical since it appears to be dependent and a direct consequence of its on-screen
character, but the process that creates it cannot always be said to be an unmediated and natural consequence. The Peircean semiotic model similarly supports the idea of Altman’s (1980d, 67) “sound ventriloquism”, since each sound representation can carry with it not only an indexical link to its object but also iconic properties and symbolic meaning: “Far from being subservient to the image, the sound track uses the illusion of subservience to serve its own ends.”

Chion (1994) described the process wherein a sound is replaced with a different sound to create a new effect, whilst retaining a sense of realism since it is still synchronous, as *synchresis*. Altman’s rejection of the indexical fallacy is taken further through the description of the process, long common to film sound practice, of replacing or substituting sounds, whilst retaining the sense of unity with their apparent visible source.

In cinesemiotic terms, there are filmic codes, including the use of a close up or a reverse shot, or the use of scored music or of titles, and so on. Each of the codes needs to be learned in order to function. Whatever we can say about a film or a genre of film, or some other classification of a group of films, styles of photography or characters, we do so on the basis of our experience of those things. Above all of these codes is the super-code of lived reality, our everyday experience. One of the principal codes of reality is that of synchronisation between sound and image. If we are talking with someone their lip movements match the sound they make. If they put a glass on the table, we hear the sound of the glass on the table matching the visible event. This fundamental code can be mimicked and then manipulated in film.

Whilst the source in life is the object that is both visible and Sonic, the source in film sound is the visible object and a separated sonic source. For example, a person speaking can be seen to speak and the sound of their voice comes from their mouth. In a film the person is visible on the screen, but the sound of their voice comes not from the position of their voice on the screen but instead is produced by a loudspeaker, usually positioned at the centre of the screen, which is typically used for most, if not all, dialogue in the film.

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37 *Synchresis* is the synchronisation of the new sound to the image, with the synthesis of the two components creating the new audiovisual object. See Glossaries – Film and sound terms: ‘synchresis’.

38 Whilst there is a difference between the speed of light and the speed of sound, such that the sound will always lag the vision (sound travelling around 340 metres per second compared to light’s speed of $3 \times 10^8$ metres per second, or for practical purposes instantaneous and infinite), it means that we can always expect the sound to be instantaneous with its visible source slightly later as the distances become greater.

39 This speaker, which is usually positioned immediately behind the screen, plays back material that is in what is referred to as the ‘centre channel’, as opposed to the left and right speaker channels or surround speaker channels. The centre channel for dialogue has been adopted almost universally by
Film sound manipulates our understanding of lived experience of synchronised sound to allow different meanings to be created. From the blending of two signs, one visible and one aural, the characteristics of one can be transposed or transplanted onto the other. The new sound is selected or modified to create a new iconic relationship, different in some way from the original, and which is designed to be interpreted in a different way. In the process of synchronisation, the two sources are initially separate. The original object (the visual plus the aural, if it exists) is separate from the new sonification. The new sonification is swapped with the original sound to forge an indexical link, removing any trace of the duality of the objects and creating a oneness with the new visible and audible object, mimicking the synchronisation code of lived reality.

Synchronisation can be explained by Peirce’s concepts of icon and index, whereby sound and image fuse into one single cinematic object. The iconic properties of the new sound are attributed to the visible object, the source of the ‘synchronised’ sound. The new object of synchronisation (the ‘synchronised’ sound) uses the new iconic properties and newly fashioned indexical properties to create a new sound for the object. As Altman (1980d) points out, we tend to hear objects coming from the visual source, but once synchronised the image will be seen as producing the sound. The new sound will have ‘disappeared’ into the object it has helped to create, leaving one conceptual object derived from its constituent visual and auditory components. The image object and synchronised sound could be related, one character’s voice being replaced by a better recording of his or her voice from another time or an alternative ‘take’, or a recording done in the process of ADR. The image object and synchronised sound could be completely unrelated until they are synchronised, such as the animated character. Since, in an animation the original object is virtual rather than filmed, there is no indexical sound recording to be replaced. Instead, a new indexical link is formed to create the single audiovisual object.

Chion (1994, 25-29) also describes three modes of listening: causal listening, which consists of listening for information; semantic listening, which involves the interpretation of a message, such as spoken language or another coded sound; and reduced listening, which involves listening to “the traits of the sound itself, independent of its cause of meaning.” These three modes of listening (causal, semantic and reduced) correspond with Peirce’s concepts of the indexical, symbolic and iconic.

It is possible to map Chion’s listening modes onto Peirce’s division of signifier-object relations:

filmmakers to present consistency, rather than attempting to match the physical sound source to the visible source on screen.
Table 3 – Chion’s listening modes and Peirce’s signifier-object relations

<table>
<thead>
<tr>
<th>Chion’s listening modes</th>
<th>Peirce’s division of signifier-object relation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced</td>
<td>Icon</td>
<td>The properties of the sound itself, rather than the meaning of the sound or the object which makes the sound.</td>
</tr>
<tr>
<td>Causal</td>
<td>Index</td>
<td>The reference to the thing, place or object which makes the sound.</td>
</tr>
<tr>
<td>Semantic</td>
<td>Symbol</td>
<td>The learned association or rule which is generated as a result of the use of the sound in a particular context.</td>
</tr>
</tbody>
</table>

Whilst the focus of Chion’s listening modes is on the reception of sounds, the Peircean concepts extend the model to include both the creation of the sounds and their reception. By attending to the three modes of listening and the three divisions of sound-signs, we can frame the different ways of manipulating the sounds that form the soundtrack.

Murch uses a continuum to describe the components of the soundtrack whose extremes are embodied and encoded. Murch (2005a) uses the analogy of the wavelengths of visible light, which are comparable to the different types of sound that can be made:

Just as the spectrum of colors is bracketed by violet and red, this sound-spectrum will have its own brackets, or limits. Usually, in this kind of discussion, we would now start talking about the lowest audible (20 cycles) and highest audible (20,000 cycles) frequencies of sound. But for the purposes of our discussion I am going to ask you to imagine limits of a completely different conceptual order – something I’ll call Encoded sound, which I’ll put over here on the left (where we had violet); and something else I’ll call Embodied sound, which I’ll put over on the right (red).

The clearest example of Encoded sound is speech.

The clearest example of Embodied sound is music (Murch 2005a).

Here Murch’s “conceptual order” can be mapped onto the twin Peircean concepts of icon and symbol. Where filmic music is purely embodied, it is without an object and is thus free of an indexical component and of symbolic meaning (particularly if it is original music). It is therefore acting purely as a sound with its own properties, irrespective of its cause or meaning. Film dialogue (being spoken language) is obviously encoded and can be mapped onto the Peircean concept of the symbolic. In Murch’s spectrum of sound, the focus is the content of the sound, rather than its relationship to the image. As such, there is no reference to the image or to the more functional aspects of the soundtrack, which would involve the introduction of the Peircean concept of the index.
Murch’s idea of the conceptual gap between what the audience is presented with and what sense is made, fits with Peirce’s description of abductive reasoning, in which the film is designed to be thought-provoking:

That's the key to all film for me—both editorial and sound. You provoke the audience to complete a circle of which you've only drawn a part. Each person being unique, they will complete that in their own way. When they have done that, the wonderful part of it is that they re-project that completion onto the film. They actually are seeing a film that they are, in part, creating—both in terms of juxtaposition of images and, then, juxtaposition of sound versus image and, then, image following sound, and all kinds of those variations (Jarrett and Murch 2000).

Therefore, for Murch, a key role of the filmmaker is to lay the foundations for meaning to be created by the individual audience member. A ‘trail of breadcrumbs’ can then be used to allow abduction to take place, which may then be supported or modified by subsequent events, but also by recollections of previous scenes of the film. These conceptual dots can then be joined together to create links between narrative elements. In Peircean terms, it means leaving sufficient space to allow the audience to formulate the object of the sign and to then create the interpretant, which gives meaning to that sign.

Holman (2002, 2010) divides the soundtrack into its three functional components: direct narrative, subliminal narrative, and grammatical. The focus is not on the individual elements of the soundtrack, but rather their combined function. Whilst the direct narrative functions of the sound are often synchronised sounds, such as dialogue or sync sound effects, what separates direct narrative from the subliminal is that it is meant to be noticed. Subliminal narrative components are designed to not be directly noticed, or at all. Similarly, the grammatical function of sound may relate to its treatment as much as to the particular sound being used.

As a direct narrative component, we can say that character dialogue is both an iconic representation and indexical representation. It is indexical in that it provides a causal link to the character speaking, just as the visual representation of the character refers to the actual character. It is also iconic in the sense that it has characteristics that are separate to the language being spoken and the particular qualities of the voice. It acts as a reference, or proof of the validity and reality of the film representation, where the film and sound work together to portray a recognisable reality. Dialogue is also most certainly symbolic in the truest sense. We make sense of the sounds of dialogue as a literal language since the words of the language have symbolic meaning.

Subliminal narrative sounds can be understood as sounds whose characteristics allow them to input into the process of meaning-making in the mind of the audience. They are the
objects that need not be immediately recognised, or fully recognised. The various Peircean
semiotic concepts, as described earlier, can now be applied to the process of creating a
soundtrack from the perspective of the sound practitioner. Background sounds or the use of
sound metaphors, the addition of sounds or the augmentation of sounds, or the emotional
content of sounds can inform the process of semiosis as meaning is gradually created. The
division of both object and interpretant, in the light of external information, allows for
meaning to become ascribed to sound signs when they are introduced, and when they are
reintroduced.

For Holman’s grammatical function of sound, Peirce’s different kinds of reasoning
(abduction, induction and deduction) can be applied to understand the process of meaning-
making from sound signs. The existing codes and conventions of film sound allow us to
make sense of what we hear, such as theme music, score music, narration, character
dialogue, continuous backgrounds across picture edits and so on, so that we can deduce or
induce their meaning. Abduction is the process that takes place in the absence of sufficient
information. It is guesswork that forces the audience to suggest or create meaning for
themselves. The grammar of sound is partly determined by our past experience of films,
which allows us to recognise certain sounds or the sound conventions used, for example,
theme music or the use of sound across a picture edit to indicate continuity. For many sound
signs, grammatical meaning is dependent on the image in order for it to function, for
example, POVs that can be created using sound, pictures or both. Indeed, POV shots and
their sound equivalents require a certain amount of learning to be thus identified since they
require a shift in the perspective of the viewer from objective observer to one that shares the
viewpoint of a participant.

This chapter has adapted Peirce’s semiotic model to sound and has shown how it enables an
interpretation of some key film sound theory in Peircean terms. Following, the model is
incorporated into an analysis of the way sound can be used either alone or in concert with
images to convey a particular required meaning.
4. Applying Peirce’s Model to Film Sound

4.1 Introduction

The previous chapter examined how Peirce’s model has opened the way to a critique of sound in film that covers both the creation of the artefact and its reception by the viewer. The aim of this thesis is to explore the suitability of Peircean semiotics for film analysis and for the analysis of the sound production process. This chapter explores the application of the model in film analysis.

4.2 Applying Peircean semiotics sound in film

4.2.1 Meaning making

Peircean semiotics takes account of the process of meaning-making, the role of the interpreter, and of context, and so can provide a useful theoretical basis and a language for describing some of the many elements of film sound practice and the ways sound can be used to add meaning. Just as words and visual signs have meanings, sounds and music also have meanings. Obviously dialogue, being spoken language, has an overt meaning that is understandable in its own right, but it can also have multiple or additional, coded meanings, depending on the speaker of the dialogue, the situation or the intonation. Sounds and music have the potential for meanings or associations. For example, a simple sound like the knocking at a door indicates that there is someone at a door. String-based orchestral music such as Tchaikovsky's *Romeo and Juliet* is recognisable to an audience as a romantic piece of music, possibly because of its inherent romanticism, or because we may know that it comes from a classic romantic ballet, which itself is based on a classic romantic play (Shakespeare’s *Romeo and Juliet*), or because it has been used previously in a similar way to represent a romantic moment or situation. In any case, as an audience we recognise in the music a sense of romance, regardless of how we came to know that.

These cultural meanings of sounds have fundamental implications for filmmakers who wish to understand how they can be used and manipulated and how they might in turn be interpreted by an audience. Many of the ‘standard practices’ and most fruitful methods of working in the creation of film sound can be analysed from a semiotic perspective. Existing music brings with it associations of a specific time, genre, performer or feeling. Even music
that is unfamiliar will have familiar aspects, whether they are the instrumentation or style that is reminiscent of another piece of music. Sounds or voices that are unfamiliar will nevertheless have similarities to people or things we have heard before, which we use to create new knowledge or adapt to our existing knowledge.

The comparative process, in which similarity is used as a basis for categorisation described by Peirce (CP, 2.85) is the means by which we seek to make sense of unfamiliar, or as yet unexplained, sounds. Ruthrof (2009, 10) in advocating a perceptually oriented theory of language describes our ability to create and modify language in light of our new experiences using our ability to compare things - *tertium comparationis* – where the third part of the comparison is the quality that the two things being compared have in common. For example, in literature the use of simile and metaphor, where a new thing being described is done so by referencing another object (or person or action) with which it shares something in common. Where we hear a sound that appears to be unique or unrecognisable, we naturally attempt to compare this sound’s characteristics, based on similarity, to existing knowledge of our repertoire of sounds. This comparison between two sounds, one familiar and one unfamiliar, through a common property can be framed in terms of Peirce’s firstness (the new sound), secondness (the sound that it resembles or calls to mind) and thirdness (the shared property between them). In the realm of sound effects for films, the idea of *tertium comparationis* provides an explanation for both the means by which sounds are selected for a task, and the ways in which they perform the role in the context of a film.

This effect of this process of *tertium comparationis* can be illustrated using examples:

- An unseen sound effect is heard, and the sound has properties or characteristics that allow the listener to make some comparative links, the creation of sound metaphors, or judgements about size, material, fearsomeness, and so on.

- A background sound is played beneath the level of the principal narrative sound elements such as dialogue and narrative sync sound effects. The background sound, though partially linked to the visible location or environment, will also have properties and characteristics that will be compared and deciphered against our knowledge and experience of other sounds with similar characteristics and what they mean.

- A piece of off-screen, original music is heard. Whether consciously or not, the music’s characteristics can be examined using the same process to gain information about the style, historical era, and connotations that the music

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40 See Glossaries – Peircean semiotic terms: *‘tertium comparationis’*. 
brings with it regardless of whether the music is orchestral symphonic or composed of a single entirely synthetic instrument.

In each case whether the sound is recognised, partially recognised, or not consciously acknowledged, the processes of semiosis are applied to make sense of the sound signs and ascribe meaning to them. The multitude of meanings (whether overt, literal, metaphorical, ironic, comedic or any other of the possibilities), operate in the mind of the listener in conjunction with other sound signs, visual signs, and combine with prior knowledge and expectation from which any meaning or interpretation is created. The new sound (firstness) is compared to a known sound (secondness) in order to abduct possible meaning (thirdness).

4.2.2 Context

Context plays a fundamental role in how signs are interpreted. A simple reordering or manipulation of the temporal structure of a soundtrack can similarly have a profound effect on our understanding of a sound in a given context. Imagine a scene in which a man and woman are talking and they are interrupted by the ringing of the telephone:

1. Telephone starts to ring and the woman immediately stops talking and looks to the phone. (Telephone sound and visible reaction synchronised)
2. Telephone starts to ring and the woman continues talking for a few moments before looking to the phone. (Telephone sound precedes the visible reaction)
3. Woman stops talking and looks to the telephone that only now starts to ring. (Visible reaction precedes the telephone sound)

In the first scenario, we have a simple conversation where the conversation stops because of the sound of the telephone ringing. In the second scenario, the woman appears to have ignored, or not noticed, the ringing for some time. Is it perhaps that she is so consumed by the conversation? In the third scenario, the woman stops the conversation to look at the phone that suddenly rings. Does she know it is going to ring? Is it a premonition of some kind? By simply moving the sound of the telephone ringing back or forward a second or two, very different interpretations of events are possible. Similarly a transformation occurs when a sign acquires its meaning through its association with other signs, and thereby changing its context, such as in the ticking clock example in section 3.4. Care may need to be taken then lest a sign intended for one thing may be received as a sign for something else, since the signifier and object can have the loosest of intrinsic connections. For the meaning to be received as intended, the framework that guides such an interpretant is crucial.
It may be sometimes tempting to think that a thought or idea is communicated via a sign (or sound) from one person to another and that sign is received and deciphered intact. This transmission model of communication put forward by Shannon (1948), in which the original message is transmitted and received intact, providing the ‘noise’ is below a certain threshold, as in a facsimile, works well for data transmission where the result is a binary output. It works less well for communication through sound in an audiovisual text such as a film in which multiple simultaneous sound and sound-image messages are being sent in myriad ways. Instead, the receiver constructs a more personalised representation of the messages that they create for themselves (Chandler 1994b).

The context, individual experience, medium, and the purpose of the communication are all influential. Especially in the case where a sound is removed from its source, the associations that the sound has become more personalised and connotative, and can range from the specific to the very general, and may be very personal. The sound of a steam train, or an air raid siren, may sound simply like an era that is long gone for some, where for others it may transport them to a very specific place and time, bringing with it a range of possible emotions. Care must be taken then that what is intended as a sign for one thing may in fact be received by the audience as a sign for something else. According to Morris, there are three components involved where a specific or explicit sign is used and needs to be recognized as sign for a specific concept or thing.

- The syntactic component - the recognition of the sign
- The semantic component - comprehension of the intended meaning of the sign
- The pragmatic component - interpretation of the meaning of the sign (Morris 1938; Chandler 2007, 196).

In terms of the Peircean model, the recognition of the object of the sign as ‘the object of a sign’ would fulfil the syntactic criterion. The semantic component would be contained within the immediate interpretant of the sign. The pragmatic component is related to the dynamical object and the dynamical interpretant of the sign where the intended meaning is interpreted as a result of the process of semiosis.

For example, in order for a parody to work, all three things need to happen. The sign must be recognised, understood and interpreted as a reference to another text for the parody to be appreciated. The trailer for the documentary feature Comedian (Charles 2002) for example, shows no clips of the film but instead shows the process of recording a voiceover for the movie, as though it were a stereotypical action movie. The voiceover artist Hal Douglas is visible during the preamble, but only when he begins to speak do we put a voice to the face
and recognize his as the voice of countless movie trailers. We recognise it as a spoof from the increasingly hackneyed lines he delivers:

VOICE IN CONTROL ROOM (CR):
OK let's try this. This is the voiceover for Comedian movie trailer. Take one.

VOICEOVER ARTIST (HAL):
In a world where laughter was king...

CR
Ah, no ‘in a world’, Jack.

HAL
What do you mean, “No ‘in a world’?”

CR
It's not that kind of movie.

HAL
Oh? OK. In a land that...

CR
No 'in a land' either.

HAL
In a time...

CR
I don't think so.

HAL
In a land before time...

CR
It's about a comedian, Jack.

In using particular sounds with specific meanings, unintended consequences can arise for some parts of the audience. Tarzan films containing the sounds of kookaburras may well sound exotic to an American audience but sound immediately out of place to an Australian audience, who instantly recognize the bird’s distinctive call (Legge 2004, 12). There are examples of in-jokes in films where a very particular sound used in one film is used again in subsequent films. The ‘Wilhelm scream’ sound effect is perhaps the best known example. The recording of the scream, which originates from the film Distant Drums (Walsh 1951), is by itself unremarkable, but the dying scream from one character ‘Wilhelm’ in this film has

41 Hal Douglas is a renowned voiceover artist who has made hundreds of trailers and whose voice is synonymous with Hollywood movie trailers.

42 See http://www.hollywoodlostandfound.net/wilhelm/, and several video compilations on YouTube and Vimeo.
since been heard in dozens if not hundreds of films including *Star Wars*, *Raiders of the Lost Ark*, *Toy Story* and *Reservoir Dogs* (Lee 2007).

### 4.2.3 Ambiguity

For Peirce, ambiguity results in a process that begins with abduction in order to determine the origin or meaning of a sound that is not recognised or partially recognised, or where it does not appear to fit its context. In a soundtrack there are sounds that we attribute to the diegetic world of the story, and others that we can recognise as being non-diegetic, as is often the case with the musical score. Where there is an obvious visible (or at least diegetic) sound source, we can attribute the sound to its origin without fuss. What happens when listeners are confronted with a situation where insufficient context or information is provided in order to ascertain the origin of the sound source? We may hear a sound that does not match what we can see, or other sounds we can hear, or what we expect to hear.

Here the dominant reading is less clear, and the logonomic system that normally adequately prescribes the condition for the production and interpretation of meaning is incomplete. The sound sign we are presented does not always quickly tell us what it refers to. Here a lack of context can provide an opportunity to create tension, since incomplete understanding requires active participation on the part of the audience to create meaning for themselves. This creation of meaning can be the application of experience of similar signs through various semiotic processes or concepts: as an iconic, symbolic or indexical sound sign; as having connotations that are implied by the sound; or as a trope such as a metaphorical, metonymic, ironic or synecdochical sound sign. In the absence of sufficiently clear evidence a process of assimilation or accommodation of the new sound sign into the code may take place through which the film text can be understood (Blauert and Jekosch 2005, 200-201).

Ambiguity is one of the most useful techniques in the production of a soundtrack with which to engage the audience. Walter Murch advocates a stretching of the sound-image relationship in order to create a tension between the literal evidence of what can be seen and heard and the relationship that is created in the mind of the audience (Murch 2000). Indeed for Murch it is this ambiguity, this incompleteness that is the source of the power of films, or any other representative art form:

> The danger of present-day cinema is that it can suffocate its subjects by its very ability to represent them: it doesn't possess the built-in escape valves of ambiguity that painting, music, literature, radio drama and black-and-white silent film automatically have simply by virtue of their sensory incompleteness -- an incompleteness that engages the imagination of the viewer as compensation for what is only evoked by the artist.
By comparison, film seems to be "all there" (it isn't, but it seems to be), and thus the responsibility of filmmakers is to find ways within that completeness to refrain from achieving it. To that end, the metaphoric use of sound is one of the most fruitful, flexible and inexpensive means: by choosing carefully what to eliminate, and then adding back sounds that seem at first hearing to be somewhat at odds with the accompanying image, the filmmaker can open up a perceptual vacuum into which the mind of the audience must inevitably rush (Murch 2000).

An example of Murch’s use of ambiguity is the moment in The Godfather (Coppola 1972) where Michael Corleone waits in the restaurant bathroom to commit his first murder. Accompanied by an unidentified metallic screech the sound-image provides an insight to the emotional state of the character through a semi-literal sound effect (nearby train?) that can be interpreted at one extreme as a manifestation of the character’s anxiety and conflict, or the external sounds from the listening perspective of the restaurant bathroom. Perhaps it can be understood as the reflection the character’s experience through the metaphorical use of a sound effect whose origin need not be visible or even diegetic.

In Antonioni’s Blow Up (1966), in which a photographer suspects he has witnessed a murder in a park, the sound of a click can be interpreted as a snapping twig, a camera shutter, or the cocking of a gun (Weis 2007, 3). Here the sound-image relationship becomes deliberately atypical rather than the usual one of sound supporting or reinforcing the images. The photographic blow-ups – normally indications of exactitude and reliable evidence – gradually become more blurred and less trustworthy whilst the soundtrack provides increasing clarity with multiple meanings, and therefore multiple interpretations. Used in such a way, deliberate ambiguity forces all but the least engaged audience member to find or create their own meaning in the sounds and images presented to them.

### 4.2.4 Abduction - Example from Once Upon a Time in America

The Peircean model gives us a range of concepts that can be applied to illuminate the role of sound in film. Firstly sound representations themselves can be conceptualised as iconic, indexical and symbolic. Secondly the process of interpreting the sound signs can be framed using the Peircean concept of abduction as a separate logical process from induction or deduction, incorporating the role of the interpreter in creating meaning.

We can illustrate some of these concepts in practice taking the example of a particular use of the sound sign of a ringing telephone from the film Once Upon a Time in America (Leone 1984). The following storyboard elucidates the sequence.
The sequence begins with Robert de Niro’s character, Noodles, in the Chinese theatre looking at a newspaper showing pictures of three men.

We hear the sounds of the visible scene.

We then hear a telephone ringing that Noodles responds to by trying to cover his ears while the ringing continues.

The telephone sound appears to be natural and we assume that he has heard it and is distracted or upset by it.

He is soothed by an attendant and lies down.

We can still hear the telephone ringing as he stares at the lamp and the scene changes.

The picture dissolves to a night time scene with three dead bodies being photographed, covered, body-bagged and tagged by police.

In addition to the sounds of the visible scene, we can still hear the regular sound of the telephone ringing, which continues throughout the scene.

Noodles is seen as one of the crowd of onlookers at the scene.

We hear the telephone ringing as each body bag is tagged with the name of the victim.

The picture cuts to a party scene Noodles is attending.

In addition to the sounds of the scene (party atmosphere, music) we still hear the telephone ringing.
Noodles leaves the party to go into a side room where we see a phone on the desk and hear a telephone ringing.

There is a short pause where Noodles hesitates while the phone rings again. Noodles picks up the telephone, but the sound of ringing continues and he begins to dial a number.

Noodles waits for his call to begin and we hear the sound of the ringing tone as Noodles would hear it, from his perspective.

The picture cuts to a phone on the desk of a Sgt. P. Halloran and we hear the now familiar telephone ringing.

There is a short pause and we see a hand move toward the phone. As it is picked up, the sound of a telephone ringing is immediately replaced by a loud, annoying, feedback-like noise.

The picture cuts back to the Chinese Theatre where the character is sitting up from his rest, again distressed, seemingly by the noise we can hear.

During this extract we hear the sound of a telephone ringing almost continuously over the three and a half minutes from the moment we first hear it (06:12) until the moment it stops (09:47). The sound crosses multiple scenes and along the way we may make many abductions about the location of the sound, which have to be modified in light of new signs, and so new abductions are made in terms of its physical location, or the scene the sound belongs to as it straddles scene boundaries. When we are finally presented with the image of a telephone that appears to match the sound, we seem to have finally found the sound source. Immediately this seems not to be the case since we can hear a telephone ringing at the same time as the telephone we can see is being dialled. When we finally see the second telephone, we are now at the end of a procession of abductions that end only when the ringing sound finally ends, though we are still not entirely sure of the origin or meaning of the ringing sound.
The initial object (a telephone) being represented goes through various changes as we make new hypotheses as to the source of the sound from the signifier (the ringing sound), from our own experience, and also from our knowledge of films since we may be aware that sounds and music can cross scene boundaries. The initial object has certainly changed and has moved locations several times. The interpretant (the meaning of the ringing sound) has undergone similar variations, from initially the audible source of the character’s discomfort and distraction, through to a final interpretant that is never fully explained. The signification of the telephone ringing appears to be related to the chain of events we have just witnessed, in which the character was involved. The initial interpretant is then different from the dynamical interpretant, while the final interpretant may never be completely apparent, or perhaps may only become apparent long after the film has finished.

Since the ringing sound remains identical throughout the whole sequence, and the meaning of the sound sign changes, we can say that the meaning of the sign is not contained in the sound itself, but in its interpretation(s). This example shows how the creation of meaning by the hearer/viewer is a continuous process involving prior experience and the conventions of cinema, and which evolves as other signs, interrelationships and contexts require previous abductions to be modified. The filmmaker then does not create the meaning alone, but rather lays the groundwork for the interpretation of signs, and thus for the creation of meaning by the audience.

4.2.5 Peircean semiotics and music

Music has cultural associations or ‘embedded meanings’ that provide a rich variety of ways in which a film, place or character is viewed or interpreted.43 Music, when viewed as a sign in a semiotic analysis, can be understood as a vehicle for a range of different elements of communication as a sign system. First, we understand music as one of the learned codes of cinema, which contains familiar musical elements, such as theme music, the use of orchestral music as an indicator of a ‘Hollywood film’, or simply the use of non-diegetic music, ragtime music played on a slightly detuned piano as a symbolic representation of a wild west saloon, or the use of leitmotif to attach a musical theme with a particular character.44

43 ‘Embedded meanings’ or embeddedness is not an inherent property of the music itself, but instead is a culturally learned, and determined, association with the music.

44 ‘Leitmotif’ is a musical term, referring to a recurring theme that is associated with a particular character (or place, or idea) popularised by Wagnerian opera. See Glossaries – Film and sound terms: ‘leitmotif’.
Second, the music can contain symbolic representations of the musicians who wrote and performed it, particularly where the music is recognised. The music associated with the character(s) become fused with the character and the lyrical content, or associations with the music, its performer or writer are attached to the character, such as the lyrics in the song ‘Everybody’s Talkin’’ from Midnight Cowboy (Schlesinger 1969). For example, non-coded or semi-coded lyrics can offer a deeper or alternative reading of what we are experiencing and how we interpret the characters on screen. In this example, the music is used to offer an alternative view of naïve optimism, which is in opposition to the visual representation of the character (Potter 1990, 93-100).

Third, music can be viewed as a second text that is embedded in the film text, bringing with it a range of meanings and references outside the filmic text that can be overlaid on to its new context. This intertextuality between film and music is overt, with the music being embedded into the film. For example, in Dr. Strangelove (Kubrick 1964), the music in the opening sequence is a lush, orchestral piece of music. By itself it is not unusual as a piece of ‘film music’, although perhaps a strange choice for an opening title sequence showing two US Air Force aeroplanes refuelling in mid-air. The romantic music seems at odds with the visual images, yet when combined with the distinctive comic book hand-drawn titles, which again do not seem to match either images or music, we are getting contradictory messages, especially given the prominence of the full title of the film (Dr. Strangleove or: How I Learned to Stop Worrying and Love the Bomb). Closer inspection of the music, to those familiar with it, will show it is actually an instrumental version of the love song, ‘Try a Little Tenderness’ (Campbell, Connelly and Woods 1932). As such, we are invited to make a connection between the now sexualised images (through the associated romantic music) of one plane ‘refuelling’ another. This being the opening sequence, such a combination of serious images being subverted by the musical soundtrack provides an invitation to see the rest of the film in light of this illuminating allusion. As well as requiring (or at least encouraging) the audience to make connections between the images, the opening titles and the music, the music refers extra-textually to a work that is itself a recognisable media representation of ‘romance’ or ‘love’. It is important also to recognise that the secondary interpretation of the music need not be immediate. It may well be noticed immediately, or sometime later during the film, sometime after the film, or not at all. Peirce’s differentiation between immediate and dynamical object and interpretant allow for interpretation and reinterpretation in the light of collateral experience.

Music used in this way is more indirect, requiring audience expectation and recognition of musical forms to add meaning through synchronisation (or juxtaposition) with images. Written in 1932, the song had been recorded by many artists, such as Bing Crosby and
notably Otis Redding in 1966 two years after the film. This made the music more recognisable still to a new audience in the years following the film’s release, thereby increasing the connotative content of the sequence, illustrating the unlimited semiotic potential of extra-textual influences affecting the interpretation of an historical and supposedly fixed film. Our understanding of the film might then be modified by time or collateral experience, which influences our interpretation of the content of the sign in the film. In Peircean semiotic terms, we may well have an initial interpretant for the film (or for this piece of music in the film) as we first experience it, and later this interpretant may be modified, whether during the course of that viewing, or when watching the same film years later.

On-screen music, such as that used in a musical or where characters play or sing, has both a literal, indexical, signifying quality, as well as other embedded and connotative qualities. In scored music even the simplest musical sequence has a multitude of possible meanings and readings, since music is so loaded with cultural, historical, and social meaning. Even where completely original music is used and the individual instruments and voices are unrecognisable, the music itself stands alone to add meaning to the film since the musical sounds have iconic properties regardless of their origin or associations. The musical characteristics (instrumentation, arrangement, musical style, tempo, and so on) will force the images or the film as a whole to be interpreted through this filter by the simple act of synchronisation with the images. Where existing music is incorporated into a film, the original music’s meaning works with the new context to create further meaning through synchronisation, or juxtaposition with images.

The music may be sympathetic to the time and period of the film, or it may be in contrast to it. Just as in the eighteenth century Mozart signified the action taking place in a Muslim country through use of instruments associated with Turkey (Deutsch 2007, 7), cinema has taken on the same idea, using instrumentation to indicate or reinforce a particular era or location in sympathy with the diegesis of the film. Conversely, films can also dispense with a musical approach being dependent on, or sympathetic to, the mimesis or diegesis. For example, Vangelis’ score for *Chariots of Fire* (Hudson 1981), is seemingly at odds with the world of the story in terms of style and orchestration, and which may therefore invite the audience to make connections between the music and the images that it accompanies.

45 ‘On-screen’ music, or ‘diegetic’ music, is often referred to as ‘source’ music to distinguish it from ‘score’ which is typically non-diegetic. Although the distinction is not clear cut, since a good deal of on-screen music is augmented by non-diegetic music blurring the line between on-screen and off-screen, diegetic and non-diegetic. ‘Scored music’ refers to music that is non-diegetic. Whilst it frequently refers to orchestral music, it is used here to mean any element of the soundtrack that is musical and does not emerge from the narrative story world.
Music can embody specific meanings dependent on cultural specificity and history. To a British listener the hymn ‘Amazing Grace’ (Newton 1779) may conjure up images of pipers and the Scottish Highlands, or some loose idea of ‘Scottishness’, funerals, or a sense of hope. The hymn was composed by a former slave trader John Newton, who converted to Christianity and subsequently became a minister. Since its popularisation in the US the same music heard by an American may represent the Ku Klux Klan and slavery as it has been closely associated with both the organisation and that period of American history. Since the 1960s it has also been linked with the American civil rights movement. Rather than simply a hymn, ‘Amazing Grace’ is then “taken seriously as cultural artefact loaded with a history of greed, oppression and hope” (Yenika-Abbaw 2006, 353).

While cultural differences such as these would obviously make symbolic or indexical use of music fraught with danger, music is often rich in meaning and can be put to service in films to either augment or contrast with the other visual or sonic elements. Examples abound, but in terms of instrumental music alone, the use of music in 2001: A Space Odyssey (Kubrick 1968) is an example par excellence. Again the Peircean concept of the dynamical interpretant takes account of the changing understanding from a seemingly stable sign object. The music that accompanies the opening title sequence is Richard Strauss’s Also Sprach Zarathustra (op. 30, 1896), which is a majestic piece of music fitting to open such an impressive film. Stephen Deutsch points out that the music was composed as a eulogy to Friedrich Nietzsche, who wrote a work of the same name that contains the line, “What is ape to man? A laughing stock, an object of shame and pity. Thus is man to Superman” (Deutsch 2007, 13). Given the subject matter of the film (the three stages of mankind – the ape, present day man, and starchild/superman), there is what appears to be an obvious reference to the Nietzsche work from its opening sequence, which then informs the whole film. The same music accompanies the transition from ape to man, and from man to starchild. Kubrick himself, though, seemed to distance himself from that interpretation of the music, arguing that he simply did not have time to use the score that Alex North had written, and in any case preferred the ‘temporary’ music he had been using during editing (Ciment 2003, 177).

The employment of pre-existing music as the soundtrack score to transfer some of the embedded meaning to the film is commonplace. Often filmmakers will select pre-existing music precisely because of the connotations it brings with it. For example, Martin Scorsese (1990, 1995, 2004) often uses music as a shorthand way of describing a precise era in films, which span many decades, and simultaneously uses particular pieces of music for its associations. The music then fulfils a dual role: efficiently indicating the era through the particular music choices, whilst allusions to the content of the titles of the songs, their lyrics, or their performer provide extra-textual information that can be brought to the filmic text.
From the use of Tony Bennett’s ‘Rags To Riches’ (Adler and Ross 1953) in the early part of 
*Goodfellas*, to The Rolling Stones’ ‘Gimme Shelter’ (Jagger and Richards 1969) years later, 
the music adds layers of possible meaning. The title and lyrics of each song can be seen as a 
reflection of the state of mind of the protagonist, Henry Hill (played by Ray Liotta), as he 
begins his mafia career in the mid 1950s with ‘Rags to Riches’:

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I know I'd go from rages to riches
If you would only say you care
And though my pocket may be empty
I'd be a millionaire
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Also his eventual decline into cocaine-induced paranoia in the late 1960s with ‘Gimme 
Shelter’:

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Oh, a storm is threat'ning
My very life today
If I don't get some shelter
Oh yeah, I'm gonna fade away
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In Peircean terms the music employed in this way uses both a symbolic link to the type of 
music, the artist, the performer, the title and so on, but also provides an indexical link to the 
artist and the era, acting as evidence of the period being presented.

### 4.2.6 Peircean semiotics and the voice

In the Peircean model dialogue in film provides iconic, indexical and symbolic 
representations, often simultaneously. The actor’s voice is at once iconic and indexical – it 
sounds like them and refers to them. Dialogue is also principally a symbolic sound, a spoken 
language that we decipher. Dialogue contains a good deal more than simply the language 
being spoken. Apart from its more obvious literal, linguistic meaning it contains myriad 
coded meanings about the speaker – accent, age, gender, status, authority, emotional state, 
and so on. It is tempting to think that the qualities that we attribute to voices are natural, but 
as with music, much of what we attribute to the ‘personality’ of the voice is culturally 
determined rather than inherent, and has to a large extent become naturalised. Just as we 
learn the language that we speak, we learn to associate characteristics by assimilating and 
accommodating new knowledge and experience.

Spoken dialogue can function as an iconic representation (in the case of a voiceover or 
imitation of a character), a symbolic representation (of familiarity in the case of the BBC 
Radio 4 shipping forecast), or as indexical representation (in the case of a telephone voice) 
as well as the obviously language-coded representation that we only perceive as *being* coded 
when we do not speak the language and are therefore all too aware of the coded and
symbolic nature of the words with which we are unfamiliar. Dialogue is routinely synchronised with images, even where the dialogue is a re-recorded version, in order to create a mimetic effect of reality experienced without mediation. The aim of film dialogue editing is usually the hiding of the artifice to present such a mimesis.

The use of dialogue as a sound sign can also extend outside the actual film. For example, take the use of actors’ voices in the production of animated films. On the one hand, the actor is not seen and therefore the only element of their performance that the audience can receive is through their voice. The manner, character, accent used to deliver the lines is the only part of the actor’s performance that is contained in the film. On the other hand there are both embedded and extra-textual inferences that an audience with prior knowledge can make.

For example, we could ask the question: Was Cameron Diaz cast for the singularity of her voice in the *Shrek* series of films (Adamson, Ashbury and Vernon 2004; Adamson and Jenson 2001; Miller and Hui 2007)? Her physical attractiveness informs the audience’s understanding of her character. However, the film is targeted as a children’s/family film, and many of the younger members of the target audience would not recognise her voice or even her name. Whether or not the audience recognises her voice, or whether this knowledge is gained through the film’s advertising or the credits of the film itself, may reorient the understanding of the particular character she plays. Either way, it would seem that the selection of Diaz relied on at least some of the audience being aware of to whom the voice belonged, and the filmmakers relied on this assumed recognition of the voice behind the animated frame in calculating their potential profits.46

This exemplifies what Kristeva termed intertextuality (1980, 66) and in Peircean terms is achieved through the interpretant itself becoming a new signifier since the object of the sign need not be a physical object but could be an idea, a person, an inanimate object, a film or anything else (CP, 8.184). The interpretant can act as a signifier for a further triad, and thus semiosis can continue since any interpretant can act as a sign-vehicle for the next sign. The voice of Diaz for a particular character has the potential for different avenues of interpretation. First, the filmmaker’s selection of Diaz can be seen as a deliberate choice with a view to exploiting her celebrity in the promotion of the film. Second, Diaz as a co-author in the film can be seen as communicating directly, as an actor through her character voice to the audience (whether to the informed audience as to the particular owner of the voice, or the uninformed voice as simply a female American voice). Third, the link between this particular animation film and other texts in which she has appeared can be seen as

\[46\text{ It should be noted that both Eddie Murphy and Mike Myers reportedly received a similar fee.}\]
creating a link to other films, magazines, televisions shows, and so on. Fourth, the assessment of Diaz’s performance can be seen in the context of other fantasy/fairy-tale animation female film heroines.

Another use of the voice is as voiceover, whilst being frowned upon by some, nevertheless conveys a wealth of significant information for the audience, whether the narrator is seen or unseen. Acousmatic voices (withholding of the visual origin of the voice) such as the wizard in The Wizard of Oz (Flemming 1939) or Colonel Kurtz in Apocalypse Now (Coppola 1979), or the mismatching of voice and body as in Sunset Blvd. (Wilder 1950) in which the voiceover comes from the drowned man seen onscreen, all allow the audience to create in their own imagination links between what they see and don’t see, and what they hear, and don’t hear.47

The privileged voiceover of Barry Lyndon (Kubrick 1975) provided by Michael Hordern, reflecting some of the authorial voice of the original Thackeray book, serves several purposes. It frees the filmmaker from lengthy expositional dialogue. It economically gives story information that does not need ‘dramatic weight’ (Ciment 1982). It provides a counterpoint to the portrayal of actors onscreen, sometimes sympathetic:

Barry’s first taste of battle was only a skirmish against a small rearguard of Frenchmen who occupied an orchard beside a road down which, a few hours later, the English main force would wish to pass. Though this encounter is not recorded in any history books, it was memorable enough for those who took part.

and at others providing an amused commentary:

A lady who sets her heart upon a lad in uniform must prepare to change lovers pretty quickly, or her life will be but a sad one. This heart of Lischen's was like many a neighbouring town and had been stormed and occupied several times before Barry came to invest it (Kubrick 1975).

Michael Hordern’s voice is variously wise, world-weary, ironic and playful. In addition, and perhaps surprisingly, the voiceover sometimes pre-empts the action we are about to see. Being told in the voice-over that Barry’s son is going to die whilst we see him happily playing creates a stronger dramatic effect than the surprise that would result if we were not forewarned. Such devices allow understated scenes to take on dramatic significance since the audience has extra-diegetic knowledge beyond that available to the characters.

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47 Michel Chion (1999) uses the terms ‘acousmêtre’ to describe such an effect, giving examples of The Wizard of Oz and Psycho. Walter Murch (2000) includes examples from his own films, such as Apocalypse Now and American Graffiti. See Glossaries – Film and sound terms: ‘acousmêtre’.
The auditory qualities of the speech-sound also have a functional use beyond their literal and symbolic meanings. In their study on the way young children use television entitled ‘The Sound Of Children's Television - Or Why It Makes Sense To Watch Television Facing Away From The Screen’, Johansen and Graakjaer (2007) found that, even in the very youngest audience, sound performs some fundamental functions:

…it co-establishes a comforting and familiar visual and auditory background (caused by the music score and the many repetitions and recognizable voices and effect sounds), it attracts attention (understood as presence and the audience's focus on the screen), and it contributes to continuous attention (Johansen and Graakjaer 2007).

That sound can perform these functions without the continuous need for visual attention indicates some of the advantages of using sound as a means of establishing the structure of an audio-visual text, such as a television program or film. It also indicates the usefulness of the soundtrack to both attract attention and hold that attention. For example, speech can be used both in a literal way and as a way of characterising the person speaking, such as a low-pitched, slow, strong voice, characterising a big and heavy body. In addition, the multitude of distinctive character voices can be exaggerated to allow separation and identification of multiple characters.

In traditional use of dialogue, the character’s speech is recorded initially during shooting. The simple act of recording (and subsequent synchronization) acts as a guarantee of indexicality between sound recording and image recording. Where the character is on screen but we do not see voice coming from the character’s mouth, such as Darth Vader in Star Wars or HAL in 2001 we have only the merest suggestion of indexicality to attribute the voice to its character. The characteristics of the voice – its iconic qualities and its symbolic qualities – can be manipulated since there is no connection between the character being filmed and the required voice. Darth Vader’s physical character was played by David Prowse, a former bodybuilder whose physical stature suited the role, whilst his voice was recorded to act as a reference for later rerecording since it would be replaced in postproduction by the voice of James Earl Jones. The voice of HAL was provided by Douglas Rain. In both cases the expressive properties of the voice and the character suggested by the voice (combined with the physical/visual representation) are crucial to the interpretation of the character since the character’s visible representation expresses little (in the case of Vader) once it has been established; where HAL has no visible demeanor at all.48

48 Interestingly, both HAL and Darth Vader appear on the AFI’s 100 greatest screen characters with Darth Vader being placed 3rd and HAL being placed 13th. http://www.afi.com/docs/tvevents/pdf/handv100.pdf
Peircean semiotics allows the use of the voice to be described and analysed according to their various functions. Their iconic, indexical and symbolic elements can convey a myriad of meanings both within the text and extra-textually. The symbolic aspect of language is both obvious yet simultaneously hidden. A native speaker no longer thinks of their language as a learnt code where an unfamiliar foreign language is most obviously exactly that. The human voice tells us much about its unseen owner through its iconic properties and our learned associations with those properties. When combined with a visual representation the sound of the voice works to reinforce the legitimacy of the representation through its apparent indexicality, even where the indexical link between voice and image is an artificial construct.

4.2.7 Peircean semiotics and sound effects

Sounds that are neither dialogue nor music are perhaps the broadest and least specific group to describe since they encompass nearly all sounds.\footnote{‘Sound effects’ or simply ‘effects’ are used for the sake of convenience but it is worth pointing out that effects can be musical, indeed each of the three broad categories of music, dialogue and effects can at times function as either of the other two groups. For example, dialogue can be also used as a sound effect as well as music.} As with dialogue and music, we may develop associations with particular sounds and are able to recognise and categorise sounds from their similarities to other sounds. Unlike dialogue and music, we may not have the coded formal framework onto which the sound is overlaid, but instead their characteristics are used to pass on meaning either on their own or in conjunction with images. In Peircean terms, then, effects then can be used iconically, indexically and symbolically whilst never referring to spoken or written language. Their mimetic abilities can be combined with their metaphorical weight to carry connotations. They are like sonic Trojan horses. Effects are an unspoken language that has the potential to be understood by anyone.

Sound effects can contain a wealth of iconic and indexical information about the source of the particular sound, including its size, solidity, weight, material and so on. For example, someone who has never heard the sound of a leopard can, upon first hearing it, use their experience of the world and experience of hearing similar sounds, to begin to categorise the sound, first, as a living creature. They may also get some idea of the size using a fundamentally useful formula or rule of thumb: the deeper the sound the larger the animal. In addition, they may also have some clue as to the type of animal, which may indicate some level of fierceness, perhaps.

The synchronisation of a sound provides an indexical link to its origin: the sound of dialogue from the on-screen actor, the gunshot from the car, the ring of the telephone. The iconic
qualities of a sound – how closely it is identified with a specific source – allow a sound to be used to represent its source. Frequently, the two are used together, as in the process of synchresis wherein an original sound is replaced for one that better suits the task. The new sound, being synchronised, is given an indexical quality to tie it to its source, whilst its iconic and symbolic qualities are then transplanted onto the new source.

Frequently sound effects are used because of the embedded information that they bring with them to their audiovisual marriage. Designed sounds for specific machines, creatures and places often begin life not as a completely new or synthetic sound, but rather as an existing sound that exhibits some of the feel or type of sound required, without necessarily being instantly recognisable as such and therefore risking drawing attention to its self. In *No Country for Old Men* (Coen and Coen 2007), Craig Berkey created the sound of the air-tank driven cattle gun – the weapon used by Javier Bardem’s character Anton Chigurh from a pneumatic nail gun:

“I wasn’t looking for authenticity, so I didn’t even research cattle guns,” he said. “I just knew it had to be impactful, with that two-part sound, like a ch-chung” (Lim 2008).

As long as the sound is synchronised sufficiently to satisfy the mimetic requirement, the actual sound of the object in question is almost irrelevant, providing the basic expectations of sound/image and sound object/physical size match. Through the process of *tertium comparationis* we use our ability to create a meaning, to create a unified sound/image that is not only plausible but that carries the required characteristics of mechanised, understated, and un-emotional power, which perfectly fits the character of Chigurh.

Such non-literal, or metaphorical uses of sounds predate the advent of synchronised sound in film, and illusory sounds can be traced back to Shakespearian theatre and further back into the ancient Greek theatre of Aeschylus, Euripides and Sophocles (Brunelle 1999). Sound effects with a comedic purpose have a long history in cinema and the films of Laurel and Hardy and The Three Stooges made great use of sound effects. Exaggerated synchronised sounds for stomach punches (a muffled kettle or bass drum), cracking knuckles (cracking walnuts), eye pokes (ukulele or violin plinks) (Brunelle 1999) created a genre of slapstick humour impossible to present silently.50

Naturally, a brick on the head would hurt, but when it's coupled with the hollow sound of a temple block, it suggests that the person's head is empty. This magically transforms a violent act into a humorous one and makes it less painful (Brunelle 1999).

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50 Though many of the same ideas were presented prior to synchronised sound films in Vaudeville (Brunelle 1999; Johnson 1989).
For Mel Blanc, who voiced an array of characters for Warner Brothers and later Looney Tunes cartoons, sound effects were there to actively counter a sense of realism: “The real challenge for any animated-film sound effects man wasn’t to simulate realism but to defy it” (Blanc and Bashe 1988, 83). Such overt use of a seemingly violent event with a recognisably ill-fitting sound equivalent helps to create the sense of un-realness required to make the comedic effect. The sound-sign is recognised as being ill-fitting and unreal, and its use must be interpreted to give it meaning. In Peircean terms, the interpretant is derived from the recognition that the sound-signifier is unrealistic.

Were these same events to be treated in a more realistic manner, the entire feel of the film would dramatically change. Conversely the realistic, or hyper-realistic, sound effects used in film frequently come from unlikely and inexpensive sources, which once separated from their origin, can marry up to their new visual partner. The sound of skulls being crushed by a robotic foot in Terminator 2 (Cameron 1991) is actually a pistachio nut being crunched by a metal plate. When the ‘T-1000’ robot turns to liquid to move through the bars of a prison, the sound is that of dog food being sucked from a can (Kenny, cited in Kelleghan 1996).

Foley artists create sounds that match the onscreen actions that we can see. They may be required where the original recording is being discarded, in favour of a new dialogue recording, or they may be used to augment or replace the existing recording. In either case, the role of the foley artist is principally concerned with choosing and using sounds for their iconic qualities. Foley is often not merely the simulation of actuality but the accentuation of actuality, making things sound more real than the actual thing. Once performed and recorded, the new iconic sound is also an indexical link through synchronisation and becomes the new sound of the visible event.

### 4.2.8 Lapsed sound signs and emergent sound signs

Signs can lose their potency to carry the information that they once had. Where previously ships and trains were symbolic of departure (Barthes 1972, 66) airports might now be a more useful symbol. A train might trigger a nostalgic memory of the past for some, but for others it stands as a representation of communal, rather than individual, travel; or the high speed modern city transit; or the mode of choice for the deadbeat, the criminal, the late night reveller. The Peircean model again allows for signs to be interpreted differently over time, and through modified context; using the conceptions of immediate and dynamical object, and similarly, immediate, dynamical and final gradations of the interpretant.

Rachel Lawes (2002, 254-258) describes how signs are in a state of flux where some become lapsed while others are emergent. The steam train is an example of a once-potent
image (visual and sonic) that is slowly lapsing as its relevance diminishes. Other lapsed or lapsing sound-signs might include the ‘record player scratch’ typically used as a metaphor for someone being wrenched from a day dream back to reality. As the number of people who have used a record player diminishes, its usefulness as a representation of anything comes only secondarily through its use in other media texts rather than as a first-hand representation of a familiar sound with additional cultural significance. This could also mean that, as a sound-sign, it changes as it becomes a reference to previous audiovisual texts. The sound of the record scratch is no longer directly linked to the event, but is now one step removed as it is the sound that simply represents ‘being wrenched from a daydream back to reality’. The arbitrary nature of the bond between the signifier and signified is now stretched further such that an already metaphorical link between the record and the person daydreaming is now semiotically coded as a more universally recognised sound-sign of the situation.

The division of both object and interpretant in Peirce’s model of the sign allows for the gradual development or modification of meaning in both lapsed and emergent sound-signs. For such a sound-sign to have meaning, it must first be recognised as a sign, and its initial object and interpretant need also to be recognised and interpreted correctly in order for the sign to function. In the case of a lapsed sound sign, a complete failure to recognise the sound-sign will obviously preclude its correct interpretation. Similarly, where the initial object is recognised, it may not represent the subsequent desired object and interpretant and so the intended message is lost.

Just as sounds can go out of fashion, new uses of sounds can also evolve. One emergent sound symbol that appears to defy conventional film practice, is in the use or deliberate avoidance of sonic backgrounds in films. Backgrounds are often used to smooth out differences in production sound recordings in order to ‘hide the joins’. They also have a secondary use of giving a subliminal sense of place or mood. A new realism code appears to be emerging where the traditional use of backgrounds is being partially abandoned. In a series of forum discussions entitled *A Trend Away From Ambience* some sound editors expressed concern at the way sound backgrounds were increasingly being subverted to simulate a more amateurish content. Others recognise the move as part of the constant shifting of signs between emergent, stable and lapsed:

> In a time when the media that is understood to be the most real is amateur YouTube videos and reality TV, it makes sense to me that directors will want a sound quality that feels raw and closer to what this new reality sounds like. It’s a clever way to give a sense of authenticity (Dávila-Irizarry 2009).
This new sound sign, amateurism as a signifier of raw truthfulness, indicates how sound signs can change in terms of what they represent. In Fahrenheit 9/11, Michael Moore (2004) used a black screen and only amateur audio recordings from the scene as it was happening to represent the collapse of the World Trade Centre. A similar change has happened with visual images, the emergence and widespread use of hand-held camera techniques to simulate or symbolise a personal or documentary feel, as opposed to a premeditated ‘Hollywood’ treatment. Here the immediate object and its immediate interpretant become dynamical object and interpretant to represent something different. It is worth remembering that in each case, whether lapsed or emergent, the use of sound-signs is contingent on external factors and relies on the learned interpretation for the eventual meaning of the sign to be determined.

4.2.9 Function of sounds revisited

Sound has multiple and simultaneous roles in film. Spoken language can be informational (narrative) as well indicative of the emotional state of the speaker, their physical size, their social position, their age, and so on. Noises and sound effects can be narrative, expressive, synchretic or subliminal whilst giving clues to the environment, mood, geography or historical period. Music alone can range from subliminal to overt, from empathetic to anempathetic, and either originating within the story world or being part of the musical score.

For example, take a dramatic hospital scene with patient, surgeons and nurses. The sound alone can convey multiple messages simultaneously (see Table 4). Of course, it is neither required nor desirable for sound alone to carry the entire range of meanings for film. It is the combination of sound and image that is most potent. The sound elements, when coupled with the visual can provide a more powerful message than either can produce individually. In Peircean terms, sound used in conjunction with images can work to convey information that is designed to contain both overt and covert meaning, using a combination of our prior knowledge and allowing or encouraging interpretation of the narrative elements through the process of abduction, induction and deduction. Its iconic properties, indexical relations and symbolic meanings allow for expositional, explanatory, narrative, emotional or realistic functions to be conveyed.
Table 4 – Sound classification example for a hospital scene

<table>
<thead>
<tr>
<th>Description</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dialogue</strong></td>
<td>Character, voiceover</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Synchronous Effects</strong></td>
<td>Beeps, snips, clothing</td>
</tr>
<tr>
<td><strong>Backgrounds</strong></td>
<td>Busy hospital, murmur of ward, quick footsteps, trolleys, more distant voices</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Music</strong></td>
<td>Score</td>
</tr>
</tbody>
</table>

### 4.2.10 Filmic sound realism

According to Peirce, our understanding of the reality of the world comes through hypothetical reasoning determined logically by previous cognitions:

We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts.

We have no power of Intuition, but every cognition is determined logically by previous cognitions (W, 2.213).

Similar to our lived experience of actuality, we interpret film reality through signs and our hypotheses based on our experience and previous thoughts. These hypotheses and experience accumulate to produce a framework with which we represent reality.

Few films totally abandon a sense of sound realism, yet the idea of film sound realism as a construction is one that is often hard to appreciate. Film sound is designed to be unobtrusive with the result so naturalised as to be synonymous with actuality. In order to create a representation that will appear to be realistic, the soundtrack has to appear to be realistic, or at least match the conventions of realism. The depiction of film sound realism, though, has to be learned. The initial development of the reality codes of sound realism resulted from cinema’s need for intelligibility when compared with the actual lived experience of hearing and seeing the world. Conventions of photography, film editing, narrative structure and so on, have evolved over a period of time rather than being brought down from the mount as
tablets of filmic truths to which all films adhere. Indeed they remain in a state of flux. The conventions of filmic realism that were present in the 1950s are markedly different from 21st century modes of realism. The codes and conventions have changed, and some sound representations have now lapsed: the absence of background noise in 1940s film in order to preserve the intelligibility and naturalness of the voices, or the short-lived attempt in the 1930s at sound-scale matching in which the intensity of sound decreases exponentially with distance from the source (Altman 1980b, 48-50).

These realism codes, understood as a system of structures that function as a representation of believable reality that are learned and built upon to the point where they become naturalised, can then be analysed in terms of the sound-signs they use to represent the reality. Altman (2004, 17) points out that assumptions about film realism, focusing on iconic and indexical representation, can divert attention away from the fact that “[b]oth the reality that is represented and the process of representation itself are already coded.” Whilst the sound of the dialogue is an obviously iconic and indexical representation of the actor speaking, the clarity through recording choices and technology, and the surrounding sounds are as much constructions as naturalness. The supporting conventions of film sound realism provide the framework onto which the dialogue is fixed as its subject.

Documentary is often invoked as a realist film code. Yet documentaries are constructions just as fiction films are constructions. The codes that make documentary recognisable as a form often seek to hide the artifice of the process and the technology used to create the artifice just as much as dramatic films do. Documentary sound realism matches our experience of other representations of sound realism. Realism in a film sense is not necessarily compared to actual lived reality but to other codes for representing reality (Altman 2004, 17). Fiction films that appear to be realistic often adopt the visual and sound conventions of documentary, such as the use of hand held cameras or rough sound, as applied in Cloverfield (Reeves 2008) or The Blair Witch Project (Myrick and Sánchez 1999), in order to give an unplanned feel to the film, which is used as an indicator of its reality. Here the code of documentary realism is being used by another code as a means of representing reality or indicating the authenticity of the representation.

Ideas about sound realism and authenticity are discussed in greater detail in Chapter 7. At this stage, we can say that realism is a learned system of representation that appears as natural. The familiarity of the style of representation begins to render the mediation invisible: “Ironically, the ‘naturalness’ of realist texts comes not from their ‘reflection of reality’ but from their uses of codes which are derived from other texts” (Chandler 2007,
Just as photographic representation, when presented for the first time, has to be learned as a code of realism, all other realist codes have to be acquired rather than being intrinsic.

For example, spoken dialogue in film requires several things to be in place for it to succeed as a coded representation of reality: adequate synchronisation with the image; a standard/flat recording that does not draw attention to the recording process; a natural amount of reverberation to match the environment but not so much as to affect intelligibility; and consistency of treatment, both temporally for the individual character and between characters in the same environment. ‘Common-sense’ or ‘lived reality’ factors that do not support this particular reality code are negated. For example, sound-scale matching (in which sound level matches the distance of the source), directional matching (in which the location of the sound matches its visible origin), level of background sound and other conversation non-pertinent to the story, work against the coded reality and are either removed or reduced.

The difference between the interpretations of sound realism, as opposed to visual realism, is in the difficulty of analysis of the realist mode being employed. When we clearly hear two people talking in a café amid the murmur of background chatter and general ambience, the code of sound realism appears preordained as a representation of the reality. It appears to be the inevitable equivalent of the visible representation rather than a representation that is there by design. We literally see the image from the camera’s point of view and therefore can work out analytically, after the fact, that a camera was pointing in that direction in order to capture those images. The soundtrack, on the other hand, gives no clue as to the point of view of the recording source. Indeed, it may be made up of several sources, including individual (possibly multiple) recordings of each character’s dialogue, background ambience, walla, and so on, which combine to create the illusion of one continuous recording of the events portrayed.51 Not only that, but their consistency seeks to anchor the visual images and portray the edited visual images as one continuous sequence. The reality code of continuity editing largely depends on the acquiescence of the soundtrack in providing consistency across pictures edits in order to hide what would otherwise be abrupt changes in visual perspective.

The soundtrack, whether composed of a single complete recording or constructed from several individual recordings, will tend to appear to be not only a single unified element, simply ‘the soundtrack’, but will also become naturalised as a consequence of the image. Compared to the images, which are an artistic choice, the sound that accompanies the image

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51 See Glossaries – Film and sound terms: ‘walla’.
tends to be treated as an inevitable consequence, and sounds how it sounds because that is what it sounded like. The visual representation forces a particular single point of view, or multiple points of view brought together through editing. Assuming for a moment that the multiple camera views could be synchronous with the action the resulting footage can be seen as realistic (if one is willing to accept that the actors ignored the fact that a film camera was pointing at them as they spoke).\textsuperscript{52} The strength of the realistic code at work in the soundtrack is that it hides any trace of its artifice. The realist code then allows “signifier and signified appear not only to unite, but the signifier seems to become transparent so that the concept seems to present itself, and the arbitrary sign is naturalized by a spurious identity between reference and referents, between the text and the world” (Tagg 1999, 271).

### 4.2.11 Conventional sound codes

We have seen from this analysis of the role of sound in film that the development of a standardised representation system for using sound in films was not linear and inevitable but was achieved through trial and error. In addition, filmic representation is both stable in the sense that it is part of a system that can be understood, whilst at the same time being in flux, as new representations and films add to the canon of possible representations. Experiments in sound-scale matching and sound-image panning originated as common sense practices that were superseded by codes that are not grounded in reality, but that nevertheless have been adopted as the standard, and are now normalised to the extent that they have become ‘invisible’.\textsuperscript{53} The question now to be addressed is the extent to which Peircean semiotics can aid in our understanding of how film sound works.

Referring back to the functions of sound in film, but this time through the semiotic lens, Chandler (2007) defines the codes at work in the development of the sound conventions in popular film:

- diegesis – sounds should be relevant to the story;
- hierarchy – the privileging of dialogue over background sound;
- seamlessness – no gaps or abrupt changes in sound;
- integration – no sounds without images or vice versa;
- readability – all sounds should be identifiable; and

\textsuperscript{52} In typical practice they are not; a single camera system is the norm in feature filmmaking, where multiple takes of the same scene are filmed from different angles in order to create coverage from various points of view.

\textsuperscript{53} See Glossaries – Film and sound terms: ‘panning’. 
• motivation – unusual sounds should be what characters are supposed to be hearing.

Film codes of narrative, characterisation, themes, setting, iconography, and film techniques create consistent representational norms that we use to make sense of the signs that are presented to us. Whether the codes are received in their entirety is dependent on the widespreadness or otherwise of the code itself. In musical examples an operatic reference such as the use of Wagner’s ‘Ride of the Valkyries’ (1851) in *Apocalypse Now* may well be missed by the majority of the audience where a popular music reference such as ‘Satisfaction’ (Jagger and Richards 1965) in the same film, being one which is more widely experienced, rather than formally acquired or learned, will have a greater chance of being attributed specific extra-textual meaning. This broadcast or narrowcast differentiation of codes can be applied to sounds that are more or less, literal, specific or accentuated in terms of competing sound-signs (Chandler 2007, 170), such as foregrounding in the soundtrack.

As with other types of sound-signs, the division of the object and interpretant in Peirce’s model can be applied. The immediate object of the sound-sign is the music, and the immediate interpretant may well be recognition of the music or its performer. In the case of the *Valkyries* the subsequent dynamical interpretant may end up as a recognition that the music is ‘classical’, or ‘cinematic’ or it may simply be that it ‘fits’ the film because of the iconic properties of the musical instruments in the arrangement, which meld well with the images portrayed on screen. For others, the *Valkyries* music may be recognised to a lesser or greater extent: the name of the music, or Wagner as its composer, or its origin in his *Ring Cycle*. It may be that then the viewer/listener hears that music and brings them it way of interpreting the music as a symbolic representation, which informs the film, offering parallels from another text to the film in question.54

It should also be noted that films are routinely produced with multiple soundtracks, or foreign language versions (FLVs), which have different dialogue, and often (as a by-product of the removal of the original language dialogue) foley recordings replace what has been removed. In addition, FLVs may contain different music from the original language version. *2001: A Space Odyssey* (Kubrick 1964) contains the song ‘Daisy Bell’, which is sung by HAL as he is shut down. In the FLVs this song is replaced variously by ‘Au Clair de la

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54 Valkyrie, (“Chooser of the Slain”), in Norse mythology, is “any of a group of maidens who served the god Odin and were sent by him to the battlefields to choose the slain who were worthy of a place in Valhalla. These foreboders of war rode to the battlefield on horses, wearing helmets and shields; in some accounts, they flew through the air and sea. Some Valkyries had the power to cause the death of the warriors they did not favour; others, especially heroine Valkyries, guarded the lives and ships of those dear to them”. [http://www.britannica.com/EBchecked/topic/622196/Valkyrie](http://www.britannica.com/EBchecked/topic/622196/Valkyrie)
Lune’ for the French version, ‘Hänschen Klein’ for the German version and ‘Giro Giro Tondo’ for the Italian version. In each case the song is chosen to convey a sense of a return to childhood for HAL as he becomes aware of his own mortality. The culturally specific nursery rhymes or folk songs achieve a similar effect in each of the versions of the film since the content of the song is largely irrelevant, with the song acting as a symbolic link to childhood and perhaps one of HAL’s earliest memories. As the music is a deliberate choice across the multiple language versions of the film, it is clear that it is not the music that is important, but rather the desired outcome from the use of the music. In Peircean terms, the music acts as a sound-sign that leads to the eventual dynamical interpretant, which is the emotional link to the sense of a return to childhood.

As illustrated in the previous example, there are cultural as well as social and political influences on the production and reception of signs. Where a sign is used in a film that has multiple meanings dependent on the audience, there is a possibility of multiple different interpretations. Through an understanding of the semiotic approach to communication, we can determine how sound is used to create the meaning that is intended. At the same time, in making deliberate choices about the signs that are used in communicating, we are adding to the wealth of signs that are made and received without a conscious recognition. As Umberto Eco points out “It does not demand, as part of a sign's definition, the qualities of being intentionally emitted and artificially produced” (Eco 1979, 15). This is an important point since a great many of the signs we produce we do so unknowingly. They can nonetheless be interpreted in some way by others, rightly or wrongly. Rick Altman points out in his critique of genre theory that each individual creates their own interpretation of a particular mode or genre, governed by their own experience and partial knowledge. Every communication then is also in part a miscommunication (Altman 1999, 174).

Stereotypes can be problematical. For example, using a foreign language to represent indecipherability may have unintended consequences for those who can understand what is being said. Nevertheless, stereotypes are useful and powerful. A study by T.A. Ryan and C.B. Schwartz showed that a cartoon drawing of a hand is more quickly recognizable as a hand than a photograph of a hand (in Chandler 2007, 66). Cornflour and salt being substituted for snow is the classic example from radio and film sound in which the essence

55 In addition, some of the songs chosen have a historical or cultural significance. *Daisy Bell* was the first song sung by the IBM 7094 computer at the Bell Laboratories. *Au Clair de la Lune* was the subject of an 1860 phonautograph paper recording of a human voice. This was recently recovered and predates Edison’s first sound recording. See: [http://www.nytimes.com/2008/03/27/arts/27soun.html](http://www.nytimes.com/2008/03/27/arts/27soun.html)
of the object conveyed through an artificial sound-sign can act as well or better than the actuality of the object.\textsuperscript{56}

### 4.2.12 A metaphorical approach

Successful film sound editors and sound designers use their education, training, instinct, experience and educated guesswork to create sounds for objects that either do not exist or that cannot be recorded. This is where sound is used metaphorically. The use of existing sounds, or combinations of sounds, to replace or augment existing recordings, or to create the sounds for artificial monsters or machines allows the fantastic to be created from the mundane, and the new from the old. The working practices of sound designers rely on the fusion of sounds with images to create something new without overtly referencing its component origin.\textsuperscript{57} For \textit{The Incredibles} (Bird 2004), Thom’s process appears to be a metaphorical approach to the use of sounds, though he does not describe what he does in semiotic terms:

> The Velocipods, the flying saucers [in \textit{The Incredibles}], were a combination of new and existing recordings of Formula One racing cars combined with jet-bys. For something like that, the best place to start is to think in very general terms rather than thinking literally. For the Velocipods, that was they're fast and they fly. First, you think of everything you can that's fast, whether it flies or not, and whether it looks anything like a Velocipod or not. You listen, try variations, then make them faster by adding some artificial Doppler Shift and heating them up with added reverb - all of the usual stuff. Then, when you come up with a set of sounds that are emotionally and dramatically satisfying, you have to bring them down to earth, to where the sound is believable in the space it's in. To do that, you combine it with more conventional sounds and maybe some wind. Now you’ve got not only the sound of the object moving through the air, but the sound of the air itself. You combine all of those things in random ways and you happen upon a few really compelling moments (Thom and Droney 2005).

This explicit description of the creation of a set of sounds for a section of an animated film uses the embedded meanings of existing sounds that, from a semiotic standpoint, describes how the functional and iconic elements of the sound-sign are made to do exactly the job that they are required to do. In this case the sound-sign needs to act as a realistic and grounding voice for an imaginary machine, through synchronization and careful editing to match its visual counterpart, but also to contain enough symbolic or indexical information for a listener to attribute the object with the characteristics of existing recognisable physical things without being so explicit that any individual element is recognised.

\textsuperscript{56} The sound of footsteps in snow has long been created in a studio using a tray filled with cornstarch (and sometimes salt or cat litter) to give various levels of squeakiness or crunchiness as required.

\textsuperscript{57} The term ‘sound designer’ is used, although it could equally include background editors, dialogue editors, ADR editors, sound mixers and so on. See Glossaries – Film and sound terms: ‘sound designer’, ‘sound mixer’, ‘dialogue editor’.
Adapting the idea of *tertium comparationis* and applying it to the creation of new sounds (or sounds for fantastical objects), such as in this example, there is sufficient information within the sound-sign for it to work as a sound-sign that carries information and meaning about the object. Over a long period this same process helps in the creation and continuation of film genres, wherein an event or characteristic film element draws on existing knowledge from other films. Within a single film context, it could be the link made between visual object and sound. Equally the two could be linked only temporally – a visual image synchronised with a piece of music. Once that link is formed – the sounds for the velocipods in *The Incredibles* - we build our understanding through the combinations of sounds and images, and their metaphorical embedded meanings. The sounds that are chosen can both inform the interpretation of the object in question or, in the case of *Jaws*, allow the removal of one element (the visual) to create a sense of tension. Hearing the double basses without the other half of the sign, we are now conditioned to expect the shark to be close by.

There are various modes of sound representation expressed in both the sequence and Thom’s description of the creation of the sound for the sequence. First, the production of a sound that appears to be plausible or reasonable for the object. Second, the realistic representational treatments and its changing perspective to match the visible object. Third, volume mixing to support the physical reality of the animated object. Fourth, the creation of new composite sounds from existing sources with specific sounds. Fifth, the realism-coded continuity and environmental background sounds that ground the physical location of the sequence, and sixth, the mixing conventions that govern the balance between these sounds with dialogue and music.

The question remains: how can we apply the semiotic concepts described to explain how sounds can be used to help create meaning in film? Once understood in semiotic terms, any new piece of information, unless it is to be permanently abstracted and not incorporated into any understanding, will be compared to our existing knowledge and understanding in order to seek out similarities in our existing schema. For example, the sound of the velocipods (see the above figure), when heard for the first time in *The Incredibles*, is abstracted from its original source, and so the listener seeks ways of linking characteristics of that sound to something in their experience via the process of *tertium comparationis*. The characteristics of this sound-sign have sufficient information to create in the listener’s mind notions of something that is hard, metallic, grinding or spinning. When eventually combined with the visual image that appears to be a flying, rotating, metallic
vehicle, the velocipod’s sound-sign reinforces the visual image, and adds value to the representation as a whole. The sound is manipulated to accentuate the movements of the vehicle, such as the Doppler Effect, changing perspective – its swooping with respect to the character Dash who is trying to escape.\(^{58}\) The sound created is also characterful with its associations such as Formula 1 cars and jets (speed, manoeuvrability) and the knife sharpener (metallic, spinning).

The theoretical perspectives that underpin the design of sound-signs such as this can be traced to some useful semiotic concepts, and which augment other concepts, such as Chion’s idea of synchresis. The combination of sounds that create a lightsaber from *Star Wars* or King Kong’s roar, are each created from transposed elements, which contain enough embedded meaning to create a believable yet fantastic new sound in their new surroundings.

The sounds of the basement dungeon and prison hallway in *Silence of the Lambs*, and the deck of the Enterprise in *Star Trek* are created from elements that are at once familiar yet new. They contain enough information to give an idea without giving away their origin.\(^{59}\)

A different use of sound is illustrated by the film *Chopper* (Dominik 2000), which tells the story of Mark ‘Chopper’ Read, formerly a notorious violent criminal who had kidnapped a judge and who was in prison for most of his adult life. Mark Evans (2004) highlights how sounds and ambiences in *Chopper* function in a role more typically performed by music. As well as contributing to the development of the specific locations of the film they also help shape the narrative, through highlighting the use of relatively mundane television sports commentary, the jangling of keys, the murmur of background voices and the sounds of cigarettes being lit and inhaled.

Subtle manipulations of the soundtrack provide dominance and control for characters, without the need for obvious bursts of prerecorded music to guide the audience. The lack of prerecorded music keeps the viewer immersed in the diegesis longer, effectively maintaining the discomfort of viewers through their suspension of disbelief, with no music to jar them away from the context being constructed. Furthering their discomfort is the subjective positioning this creates, with no sonic breaks available to objectify the diegesis or present it from another angle, the audience become bound to Chopper’s interpretation of events and even his experience of them (Evans 2004, 87).

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\(^{58}\) Indeed, the swooping effect itself suggests the idea of a swooping attack from above such as by a magpie. The Doppler Effect is the changing in pitch of a moving object relative to a stationary listener, such as a car passing by. As the object moves toward the listener the pitch will be heard as higher and as it moves past the listener its pitch (to the stationary listener) will be heard to drop.

\(^{59}\) The prison hallway is partly created from a recording of the Bronx Zoo (C5 2005) while the dungeon is created from a modified recording of lunatic screaming (Weis 1995). In the original *Star Trek* television show the background sound of the deck was created using electronic music and beeps but the newer films used combinations of fans, air conditioners and white noise (Kelleghan 1996).
Sharing as they do Chopper’s sonic environment, the audience is compelled to experience it. Through using sounds that appear to be there naturally, rather than using music that would be seen as a more deliberate intervention, the soundtrack (or rather the sound practitioners) can fulfil their narrative functions without drawing unwanted attention. In the absence of music other elements in the soundtrack are instead examined, whether consciously or unconsciously, for any clues to guide an interpretation of the unfolding narrative and the emotions of its characters.

As well as the metaphorical use of sound, including sound similes as a comparative method of producing meaningful sounds, other tropes are available that describe how sounds can be used in figurative or non-literal ways.

Metonymy – a sound that denotes one thing but refers to a related thing. Just as Canberra acts as a metonym for the Australian federal government, a sound can be used to represent an event, such as the use of a snare drum to punctuate the punch line of a joke, or a horn to indicate a comical fall.

Synecdoche – the part being substituted for the whole, for example, “get your butt over here” or “a new set of wheels”. In a visual close-up the part is substituted for the whole. A sound equivalent is a focus on one element. Individual sounds can be used to substitute for the greater mass of sounds to describe a place, such as a single explosion or whine of an incoming bomb for the sound of warfare.

Irony – a contradictory meaning to what is actually shown. Here we could point to Michel Chion’s idea of anempathetic music or Michael Hordern’s voiceover in *Barry Lyndon*.

The Peircean universal categories illustrate such figurative uses of sound. The sound-sign (firstness) is used to refer to its apparent object (secondness), to produce a particular effect in the mind (thirdness).

In many cases the working practices of filmmakers point to uses of sound that can be examined, not simply for its functionality, but for the effect that the signifying character of the sound is manipulated, or in which the conventional filmic code is deliberately broken in order to force new interpretations. Craig Berkey and Erik Aadahl worked on *The Tree of Life* (Malick 2011). Berkey describes their approach:

“There’s a scene in the first reel,” Berkey continues, “where there’s a close-up of a character talking on the phone, he then walks away toward a running airplane. In a conventional movie, you would hear the dialog up front, he’d walk away, you’d hear his footsteps, there’s a plane in the background, you’d hear the plane engine. There might be some music playing. But we did it differently. We don’t have the dialog playing, even though he’s talking right on camera. Instead, most of the sound is the
airplane and this weird instrument called The Beam [which has piano wire strung across a metal frame and is amplified to create unearthly tones]. It took us forever to get the feeling right. Do we need to play [the FX] really loud to justify why we wouldn’t hear [the phone call], or should we play it sort of subtly, and then it’s even weirder because why don’t I hear him? You can do it endless ways” (Jackson 2011c).

In Peircean terms the sound-signs being used are manipulated to deliberately breach the conventional use of sound such as on-screen characters’ speech or expected sync sound effects such as footsteps, to provoke a feeling in the mind of the audience. In the absence of the normal convention or code (which would allow induction or deduction), the audience is then invited or forced to create meaning (interpretants) through abduction from the sound-signs that they are presented. This type of reflection on the practice of film sound indicates the extent to which filmmakers are aware that the audience is an active participant in the creation of meaning rather than the passive recipient of meaningful signs. By deviating from standard or typical cinematic representations, part of the onus for the creation of meaning is taken on by the audience.

4.3 Conclusions

A great many of the signs that we produce ourselves, we do so unknowingly. For example, how we dress, the type of music we listen to, the food we buy, or the way we style our hair. They may not be deliberate or conscious signs to the outside world, but they are still open to interpretation. As Barthes (1972, 112) points out, there are few things that we encounter that do not signify something or other:

At the beach what does the sea say to me? nothing [sic] perhaps, or maybe it is full of natural signs about power, restfulness, mystery and so on. As soon as the human world comes in with flags, suntan lotion, towels, surfboards, bikinis etc it is signs galore.

In terms of sound in film, the same is true. Every element is, in effect, a choice. Everywhere a choice was made or not made, where a sound is heard, not heard, heard in addition to another sound, louder than another, or in preference to another, and all these choices can be interpreted as signs.

Each time a message is produced, it depends on the recipients of the message to interpret it for it to function properly (Hodge and Kress 1988, 4). What happens when the message is new, or at least the combination of messages contained within the text is new? Will the messages work separately or together? Will one message prevail? In the context of film, it appears that the visual messages and the sound messages will work together, but not all of the messages will be received by the recipients of the text, or received with the intended
meaning intact. In addition, a great many of the messages and signs in the soundtrack are not consciously acknowledged at all, nor are they designed to be noticed. Yet the effect that they have is still felt and the interpretation of the elements, characters, locations, themes, or the narrative of the film as a whole is the result.

The seemingly different elements of the soundtrack may appear at first glance to be difficult to analyse in the same way that a written text or a photographic image can be analysed. Yet, just as a moving image can be analysed using tools adapted from areas of Saussurean semiotics, Peircean semiotic tools can be turned toward the soundtrack in order to uncover some of its uses, its strengths and its abilities to represent in ways that are too difficult, too obvious, or too cumbersome to be done through visual means. In addition, the analysis can inform the production of films rather than simply the reception and analysis by the audience. Using Peircean semiotics as a theoretical tool, the traditional practices, artistic hunches, or techniques that are passed down through generations of filmmakers can be examined to determine the fundamental theoretical underpinnings for their practical use. Filmmakers can then get closer to harnessing the abilities and peculiarities of the visual and aural senses. As a means of deciphering the meanings in films, semiotics is singularly useful since it “allows us to separate ideas from their representation in order to see how our view of the world, or a film, is constructed” (Turner 1993, 48).

With the overall goal of the soundtrack as ‘serving the needs of the story’, viewed in terms of Peirce’s model of the sign the choices in the soundtrack are geared around creating a set of interpretants (the story, or aspects of the story). Therefore, the sound-signs are manipulated in such a way that the interpretants can be understood or felt by the audience. Some of the processes in a film are explicitly about creating more meaningful representations. The ‘spotting session’ is a prime example of the manipulation of the soundtrack in order to change or accentuate the story. This is where a picture edit is viewed and particular moments are noted as needing a particular type of music or emphasis, modification or some other meaningful change in the soundtrack.

This chapter has illustrated how the Peircean semiotic model is particularly useful in the analysis of sound since it takes us beyond the linguistic model and the content of a sound to the process of sound creation and sound reception. It highlights the role of the interpreting mind, and the wealth of other signs, particular contexts and experiences into which new

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60 In the case of non-narrative films, whilst not having a story as such, could still be supposed to have a purpose, and that purpose would be to create some sensation or response in the audience. The goal of the soundtrack in this case would be to serve that end.

61 See Glossaries – Film and sound terms: ‘spotting session’.
signs are to be accommodated. How useful will it be, then, as a tool for film analysis? In the next chapter we examine some film examples in detail to see how the use of Peircean semiotic concepts can illuminate the film processes and practices and their results.
5. **Soundtrack Analyses Using the Peircean Model**

During the making of *Star Wars* (Lucas 1977), the character of Darth Vader was played by David Prowse, who also performed the character’s lines of dialogue as a guide track, which were later replaced by the actor James Earl Jones. To anyone watching the film, Vader’s voice is that of James Earl Jones since there is no other reality. When hearing the original location recordings where Vader’s voice is that of David Prowse an alternative version presents itself and even though it is provided by the actor we can see onscreen, as far as the viewer is concerned the ‘real’ voice of Darth Vader is that which was added later (Becker and Burns 2004). The ‘real’ voice is the replacement. The iconic voice of Darth Vader (in both the Peircean sense and in the broader meaning of the word) was provided by James Earl Jones. The qualities of the voice (its depth and gravitas) are then transferred to the character. The indexical relationship between the visual image of Darth Vader (whose mouth we do not see) and the voice is merely suggested, and we infer from the absence of alternatives and the other supporting evidence – other characters’ conversational dialogue, other visual cues such as the other characters looking at the character talking – that the voice we hear is Vader’s voice. Here then are the iconic properties of sound (and their symbolic meanings) and the indexical relationships between sound and image being manipulated to create a new reality.

This chapter focuses on two films, *King Kong* (Cooper 1933) and *No Country for Old Men* (Coen and Coen 2007) to illustrate how the Peircean model of the sign can be applied to an analysis of the soundtrack. The aim is to show how individual sounds can be analysed in terms of their illustrative and representational properties as signs, and the Peircean model can also be applied to the analysis of the overall approach to the soundtrack in a film and its combination with the images. The soundtrack comprises a range of sounds, as well as the sound relationships to other sounds and to images. All the elements are there by choice, and are chosen because they are ‘meaningful’ in the sense that they suggest a particular interpretation, or reduce a chance of misinterpretation.

The sound recorded on set has a distinct relationship with the corresponding images. They each act to record the representation of the object as well as mutually providing evidence of the reality of the representation. The sound helps to support the reality of the images and the image supports the reality of the sound. The two Peircean elements of representation are, first, the iconic representation of the thing itself, for example, the quality of the voice of a character, and second, the indexical representation of the phenomena itself, for example, the
factual representation of the speech being made by someone, or to someone. The simple act of recording the location dialogue allows this legitimating double representation, sound and image, to present the reality of the event.

Where the location recording is not used, for whatever reason, such as a recording quality issue, unwanted background noise, a different delivery required, or a line change, a new recording is required that will seek to recreate the synchronous link with the image, but which allows for manipulation of the sound that matches the image. For example, it could be simply a ‘clean’ version of the dialogue, the original iconic representation is clearer and the indexical link is replaced. It could be a different interpretation or reading of the same lines of dialogue, the original iconic representation is changed, whilst the indexical link is recreated to create the new sound-image object. It is important to note that this sound-image object is not destined to be recognised as a ‘new’ sound-image. Far from it. Any manipulation is intended to be invisible and undetectable by the audience. From now on it is simply the sound-image, a new reality that has been created. Only when compared with the original sound-image would its difference be noted, and typically in cinema we do not experience the original but only the finished version.

5.1 **King Kong (1933)**

I'd like to especially thank Chris Ward, Martin Kwok, and Pepper Anderson. And the amazing Peter's Park Road, and the guy that paved the way for us, Murray Spivack, the original sound designer for the 1933 vision of “King Kong”. Murray, Thank you. Thank you so much.

[Mike Hopkins acceptance speech on receiving the Academy Award for his work on Peter Jackson’s 2005 remake of *King Kong.*] (Hopkins and Van der Ryn 2006).

Released at the height of the Great Depression, *King Kong* (Cooper and Schoedsack 1933) was a ground-breaking film in several ways. First, it was the first cinematic ‘blockbuster’, making a $2 million dollar return in the years of its release alone, from a production budget of $672,000. Second, its use of stop-motion techniques (by Willis O’Brien and Marcel Delgado) was an enormous advance on the technique pioneered by Georges Méliès. Third, it was among the first feature sound films whose musical score was entirely original. Fourth, it was one of the first non-cartoon films for which the character sounds were designed.

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62 Original music had been used in conjunction with existing music in previous sound films, and some original scores had been written for silent films such as *The Fall of a Nation* (1916) and *Battleship Potemkin* (1925) (see Buhler, Neumeyer, and Deemer 2010, 274-275). Steiner had also written original music for three films preceding *King Kong*: *Symphony of Six Million* (1932), *Bird of Paradise* (1932) and *The Most Dangerous Game* (1932).
The processes and approach pioneered in *King Kong* have been adopted and adapted by generations of filmmakers. The creation of the desired filmic effect through the manipulation of existing recordings bearing some trace of iconic or symbolic meaning has been the *de facto* standard for much of the work of sound designers ever since. What began as a means of sonic problem-solving is also an enormously productive avenue to explore for sound design, given the wealth of fertile sounds with which to begin.

### 5.1.1 Sound effects in *King Kong*

Ever since sound recording became possible and thereby “loosened the bonds of causality and lifted the shadow away from the object” (Murch 2000, 2.1) sound representations provided a potential wealth of creative opportunities. At the time of the making of *King Kong* the ability to record sound and later synchronise to pictures was still in its relative infancy, though those working in animated cinema had arguably done more creative work in this field than those working in the realm of live action, since unlike live action films cartoons were not tied to any realistic portrayal.63

Murray Spivack had worked previously as a symphonic percussionist before joining FBO Pictures (which later became RKO Pictures) in 1929 at the beginning of the industry’s changeover to talking pictures. The sound effects he created for *King Kong* play an important part in creating believable monster characters that could only really come to life when they made a sound.

Spivack had researched the likely sounds made by the dinosaurs in the film, but was informed that the creatures would not roar as they did not have vocal chords, and would instead have been more likely to have hissed (Goldner and Turner 1976, 190). Departing from an authentic representation Spivack chose to adopt a more dramatic approach combining recordings from the RKO sound library of various animals to which he added some vocalisations of his own. In an interview with *Popular Science* magazine, during the making of *King Kong*, Spivack explained the problem of creating the sound of massive monsters:

> “But why,” I asked, “wouldn’t some living animal’s roar have done the trick? A lion, for instance?”

> “The trouble with the roars of living animals,” Spivack said, “lies in the fact that audiences recognize them. Even the most terrifying notes would be recognized. Also, the majority of roars are too short. The elephant, with the longest roar of which I know, 63 For example, see *Steamboat Willie* (Iwerks 1928) or the *Merrie Melodies* and *Looney Tunes* series, which began in 1929, and *Sinkin’ in the Bathtub* (Harman and Ising 1930), which has a wealth of expressive sound effects and music.
sustains the sound only eight or nine seconds. Kong’s longest continues for thirty seconds, including six peaks and a three-second tail.

“The triceratops resembles an enlarged boar or a rhinoceros; more like a boar, perhaps, because of the three large horns protruding from his head. This little fellow measures only twenty-five feet long, yet in the picture he bellows like a bull, gores a man and tosses him into some long-forgotten bush—to the accompaniment of a reversed and lengthened elephant roar” (Boone 1933, 21).

Spivack described the start of the process in which his secretary would look over the script and see what sort of sound was needed for the script, which was noted on the document ‘Sound Effects List and Cost Estimate, July 19, 1932’ (Goldner and Turner 1976, 195-199). The document lists various materials which would need to be purchased as well as a ‘spotting list’ of effects which would need to be created. Among the sounds required are all the relatively straightforward sounds such as wind, the ship’s foghorn, the officer’s whistle, gunshots, airplanes, and so on, as well as the creature voices (roars, hisses, snarls, whimpers and grunts) and other body sounds, such as footsteps and fight sounds that would need to be created.

Initially Spivack contacted the curator of the Carnegie Museum to ask for an opinion on what Kong and the other creatures might have sounded like. With no useful answer forthcoming Spivack instead used his own reasoning:

I thought, ‘Well, what the hell am I going to do with this? Now, I’ve got to come up with some sound and I’ve got to come up with something that’s practical.’ I didn’t want any toys, I didn’t want any cartoon sounds. I wanted something that would be believable. So the first thing I did is I went to the zoo. And I gave one of the men who feed the animals a ten dollar bill and I said, ‘I want to get this lion to roar and I want to get the tiger to roar, and I want to get some sounds out of these animals…’

… the giraffe, the elephants. I wanted to get as much sound as I could, and I had a portable microphone and a portable recorder so I could record all of these sounds. So he said, ‘Well, the best time to do that would be at feeding time.’ So he said, ‘I’ll feed them. And then after I feed them, I’ll get them to roar.’ So he fed them, went outside the cage and made as though he were going to steal their food. And believe me, they bellowed. They raised hell! And it was the very sound that I wanted (Spivack and Degelman 1995, 54-55).

Armed with recordings of lions and tigers, Spivack then had to make them unrecognisable:

I got what I needed, but it wasn’t sufficient, because you could recognize a lion and you could recognize a tiger. Well, I conceived the idea like a phonograph record. If you slow the record down, the pitch drops in direct proportion. So if I wanted to slow it down a whole octave, I knew that if I played it at half-speed the pitch would drop an octave. And the octave would be outside of the human range. There wasn’t any animal that could bellow that low, and of course, if we slowed it down to half-speed it lengthened the sound. So consequently, I knew then that I’ve got the start of this thing. So I took the tiger growl, went through the same process, and played that backwards…

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64 See Appendix A - Sound Effects List for King Kong.
And played the lion growl forwards, also at the same [speed], and got a mixture of those two so that it was an unrecognizable sound but it certainly was a roar. And being that low, it was out of the human range. And it was quite lengthened. So I made all sorts of shadings and all sorts of sizes on that. And then fitted them (Spivack and Degelman 1995, 55).

The sound of the pterodactyls originated as a bird recording, while the tyrannosaurus was made again using an original animal recording which was slowed and pitched down to hide its origin whilst achieving the desired effect (Spivack and Degelman 1995, 56). In describing the sound design process Spivack describes the difficulties:

You see, I started making the sounds before they had concluded putting the whole picture together. So I had most of the sound that I was going to use earlier. And it was just a matter, then, of synchronizing it to the picture, and that wasn’t the most difficult part of it. The most difficult part of it was trying to get some sound that made some sense, without including a bunch of toys and junk like the average cartoon is (Spivack and Degelman 1995, 60).

Getting “something that’s practical” that “would be believable” and “that made some sense” gives us a clue to the underlying conceptual reasoning for the choice. Spivack adopted a realistic treatment (although completely inauthentic) using common-sense understandings of everyday life. First, that a larger animal makes a deeper sound, and second, the characteristic sounds of animals, such as the screech of a bird, or the roar of a big cat, can be used as the basis for new creatures bearing similar characteristics, but on a larger scale. In Peirce’s semiotic terms this can be described as transplanting the recognisable iconic and symbolic sounds of animals, and shifting them sufficiently so that they indicate their new source while retaining their expressive power, thereby creating a new indexical link between sound and image.

Once the original sounds had been recorded the relative levels were mixed on a purpose-made four-channel mixer allowing Spivack to play the newly designed sounds back in combination with the pictures:

I did that for all of the noises that I needed. I didn’t need it for an elevated train. I knew what those sounded like. But any of the noises that were strange noises I worked out. And that’s how I got to the sounds (Spivack and Degelman 1995, 57).

Where Kong battles with the tyrannosaurus rex each creature needed to be distinguished. Since both creature voices were based on pitched down and slowed down recordings they lost some of their distinguishing features, and so the dinosaur’s voice was created using different elements:

Spivack had mixed an old puma sound track with the steam-like noise from a compressed air machine and added a few screeches from his own throat, uttered a few inches from a microphone in the soundproof room. Exactly in what proportions they
were blended I cannot say, for each sequence demands many trials before the mixed noises come through the loud speaker in such volume and of such quality that the small audience of men expert in diagnosing sound declare, “Kong and the tyrannosaurus [sic] must have sounded like that” (Boone 1933).

Spivack’s two basic processes, (a) reversing the recordings, and (b) slowing down the recordings, retain some of the iconic qualities of the sounds whilst breaking the indexical link that ties them to their recognisable origin. By reversing a sound the tonal character is retained but the sense that is made of the sound is lost. For example, reversing a speech recording no longer makes sense (as the symbolic sequencing of the different language elements no longer create language meaning) but the tonal character of the sound itself (and thus much of its iconic quality) is recognisably human in origin as well as being recognisably male. Slowing down the recording further shifts the indexical and iconic links between the sound and its origin – our natural world tells us that a lower pitch is an indication of the size of the creature which produces it. Younger animals tend to sound higher in pitch than they do as adults. Using this approach natural-sounding creature sounds were created which carried the properties borrowed from their original recordings, and then were manipulated in order to hide the origin of the sound, whilst retaining the metaphorical meaning of the sound.

To create the sound of Kong beating his chest Spivack’s team experimented with timpani, the floor, and eventually settled on hitting an assistant’s chest whilst placing the microphone at his back. For other creature sounds Spivack and his assistant Walter G. Elliot adopted similar approaches to create what later became known as sound design, which involved vocalising:

Some of the miscellaneous sounds were created with the simple instruments one would find in any studio sound laboratory. One hour Elliot was grunting into a hollow double gourd with a microphone conveniently placed to pick up deep growls and grunts of the triceratops; later in the morning he was half-reclined on the floor, grunting through a water-filled mouth into a megaphone, thus producing the animal’s death gurgles (Boone 1933, 106).

The Kong ‘love grunt’ was not recorded using this method; instead Spivack recorded himself grunting through a megaphone, and pitching/slowing down the recording as before to take it out of the range which would make it recognisably human in origin (Spivack and Degelman 1995, 56; Cooper et al. 2006). Just as we may often tell the sound of an angry animal from a happy animal (such as the sounds of dogs and cats when angry or contented), performing the sound in this way imbues the sound with the desired characteristics and allows meaning to be drawn from it. In Peircean terms the meaning of the sound (its interpretant) is created because we recognise some of the emotional content of the sign from our own experience of animal and human sounds. We can therefore create the metaphorical
link between the partially recognised iconic sounds of vocalisation (which when synchronised become Kong’s vocalisations providing an indexical link to him) and a learned symbolic meaning of the sound that can inform our understanding of his emotional state.

It is also interesting, and slightly ironic, to note that in the sequences showing Denham’s film crew on the island there is no sound crew accompanying the actual camera crew. Even within *King Kong* itself sound is not shown as being a mediated part of the filmmaking process.

> It is as if sound in a film has no technological base, involves no work, is natural, and will simply “show up,” just like the spectacle Denham witnesses. Further, the classical paradigm would have us believe that no work has gone into the sound of what we witness. Sound is just there, oozing from the images we see (Gorbman 1987, 75).

Sound appears to happen without choice, creativity or design playing a part and this depiction from 1933 presages the widespread attitude towards the hierarchy between picture and sound for years to come.

### 5.1.2 Music in *King Kong*

One of the principal differences between score for the sound film compared to score for the silent film was the use of silence itself. In the silent film score continuous music was the norm since discontinuities could not be hidden by other sounds, whereas the sound film had dialogue and sound effects to fill in the sonic spaces between sections of music. In the silent film the musical accompaniment, whether pre-existing, improvised or written specifically for the film, could only be loosely synchronised to the images, at best using key moments to signify changes. If the score was to match the action it was only suitable for a single instrumentalist who could improvise, since there would be enormous difficulty in improvising musical time to pictures whilst attempting to play in time with other musicians. The synchronous soundtrack allowed for an approach which combined the elements of the silent score approach – underscoring the mood of the scene - combined with accentuation of key story elements (Buhler, Neumeyer, and Deemer 2010, 322).

This allowed the composer some degree of flexibility, without having to provide the “structural consummations required by the syntax of Western Music” (Brown 1994, 94). Instead, shorter phrases and stand-alone motifs could be used where necessary, alongside longer more traditional themes which in a standalone piece of music would not be possible. Max Steiner was one of the foremost composers of the formative years of Hollywood's conversion to sound. A proponent of non-source (non-diegetic) music Steiner, in adapting
his compositions, helped to define the parameters of film music language and the standard of

Steiner was a child prodigy in his native Austria, having composed a successful operetta at
the age of sixteen which ran for one year in Vienna’s Orpheum Theatre, with several other
of his compositions published and played by the Vienna Philharmonic (Goldner and Turner
1976, 191). Steiner’s score for _King Kong_ was entirely original and composed specifically
for the film. There is no music at all in the first twenty minutes of the film. Steiner reasoned
that since the first part of the film concerned the ongoing Depression it would be more
effective to leave it without score (Steiner 1976). The absence of music from the opening
New York scenes also makes the characters’ motives difficult to determine, particularly
Denham’s in convincing Anne to join his expedition.

Once the film leaves behind present-day concerns and begins to enter into the unknown the
soundtrack leaves behind New York and the reality of the times and begins to move towards
an expressive mode of storytelling. As the ship approaches Skull Island through fog music is
used to create a sense of mystery and a sense of the unknown. The score is used throughout
most of the remainder of the film, accompanying around 68 of the film's remaining 79
minutes (Handzo 1995, 47) with a total running time of approximately 100 minutes.65
Acknowledging the prestige of orchestral music, and the fact that it could be used as an
indicator of the scale and status of the film, Steiner was hired to compose an entirely original
score for _King Kong_.

It is relatively easy for any composer worth the name to provide music to fit a particular
mood, far harder to judge what mood is required by the scene, and how much of it
should be provided musically (Deutsch 2007, 6).

Steiner adopted the Wagnerian style of leitmotif to combine musical themes with particular
characters, rather than simply accentuating a particular mood.66 The love theme which is
used to signify Anne’s character and later her relationship with Driscoll is established early
in the film.

Steiner also punctuated elements of the narrative in a style, disparagingly referred to as
mickey-mousing, which contemporaries often found disagreeable.67 Fellow composer
Miklos Rozsa, was critical: “I intensely dislike it. One of the reasons I did not want to come
to Hollywood was that I thought that was what you had to do here” (Brown 1994, 273).

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65 A three minute overture precedes the opening titles.
66 See Glossaries – Film and sound terms: ‘leitmotif’.
67 The term mickey-mousing is usually attributed to _King Kong_ executive producer David O. Selznik.
Steiner, though, took the view that film music was there to serve the dramatic content, arguing that to criticise the practice was missing the point:

‘Mickey Mousing’. It is so darn silly. You think soldiers marching. What are you going to do? The music going one way and the image another? It would drive you nuts. It needs a march. It has to be with marching feet. So if you call it ‘Mickey Mousing’, it's fine with me (Schreibman and Steiner 2004).

The style became much more familiar through its employment in cartoons, from which it gets its name. Music used in this way can also be described in Peirce’s semiotic terms. Accentuation of the dramatic content through the musical soundtrack is thus used to reinforce the sign already present in the story, creating a metaphorical and symbolic link between music and story. This technique is extensively used throughout the film; for example, when the tribal chief first notices Denham’s party he walks down the steps to the accompaniment of a low bowed string, synchronised to his footsteps, which continues for his entire approach to Denham. Elsewhere in King Kong further examples of mickey-mousing abound:

- The music ascending as Anne is forced up the steps to be chained to the pillars.
- Driscoll ‘sneaking’ past the dead tyrannosaurus accompanied by ‘tiptoeing’ music.
- Kong seemingly ‘tickling’ Anne accompanied by the synchronised trills of the woodwind.
- Driscoll ascending the rocks to reach Anne.
- The elevated train coming down the line.

As well as mickey-mousing the score is also used to highlight or accent other story elements. Where the captain translates the conversation with the island chief music is used to accent the islanders’ speech, adding a second layer of non-verbal meaning to the foreign dialogue. Similarly, back on board the ship the love theme for Anne/Driscoll is interrupted by the captain’s question: “Mr Driscoll. Are you on deck?” The music resumes for the shot of their embrace and is interrupted once more when the captain then asks “Can you please come up on the bridge?”

Simple symbolic links such as a run of ascending notes may have a very literal link to what is happening on screen. By synchronisation with narrative elements we are able to use Peirce’s concept of abduction to interpret the meaning of the film through prior experience of musical themes or conventions which then inform our reading of the narrative. In Peircean terms, through synchronisation, the music is used to create a symbolic meaning or
learned association which informs the interpretation of the broader narrative. For other relatively direct links between music and narrative such as ‘sneaking’, ‘tiptoeing’ or ‘tickling’ music the audience is expected to interpret the music as having a clarifying role in the interpretation of the story. For example, where Kong tickles Anne the musical treatment encourages us to view Kong as inquisitive and gentle, where previously he was fearsome.

Steiner’s use of leitmotif mirrors the symbolic linking of music with character, planting the seed for music to suggest a character through the music. The main three-note descending figure theme of Kong himself also accompanies the opening titles, while a variation is also used for Anne’s motif, as is another for the main love-theme. Jack’s ‘courage’ theme is a four-note figure. The score interweaves some of the themes together in a sequence, such as the aboriginal dance being interspersed with Anne’s theme, and Jack’s four-note motif accompanying the rescue attempt. The aboriginal theme is also whistled by Denham, accompanied by the (non-diegetic) orchestra. There is no strict delineation between diegetic and non-diegetic music in King Kong, which Jim Buhler describes as ‘fantastic’:

The music on the island, for instance, is neither diegetic nor nondiegetic. I would locate the fantastic, in fact, in the gap between what we hear and what we see. But without some sort of distinction between diegetic/nondiegetic sound, such a gap isn’t even really audible (Buhler et al. 2003, 77).

Even where the film features source music, such as in the ‘aboriginal sacrificial dance’, drums are the only instruments seen, and are augmented in the score by orchestral instruments. It is a musical shorthand to indicate the unfamiliar. Its only specificity is its non-westernness, and this is accentuated, positioned as it is alongside more western traditions of orchestral musical forms and orchestration. For a general, western audience an accentuation on percussion and repetition was sufficient to indicate a tribal or strange setting. The ‘open-fifths’ of the score used for Skull Island is structurally identical to music used to represent native Americans, being a shorthand for exotic and/or primitive (Buhler, Neumeyer, and Deemer 2010, 205-208). By 1933 the use of stereotypical music was already well established with part of the Tchaikovsky’s The Nutcracker being used to represent a wide variety of locations from North Africa through to south east Asia (Buhler, Neumeyer, and Deemer 2010).

The music which accompanies our first sight of Kong is his theme (introduced in the opening credits) which is repeated during Kong’s battles. When Kong puts Anne on the ledge near his Skull Island cliff top home Kong’s theme has been replaced by Anne’s. We, like Anne, are therefore guided to be less fearful of Kong and see him as a protector and he does indeed save from a giant snake. The Empire State building finale brings back the love theme which previously was used for Anne, or Anne and Driscoll. Used here, it now
indicates the relationship between Kong and Anne. As the aeroplanes move in we see Kong as he holds Anne for what will be the last time. The musical score is used to indicate Kong no longer as threat, but instead as protector, through the use of Anne’s rather than Kong’s theme. Through the accompanying score, Kong’s character has moved from savage beast to loving protector. After Denholm’s final line of “It was beauty killed the beast” we hear the Kong theme repeated but this time as a mournful coda as he lay dead on the pavement.

In Peirce’s semiotic terms the symbolic identifications which are created by the music allow meaning to be made by the audience. On viewing the film for the first time the individual pieces of music could not be recognised since the score was original. Instead some of the musical themes used are recognisable or have qualities which can be recognised, and which have been used before to represent particular places or emotions. These pieces of music act as sound symbols, which in Peircean terms are learned associations or rules “which represent their objects, independently alike of any resemblance or any real connection, because dispositions or factitious habits of their interpreters insure their being so understood” (Peirce Edition Project 1998, 460-461).

Steiner’s score for King Kong illustrates many of the Peircean concepts that apply to film music. The use of Wagnerian leitmotif to establish a symbolic link between character and musical theme where iconic and symbolic representations are created from particular orchestration and culturally accepted representations of places, peoples, actions and moods. Close synchronisation between music and action attempts to create a pseudo-causal (indexical) link between film and score, where the score responds and reacts to the action rather than pre-empts or describes it. The synchronisation also encourages or demands that the music be related to the narrative in some symbolic way, and our prior knowledge or familiarity with musical themes and orchestrations allow us to bring extra-textual knowledge to aid in our interpretation. Having established symbolic links between score and narrative we are invited to interpret meaning through abduction such as empathising with Kong’s motives and his relationship with Anne.

5.2 No Country for Old Men (2007)

No Country for Old Men was the recipient of many awards including Oscars for directing, film, and writing, with nominations for sound and sound editing. It also won a Cinema Audio Society award for sound mixing, two Motion Picture Sound Editors awards and a BAFTA nomination for best sound. It is, perhaps, a rare film in that the soundtrack was noticed and singled out for praise in reviews:
and particularly in this article from the *New York Times*:

In one scene a man sits in a dark hotel room as his pursuer walks down the corridor outside. You hear the creak of floorboards and the beeping of a transponder, and see the shadows of the hunter’s feet in the sliver of light under the door. The footsteps move away, and the next sound is the faint squeak of the light bulb in the hall being unscrewed. The silence and the slowness awaken your senses and quiet your breathing, as by the simplest cinematic means - Look! Listen! Hush! - your attention is completely and ecstatically absorbed. You won’t believe what happens next, even though you know it’s coming (Scott 2007).

Skip Lievsay, who has worked on each of the Coen brothers’ films describes the process of creating the soundtrack for the film:

“Suspense thrillers in Hollywood are traditionally done almost entirely with music,” he said. “The idea here was to remove the safety net that lets the audience feel like they know what’s going to happen. I think it makes the movie much more suspenseful. You’re not guided by the score and so you lose that comfort zone” (Lim 2008).

Composer Carter Burwell, another long time Coen collaborator, agreed with the treatment:

My first suggestion was that if there’s music, it should somehow emanate from the landscape,” Mr. Burwell said. He tried a few “abstract musical sounds, just the harmonics of a violin or some percussive sounds,” but found that even these small touches “destroyed the tension that came from the quiet” (Lim 2008).

The relatively quiet and uncluttered soundtrack lends more meaning to the sounds that are included, since they are therefore highlighted. Rather than using musical score to accentuate a feeling that is already created by other means, the silence surrounding the sparse sounds accentuates the inherent drama of the situation. Silence is used when Llewellyn Moss (played by Josh Brolin) surveys the scene of the botched drug deal as he takes in what he has come across, as we do, and also later where he escapes by swimming down the river, pursued by the dog, which again is wholly without music – sonically it contains only the natural sounds of the river, and the exertions of both man and dog until the moment Moss shoots it.
Here we will focus on some key ideas and their development using Peircean analysis. In this way we can look at some of the sounds in the film as they are used as signs. If we are to take every sound as a sign then we must also take every image as a sign, and the whole range of signs are interrelated and the context of each sign affects its interpretation. In a film such as *No Country for Old men*, techniques of providing or withholding information, providing ambiguous information, and encouraging the audience to infer meaning and then playing on the audiences’ expectations are used to immerse the audience in the narrative. What we know, what we have seen and heard, what we think we know, and what we think is happening or will happen are all used to allow the viewer/listener to create the meaning from the narrative for themselves as they watch and listen. As a consequence at several stages of the film there are information gaps which need to be filled in order to know what is happening and therefore what is about to happen.

Early in the film some of the important sound elements are introduced. The opening sequences in a film are not simply introducing themes, characters or locations. They also show the audience how the soundtrack interacts with the images. The first sequences which show each of the three main characters introduce the characters themselves and also illustrate something of the approach to the soundtrack taken in the film. First, Anton Chigurh’s murder weapon, a gas-powered cattle gun, is shown to indicate what is about to happen through the use of relatively innocuous images and sounds: a bottle of compressed air, and the slight hissing sound it makes when turned on. Having established the air canister and the sound of the valve being opened prior to its use, thereafter simply seeing the tank being carried or put down deliberately, or hearing the sound of the valve being turned on, is sufficient to signify its imminent use as a weapon. In Peircean terms the sight of the bottle and the hissing sound of the valve are then established as being related to the bottle’s use as a murder weapon. The sound of hissing in particular is now used symbolically to suggest an imminent attack.

Second, dialogue, especially that of the character of Chigurh (played by Javier Bardem) is used both for its language meaning and as a particular delivery as well as a signifier of a course of action. Once introduced, the stylised dialogue and immediate aftermath are symbolically associated, and are linked thereafter in the film: when we subsequently hear Chigurh repeating a question we then expect a violent outcome. As with the sound of the gas bottle in Peircean semiotic terms the repeated dialogue uses abduction to suggest a future course of action based on what we have seen and heard and how they are linked.

Third, the withholding of information, both visual and aural, forces the audience to make meaning from the sounds that they are given. Rather than having a clear cause and effect, the
audience is positioned to propose links (or in Peircean terms: abductions) from the signs they are given. This again aligns the audience’s perspective with that of the character’s perspective. We, like the characters, are trying to understand what is happening from the information we have available to us.

5.2.1 The sound of the gas bottle and cattle gun

We first see the gas bottle being put into the police car by the deputy sheriff who has arrested Chigurh and later he describes the arrest to his sheriff: “He had an oxygen tank for emphysema or something and a hose that ran down the sleeve.”

After killing the deputy, Chigurh picks up the gas bottle and its attachment which makes a distinctive ‘ping’ as it taps against the chair. Though quiet, the sound of the gas bottle is clear and isolated in the soundtrack, which is uncluttered and noticeably free of other sonic distraction including music. Driving a stolen police car Chigurh pulls over a man on the highway and approaches him with the bottle at his side before killing the man.

When Chigurh arrives at Moss’s trailer we see a shot of the gas bottle being carried up steps to trailer. We see only the boots of the man walking but the sight of the cylinder and hose indicates that it is Chigurh. We see the gas bottle being turned on and hear the accompanying ‘hissing’ sound.

We still do not see the character’s face, since he is suggested by the sight of the bottle alone and by his distinctive boots. The cattle gun is then used to blow out the door lock.

Elegant and efficient filmmaking is achieved through the establishing of images and sound signs whose significance is enhance by their relative scarcity. Simply seeing and hearing the gas tap being turned on is sufficient to create a sense of tension and foreknowledge in the viewer/listener. We are primed to expect a violent confrontation from a visual shot of a gas bottle and the sound of a gentle hissing as the gas tap is turned on. By highlighting visual elements and the sounds of the device – the hissing of the tap, and the ping of the cylinder – our attention is pointed to the device itself as it has become a sound-sign of imminent violence.
5.2.2 Repeated dialogue

Scene: Roadside
Before Chigurh’s first use of the cattle gun his dialogue sets the tone for several other meetings with individuals: “Step out of the car, please” and “I need you to step out of the car, please, sir”. The repetition becomes a sound sign which precedes his use of the cattle gun. The repeated dialogue pre-empts the murder and thereafter acts as a sign of an impending murder. The symbolic link between the character’s speech and the event which follows it would not, by itself, be strong, but it becomes strong because these two themes, once established, are repeated during the film. The character reiterates questions throughout the film, as he uses the cattle gun or other weapon several times.

Scene: Gas station
By now Chigurh has killed two people: the policeman and the man he pulled over in the car. At the gas station Chigurh engages the attendant in conversation, eventually convincing him to call on a coin toss: “Call it”, “Just call it” and “You need to call it. I can't call it for you”. The man guesses correctly, and Chigurh leaves. We are set up to believe we know what will happen but since the man guesses correctly Chigurh does not carry out what we assumed he would. The abduction is not fully correct, but neither is it wrong. We have learned a little more about Chigurh’s character, though we have our assumptions about the link between the repetitive dialogue and an attack modified as it did not take place on this occasion.

Scene: Chigurh at trailer office
Later, Chigurh visits the woman in the trailer park office looking for Moss. Chigurh repeatedly asks the woman in the office: “Where does he work?” Exasperated, the woman replies “Did you not hear me? We can’t give out no information.” At this point, the repeated dialogue mirrors what we have seen earlier and we now have a fair idea of Chigurh’s intended course of action. Although the woman is unaware of it, we can make the abduction based on a previous link between the repeated questions and the likelihood of an attack.

Instead, Chigurh is interrupted by the sound of toilet flush, and while the woman is oblivious to the importance of the sound, he leaves without another word.

The toilet flush is an indication that someone else is
nearby, and so breaks the sequence that had been established. Again the expected course of action is foiled, and again our again hypothesis remains, though again needs to be modified. The process of meaning-making, and as in this case, abduction modification in light of further evidence, requires the audience to actively participate in the production of meaning rather than being a passive recipient.

5.2.3 Withholding information

We have seen how Chigurh is pinpointing the location of the money and of Moss. We see and hear Chigurh’s tracking receiver (whose transmitter is hidden inside the briefcase of money) which is flashing and beeping faster as he approaches the motel in a car.

HOTEL ROOM: Moss notices tracking transmitter buried in the money he has been carrying as he sits in a room in a new hotel. He now knows how he has been traced. Hearing a slight noise, he rings downstairs to the desk clerk that he had just spoken to – we clearly hear the dial tone and ringing tone from the phone as well the sound of a phone ringing downstairs.

The call goes unanswered and we hear a distant noise from outside the room. Moss sits on the bed pointing his gun at the door, and turns off the lights. We begin to hear approaching footsteps and the faint sound of the quickening beeps of the tracking receiver and then a click as it is switched off.

Moss sits on the bed pointing a gun at the door. He notices the shadow of something outside his door (Chigurh’s legs). We see a close up of the Moss’s gun hear the sound of it being cocked. After a moment’s pause we see the shadow move away, and then a hear very faint squeak and the corridor light goes out (see the figures below).

In the ensuing darkness and silence we see that Moss is puzzled. He, and we the audience, have a second or two to work out that the squeaking sound was the corridor light bulb being unscrewed. The lock is blown out and hits Moss, who then fires through the still-closed door and wall, and then escapes through the window, pursued by Chigurh.
REAR OF HOTEL - Moss lands on the ground outside the hotel, picks up his gun and the case of money and re-enters the hotel.

HOTEL LOBBY – Moss walks back through the reception area of the hotel and sees the overturned cat’s milk and the desk, previously occupied by the clerk, empty.

There are several ways that this sequence could have been written, filmed and edited. It would be understandable to be presented with Chigurh’s entry to the hotel, his killing of the clerk, the quickening pace of the tracking receiver as he slowly ascends the stairs, the picture cutting between the occupant of the room and his pursuer as he makes his way ever closer to the room. Music could be used to build the tension in such a scene either through source music or score. Instead, the sequence takes place inside Moss’ hotel room, and resists showing Chigurh’s approach, or even Chigurh at all. By limiting the sights and sounds to that which Moss can see and hear the audience is then effectively experiencing the film from Moss’s position in real-time, hearing from his perspective; seeing and hearing only what he sees and hears: seeing only the sliver of light and shadows under the door, and hearing the silence and small sound cues such as the telephone, the beeping, the silence after the beeping stops, and the squeaking of the light bulb being removed. Through the subtle uses of simple sounds, important consequences can be inferred. We are given an opportunity to determine the sounds, understand the origin of the sounds, and then to interpret their meaning in that particular context, both from the perspective of the character and from our knowledge of the film up until that point.

- Moss’s telephone ringing tone – we see and hear that his call is not answered.
- Telephone ringing in lobby – we hear that it was the lobby phone he was calling.
- Footsteps – we hear slow footsteps approaching the room.
- Beeps – we hear the quiet but quickening sound of beeps that indicate to us that Chigurh has located Moss.
- Squeak – unclear initially what this means, though when we see the light go out we have a moment to realise what is happening.

In Peirce’s model of the sign neither the object nor its meaning is necessarily constant. Hearing a sound object is merely the first step. Understanding the meaning of that sound sign is a process in which context is crucial and abductive thinking is required to create the initial interpretant, which can be tested by induction. By manipulating the available sounds and available story information through POV, framing, editing and so on, the audience is required to engage with the film in order for meaning to be created.
The use of sound signs to represent the object allows the object to be represented without need for a visual representation. The sound of the object stands in for the object. For example, the hiss stands in for the gas bottle, and thus the cattle gun. The use of repeated dialogue creates a symbolic link with the action that follows it. The first occasion does not create a link by itself, which is in a sense Peirce’s idea of firstness, of possibility. By the second repeated dialogue, we are reminded of the first use of repeated dialogue and can make an abduction that a similar course of action will take place, which is Peirce’s idea of secondness, or relation between the two. By the third use of repeated dialogue we see that a pattern has been established, which is Peirce’s idea of thirdness, a rule or habit. In both cases, the abductions that we are invited to make and then test when we next come across the pattern are only partially correct. We can deduce the intent of Chigurh’s character but not his actions.

By withholding information the sounds which remain are relatively simple but they may have very particular contextual meaning. The sound-signs’ objects may be simple but their interpretants convey something other than the simple sound object itself. The sound of a toilet flushing is not merely a sign that a toilet has been flushed (initial interpretant), but that a murder has been averted (dynamical interpretant), though the potential victim is unaware of its significance. A vague pair of shadows which then move and disappear leaving only a sliver of light beneath a door, which disappears as the light source itself is removed, indicates not simply an object outside the door, but a killer outside the door. The squeaking of the light bulb is a sound-sign, but it is not clear what it means until the light goes out. The deliberate withholding of information forces more significance to be placed onto what remains.

The soundtrack in combination with each of the visual elements (script, picture editing, cinematography, direction) provides sufficient information but no more. It allows the audience to attempt to create meaning, and to have that meaning challenged or modified. It is worth noting that the hotel room scene in the finished film precisely follows the way it was scripted.\footnote{See Appendix B - Script Extract from \textit{No Country for Old Men} for the relevant pages of the draft script (Coen and Coen 2006).} It was written and designed to work as it does using sound and image together to create the narrative. Only by a sympathetic orchestration of all the elements of image, sound and editing can each work with the other. The entire sequence is from the perspective of Moss inside the hotel room. It contains no dialogue. As elegant as it is efficient, the soundtrack contains relatively few sounds but the relative rarity bestows meaning. The moment immediately after Chigurh removes the light bulb, in the silence that
surrounds the characters. The sound of the gas bottle’s hiss can be imagined. It need not even be there and is as close to Murch’s idea of the ideal sound as is possible to attain. We may have just heard it, or may think we have heard it, and in a sense it does not matter. The mere suggestion is enough.

5.3 Conclusions

Using the examples of *King Kong* and *No Country for Old Men* it can be shown that the Peircean semiotic model can be applied to all aspects of the film soundtrack, from the structure at the macro level to the examination of individual sounds at the micro level, and the relationship between sound and image. It can be applied to the meaning of individual sound effects, pieces of music or lines of dialogue. It can also be used to shine a light on the way sound is used in the narrative structure of the film. The flexibility of the model allows for, and accounts for, the way meaning is produced as a collaborative effort between the creator of the sound-sign and the audience.

Several of Peirce’s elements and concepts that make up his model of the sign can be used to examine functions of sounds as they operate as sound signs. In particular the distinction between different types of sound representations – iconic, indexical and symbolic; the provisional adoption of a hypothesis to create meaning in the absence of more concrete evidence – the process of abduction; the ability for sounds to represent and mean something other than their simple origin – the initial and dynamical object and interpretant; and that meaning making – the interpretation of sound signs - is a process carried out by the interpreter of the sound sign which is informed by reasoning and by collateral information.

This chapter was primarily concerned with the analysis of the films and their finished soundtracks, supported by the accounts of the practitioners who created them. Having analysed the product we now turn our attention to the process. The following chapter will examine the use of sound from the perspective of the practitioners.
6. A Snapshot of Industry Practice

Since the focus of the Peircean semiotic model is on the process of semiosis, or the construction of meaning, it can be applied not only to the finished article but also to the work that creates it. Having applied the model to film analysis in the previous chapter, this chapter focuses on real life practice, in order to see how the Peircean lens can illuminate the craft of sound design, articulating what has until now been left largely unarticulated.

In this chapter, a number of sound practitioners discuss their craft and their professional philosophies providing a snapshot of the realities of industry practice. They first discuss the role of the sound practitioner and then their perceptions of the role of sound in terms of Holman’s classification of the function of the soundtrack, including the literal narrative, subliminal narrative and grammatical (Holman 2002, vi-vii).

As with the film analyses, the ideas, understandings and practices of the practitioners will be aligned with aspects of the Peircean model of the sign to help provide a theoretical basis and rationale for industry practice.

6.1 The participants

The aim was to include participants from a sufficiently broad range of sound roles rather than a more numerically significant industry-wide study. Snowball sampling resulted in interviewees from Australia and the UK. Whilst only eight participants were drawn from a geographically limited area they were nevertheless selected to provide a cross-section of film and television sound professionals with some working in one primary role and others working in two or three roles, either across their careers or depending on the production. The experiences of sound recordists, dialogue editors, sound effects editors, ADR recordists, dubbing mixers, rerecording mixers, as well as the perspective of a director were included. The interviews were conducted either in person, by telephone or by video call using Skype. Since the interviews were semi-structured, each participant was able to generally speak about their perspectives on film sound, as well as their experiences and views on specific productions they had worked on.

The participants interviewed are indicated in the text by their initials: James Currie (JC), Rolf de Heer (RH), Graham Ross (GR), Tony Murtagh (TM), Kallis Shamaris (KS), Steve
6.2 A snapshot of industry practice through interviews

The production of the typical soundtrack involves various stages and processes, including: recording sound on location, recording supplementary sounds, editing location sound (dialogue editing), rerecording dialogue in ADR, recording foley sounds, replacing or augmenting location sounds, mixing the various versions of the soundtrack (television, DVD and cinema versions, stem mixes, foreign language versions and so on).

Depending on the needs of the story, whether guided by the director (or producer or editor), or in many cases by the individual judgement of the sound recordist, editor or mixer, the soundtrack takes a great many twists and turns on the road to the finished article. However, the audience only hears the finished film and accepts the finished film as the sound of the film rather than as a series of choices, compromises and artistic judgements.

From the perspective of the practitioners, the needs of the story may dictate that dialogue recording is crucial to the exclusion of other location sounds, or they may render the location recordings virtually insignificant, except to be used as a timing reference for the new sound that will be recorded at a later date. The depiction of authentic sounds may be essential, irrelevant or simply a good starting point in the search for the most appropriate sound that will eventually be used.

At each stage, sound works as part of the process, with judgements and decisions impacting other departments, and other departments influencing sound decisions and options. Location sound recordists are usually outnumbered by picture-related departments and their specific needs. Time and money are at stake and where sound is seen as an impediment to the progress of the shoot, sound can and often is sacrificed for the sake of pictures which cannot be fixed later. Sound postproduction is often dependent on picture editing where the visual performance can take precedence over the sonic, though in some cases picture and sound editing can take place alongside each other to their mutual benefit.

At each stage the production of the soundtrack is concerned with the telling of the story in the most sympathetic way whilst hiding both the means of production and the artifice involved in creating the representation. It is important to recognise that this does not happen

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69 For biographical information on the participants, see Appendix E – Biographical Information on Interview Participants.
without a good deal of manipulation and artifice in the way the sounds are recorded and the way they are edited and mixed together. The realistic portrayal of the final representation has little to do with the authenticity of its components. Only where this is a specific concern is authenticity sought as anything other than a good place to begin.

The participants talked about their practices and processes, their personal experiences and perspectives having worked on a number of films throughout their careers. The interviews ranged in length from one to three hours and covered their work on particular films as well as their views on sound in film generally and their particular niche of the sound department. The responses have been divided up into two sections. The first section concerns the reality of working as a sound practitioner whilst the second relates to the practitioners’ view of the roles of sound.

6.3 On the roles of the sound practitioner

Some directors are intimately involved in the creation of the soundtrack. David Lynch is credited as sound designer and rerecording mixer for several films and worked along with Alan Splet to create the sounds for Eraserhead (1977). Others like Ray Lawrence, director of Lantana (2001) are happy to leave the minutiae to the sound department:

Our first spotting session with Ray is now legendary in the film industry – we all had to work out how to deal with each other... We did the introductions and then Jan said “So Ray, I think you should start by saying what you want from the film,” and he said, “Well, I want it to be hot and summery and lots of insects.” Then there was a long pause and then he said, “So that's about it really.” Then Jan got really flustered and said, “Don't you think we should go through the film?” Ray said, “Well, if we have to - I mean, I'm really sick of the film now” (Coyle 2005, 170).

This section focuses on the practitioners describing in their own words their real-life experiences of working in film sound both individually and as part of the larger team. It is often said that interpersonal skills and communication are important in any career but, those working in film sound are acutely aware of the need to work as part of a team. This is perhaps inevitable since they represent only a small part of the combined operation working on a film set which comprises camera department, grips, gaffers, costume, special effects, make up and so on.

In the context of the practitioner interviews pre-production refers to the stages ‘before the camera starts to roll’: writing, storyboarding, funding, assembly of crew, casting, costume
design, location scouting, set design, props, scheduling.\textsuperscript{70} Production refers to principal shooting which involves the various departments and crew members. Post-production encompasses the sound and picture editing, and includes ADR and foley recording, dubbing and rerecording.

6.3.1 Getting started in sound

Several participants began their careers in other areas of film production. Few came from film courses at university, though where they did, they agreed on the benefits of a broader appreciation of film as a whole rather than an early focus on the specifics of the practice of film sound. For James Currie, long-time collaborator with directors Rolf de Heer and Paul Cox, studying film at university, which combined theory and practice, was invaluable:

[JC] – The lecturers weren’t filmmakers. They were theorists. They came from a different viewpoint. So they augmented this with actual practicing filmmakers, and that was a great basis.

Kallis Shamaris studied film theory rather than production which provided a different starting point:

[KS] – Of course we looked at sound because we looked at the whole filmmaking process, and we looked at the introduction of sound into film, the transition from silents to sound films. We looked at the transition in Russia as well – Pudovkin and there’s a couple of landmark films that use sound in ways that Hollywood would not have thought of. So it wasn’t really a training to go into sound editing.

Others like Ric Curtin came to film sound after starting in the music recording industry:

[RC] – When I learnt there were no schools. Even as a music engineer, [I] started off as a tape op in England at a studio called Sarm. But that was your entrance route. The nice thing about it was being a tape op, you did have the opportunity to sit and watch how engineers conduct sessions.

For many of the participants the study of film in general, or film sound in particular, was simply a starting point from which to learn about sound. There is no substitute for working on films, and gradually a personal philosophy or method of working develops which is based on the actual practice of working in film sound.

\textsuperscript{70} See Glossaries – Film and sound terms: ‘pre-production’. Whilst pre-production here is taken to include scripting it is strictly speaking part of a separate stage ‘development’ which happens before pre-production. The five discreet stages of film production can be described as a sequence: Development, Pre-production, Production, Post-production and Distribution.
6.3.2 Location sound – Recording the performance

For sound recordists the ability to record in often trying circumstances is their bread-and-butter work. Graham Ross has worked as sound recordist on a range of drama and documentary films including David Attenborough’s narration in natural history documentaries including *Life of Mammals* (2002) and *Life in the Undergrowth* (2005), dramatic feature dramas *Earth* (Mehta 1998) which was shot on location in Delhi and *Threads* (Jackson 1984), a drama shot documentary-style by a primarily documentary crew. The approach tended to be pragmatic:

[GR] – If you’re a hi-fi fanatic and you like doing music and all the rest of it, don’t do film sound. It’s not about recording hi-fi. It’s about getting the best material you can in the time.

The relationship between the members of the sound crew and the other production crew determines whether such recording is possible, reasonable, or even sought after. Working as sound recordist involves being part of a team whose attention is on the entire production rather than sound in particular. The focus is not on trying to record ‘perfect sound’:

[GR] – If you’re a sound person and all the time you’re trying to record perfect sound on every single take you’re not going to be well liked because you’re just holding everything up. They want you to keep going and basically get a result that’s acceptable.

Where the director, actors and sound recordist are working together to allow both sound and images to be recorded to a usable standard then the process can be geared toward using the performances as a whole, rather than having to rerecord the sound portion at a later date.

[GR] – It’s all about trust. I mean even with Deepa [Mehta, director], the first few days were tricky, but as soon as they realise you vaguely know what you’re doing and maybe there’s been occasion when they think it’s going to be a problem and hold them up and you say ‘don’t worry, we’ve already got this’ and you build a rapport. That’s why it’s so much easier working with directors second time round. You don’t have this initial 2 or 3 weeks with them wondering if you’re alright or not.

Ross found that as location sound recordist for several natural history documentaries with David Attenborough the focus was different again, but typically involved dialogue as a key element:

[GR] – In natural history we would get as much of the real sound as we could when we were there but my primary function is to record David’s dialogue.

Whether recording for drama or documentary the sound recordist has two distinct roles:

[GR] – Over the years, my job is to record the sound, and it comes in two elements. One is the technical side and one, without sounding pretentious, is the artistic side – the person’s performance – has it changed since we were shooting yesterday, picking it up and all the rest of it. That’s the part of the job I really enjoy.
6.3.3 Planning for sound – Carrying through ideas from script to finished article

For many sound practitioners their role is strictly defined to one portion of the range of tasks in film sound. According to Kallis Shamaris, who primarily works as a dialogue and ADR editor, working with directors for the first time presents sound producers with a situation where decisions with an impact on sound may have been taken before they became involved in the project:

[KS] – …often you’re not even hired, you’re not even on board until they are picture editing in which case they’ve already shot the sound, for good or bad, and they’ve already loaded it into the cutting room. Good or bad, you know what I mean? And sometimes that’s too late, it’s quite good to get people on earlier to get stuff covered.

Many sound editors are well aware of the need for the ideas concerning sound to be embedded in the script, which is the blueprint for the film:

[KS] – It’s interesting because when you read a script, it’s not like reading a novel. It has dialogue and in between that dialogue it has descriptive things, hasn’t it, so it’s a blueprint for something. I’m not used to reading scripts to be honest, but I should think that there is a skill, maybe as a script editor or director, you read that script and you have to be able to visualise the scope that the scene is giving you to do something. And to pre-think some scope for where the sound could work and I think that opening for There Will Be Blood which is all about that sound detail, that’s been thought of.

For some, like James Currie, working across an entire project affords them greater involvement in the film itself since they have input all the way through the process. Collaborating frequently with directors Rolf de Heer and Paul Cox made it possible to carry ideas from the script stage, through pre-production, production and post-production, and then carry them through to the next project. This offered much greater potential for the sound to be used on an equal footing to the pictures.

[JC] – There was a film that completely turned things around for Rolf and I and that was Bad Boy Bubby where we… it was an off the wall script, pretty interesting. And he said ‘let’s put some microphones on the actor’s head.’ ‘Head?’ He said ‘Yes. I’ve thought of this.’ And new things had come out of Germany like microphone kits that would record M/S and the old Dolby 4-2-4 - that filled up the whole cinema left-centre-right-surround. And because of being a sound editor and recordist and mixer for ten years Rolf said ‘well let’s do the whole thing’.

6.3.4 Communication during production

Whilst everyone on a film set may be working on the same film, their concerns are often quite different. The sound recordist or boom operator’s relationships with the director, first assistant director (1st AD) and cinematographer largely determine the amount of time, effort and leeway available to the sound department to record the sound that is needed. The

71 See Glossaries – Film and sound terms: ‘M/S’ and ‘Dolby 4-2-4’.
director sets the tone for the shoot. A sympathetic (or at least sound aware) director will have very different expectations of the role of the sound crew. Graham Ross, working in drama, has seen both extremes; directors who are sympathetic to sound:

[GR] – There’s been a trend in the last ten years. Christopher Morahan who was head of drama who did Jewel in the Crown. I worked with him on a thing called After Pilkington which won the Prix Italia drama prize, and my mate Andrew shot it. He was a total nightmare to work with apart from two areas: he was fine with make-up and costume, and my job. He gave everybody a hard time... But sound... He’d turn to me – and this really got up Andrew’s nose: the director usually at the end turns to the cameraman. Christopher would turn to me and ask me first: ‘How was that, Graham?’ because he realised the dialogue was the performance.

Also directors who are less sympathetic to the needs of the sound department, during the making of the acclaimed television film Threads:

[GR] – I remember when we were down in the bunker in Sheffield, underneath and I was all set to have a really big row with him. At the end of the day it’s your sound. If I’m working for you, I’m trying to get the best for you and quite often you as a director are thwarting me all the time. And eventually it grinds you down. And then it’s the poor old dubbing mixer and the editor who have the problem. If there’s a very good reason for it then fine.

In both cases the films went on to win awards: Threads winning the 1984 BAFTA for Best Single Drama and After Pilkington winning the 1987 Prix Italia for Best Fiction. Other sound recordists benefit from developing a longer working relationship with directors:

[JC] – With some directors I take them right from location right through to festivals. And it depends on their nature and Coxy – Paul Cox – and Rolf de Heer have formed a relationship that means that the conversation that we have is minimal and they like that and they have an adversity to new people. Especially Paul.

The separation of production from post-production often creates difficulty for location sound recordists because of the widespread belief that sound can be ‘fixed in post’ or simply rerecorded, and for many sound recordists it can mean the difference between being able to do a good job and not. The hierarchical nature of the film crew with various heads of department whose concern is primarily on the visual can create pressure on the sound department:

[GM] – I think every sound recordist suffers from it. The belief that post will fix it. And they watch it eventually and it works. They don’t think it was a tricky shot, I wonder how the sound recordist managed to get that not so roomy. They just watch it and they’re just watching the pictures and think ‘Oh no, that works.’ By the time you get into the final product it’s all been fixed and mellowed out and so people who aren’t into sound...

[LM] – ‘What were you worried about?’

[GM] – Exactly. It worked. ‘What’s the problem?’
For those working in location sound to do their job a level of collegiality across departments is required which is not achieved on every film set:

[GR] – Directors sometimes get into a little clique with the cameraman and everyone else is just left to get on with it.

The sound recordist whose primary responsibility is recording production sound is therefore sometimes at the mercy of other departments or of production decisions made at the expense of clean or even useable location sound recordings:

[GR] – The bottom line for me is [that] the dialogue is there, because if it’s not they are going to have to bring the actors in and that is expensive. But having said that I went out to do Hornblower – the seafaring thing. I only went out to do second unit …and there was almost nothing for me to do. It was all special effects like a pistols flying through the air in slow motion. So I spent a month in Yalta virtually doing nothing and when I spoke to the sound mixer the boats, when they were out at sea, had an engine running all the time which they were very loath to switch off. They’d switch it off for the dialogue, and he’d try to explain to them that actually for once it was the other way around. You could pick up the dialogue quite easily even if you had to ADR it, but he’d got no sounds of cannons being pushed around decks and being loaded and all that sort of thing.

Similarly the use of second camera may at first seem a timesaver but can often result in problems for sound:

[GM] – [The second camera was] meant as a backup but inevitably used on long shots making boom shots nearly impossible. ‘No you’re going to see the boom there’. Straight away I said ‘Well this is going to be post-sync’.72

6.3.5 Understanding of other sound crews’ work

Whilst there is the potential for misunderstandings or a lack of awareness with visual departments of the needs of sound, there can sometimes be a disconnect between those working in production sound and post-production sound. Graham Ross describes a common view of sound editors from the perspective of a sound recordist:

[GR] – I’m always amazed at how they don’t have any… they have very little knowledge about what goes on in the field. It’s odd, you’d think there could be more cross fertilisation. Often editors… a good editor, quite often, is someone you don’t often hear from. If they are on the phone every other day saying ‘where’s this, what’s that?’ They are usually not very confident. They’re not very good.

Sound editor Kallis Shamaris similarly describes a view of location sound recordists common amongst sound editors:

[KS] – I think it’s the ones who are least popular that are the best ones. Because they are the ones being awkward and asking people to be quiet and stopping people so they

72 See Glossaries – Film and sound terms: ‘post-sync’.
can lay down some carpet or suggesting people take off their shoes. All those kind of awkward things that are a real pain, actually that’s probably a good sound recordist. Whereas the ones who are liked and who just gets on with it...

6.3.6 Technology

The skills of the individual and their ability to recognise what is important in terms of the performance or sound that they need to capture are key, and in order to do that a certain level of technology is required. Though working in an area which requires a level of technical skill sound practitioners see the technology merely as a tool to get the job done:

[GR] – Again with the technology it has got so much more complicated in the last few years. The tail does wag the dog. This is something that you should be interested in. Over the years, my job is to record the sound, and it comes in two elements. One is the technical side and one, without sounding pretentious, is the artistic side – the person’s performance – has it changed since we were shooting yesterday? Picking it up, and all the rest of it. That’s the part of the job I really enjoy.

Graham Ross remembers a particularly tricky scene which relied on the skill of the operator rather than the technology. It was a dinner party scene with eight people, spoken in a mixture of Hindi and English, using one microphone and one boom operator:

[GR] – The most valuable bit of gear is the boom op. How he remembered who was going to speak when, I don’t know, but what I do know is whenever somebody spoke they were on mic.

Whilst recognising that the technology is crucial to recording sound Graham Ross feels it is merely a means to an end:

[GR] – You can get bogged down in technical details and I use this and that but I’m not interested in that – maybe it’s because I came from the camera side. What I am interested in - the key to my job without a doubt - is editing.

James Currie shares a similar view:

[JC] – And it never worried me to, whatever recorders I could find. Whatever did the job. You could ask questions like ‘What is your favourite recorder?’ – ‘One that doesn’t drop out’. Basically I don’t care what it is. And specifications are all much of a muchness. The digital age is good at some things. It’s not as reliable as quarter-inch. It’s not as forgiving. You don’t fall in love with it like you do with quarter-inch.

6.3.7 Workflow

Working on smaller films or in smaller crews can allow flexibility in working. Glen Martin regularly works both as sound recordist and sound editor on both documentaries and dramas. Being able to record the sound whilst knowing that you will also be editing it removes the

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73 See Glossaries – Film and sound terms: ‘quarter-inch’.

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need for endless redundancy, and allows for more flexibility and speed. Glen Martin explains why as sound recordist he also came to do the dialogue editing on the feature film *Blame* (Henry 2010):

    [GM] – Originally I was going to do the effects and Ric [Curtin] was going to do the dialogue. And when I started watching it I thought, ‘I actually know the tracks and how I’ve split up the actors’ because I’d put it on a four-track machine, and it made sense for me to go through and basically fix my mistakes.

The typical workflow of post-production involves the picture editor assembling a cut which then becomes closer and closer to the final ‘locked’ cut of the film. The sound post team then begin working in earnest on the sound for this locked version, spotting the film to create a list of specific items like dialogue that need attention or replacement, sounds that need to be added or rerecorded, or places where music cues will be used. This may be a common way of working but is by no means the only way. Rolf de Heer prefers to do the picture editing and sound editing concurrently:

    [RH] – Now you can do a tremendous amount of sound and you can work out much better what’s working and not working instead of it being an act of faith. Because you can do much more with sound. So I start to deal with sound ideas, yes, from the very first part of the picture edit... It’s always a question of how much money there is. On *Ten Canoes* for example, James and Tom [were involved] well before the cut was finished. And they would work with sound and get it back to us and then we would modify image as a consequence of that, and they could modify the sound as a consequence of that, and it was a process where the two grew together.

Whilst there are dangers or potential pitfalls in the use of temporary music and effects, they can be used in order to ensure space is left for the sound to be added later:

    [RC] – What I always make sure I do with editors is very early on I start having a look at assembles and I’ll start feeding them sound effects so they’ll put the sound effects in, especially important ones; even if it’s not the right one at least there’s something there. What will happen is they know a big sound effect is going to happen here so they’ll leave a hole. When they are watching it if there is no sound there they’ll drag the hole narrower. So if you give them the sound, and they put the sound in there they will tend to leave a bigger gap. It may only be frames, but it’s just before the next dialogue comes in. I think it’s very important.

Rolf de Heer’s method of working allows that sound editing, music and pictures work together and influence each other. Working on pictures and sound concurrently leaves the potential for picture changes in response to sound and music, as well as the more common sound and music changes in response to the pictures:

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74 See Glossaries – Film and sound terms: ‘locked’.
75 See Glossaries – Film and sound terms: ‘spotting’.
76 See Glossaries – Film and sound terms: ‘assemble’.
[RH] – With The Tracker for example – once we’d worked out that the songs needed to be different and needed to have an Indigenous voice, and once we understood that that Indigenous voice immediately connected itself to the character of the tracker then the film demanded to have its image modified, so that as the music arrived... And this is the difficulty, because the music is written to the image. But when the music arrives, in that case, then you needed to change the image because of what the music was doing, and you change the image, and you change the timing, and you have to change the music, and so it goes.

Although inevitable this flexibility is not always available for films with a tightly defined budget and deadlines:

[RH] – At its best, in my view, the process should be one of the two or three main elements in post-production modifying each other and shifting gradually. But the way films are generally made, that’s simply not possible. People hand over the cut to the sound company, who have done a quote on providing... ‘OK here’s twenty five thousand dollars, you do the soundtrack.’ I can’t work like that. I find it an appalling way to work because it does not allow this process of development of both image and sound and music – all three of them – coming together in the right way at the right time. It’s people working in such isolation. I don’t like it very much. I do it occasionally but don’t like it.

6.3.8 Communication during post-production

Working with other film professionals, particularly directors who are not sound professionals, involves a level of trust that you will attend to the film in way that is sympathetic to their intentions:

[KS] – That’s also part of building a relationship with a director, building trust with people. They don’t know you. They’ve spent a lot of time working on a script, shooting it, working with the actors, working with the picture editor, and suddenly they’ve handed their film over to somebody they don’t know, maybe, and maybe they’re just a bit suspicious that you’re tampering with their baby. And that’s why it’s important to work with them and you have to gain some trust. And usually you try in the ADR sessions that you are giving them something. You are contributing something to their project.

Communicating ideas about sound involves finding a common language to describe the kind of approach to take:

[TM] – I think it’s a generational thing. As younger directors are coming through they are more au fait with terminology. They are more familiar with different phrases and terms for communication, where if you get an older type director and you start throwing terminology like ‘Would you like this diegetic, non-diegetic, contrapuntal, whatever...’ there’s a very big risk that you’ll come over as a wanker... I can say ‘Would you like to play this scene subjectively or objectively. Would you like to be hearing this scene through his ears as he’s hearing it, or would you like to hear it as a member of the audience, as an outside person watching it?’ which is basically saying the same thing.

The lack of specific technical sound terminology is not necessarily an impediment to good communication, particularly where the required end result rather than the technique required to produce it can be communicated:
A lot of these terms overlap as well. There was a situation where someone said ‘Can you use some form of non-diegetic drone or uneasy feeling’. Somebody might say ‘Can you play up the internal logic of what that actor is feeling at this point in time’. Like if the guy is going through anguish and turmoil, can we highlight or portray his internal feelings at that point in time in the soundtrack? There’s no right or wrong way as far as communicating. It’s whatever works.

Each of the various different ‘owners’ of a project (writer, director, editor, producer) may have an opinion on the soundtrack which needs to be respected:

It’s one of those things where… often in a mix there’s always be one, two or three options to a scene. And you’ll talk to the mixer and they’ll have their way of mixing it, you’ll have your way, and maybe the director will have their way. It’s a situation where, having a look at all three, see what the best consensus is for how to play the scene. I hate to be the meat in the sandwich. I’ve seen it where the producer has said ‘I want it louder’, the director says ‘I want it softer’ and the mixer going ‘who’s writing my check?’

For some sound practitioners working in post-production there is also a sense of isolation from the rest of the filmmaking process:

One of the things about sound, or post sound, is that that kind of world is kind of divorced from the rest of the filmmaking process. And they’re one step away from it all. It is quite isolating and I wonder if it adds to that feeling it doesn’t get recognised by people because they are kind of divorced from that whole process of pre-production, location, make-up, costume and acting and performance. The editor is the little bridge between location and post, but then from picture editor to sound, there’s no link from the sound to production. The editor is the bridge and I think maybe sound people don’t really think back to what’s gone before.

## Recognising ‘good’ work

Since much sound work is essentially hidden it is practically impossible to determine how much work has gone into creating what appears as a natural and unmediated soundtrack to the images. For sound practitioners it means not only is their work largely hidden, but also that it is difficult from listening only to the finished result to appreciate how much good work went into its creation:

One of the things you have to give up. There’s no kudos in sound. If you’ve got a big ego… nobody is going to say ‘gosh that was fantastic sound’. Not likely. But they’ll notice bad sound. That is one thing that you have to give up… On Tumbledown there was a line that wasn’t post synced – a gust of wind on a radio mic. Not post synced. And it went out like that. It was nominated but didn’t win. I did better sound [on other projects] which went totally unnoticed.

Sometimes the work is only noticed because it differs from the temporary version heard in the picture edit stage:

It’s a new element that they haven’t heard before in the cutting room. So, do they appreciate what you are doing…? I think with effects editors they really do
because effects stuff is bang and it’s quite obvious that you’ve added something new to it. And I think with dialogue editors, if they get a rapport with them in the ADR theatre.

As with temporary music, there is a danger that temporary sound effects can gradually become the de facto soundtrack, which then becomes difficult to dislodge:

[SH] – I did an episode of Silent Witness for the BBC and one of the sequences was a massive sequence in a fairground and they had obviously spent hours on it in the cutting room and done this cutting. Flashing lights and buzzers and bells, and they had put all this sound in. Then the dubbing editor brought this in and said ‘Right I’ve got some fabulous, really good surround sound effects of such and such fairground. And the director came in and we said ‘What do you think?” Came in a looked at it and said ‘I don’t like it. I preferred what we had on the cutting copy’. And that to me is purely and simply a case of what I call Temp Dub Love. They are in the cutting room day-in, day-out. They’ve heard it a thousand times in the cutting room on crappy little speakers. And suddenly, when the rollercoaster has all this low frequency rumble in it they sit there and think ‘that’s not what I heard’.

6.3.10 Experimentation and creativity

Whilst the idea of being professional suggests that the practitioner knows how to go about their tasks, an important part of the creative process is in experimentation and creativity which involves failure as well as recognising moments of serendipity.

[TM] – A lot of the time, you’ll be working on a theme, and you basically hitting your head against a brick wall, and move on, and something that were trying for another theme that didn’t work you’ll actually use for another scene. It’s like that old adage – ‘a craftsman knows how to avoid mistakes, but an artist knows how to use them’.

For James Currie working with directors who allow for the possibility of mistakes makes for an environment conducive to the creative process:

[JC] – The mistakes then become, as Coxy likes to call them, ‘extra creative ideas’ that you hadn’t thought of. Because he doesn’t believe in mistakes – ‘It’s the gods at play, Jimmy’.

Sometimes the process involves a series of combinations which are wrong until something comes close to being fruitful:

[RC] – It was one of those where it was almost there but it wasn’t that. But nobody knew what that is, and they’d sent me a couple of bits in the ‘clean up’ scene where they think he’s dead and they’re all cleaning up the house and doing all this stuff. And it was another track which we had for something else and I thought I really reckon that would work. So I grabbed that and edited it a bit and did some things with it and it wasn’t right but it had that kind of essence which we were all looking for. And I sent that back to them, and they went ‘Ah, yeah. Right. OK, now we see that’.

Some working methods allow for, and indeed encourage, such accidental discoveries. Whereas sound editors now can search a sound database like Soundminer by description and
go straight to a sound recording they may miss the unexpected gems previously unearthed when they had to spool through a DAT or quarter-inch tape library:

[GM] – I think that’s the biggest thing. You might find so much stuff on the way there… You tend to search things in a library that are similar. Like you type in ‘door’ and you find [recordings of] doors... So many times I accidentally stopped. Especially DAT or quarter-inch and you’ll be looking and think ‘bingo’. And something totally wrong, and something you’d never have thought about in a million years. But it ends up being used in a scene that you’re not even working on.

6.3.11 Governing principles / overall philosophy

The governing principles by which many sound practitioners work are marked by the needs of the story to be foremost at all times. Part of serving the story necessarily means hiding the artifice that went into the production of the story.

[KS] – Well it’s to make sure that the drama is working. And if the emotion is there. And basically that is to fulfil the director’s intentions.

For sound editors part of the job is also recognising when to pull back:

[TM] – At what point in time in a film what needs to be told? What is the story and how can the soundtrack help tell that story? Hey, if it’s a great performance - magic shot, magic words – get out of the way. Let them take it. Some times less is more. Pull back and leave space for somebody. If the performance lives people think we should put a music cue in here, put screaming violins… Yeah you can, but it’s a situation where a pretty powerful moment, and a magic performance.

For most sound recordists the most fundamental aspect of their job is recording the character dialogue:

[GR] – Sound is the performance... The dialogue is the performance.

For Ric Curtin sound is a genuine partner in the film and which contributes to the story in several ways:

[RC] – As far as I’m concerned, if somebody watches something that I’ve done I don’t want them to hear the soundtrack. I just want them to be lost in the story, so if there is anything jarring or they start to think about the sound, they are going to miss the next line of dialogue. I don’t want them to do that. I want to move them to feel happy and comfortable, or make them feel uncomfortable, or do whatever I want them to feel for the story. When I’m mixing, I ask myself ‘do I feel I’m there?’ If I don’t feel I’m there, then something is not sitting right in the mix.

6.3.12 Realism and authenticity in the soundtrack

The aim of realistic representation in the soundtrack is one that is deeply embedded in both the production of films and the audience reception of films. From the perspective of the practitioners, realism is a stylistic choice, but the actuality or authenticity of the sounds
presented can vary markedly from person to person, film to film, and genre to genre. Every
element of the soundtrack is capable of being replaced by something new without such an
artifice being recognised by the audience. The original or authentic recording may be
fundamental to the storytelling or may simply be a starting point, the rough sketch or draft
for the chosen sound.

The original recording may initially be thought of as merely a sync reference:

[GM] – Everything with the dog I actually re-recorded the same dog. The problem of
getting the dog on the day was the handler, who was talking all the time. There is one
scene where they grab the dog and that’s the only original sound and the dog goes
[whimpers] and I thought ‘the dog’s got potential’. And we went to a park somewhere.

The traditional method of shooting drama with crowds involves pretence in order to give the
impression of reality:

[GR] – I remember we were doing one shot [for Threads] of people in a compound to
stop them getting food... and there’s about 3 or 4 hundred people all screaming or
yelling, wanting to get in and we’ve got a close up of our hero. And the normal way of
doing that you don’t have the crowd shouting. You don’t see them and you shoot the
guy clean and lay the yelling over to the level you want. But oh no, Mick wanted the
whole crowd screaming and yelling, and he was like that all the way through.

In some dramas, particular sounds may be used that would pass unnoticed for large parts of
the audience, but whose use will be picked up by some:

[SH] – You do have to be careful. When I was working on Heartbeat, which is based
on the North York Moors, one of the big things in it, is not just the cars and the
policemen, it’s the railway line that often features quite heavily. We were doing
something and we decided to replace, I don’t know… the sound effect that had been
recorded on location didn’t sound right, so we put another steam engine sound effect on
which sounded great… ‘Um-cha, ee-cha’ as it went down the line. And we got this
letter from this train buff who said ‘I’d just like to point out that the sound effect that
you put on the train... was actually an 060 shunter and not in fact the proper sound for a
462’. And he was right. He was absolutely right, but what do you do? It made it so
much more exciting to have this lovely effect that we’d put on, that wasn’t right and we
got caught out, but let’s face it, only one person noticed it.

For others the authentic recording of sound effects is often merely a starting point:

[TM] – This is interesting as far as a lot of the times where, what works dramatically
and what is exactly correct, are two different things. Often times people record the exact
gun or the exact sound for something, but the bottom line is that the actual location
recording is pretty piss poor. It’s a case where we’ve got to add a cannon explosion to
it, or something else, to give it some meat and some impact and some guts to get it
across. We are creating drama.

In such cases, artistic licence would no doubt be given, but for other films the specifics of
the representation, the subject matter and the impact on the audience for the film make
authentic representation a genuine concern, even in a dramatic film. Tony Murtagh recalls
the following experience while making *Samson & Delilah*, a film about two teenage Indigenous Australians set in the central Australian desert and Alice Springs:

[TM] – I think it was [the director] Warwick’s sister who, when they were in the tent stages, she would pick up specific things like ‘That bird is not from this region’. Like if an atmosphere was put in, and it was a tropical North Queensland bird or something like that, it was a case that they were very aware that ‘Ah, that’s not local to this…. You wouldn’t hear that type of bird here. We’ve got to get rid of that one’.

Fundamental to de Heer’s choices in the soundtrack are the separation of the ideas of realism from authenticity and determining their specific relevance to each particular film:

[RH] – Depending on the film – with a film like *Bad Boy Bubby* for example – realism is not significant. It’s not about realism. It’s about subjectivity. It’s about the sound working. It should be authentic - it should - but realism has actually got nothing to do with it. *Alexandra’s Project* as well, realism has nothing to do with it. You use sound in heightened ways for a dramatic effect. And that’s a perfectly good way to do things.

### 6.3.13 Documentary sound

Many sound editors who have experience in documentary recognise that the creative aspects of sound apply equally to non-fiction:

[JC] – People misunderstand the creative processes. ‘Ah, well, you’ve only done documentaries’. I’m sorry to tell you but all the creative processes that you make in feature films are made in documentaries. Sometimes you make them much quicker. Sometimes you have no time at all to make them and other times they are explored to a greater degree.

There are often smaller budgets and smaller crews for a documentary film which mean elements of the soundtrack need to be created afterwards:

[KS] – I think with documentaries, especially those nature ones, it’s a bit of a funny one because people watch it and don’t realise the sound is constructed… it makes it much more palatable. Economically maybe it might be completely unfeasible to take a sound recordist. I don’t see why they shouldn’t but to get a close-up sound - they’d never be able to do that.

Whilst the sound elements of fiction films are routinely rerecorded the requirements of a documentary soundtrack are different. Steve Haynes discusses the issue of replacing elements of sound in a documentary:

[SH] – To be honest we would only manipulate it in an area where it didn’t matter. So if it was a lorry going across camera then it didn’t matter if it was the wrong lorry sound. But if it was something that was actually related to what the documentary was about we would stop and say ‘we can’t do this’. It’s got to be right. You would take liberties but only where those liberties wouldn’t matter in a documentary. You are much more likely to take liberties in a drama than a documentary.
Whether for technical, creative or budgetary reasons documentaries have often relied on post-sync effects. Graham Ross describes the work involved in sound post-production for natural history documentaries once his work on location is complete:

[GR] – As far as the track lay, yes, hmm very interesting. But I’d have been in a room in Bristol just laying the sounds. Still a very skilful job, particularly natural history, because they post sync all the effects. How often do you hear clomp clomp clomp..? Well obviously it’s been done by track layers. There used to be someone David [Attenborough] talked about called Betty the Boot and this is way back before my time, and she used to come in with her friend with some feathers and stuff. And a crow stuck in the snow, they’d rustle around, because everything was shot mute. And that tricks you. It was on film, they didn’t have sound. They’d do wild tracks.

### 6.3.14 Practitioners’ view of the role of practitioners: Summary

Though working across different countries, drama and documentary, production and post-production, film and television, big budget and small budget, there are a number of common themes that came up again and again in discussion with the sound practitioners:

- The increasing pressure on time to complete the work to the standard required, particularly in post-production.
- The importance of communication and the building of relationships with sound and non-sound colleagues, and the relative unimportance of equipment.
- An appreciation of the benefits of early involvement in a project, the ability to see a project through from its beginning to the end, and the desire to be more closely involved with other parts of the process.
- The relative difficulty of non-sound professionals in determining ‘good work’ since most of the work is hidden.
- The distinction between actual authentic sound from the realistic representation of sound which need not be authentic at all.
- The recognition of the similarity in the treatment of documentary and drama sound.
- Most importantly, the passion for sound and its ability to help in telling stories.

For each of the practitioners communication was vitally important to their success. Much of the communication revolves around determining the needs to achieve that end. Whether their work was focused on capturing an actor’s performance, hiding the artifice of the process, or mixing sounds for a particular effect, the aim was always to contribute to the creation of a meaningful soundtrack for the audience. As a result much of the discussion with the sound
practitioners and film professionals relates back to sound and its meaning, purpose and function. How do they view the role of each sound in the soundtrack? We deal with this in the next section.

### 6.4 On the roles of sound

For sound practitioners there are key questions that are kept in mind which guide the production of the soundtrack: (a) what you want the audience to **know**, (b) what you want the audience to **feel**, and (c) what you want the audience to **think**. The narrative elements will give much of the plot and give factual information on causes and effects: what the audience will know. The subliminal narrative elements will help to give the emotional sense of the film – the character’s mood, feelings, experiences: what the audience will feel. The way the sound elements are used and how they are sequenced, integrated, juxtaposed, omitted or highlighted, in relation to itself and other films and lived experience will determine what the audience will think about the film itself, both during the film and afterward.

The telling of the story is fundamentally concerned with the creation or manipulation of meaning – in Holman’s terms there are three roles of the soundtrack:

1. Direct narrative role - dialogue and other narrative sounds which literally tell the story
2. Subliminal narrative role – the particular sounds used. The background sounds which give a clue to the environment or mood, the music being used to augment the drama, the foley sound effects which give character to particular characters, places and things.
3. Grammatical role – the invisibility of picture editing relies on sound editing to act as the glue which in turns helps to create the reality of the audio-visual representation. Sound and pictures work together to create the world of the film that its characters inhabit. (Holman 2002, xi-xii)

Having introduced the Peircean model of the sign and demonstrated its potential relevance to sound and meaning-making in the reception of films and the analysis of their soundtracks, we can now seek to apply the model to the actual practice of film sound to see if it helps elucidate the actual processes and thinking behind the processes. The decisions that sound practitioners make can be viewed through this ‘semiotic lens’ in order to describe the particular choices which underlie particular approaches, manipulations and decisions about such things as:
• which particular sound-signs to use, to augment, or to replace to achieve the desired end
• how they should be manipulated for better effect
• what such a sound-sign might mean for the audience
• how well they fit into the existing schema or code of film
• how quickly the sound-signs will be understood
• what particular sound-image combinations will mean

The soundtrack is composed of both overt narrative components which need to be understood (what Holman terms the ‘direct narrative sounds’) as well as other more covert narrative components which provide emotional content (what Holman calls the ‘subliminal narrative’ sounds). Some of the sound-signs must be clear where others are necessarily more obscure or ambiguous. The soundtrack also relies on what Holman calls the ‘grammar’ of film which is what the audience brings with them in order to make sense of the film. In conjunction with these codes and conventions the film may contain unfamiliar sound-signs which the audience must decipher for themselves using contextual information.

6.5 Roles of sound - direct narrative

Since a large part of the narrative of the typical film would be contained in the dialogue, the location recording of the actors’ performance is concerned with their dialogue. As a rule the original performance would be preferable but where this is not possible later recording is an option, as is the assembling of a new performance from the various takes which have been made.

The role of the sound recordist can vary from project to project. The ability to capture location sound, especially dialogue, is key to the role, but there may be other sounds that can be gathered, whether during the filming or separately, that may be pertinent to the project. Particular locations may be rich with specific sounds which can be useful source material during post-production. Documentaries may require particular sounds or location ambiences which are either necessary or otherwise difficult to reproduce.

One of the primary difficulties in location sound recording is due to the often conflicting needs of different crew departments. Where the majority of the people on set are concerned only with what the camera lens can see, attention to the sound environment routinely takes second place. First assistant directors’ primary concern may be scheduling and ‘getting the
shots’, while stopping all movement in order to get alternative sound takes or room tone for the sound department can frequently be seen as a luxury the production can ill afford.

We can now attempt to apply the Peircean model to the production of the direct narrative components of the film soundtrack. Dialogue has a fundamental input to the direct narrative role of the soundtrack, and works as a sign in a number of ways. In production, each of the representative elements of the dialogue may be manipulated individually. The iconic characteristics of the sound can be changed, such as pitched, filtered, and so on. The indexical link between the new sound and the object to which it must be synchronised can be changed. For meaning to be created, the symbolic element of the dialogue is more dependent on its surroundings. It is dependent on what comes before and what comes after since language is sequential, and is dependent on sequence for meaning. As well as the context of the dialogue, word order and sentence order are key.

Whilst the iconic portion of the dialogue may be partially obscured by other sounds, in order for that language to be understood sound producers need to ensure that there is a sufficient level of clarity for the audience to understand the content of the dialogue. The clarity of the dialogue is dependent on many factors: how the dialogue is pronounced, the accent used, overlapping dialogue, competing sounds, quality of recording, level of reverberation, and so on. When watching a film, unlike in everyday conversation, we do not have an opportunity to ask for a repetition or rephrasing, either by asking expressly, ‘I’m sorry, could you please repeat that?’, or from non-verbal cues, such as a puzzled expression to indicate to the speaker.

However, it should also be noted that film sound practitioners are routinely in the business of both recording dialogue and also replacing the synchronous original dialogue with a different recording. Dialogue editors, foley artists and editors, and ADR personnel each use the principles of iconicity and indexicality in recreating or rerecording the sound to create a more meaningful or clearer version of the original or missing sound. The iconicity of the sound is the key component that is changed, its characteristics, which can be sutured onto the images, provided the indexical link is recreated in such a way as to be both believable and undetectable.

Dialogue editors may replace the original iconic sound recording with a different iconic sound, for all the reasons that are used in practice, for example, a better recording (clearer iconic with less distraction), a clearer reading of the dialogue (meaning more clear), or a different inflection or emphasis (different symbolic meaning). The challenge in dialogue editing is in creating a new reality, in such a way that the new version of the sound is seamlessly joined to the image. Therefore, the indexical element needs to be recreated in
order for the process of synchresis to work. Once the new recording has been worked on, so that its iconic qualities and its indexical qualities make it indistinguishable as a replacement, it can be inserted without the audience recognising that it is not the original sound. The clarity of the representation is a fundamental issue for dialogue since its spoken language is a symbolic representation, perhaps the clearest possible example of a symbolic sign. The stream of sounds in dialogue requires it to be decoded in order to be understood, and therefore the intelligibility of the dialogue is an issue where it is important that the audience understands the particular line of dialogue.

The issue of dialogue clarity highlights the competing needs of the individual elements in the soundtrack. Whilst the dialogue needs to be recognised as ‘realistic’ rather than ‘stagey’, there is also the danger that a lack of clarity will render the dialogue unintelligible or incomprehensible, if only for a moment, which could have a profound impact not only on that particular line, but on subsequent understanding. The realistic portrayal of character dialogue, including its delivery, pronunciation and enunciation, and volume, carries the coded message (the spoken language itself) as well as other coded conventional meanings, such as the emotion being conveyed, and linguistic devices, such as sarcasm and irony.

6.5.1 On using alternative takes

Even where dialogue recordings are technically acceptable there are occasions when alternative takes are used or portions of them are used. The idea here is to make it virtually impossible for the audience to detect which, if any, parts of the soundtrack have been replaced, edited or modified. The side effect of this subterfuge is the lack of awareness of the work that goes into the soundtrack in order to present it as seamless and natural rather than as a construct:

[GM] - Looking at the film it seems a simple film but there was so much dialogue that had to be from alternative takes, or louder, or lots of cleaning up - all the hidden components that make up picture and sound.

Whilst many of the changes are requested by the editor or director in a spotting session there are times when the sound editor makes changes for story reasons:

[KS] - Maybe going through the spot with the director we’ll be talking about what the film’s trying to do. What the scene’s trying to do. You’d be talking about the scene where they want things to be more dramatic, or the sense of the scene being more threatening. I’ve switched words to get a more powerful reading. I think the picture editors go through all the takes and they get the best take but sometimes maybe there’s just a slight… just a little word, a response that percentage wise a little is stronger, that might help.
Where a performance has been replayed many times it becomes difficult to determine how clear or unclear it actually will be for an audience who will hear it only once:

[KS] – Especially editors and directors and producers – anyone that’s been on the cutting room or location – know the material so well they think that it’s crystal clear. When you hear it for the first time, and you try and put yourself in the audience’s position, you’re not hearing something. Sometimes it’s that ‘There’s nothing wrong with the sound quality, why can’t you hear it.’ It’s just a certain intonation or something wrong with the diction. Do you know what I mean? Sometimes it’s a quite an elusive thing to put your finger on and it’s not something that people want to hear.

By manipulating dialogue or other direct narrative elements – using alternative takes, or compiling elements from multiple takes into one version – sound producers seek to isolate or intensify the iconic relationship of the signifier to its object, the representation of the voice to the character. As long as the replaced sound editing is done sufficiently well – with the indexical link is firmly established – then it will be taken as the definitive and only version rather than as the result of a choice.

Shamaris described some of the reasons for using alternative takes: “...talking about what the film’s trying to do. What the scene’s trying to do… I’ve switched words to get a more powerful reading.” Here the production process is made explicit. First, the required meaning or purpose of the scene is determined, and the sound for the scene is then manipulated to achieve those ends. Such editing of the dialogue recording illustrates the manipulation of the iconic and symbolic elements of the sound-sign while reforging the indexical link with the image. Thus, the content is changed while the manipulation remains hidden. The Peircean interpretant of this sound sign, the ‘effect actually produced on the mind’, is the intended effect on the audience, which Shamaris describes as: “What the film’s trying to do” or “What the scene is trying to do”.

6.5.2 On the need for clarity

Many issues about dialogue relate particularly to clarity for intelligibility. What is understood by the writer, director, producer and editor after hearing a line multiple times, and with the aid of a written script, may not be immediately, or even eventually, understood by the audience.

[KS] – You’ve got the cut ‘as is’ which is the one you’ve really got to try and make work. And then you’ve got clarity issues and if there’s a bad one - if there’s something wrong with the technical reasons - you’ve got to try and look at other takes and also for clarity and that clarity issue is a sore point for some people because they know the material, especially editors and directors and producers. Anyone that’s been on the cutting room or location know the material so well they think that it’s crystal clear. When you hear it for the first time, and you try and put yourself in the audience’s position, you’re not hearing something. Sometimes it’s that ‘There’s nothing wrong with the sound quality, why can’t you hear it?’ It’s just a certain intonation or
something wrong with the diction. Do you know what I mean? Sometimes it’s quite an elusive thing to put your finger on and that’s not something that people [editor, director, producer] want to hear.

The sound editor in these instances is a kind of proxy for the audience, who would normally only get one opportunity to understand each line. Here an impartial third party might be useful:

[KS] – I’d love to do that. Bring a guinea pig in, because if they don’t hear it from you, they want to hear it from someone that’s audience, almost, and that could be just somebody that hasn’t heard it before. And even when you’ve got it on the ADR sheet, the minute you’ve got it written down, and everybody in the studio has read the line, then when they hear it, it makes complete sense.

Sometimes during production the sound recordist may recognise that intelligibility is a problem but the decision to make the change is the province of the director:

[GM] – Originally, it was one of those ones where you didn’t have time, there was no budget for post sync. But there’s a road right next to the property that they can’t shut off, so you’ve got passing traffic. It’s just bushy so you’ve got wind in the trees when there shouldn’t be. One actor that’s really quiet speaking all the time. I remember on location saying ‘he’s got to speak up louder. He’s too soft.’ For some reason the director didn’t want to go down that path. And then you watch the show and he’s mainly post sync.

Assuming that the indexical link is established between the dialogue and its source the iconic and symbolic elements provide the fundamental meaning to be made. There are times when the actual words of dialogue are expressly not required but the symbolic sound of dialogue is required, such as in cases of overlapping dialogue, or as in the use of background chatter or walla. In order for the symbolic meaning to be understood the dialogue may be required to be manipulated so that the level of clarity is appropriate for the audience’s understanding the meaning.

Shamaris illustrates the potential problem of familiarity with dialogue when assessing its intelligibility — “…when you’ve got it on the ADR sheet, the minute you’ve got it written down, and everybody in the studio has read the line, and when they hear it, it makes complete sense.” The meaning of the dialogue in this case is not gained purely from the sound of the dialogue, but is assisted by a combination of access to the written script, and then hearing the expected dialogue. The audience does not have this advantage. Shamaris explicitly describes the thought process: “When you hear it for the first time, and you try and put yourself in the audience’s position, you’re not hearing something.” The meaning for those who are intimately acquainted with the production and the story is therefore substantially different to the meaning that the eventual audience will generate because they

77 See Glossaries – Film and sound terms: ‘walla’.
each have different collateral experiences which inform the meaning of the sound sign. For the two groups of people presented with the same sound sign the immediate object and dynamical object will be different, and similarly the immediate and dynamical interpretant will also be different.

6.5.3 Foley and ADR

Foley is sometimes thought of as a necessary evil that needs to be undertaken if production sound cannot be used. For many sound editors and mixers, foley becomes a process where the listener is drawn into the story through the highlighting of seemingly insignificant everyday sounds:

[KS] – For some things it’s really important. Good footsteps are fantastic, for kind of pinning someone in the scene and creating some drama. And little spot effects, you don’t realise how important they are. On location you’re never going to hear that kind of movement… things being put down and what have you. Foley does all that stuff, and you think ‘oh, it’s a bit fussy’, but actually it makes the whole thing feel... it pulls you in a bit closer.

Glenn Martin describes a particular foley sound that he has used several times:

[GM] – I’ve been around a long time. There’s a classic recording of a leather jacket swipe. And I just use it everywhere. It’s really great for punches. Instead of just having a crack you have this [swish], and again it’s recorded on quarter-inch for Robbery Under Arms from South Aussie Film Corp. It sits in a library and there’s a series of them. Some aren’t so good.

As with foley recording, the process of ADR need not be confined to the duplication of a performance that was problematic. Instead, it can be used as an opportunity to change a performance. Steve Haynes discusses recording ADR in Enduring Love:

[SH] – The opening sequence is about a balloon. I did that – it’s all ADR. For the first two or three minutes of the film there isn’t a scrap of sync. It’s all ADR. All added effects, hardly any music. Every time I see it still go… ‘It’s amazing’.

As an ADR recordist, Steve Haynes sees this process as the final stage where the performance can be directly changed:

[SH] – I love interacting with the actors. I feel that you can do so much. You can transform a scene. All the effects you want in. If you revoice it nicely and do a really good job on it, and obviously a lot depends on the talent of the actors, but you can really improve things. You really can.

78 See Glossaries – Film and sound terms: ‘foley’, ‘ADR’.
However, at the same time, if the performance could have been captured during shooting it would save not only time but a substantial amount of work, both for the ADR team and the actor:

[RC] – Doing ADR with actors is very difficult sometimes. Some actors can do ADR very well and don’t mind doing it. Some actors don’t mind doing it but can’t do it. Just can’t get their timing back, and just concentrate so much on the technical aspects and getting their timing right that they completely forget to act and you don’t get the performance. It’s difficult. You’ve got an actor on set. There are real people there. They’re in costume. There’s a buzz going on. You take that out and put them in an ADR studio and there’s a whole lot of people like me the other side of the glass looking at them. A pair of headphones on and they are supposed to recreate this …not only create it emotionally, but create it the same as they did before.

Working in combination, sound-sign and image act as their own proof of reality, each corresponding to what the other is also showing. However, ADR allows the manipulation of the character’s performance through a new synchronised sound or sound-sign with a seemingly causal (indexical) link to the images. By manipulating the iconic and symbolic portions of the sound-sign, sound practitioners can create a different meaning whilst presenting a realistic representation. Through this sleight of hand a new version can be created. According to Steve Haynes, “You can do so much. You can transform a scene…you can really improve things.” The synchronisation of the new recording forges a new indexical link, allowing the new reading of the dialogue to provide a different meaning.

The use of foley sounds is a clearer example of iconic sounds being used to replace or augment a sequence and when (re-)synchronised with the image creating a new reality with the desired effect. Through foley an original recording may be replaced by a new sound which provides a clearer or more expressive representation. The iconic properties of the sound can be manipulated, whilst ensuring that the indexical link to its object is made through synchronisation. According to Shamaris a well done foley “pulls you in a bit closer” by making it possible for the audience to hear the most minute sounds that are normally only audible when one is very close. For foley recordists, foley editors and foley artists the foley sounds may perform their symbolic function more quickly and effectively than the actual recording of a particular sound.

Dialogue editors, foley artists and editors, and ADR personnel all use the principles of iconicity and indexicality in recreating or rerecording the sound to create a more meaningful, or clearer, version of the original or missing sound. In selecting the characteristics to suture onto the images it is the iconicity of the sound which is changed. This can be achieved successfully providing the indexical link is recreated in such a way as to be both believable and undetectable.
The logical reasoning which underpins much foley work is the abductive or deductive process which begins with hearing a quiet sound which one normally would hear only if one were sufficiently close to its source, or if one’s attention was focussed on such a sound. Through foley sounds which allow us to hear the minutest of sounds we are therefore encouraged to think that we are closer or more involved in the characters or the scene. As noted in the previous chapter the ‘leather jacket swipe’ was useful for Glenn Martin because it provides a shorthand to meaning, an efficient and effective way of accentuating the moment using a simple sound whose meaning can be readily understood and which adds to the drama.

6.6 Roles of sound - subliminal narrative

The choices made in the selection of sounds and their treatment have a profound effect on how the film will be received. Whilst the direct synchronised narrative sounds (dialogue, narration and other narrative sounds) contain much of the plot and go a long way to delivering the realistic representation that is required of the film, the sounds themselves which are used to do this work can be manipulated in order to create a more meaningful representation. What Michel Chion describes as synchresis is applied at virtually every stage in the production of the soundtrack. Voices can be rerecorded or revoiced; production sound effects can be augmented or replaced by better recordings, or entirely different objects to create a different sonic character. Background ambiences can be removed, inserted, created or mixed to indicate a mood or set a tone, supporting the direct narrative role whilst at the same time guiding the audience to interpret characters, places, motivations or memories in a particular way.

Subliminal narrative sounds are sounds which enhance the creation of meaning in the mind of the audience. They are the objects which need not be immediately recognised, or fully recognised. Whether through the addition of background sound effects, or the use of music, the choices that govern the sound producers’ use of such sounds rely on an implicit understanding of the symbolic meaning of such sounds and their combination, and their juxtaposition with the image. Peircean semiotic concepts can now be used to illuminate the role of the sound practitioner in the process of creating the soundtrack.
6.6.1 Augmented sound

Much sound effects editing work involves augmenting or replacing the original recordings. Glen Martin describes his approach to sound effects editing:

[GM] – I generally enhance everything. It’s just what I tend to do. And I don’t need to in a lot of ways.

Such augmentation or replacement is difficult to detect, if not impossible:

[KS] – People assume that’s what it is. You don’t think about the construction, you are just watching it. That’s the magic of cinema – that very, very quickly you forget the construction.

Often the replacement sound is created from scratch using multiple sound components:

[GM] – I went everywhere to get the right door components – like there’s five doors... A really solid door. And I just wanted to make it longer and stuff. It’s nice to put sounds in that aren’t precise. You hear it open, hear it turn and then open, even though he just pushes it. It works… It’s just more fun. Plus, you’re going to use the door later on anyway so you spend a bit of time getting it right.

The fact that the audience can never be aware of any replacement or augmentation of sound allows enormous scope to producers in the selection of treatments for each element of the soundtrack; in Shamaris’s words: “You don’t think about the construction, you are just watching it. That’s the magic of cinema - that very, very quickly you forget the construction.” In describing the routine augmentation of sound Martin says “I generally enhance everything. It’s just what I tend to do.” This shows the importance of this technique which allows the sound producer to inject meaning or heightened meaning in the smallest sound element.

For example, in representing a door, augmentation could be used to suggest more substantial weight, such as when a prop door, or otherwise flimsy door is used, or some other characteristic, such as squeaking or rattling to indicate a sense of weatheredness or dilapidation. Used in conjunction with the remaining soundscape, the silence that follows the sound of the door closing could also be used to suggest a feeling of finality or of a turning point. The augmentation of sounds allows for figurative use of sound, as with sound metaphors. It also allows the layering of sounds with different iconic and symbolic properties to build more depth or substance to a sound to lend it emotional weight, or to create a symbolic link to a desired interpretation of the sound.

The sounds that are used to augment may be from combinations of sounds each of which have a characteristic that is required, and whose individual meaning contributes to the feel of the new composite sound. Martin describes the elements used to create a simple door sound:
“I went everywhere to get the right door components – like there’s five doors...” and “It’s nice to put sounds in that aren’t precise. You hear it open, hear it turn and then open, even though he just pushes it.” The different sounds may each possess characteristics that the audience will ascribe to the object, for example, a low-pitched sound to indicate the door’s weight, or a rattle to indicate its weatheredness. In this way, these iconic properties contribute to the overall effect. The augmentation need not strictly match the reality, but merely be close enough to render the augmentation undetectable.

### 6.6.2 Backgrounds and subconscious sound

Backgrounds (BGs, ambiences) serve a dual purpose. They allow the masking of sound edits, where replacement lines of dialogue or alternative takes are used, to hide the discontinuity in the background soundscape. This then suggests a continuous sequence rather than a disjointed construction. Similarly, sound backgrounds serve to hide the discontinuity which sometimes results from picture continuity editing, in order to present a scene as a continuous sequence rather than isolated shots. In addition, they provide a subconscious anchoring of the scene. A good deal of time is spent compiling backgrounds, which are used to create a mood or feel for a sequence or location:

> [KS] – The little subtle thing in effects is the atmospheres that you are laying behind dialogue. It might just be a dialogue scene, but it might be a country scene or an interior scene, the subtlety of the atmosphere will give a certain tone or feel to the scene.

Since the majority of the soundtrack is not subject to critical attention, there is scope to design elements into the backgrounds to give a particular feel:

> [KS] – The non-literal stuff is quite interesting... you’ve done all your location work within the limits and budget that that involves. I was working on the TV version of *Oliver Twist* for example, and in the spotting session there was a scene where people were talking in a dark place and the director said ‘I want this to be really threatening.’ They’re by the Thames in an alleyway and all this stuff going on in the background. So suddenly you’ve got all these other sound elements that you can add to it, subconsciously creating this sense of menace.

Steve Haynes describes a similar approach:

> [SH] – The director of the 1980 *Red Riding [Red Riding: In the Year of Our Lord 1980]*, which was about the [Yorkshire] Ripper; the director was very sound oriented, which was great. The police used to take victims down to the bottom of the police station, which they called the belly and the director said to me ‘What I want is a certain unearthly, unpleasant, unsettling atmosphere in the belly.’ So every time they go down into the belly I want the atmosphere to change.’ So we got a slightly – it sounds a

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79 See Glossaries – Film and sound terms: ‘backgrounds’.

bit ridiculous but it was very low in the mix – we got a slightly phasey, slightly space
trekky atmosphere and we mixed that with the sound of… you know when you’re down
in the bottom of a big ship and it’s underway, and everything is shuddering. You get the
big echoey, metal, shuddering. You can’t hear the sea. All you can hear is the
shuddering from engine because the engine makes everything on the ship vibrate. So
we had that shuddering, underwater sort of noise. Plus the slightly, sort of phasey sort
of noise and we mixed them together and that was the atmosphere for the belly.

Small changes to backgrounds can be used to steer an audience’s understanding of the mood
of a particular scene:

[RC] – If scene is in a flat you, can put the odd car or a dog bark outside and all that
kind of stuff, so that there’s movement going and it just not quite, even though there is
nothing changing in the picture. If in the sound there is some movement going on so, it
doesn’t feel still and… it helps people stay in the scene. Or you can do the reverse, so if
you do want it to feel incredibly long you can take all that sort of stuff out. And then it
makes two seconds of silence feels feel incredibly like half a minute. Silence is great. I
use silence a lot. Get in and get out. Silence is great. Makes the audience feel
uncomfortable.

For some films the backgrounds are considered so important that they are designed
beforehand and played back on set during filming. Rolf de Heer describes them on Bad Boy
Bubby:

[RH] – When we created the atmospheres that appeared in the house… when we
appeared outside the house we had to have those atmospheres either put in, track lay,
which he said ‘I’d prefer not to’. Let’s play them live’. So we had a set of night
atmospheres, so I just hired some Marshall amps from a PA place, and we had the
streets we had sort of a T-junction. I put up these Marshall amps and we just turned
them on. We took our own atmosphere with us and I rerecorded that on location as
though it was the factory just idling at night, which is interesting to see some sound
people who go ‘Oh’ as though it’s a revolutionary idea, where it was just an extension.
We don’t want the atmosphere that’s there; we’ll bring our own, and set that up. We
won’t track lay. We won’t put it in conventionally. We’ll put it in live and get what we
can.

The attention given to backgrounds in sound editing illustrates two key points. First,
backgrounds by nature tend to be relatively subliminal, literally as well as figuratively in the
background rather than the foreground. Second, they tend to be a continuance of sounds
rather than isolated individual elements, although they can of course be created from
individual elements. Since they do not normally stop and start abruptly, we are not alerted to
their presence, although we do hear them. Just as with the background sounds of life, for
example, the air-conditioning, traffic and electrical hums, we become accustomed to them
and only notice them if they suddenly start or stop. Therefore, backgrounds can be designed
to create a sense a place or a mood unobtrusively.

As with each part of the sound production process the sound practitioners put themselves in
the position of the audience, acting as a proxy to determine the most appropriate sound, or
combination of sounds, to produce the desired effect on the audience. In post-production the addition of common sounds “odd car or a dog bark and all that kind of stuff” [Ric Curtin] may tend to suggest the normality of the scene. Similarly Steve Haynes recalls the need for a “certain unearthly, unpleasant, unsettling atmosphere” required for the scene was created though it was “very low in the mix”. The sounds which are used in these two cases – cars and dog barks to indicate normality; an echoey, ship-like throbbing to indicate being in the bowels of an enormous machine – by themselves are inconspicuous, particularly if they are relatively quiet compared to other elements in the soundtrack. The objects themselves may not be recognised, but the meaning produced because of their inclusion is genuine. The sound practitioners use them because they are aware of the difference in mood, tone and feel which the backgrounds create. The interpretant of the sound sign in this case is the feeling – in these examples whether of normalcy or of dread - produced in the audience.

6.6.3 Sound as a metaphor

Sound elements can be used for their metaphorical connotations. Musical themes have long been linked with characters but, stylistically, sound treatments can also be used to add meaning to characters, situations, objects, or moments. Tony Murtagh discusses the main character of *Suburban Mayhem*:

[TM] – They were trying to come across, to reflect the Katrina character of ‘here’s a brash, really in-your-face, hard, rough sort of character’, and the soundtrack was mirroring her. I know that even in an early stage there were points where we’d come into a scene and we’d be using a production piece of music, like a rock n roll song, and it would just cut half way through a word. Like really loud half way through a word, or the other option is coming out like chopping it. There’d be some debate at the time whether we’d use some effect to transition it to something else whether you could echo it off or explosions or do things. And it was a case where I want it to be brash. I want it have an edge to it. It was a stylistic choice. It wasn’t going to be an ultra-smooth feel to the soundtrack. We wanted to have that edginess and grit to it. I know initially, personally I thought, ‘Righto’. You’re always trying to make things as smooth and seamless as possible. This is going for the other side. But it works.

Such metaphorical uses of sound often rely on the idea that sounds contain embedded meanings, such as clues to their physical size, material, origins and so on. For Kallis Shamaris such use of metaphorical sound is the basis of the approach:

[KS] – That’s completely what you’re doing. That’s why it takes two weeks rather than a day. Otherwise you’d just use a crappy library door. It’s all about getting it feeling and sounding right. And the manipulation would be in getting a bigger door because you’re trying to be more dramatic, and pushing that point, rather than a door that might be more accurate. You might go for something that’s less accurate but more dramatic.

81 “Very low in the mix” in this context means played very quietly compared to other elements in the soundtrack, so that the sound is heard (and its effect felt) without drawing attention to itself.
Only with the ability to compare the results of two different approaches can the full effect of sound be determined:

[KS] – Great sound… it’s incredible how it gives you a whole different dimension. Not just the practical level of being right, but on that imaginative, metaphoric level of the things you can do with it.

The metaphorical uses of sound rely on the ability to refer to another object to create an alternative meaning. For sound producers there is an opportunity at the sound editing stage to add layers of meaning to particular sounds. In their treatment of sound effects and music they can use the soundtrack as a metaphor for characters. Shamaris describes the dual approach of the literal and figurative meanings of sounds working at the same time as: “Not just practical the level of being right, but on that imaginative, metaphoric level of the things you can do with it”.

Not only can music be used in a symbolic way but also the treatment of the music in the soundtrack can also be symbolic, providing its own metaphorical enhancement. Murtagh gives an example from *Suburban Mayhem*: “They were trying to come across, to reflect the Katrina character of ‘here’s a brash, really in-your-face, hard, rough sort of character’ and the soundtrack was mirroring her”. The metaphorical association of rock music with Katrina relies on the audience reading both the meaning of the music as well as the treatment of the music. Even if the audience is unaware of the symbolic meaning of the particular song being used or the specific artist, the audience’s understanding of rock music as a genre (and its associations with youth, rebelliousness, and so on) will do a similar job of carrying the metaphor. Similarly the treatment of the music, such as loudness and cutting part way through a word, also relies on the textual knowledge of the audience to recognise that this is a metaphor, the abruptness is a stylistic choice rather than a technical mistake, signifying the character’s defiance of convention or her unpredictability.

Several Peircean concepts relate to the use of sound metaphors: the symbolic representation; the separation of the object of the sign and its interpretant; the distinction between the initial object and the dynamical object; and the distinction between the initial, dynamical and final interpretants. The rock music described by Murtagh which is used as a kind of character theme acts as an object, but is also used to refer to the character through its synchronisation and association with her. The initial synchronisation may not yield such a result, but once the music has been associated a second time, the association with the character Katrina is then stronger and we reassess the previous sound-sign. The music is now acting as a sound-sign whose object is Katrina. Similarly, the music symbolically represents Katrina. We are thus invited to ascribe meaning to the association of the character and music. Similarly, the
initial interpretant for the initial sign is now modified and becomes a dynamical interpretant. The audience is then invited to ascribe meaning to the linking of the Katrina character and the rock music, and its treatment.

6.6.4 Using sound to convey emotion

For many filmmakers sound is a key means of creating the sense of emotion or provoking an emotional response in the audience. The fact that it can be done without drawing attention to itself is one of its benefits.

[TM] – You watch Bambi over his dead mother, and it’s a case of the violins are going in the background and you’ve got a tear in your eye, and you’re being totally twisted emotionally by the soundtrack.

Even without such overtly manipulative treatment the soundtrack can convey the emotional core of the film:

[RH] – Now that is not a way that people think because they don’t generally have this notion that sound is responsible for 60% of the emotional truth of the film. So if there’s any one guiding principle in a way it’s that. It’s that sound is tremendously underrated until it’s too late, usually. Now it doesn’t mean that people don’t do great jobs afterwards, and there’s a whole standard way of doing stuff that I don’t necessarily agree with and there’s some fantastic work that’s done and all that sort of stuff. But in low budget filmmaking in particular the thing that is often not up to standard is the soundtrack and it can be if people think differently about it.

Though sequences of images alone can be powerful a good deal of the emotional content of the film comes through its accompanying sound. Indeed the use of restraint in both image and sound can give a more satisfying result. Tony Murtagh describes the murder scene in Suburban Mayhem:

[TM] – We could have gone for the whole blood and gore, the baseball bat to the head sort of scenario. I think we actually pulled back on that. We got the father to do a fair bit of ADR and it was great. Blood curdling sort of stuff. And I think the sound was getting really gruesome. I think we pulled back a bit. It’s amazing how often people don’t let the audience use their own imagination. The classic person who did all that was Hitchcock, using the audience to fill in what’s going on. The most frightening scene in The Birds you see a beak for two seconds and that’s all. You never see the birds. Or waiting for the attack. It’s the threat, the Damocles sword over your head.

As with any artistic enterprise, the ingredients may be brought together but only in a certain arrangement do they gel. Part of the role of sound editors, as with any kind of editing, is recognising when something is working; when something feels right:

[RC] - Like when you are recording a band. They can play exactly the same. You’d do ten takes and all of a sudden the eleventh take and everyone sits up and the hairs on the back of your neck go up and you go ‘that’s the one’. You play it back and try and
analyse why that one works and everyone feels it. If you knew what it was it would be
great.

The aim then is for all the elements to work together so that the film becomes a unified
whole rather than a combination of disparate elements, which allows the audience to become
immersed in the story:

[RC] - To me with sound, if it’s right and it works then people don’t hear it. It’s when
it’s wrong and something happens and people don’t actually hear it but it throws them
out of the story, and it takes them a little while to catch back up again. And so they can
miss a line of dialogue of something like that and all of a sudden they’ve got to start
thinking again. I find if I go to movies, in the first little bit of the movie I’m always
listening and watching technically, if I get sucked into it and blown out the other end I
go ‘That was really good guys. I’ll get it on DVD and have a listen’.

The emotional power of the sound in film is not solely determined by only the emotional
content of the soundtrack, the emotional content of the images, or their combination. It is
also dependent on the preconceptions and experiences of the audience. Leaving space to
allow for meaning to be created allows for engagement by the audience. Peircean semiotics
takes into account the role of the interpreter of the sign. In cases where a particular emotion
is required, due to a particular scene or moment, sound practitioners understand that the
emotional content of the sound is only one component that will determine whether or not the
result is achieved. The choice of the sound-signs that are required to help produce an
emotional response might be associated with particular emotions. For example, music allows
the prior knowledge of the audience to help create the emotional meaning, with the
dynamical object being a particular sound-sign (a musical motif played on strings, or the
sound of a train whistle), which by association then produces a different meaning, the
dynamical interpretant, such as a feeling of longing, or loss, or romance.

Indeed old-fashioned or over-used representations can only happen with the prior knowledge
of the audience, who have experienced the same or similar signs before, and whose novelty
or value has worn off. This also shows how the same sign can produce different meanings
for different audiences, where the sign itself produces a different interpretant. In cases such
as the use of violins in Bambi described by Murtagh which, to a modern adult audience, may
tend toward stereotypical or hackneyed usage, the same sound-sign which once evoked a
feeling of tragedy or sorrow may now only draw attention to the manipulation since the sign
no longer works in this context. It is no longer sufficiently well hidden and risks being seen
as an overt attempt to manipulate the emotions.

Peircean semiotics highlights the process of semiosis in film, recognising that the meaning is
created by the recipient of the sign. It is worth noting than that we are not therefore talking
about the emotional content of the film in general, and its soundtrack in particular, but rather
the elements of the soundtrack which have the potential to evoke an emotional response in the audience. Whilst dialogue is often regarded as the peak of the soundtrack hierarchy, and for a good many films dialogue is carrying much of the emotional content, it is frequently a sound, absence of a sound, a musical theme, or a combination of sound and visual elements which may provide particularly emotional moments. Crucial to the audience’s feeling of emotional involvement is engagement. Viewing the audience in Peircean terms as a partner in the making of meaning there is then great potential in leaving emotional space for the audience to use their own imagination. Murtagh laments: “It’s amazing how often people don’t let the audience use their own imagination.” Recognising the correct balance between the content of the film and the space for the audience to bring in their own imagination is vital in creating an engaging film.

6.7 Roles of sound - grammatical

Sound plays a fundamental role in presenting the apparent reality of the cinematic representation. Conventions of continuity editing rely on sound to provide the stability across picture edits in order to present the assembled scene as an uninterrupted sequential perspective. Sound also provides a larger scale role in the grammar of film. Foreknowledge of film forms prepares us for new films: the conventions of opening title sequences, theme music, accompanying music, dialogue emerging from the centre of the screen are all departures from real, lived experience, but ones which we accept as being recognisably film-like.

Sound practitioners use their experience and instincts to determine whether a particular treatment is working, or will have the desired effect on the audience. Both sound and music can fundamentally change how the film is received by the audience: its pacing, its characterisations and motivation, its feel or mood. Whilst films may contain explicit language and seemingly unambiguous representations we can say that all films create a framework in which sound and images are interpreted by the audience to create meaning. The audience brings with them pre-existing understandings or codes which they combine with new sound and image elements to create new meanings. Familiar film techniques such as theme music or voiceover narration will be understood and assimilated into the understanding of how to read the film.

We are able at one and the same time to expect a realistic portrayal of events on screen, while accepting music or narration that are obviously not coming from the world depicted in the film. Film makers may use familiar techniques or new or unfamiliar ones which require
the process of making meaning to be modified. In Peircean terms the making of meaning is seen not as a finite process, but as a process that takes place over time. We may have an existing understanding which will be modified in light of contradictory or supplementary information. The tripartite model of the sign – object, sign vehicle and interpretant – allows for the object being referred to in the sign to actually mean something else. A telephone ringing doesn’t only mean that an electrical signal is causing the bell to sound: it also means that someone is trying to make contact.

Peirce’s different kinds of reasoning – abduction, induction and deduction – can be applied to the way sound practitioners go about creating sound signs from which meaning will be created. Our prior knowledge of existing codes and conventions of film sound allows us to make sense of what we hear in the soundtrack – theme music, score music, narration, character dialogue, continuous background sounds across picture edits – so that we can deduce or induce some meaning from them. Abduction is the process which takes place in the absence of such information. It is a form of guesswork through which the audience is forced to actively suggest or create meaning for themselves.

Whilst the soundtrack incorporates literal and non-literal elements (direct narrative and subliminal narrative), the relative ease or difficulty for the audience in the meaning creation process is dependent on the grammatical use of the sounds. The extent to which particular sounds that fit into familiar codes or information are given to or withheld from the audience, will determine whether abduction, induction or deduction takes place.

For example, in a simple scene where a character A is established, talking to a character B, there could be examples of each type of reasoning being used:

Hear and see character A speaking: a deduction that the person seen and heard are one and the same.

See character B, but hear character A speaking: an induction that character A previously seen is speaking, or that character B is listening to character A as I can hear them.

Hearing scored music accompanying the scene: the abduction that the music relates to the scene and influences how the scene is interpreted.

6.7.1 The interdependence of sound and picture

The typical division of roles in film and television post-production often means that picture editing takes place before sound editing, and with a few exceptions, the picture cut is then ‘locked’, meaning timing changes are unlikely. Unless flexibility is built in, the hierarchy of
workflows in film production and film post-production rarely allows for extensive changes, partly because of the time ramifications on late picture changes for other departments, including animation, visual effects, grading, and so on.

It is perhaps stating the obvious to say that adding sound and music to pictures fundamentally changes the meaning from that which was contained in the images alone. Part of the role of the picture editor is gauging the effect of elements being added which do not yet exist. One example is scored music which is often either not yet written or not in a state to incorporate into the picture edit. Instead, temporary (temp) music is often used which is thought to be similar enough to be able to make a judgement on how the scene should be cut together.

Typically the picture editor works with the picture elements and basic sound elements such as production audio and some sound effects, which can lead to a situation where sound and music are simply a coat of paint to be applied once the structure of the film is in place. James Currie describes working on sound picture and music simultaneously with the addition of each affecting the other.

[JC] - With Ten Canoes we realised we could only cut a certain bit roughly and he would send that over on a stick to us and we’d stick it in and we’d put all that together. We’d even do some foley for it and give it back to him. And he did the opening three minutes then he did it in blocks and they would elasticise or contract the block as they went through - so now because you’ve done this, we’ll need some more atmosphere here or we’d make a note because Tom and I made the music for it…

Being in a position where sound and picture are still in flux means that options are still open:

[JC] - Yeah, it’s frustrating that you can’t, but you just shake your shoulders and go ‘OK.’ But that’s what applies to this film, or this particular piece of work. Documentaries are easier to do that with. With Darlene Johnson and River Of No Return, I said, ‘Darlene we really need to expand this and contract this one.’ ‘Not a problem. Yes,’ she said ‘yep, yep, yep’.

Working in this way may require a different approach for those not used to working in this way. There is a benefit in having the director see the changes that sound and music have on the picture edit.

[JC] – Her producer on Crocodile Dreaming said to me ‘How long do you want the director for?’ I said ‘For the sound edit, the whole lot.’ ‘She’ll get bored.’ I said, ‘Well, give her a chance to get bored.’

Whilst not everyone has the flexibility to change the picture edit as a result of sound editing it is recognised that the combination of sound and image plays a significant role in the creation of meaning.
The sound producers’ descriptions of their practice shows the change in meaning that comes about once sound and/or music have been added to the picture edit and illustrate the concept of the fluidity of both the object and the interpretant. Working from the premise that we are manipulating or guiding what we wish the audience to (a) know, (b) feel, and (c) think, the addition of both sound and music can have a profound effect on all three. The pictures may remain the same but rather than being the only object of visual representation; the additional elements will modify the object. That is, the object being represented in the film will change as sound and music are added. Between a locked picture cut and final sound mix both the things being represented (objects) and their meaning (interpretants) will necessarily change.

For the audience it is impossible to determine how much effect there is in a finished film, as they do not have access to the version before sound and music were added. Similarly, a sound editor, where a picture cut is indeed locked, can never see what the difference would be if it were possible to go back and insert another two seconds to the end or beginning of a scene in order to include a sonic idea. In cases where such amendments have been able to be made, the results of such back and forth are visible to directors, picture editor and sound editor. Currie’s collaboration with de Heer on Ten Canoes and with Johnson on Crocodile Dreaming show us how the addition of sound and music interacts with the pictures and changes the perceived meaning, for the sound practitioner, editor and director alike. The meaning of the images is not fixed but is co-dependent on the soundtrack. Both the object being referred to in the film and the interpretant which arises from it is not set by the visual component alone but is changed once sound is combined with the images.

### 6.7.2 POV sound

Typically the narrative components of the soundtrack are presented as being relatively objective and realistic, in order to minimise the risk of undue attention on the artifice of its production being diverted away from the story itself. The use of subjective sound (POV sound) is a rich means of immersing the audience in the story. Whether supported or implied by POV images or not, POV sound allows the audience to hear the world as though filtered through the perception of the character. Tony Murtagh describes the use of POV sound in Samson & Delilah:

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82 See Glossaries – Film and sound terms: ‘POV’. The term POV (point of view) is used in preference to the technically correct POA (point of audition), simply because it is a widely understood and accepted term, and does not necessarily imply emphasis on the visual.
[TM] – It was in the script and something that Warwick [Thornton, the director] tried to explain in the post-production stage. He wanted to actually focus on the health issues of aboriginal communities – or the lack of. And he’s [Samson’s] got hearing problems, and it’s the case with a lot of aboriginal camps where they don’t have a lot of access to chemists or doctors, or things like this. The kids will get hearing infections... And one of his ears was supposed to be worse affected than the others. So in the mixing stage, Rob who mixed it was supposed to make one more muffled and also that scene where Delilah gets kidnapped the side of the car that pulls up was the side of his bad ear as well, but also combined with that fact was his state of mind at that point in time was stoned on petrol and things like that where he was in a haze and not quite there.

Where the soundtrack departs from objectivity and becomes the POV sound of a particular character the listener is drawn closer into the story.

[RC] - There are times when you are doing drama stuff where you do want to take it out of reality because you want to go inside their head. You want to make people feel like they are looking out from his point of view so you do all sorts of things to pull them in there and then you cut away, and you want to come back out, so you’re seeing him and all this kind of stuff. Which is fun.

Some films use a form of sound POV for the whole of the soundtrack, in order to present the filmic world from the perspective of a character. James Currie talks about the sound perspective in Bad Boy Bubby:

[JC] – As you’re getting sucked into the film you’re hearing all he’s hearing as a character, not necessarily seeing what he’s seeing. There aren’t too many POV shots of what he is seeing, but certainly in terms of the soundtrack and then it’s literalised with the bagpipes, which again is the benefit of having a small-ish crew and the having less people and having more input rather than by committee.

In order to take advantage of this approach both the script and the images need to be designed with sound POV in mind:

[RC] – Part of the scripting is, and hopefully in discussion with the director and stuff you’ll go ‘I feel when we get to that scene maybe we’ll do a shot of that guy’s POV’ and we can do some sound for the edit and make it a bit more convincing and stuff like that; (a) it’s got to be in the story to start with and (b) hopefully the pictures will be shot. Hopefully everybody is on the same page. The hardest thing to do any time, and it happens quite often, you get to a point and you put it up and go ‘that scene doesn’t quite work’ and the director says ‘yeah we never could get that right on the day. Can you fix it?’

POV sounds, like POV images, indicate a subjective rather than objective representation. The ability of the filmmaker to create the feeling of experiencing the film through the eyes and ears of a character allows the audience to become more immersed in the story. POV sound and POV images often work simultaneously but POV sound need not require the images to literally represent the viewpoint of the character. Such use of subjective sound often depends on the script or the images to establish the foundations for sound to be used in that way.
In some instances the sound practitioners’ manipulation of the soundtrack may allow the audience consciously to recognise that POV sound is being used, or they may also fail to recognise this, or begin to recognise, or only recognise long after its actual usage. Such variance in the individual interpretation of the sound sign indicates how the initial object may differ from the eventual or dynamical object. Accordingly, the sense that is made of the use of POV may well be modified as well. In Peirce’s model this can be described as the initial interpretant becoming the dynamical interpretant and perhaps evolving into a final interpretant. In the example from *Samson & Delilah* the sound heard as Delilah is bundled into a car [described by Murtagh on page 186] is ambiguous. The initial object being depicted in this case may be a literal representation of the car pulling up (the object), but once we recognise it as the POV of the character Samson it becomes instead a representation of what Samson was actually hearing. The meaning of the muffled sound is now not simply the indexical representation of the car we see, but also an interpretant incorporating Samson’s altered perspective as he experiences the events.

**6.7.3 Audience perception and manipulation**

As a starting point on the soundtrack for any particular moment or scene it is common for sound practitioners to take a broad view of both the film and the needs of the story. Tony Murtagh describes his philosophy:

[TM] – The bottom line I think is 'At what point in time in a film, what needs to be told, what is the story, and how can the soundtrack help tell that story?'

Some sound editors are even more explicit in trying to determine what is required from the soundtrack, rather than simply filling a soundtrack with sound. Here is James Currie talking about working with the director Darlene Johnson on *Crocodile Dreaming*:

[JC] – So I said to Darlene you’re coming to talk to us, to tell us, to reconfirm to Tom and I how you want things, what new things have come up. And she gave us a rough cut of the film. So developed it like that and developed ideas that she was incorporated in, and the tonal language of the film, and the understanding of ‘what do you want the audience to feel here - at this point? Look, we can put in all the crap possible but from you the director - and it’s your film - what do you want the audience at this point, or is it that point?’

One of the benefits of the relative ‘invisibility’ of the soundtrack is the lack of critical attention to it:

[RH] – People are less conscious of what the soundtrack is doing unless it’s really obvious music and then they become conscious of that because that’s not very good.

The lack of critical attention extends to film critics and reviewers:
[TM] – One of the reviews in the paper said ‘Samson and Delilah - the movie with no sound in it’, because there was no major dialogue or no major music. Some reviewer wrote this. At times there would be 40 or 50 tracks of atmospheres layered. And very complex. And a lot of the time it wouldn’t even be featured all at once – one would come in one would come out. And also there was this whole identity thing - I don’t know where it came from – whether it was Warwick or it was in the script. It was a case of Samson was represented by a cockatoo and Delilah was a crow. So like any of those sort of sequences where he is up on the hill, looking down and petrol sniffing, you’ll hear in the distance cockatoos and that sort of thing. It was almost like a signature identity thing - a part of the whole film.

Since the audience is presented with a finished product only those who work on the soundtrack and can see and hear the results of changes are in a position to appreciate the effect that the work has:

[KS] - People don’t realise that sound does a lot of work subconsciously for you. It helps to drive the story forward in ways you don’t realise. You don’t realise what it’s done for you but it’s done a hell of a lot. Whether it’s in terms of just making some things clearer in certain dialogue. Just in the effects. Some action sequences that sound absolutely fantastic and really dynamic, you don’t appreciate how much work has gone into them and why you’ve enjoyed it so much. It’s not just because you’ve seen a sword swish and swirl through the sky, it’s because of the effects that go with it.

The relative invisibility of the mechanics of the soundtrack and its manipulation, and the consequent difficulty of detecting manipulations where they exist give sound practitioners a great deal of scope to shift, clarify, suggest and manipulate meanings in the film soundtrack. They are often able to hide their work ‘in plain view’ as is the case of much music score. They may manipulate the sound without leaving any trace of its manipulation as is the case with much dialogue editing: simply satisfying the appearance of synchronisation to the image is sufficient for the rendering to be understood as the necessary and self-evident sound of the events on screen. The sounds, and therefore the sound-signs, may achieve their purpose without conscious attention. The objective of much of the work of sound practitioners is to create signs, but hide the artifice. That this outcome is so successfully achieved does not indicate that no work is being done, but only that the sign is hidden.

The starting point of the decision-making process for sound practitioners for the film overall, or for a moment or scene in particular, can be framed in light of the fundamental questions (a) what does the audience need to know, (b) how should the audience feel, and (c) what should they think. Murtagh’s description of the role of the soundtrack characterises the sound practitioner view: “The bottom line I think is: at what point in time in a film, what needs to be told, what is the story, and how can the soundtrack help tell that story?” In Peirce’s terms the desired interpretants are the starting points and the sound-signs are then created which allow for those interpretants to be created.
6.8 The Peircean model applied to sound practice: Summary

Whether or not the director is intimately involved with the production of the soundtrack, the sound team’s work is geared toward serving the needs of the story by creating a film which is faithful to the director’s wishes. Since they are intimately involved with the sound elements and their symbiotic relationship with the images, there is a real appreciation of the interdependence of both sound and image. Not only do they see the potential for sound to help tell the story but they are focused on precisely that. They are primarily concerned with making meaning.

Applying the Peircean model of the sign not only to the analysis of the soundtrack, but to the practice of creating the soundtrack allows for a broadening of the critical language beyond static film analysis to include the active processes of sound production. Whether sounds are diegetic or non-diegetic has little impact on either the way the practitioner designs, rerecords or modifies the sound or the way the audience will respond to the sound and get meaning from it. Similarly, describing the soundtrack simply as a combination of dialogue, music and effects does not describe the rationale or philosophy behind the manipulations which are made to the elements of the soundtrack to enhance the story.

Applying the Peircean concepts to the actual practices of sound practitioners can help to describe some of the ways the soundtrack is used as well as illuminating the theoretical basis and rationale that underpins the work of the sound producers.

The Peircean model has a number of strengths which allow it to be co-opted into the language of film sound practice.

- It is a flexible and powerful means of describing the way that sounds are used as signs.
- It takes account of the characteristics of sounds, their links to objects, and their symbolic meanings and associations.
- It takes account of the fact that sounds can fulfil multiple simultaneous roles.
- It takes account of the role of the audience in the creation of meaning.
- It takes account of the process of meaning creation through abduction, as well as deduction and induction.
- It takes account of the ability of sounds to represent multiple things, and for those things to change as a result of this fluidity.
• It allows for sounds to mean multiple things and also for those meanings to change.

• It takes account of the pre-existing experience and cultural interpretations that audiences bring with them.

The analysis of case study films in Chapter 5 showed the usefulness of the Peircean model in highlighting particular functions of sound. In this chapter we have seen how the same model can illuminate the practice of sound production as articulated by industry practitioners. The next chapter attends to the third strand of this research. Here the Peircean semiotics model is applied self-reflexively to test its effectiveness in explicating my own practice.
7. Peircean Semiotics and Self-Reflexive Practice

Thus far, this study has applied Peircean semiotic theory to the analysis of films, and has used the same model to put the sound practitioners’ description of their own practices in semiotic terms. In this chapter, the tools of Peircean semiotics are applied to my own work as a practitioner, using four of my films as case studies to further illuminate the process of developing the soundtrack to its final version.

The four films used in this chapter are included on the accompanying DVD. In addition to the main soundtrack, three of the films include supplementary audio tracks that can be selected using the audio menu on the DVD. The supplementary audio tracks are listed in Appendix H – Accompanying DVD of Productions. For each example referred to in this chapter, the particular film, chapter and audio track will be indicated so that it can be watched and listened to in the context of the discussion.

A film undergoes three discrete phases of creation: the script stage governed by the writer; the production stage governed by the director; and the editing stage governed by the editor. The script is the basic structure of the story on which every other creative decision is based, and sets out the extent to which sound is part of the structure of the film. Sound practitioners are acutely aware of the importance of the first stage, in determining the eventual implementation of the overall sound design (successful or otherwise) of the production. The shooting stage (production) has a profound impact on sound, not simply because of the sound that is recorded, or how well it is recorded. The visual storytelling choices made at this stage of production also profoundly influence how sound will be utilised to match the pictures. The picture editing phase again influences sound in that it can open or close off areas for sound to help the story.

Picking apart what happens to sound at each phase is a complex analytical exercise, and the purpose of this thesis has been to attempt to find a critical language for identifying and explaining the practice of sound production. In this chapter, I use examples from my own practice to provide an intimate step-by-step account of the sound production process from the inside.

In each of the productions used as examples, I had a different level of involvement. Using Candy’s (2006, 8) guidelines, I will reflect on the nature of the work and how the various productions created opportunities for collaboration and experimentation, for challenges and solutions, as well as inevitable problems and failures. Where possible I have included
multiple audio tracks, in addition to the full mix, so that particular elements can be heard in isolation, such as dialogue, fx, music, backgrounds and voiceover. For the films, I will also apply the Peircean concepts of the sign to the discussion of particular elements of specific sounds or sound choices, or the overall aims of the soundtrack, in order to better explain the rationale for the sound choices. It is hoped that the application of Peircean semiotics can shine a light on the reasoning in the production/creation stage of the film, where the fundamental requirement is the creation of a meaningful soundtrack.83

Four productions will be examined: *The Road Not Taken* (Fasolo 2011); *Eleven Thirty* (Ciallella 2012); *Weewar* (Stasiuk 2006); and *Footprints in the Sand* (Stasiuk 2007).

*The Road Not Taken* is used as an example where the Peircian model can be applied to the overall sound design of the film. Here the use of sound, used non-literally in the main, allows for the narrative to be created in many ways. By removing many of the literal and grammatical elements of the soundtrack more focus is placed onto its non-literal elements, which allow other metaphorical links to be made between sound and the narrative.

*Eleven Thirty* shares some of the themes of *The Road Not Taken* but uses a markedly different approach. Here the Peircean model is applied to the practical aspects of the soundtrack to illustrate how the model can be used to illuminate various issues, such as dialogue intelligibility and the practice of sound editing. *Eleven Thirty* also illustrates how sound elements, once established, can subsequently be used as a sign later in the film.

*Weewar* is a short drama that illustrates a number of aspects of the Peircian model, highlighting a particular sound that is used iconically, indexically and symbolically at different points in the film. *Weewar* illustrates the importance of the concept of Peircean indexicality for sound where it is used to refer to a specific person, culture or place, and shows that there are times when ethical issues emerge in fiction films such as this, which is based on real events and which portrays a culture that has rarely been shown in film.

*Footprints in the Sand* is a documentary that illustrates some of the aspects of the Peircian model as they apply to non-fiction. The choices made in recording and editing dialogue, music and sound effects take on an extra dimension in the context of an ethnographic documentary. Ideas about sonic truthfulness, realism, naturalness and authenticity are discussed, along with the potential problems that arise when working with silent archive materials given the soundtrack’s ability to appear unmediated. *Footprints in the Sand*

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83'Meaningful’ is used in its widest sense, in that it involves any meaning whether it is the simplest element of the narrative, such as a knock at the door, or the entire musical score that works as a whole to inform and guide the audience about the narrative, the characters or the mood.
illustrates the particular approach taken to balance the dramatic needs of the filmmakers, with the requirement to create a soundtrack that faithfully reflects its participants whilst fulfilling its dramatic function to a wider audience.

7.1 Reflections on the productions and the production process

The films that form this section on reflexive practice were small-scale productions involving much smaller crews than on larger feature films. In this context, one or two people manage the entire sound production process, and are therefore involved in all the sound elements up to and including the final mix. As a result, there is less chance of encountering nasty surprises since the elements can be introduced and premixed as the production progresses rather than at the very end, at the final mix stage. In addition, since the crew is smaller, the chain of command is often shorter and creative collaboration may be easier to implement, for example, a suggestion can be integrated or an idea carried through. This may slow down the process, whereas multiple sound editors and separate final mix personnel can mean a faster turnaround, with more attention to detail and a fresh perspective for the final mix. No doubt there are advantages and disadvantages to each method. Working on all the available sound elements and the picture in context can have the advantage of knowing where to focus one’s energies. For example, a music cue may dominate a particular scene, rendering subtle backgrounds and foley cues partially irrelevant. At the same time, this way of working allows for a broader perspective on how the whole film gradually comes together, and how each sound element and choice works in concert with the images to create the final film.

The aspects of the soundtrack for each of the four films in this chapter will be discussed using the concepts of direct narrative / subliminal narrative / grammatical roles of sound. The Peircean concepts will also be applied to illuminate the decision-making processes involved as well as the finished result.

7.1.1 Accompanying DVD

The DVD that contains the productions has a menu for each of the four productions. There is an audio submenu that indicates any additional audio tracks for the film, such as dialogue, music or FX, which can be selected individually in addition to the main audio track containing the full mix. Each film also has a chapter selection menu and an information page, which contains a synopsis of the film and a brief description of my role on the film.84

84 See Appendix H – Accompanying DVD of Productions.
In this chapter, specific elements or sequences from each of the four films are discussed. The film, chapter and relevant audio tracks are indicated in each case. Where the film has alternative or supplementary audio tracks, the different audio tracks are available on the disc:

Table 5 – Accompanying DVD audio tracks

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<td>Full Mix</td>
<td>Dialogue</td>
<td>Effects</td>
<td>Music</td>
<td>Voiceover</td>
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<tr>
<td>Eleven Thirty</td>
<td>Full Mix</td>
<td>Dialogue</td>
<td>Effects</td>
<td>Music</td>
<td>Backgrounds</td>
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<tr>
<td>Weewar</td>
<td>Full Mix</td>
<td>Temp Mix</td>
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<tr>
<td>Footprints in the Sand</td>
<td>Full Mix</td>
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7.2 The Road Not Taken

7.2.1 Background and challenges

The Road Not Taken (Fasolo 2011) tells the story of a girl who reflects on her past as she and her sister witness the breakdown of their parents’ marriage, and the choices she makes as a result. This film is included because it is an example of a soundtrack with little to no character dialogue. Instead, the main source of dialogue is through a narrator who is never explicitly identified. Through sound effects and music, the soundtrack is also used to provide a metaphorical companion to the visual images rather than providing a literal representation of events.

Being an adaptation of Robert Frost’s (1916) poem of the same name, this film provided a number of opportunities to experiment with the soundtrack, partly because of the lack of dialogue. Indeed, there is only one word of synchronous character dialogue in the film. The text of the poem is provided through a voiceover, though the identity of the speaker is left deliberately ambiguous. The writer/director of the film is also the director of photography, and so the production stage of the film was almost entirely geared toward the visual representation in the knowledge that the images would subsequently be synchronised to the audio text of the poem. The story-boarding for the film contained a very detailed plan for the visual style of the film and was rigorous in detail, as might be expected from a director of photography who is also the writer and director. At the same time, care was taken to leave
sufficient ambiguity in the visual representation for the audience to be able to create parts of the narrative for themselves. The voiceover was recorded after the production shooting was completed, and was available during picture editing. Only once picture editing was complete, was production of the remaining sound and music begun in earnest, with a composer having been engaged to provide the original score.

7.2.2 What happened in practice

Whilst comprising an unusual method of working, one principal benefit of this project was discovering the profound influence of the soundtrack in modifying the meaning of the images. Having shot the film virtually MOS, the addition of a soundtrack for which there was virtually no sync sound encouraged, if not demanded, an approach in which the sound was not linked to filmed/recorded representations of the characters’ actions. There was very little in the soundtrack that required a literal sound, for example, in sound effects or synchronous dialogue. In their place the soundtrack was instead primarily a metaphorical sonic partner.

Character dialogue in the film is deliberately obscured or removed, and instead the poem is heard as a voiceover narration. The arguments between the mother and father in the car are not heard at all; the mother’s phone call in the house is not heard at all; the argument going on inside the house as the two sisters stand at the letter box is suggested but no words are recognisable. As a result, there is little direct narrative sound in the film other than the voiceover.

There is a deliberately loose connection between the sound and the images presented. The voice of the priest is heard but is out of sync with the image; a baby crying is heard as the baby sister cries; a sound is heard as the teacher hits the girl’s desk. However, these sounds are not objectively real. Having established the girl as a key character in the opening shot of the film, the soundtrack can then be understood as being experienced as though through the character of the girl. The absence of direct narrative sounds is an invitation to interpret the remaining sounds as being filtered through her experience, or her emotions.

As such, here the grammar of the film is partially hidden, since there is relatively little connection between the voiceover and images. Instead, the audience is invited to make connections between the words they hear, and other accompanying sounds, music and images.
7.3  The Road Not Taken in Peircean terms

Since the soundtrack is not tied to the image through synchronous sound, the relationships between sound and image are almost entirely fabricated. The first scene indicates a non-realistic and non-literal relationship between sound and image. We hear a range of sounds (wind, drones) that do not appear to match the scene presented in the image. We see the priest talk, but hear a version of his voice that is out of sync with the images. We hear a faint church bell, but the landscape is desolate and contains only a single tree and the five standing figures. The sounds themselves, acting as signifiers, do not immediately point to their objects since there is hardly any synchronous relationship between image and sound, or else the sound is too obscure to make a definite and trustworthy causal link. The indexical relationship between sound and image is therefore largely absent. In its place, the narration and thus the text of the poem, is given more prominence as a likely source of potential meaning, along with the musical score that accompanies the majority of the film.

7.3.1  The unseen argument\(^{85}\)

In this scene, the two children are outside the house and their attention turns to the house to hear muffled voices and a plate smash. As an audience this is all you need to know, the argument itself is neither seen nor heard. The sounds of muffled voices and a single smashed plate are sufficient. Character dialogue in the film is deliberately obscured or removed, and instead the poem is heard as a voiceover narration. The arguments between the mother and father in the car are not heard at all; the mother’s phone call in the house is not heard at all; the argument going on inside the house as the two sisters stand at the letter box is suggested but no words can be discerned.

The sound for the argument scene suggests action without actually showing it. It is enough for the characters’ attention to be directed to the house, with the single sound symbolising something breaking. Rather than images and direct sounds of a fight between the parents, we instead hear from the children’s perspective, muffled, raised voices and the distant sound of plate or glass smashing. The indexical link is merely suggested, but we imbue the sounds with a wealth of meaning, building in associations with unhappy families, violence and children’s distress.

\(^{85}\) The Road Not Taken chapter 3 from 03:50 – 4:05, audio tracks 1-Full Mix, 2-Dialogue, 3-effects.
7.3.2 “No”\textsuperscript{86}

The single word of character dialogue in the film is “No”, uttered by the mother as she kneels alone at the coffin. There is no sync sound prior to that, although there is some deliberately out-of-sync dialogue from the priest in the opening scene, and the sound of the baby sister crying, which could be interpreted as dialogue. The power of the mother’s single word derives partly from this relative scarcity of character dialogue. Its absence, until now, creates the expectation (abduction) in the audience that there will be no sync dialogue in the film at all. When the single word of sync dialogue is used it breaks the abduction, and brings a previously hazy connection between characters, sound, image and narrative to a relative point of clarity by giving a very definite synchronous (indexical) link between sound and image. The single word becomes the focus of the tension that has been built up until that moment.

7.3.3 Fan sound and transition\textsuperscript{87}

This sound is also the sound that pre-laps the scene cut from the father slapping the mother in the interior of the car to the scene in the girl’s classroom.\textsuperscript{88} For the sound of the fan, a metallic, sharp, grating sound of a fan was used as its piercing qualities provided a metaphorical connection to the character’s experience. For the lead up to the (unseen and unheard) slap, the sound of the fan is reversed and stretched so that it shares the iconic properties of the fan sound loosely used as the sound of the classroom ceiling fan. The sound works as a bridge between the car scene and the classroom scene.

The sound for the fan is a real fan sound with metallic scraping qualities. The iconic properties of the sound suggest something unpleasant. The sound is first heard before its origin is revealed, but the girl never looks at it. In any case, it is not synchronous with the visual representation of the classroom ceiling fan, in that one cycle of the sound does not match one visual cycle of the fan. The indexical link is thus deliberately vague, the sound has a possible origin but it is a loose connection. The symbolic use of the sound of the fan occurs as it fades in to accompany the presumed slap. The hit is neither seen nor heard, and in its place is the fan’s repetitive scraping.

\textsuperscript{86} The Road Not Taken chapter 4 from 04:25 – 04:35, audio tracks 1-Full Mix, 2-Dialogue.
\textsuperscript{87} The Road Not Taken chapter 2 from 01:29 – 02:03, audio tracks 1-Full Mix, 3-effects.
\textsuperscript{88} See Glossaries – Film and sound terms: ‘pre-lap’.
7.3.4 Abduction and the creation of meaning

Whilst the poem is used in its entirety, it is sufficiently ambiguous to allow for a number of interpretations.\(^{89}\) The metaphor of the two roads is carried throughout but can be interpreted to mean a choice between courses of action:

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth.

In this respect, many of the decisions taken in both image and sound were made to retain some level of ambiguity. It is never revealed whether the narrator is one of the two girl characters of the film, nor is it revealed how the elder girl dies. The images and lines of the poem share a loose bond, and so the audience is required to construct meaning from that which is presented. First, it illustrates how the Peircean model applies to sounds used metaphorically, and second, it shows how the Peircean concept of abduction applies to the soundtrack and the creation of the narrative.

The images in the film provide little in the shape of a literalised representation of the poem. Also by withholding information in the form of synchronous sound the search for meaning moves toward the creation of hypothetical links between sound and image. The three individual examples above illustrate the potential for sound to act as an indication of something whilst not directly referring to the object in question. A benefit of this approach is that the audience is required to provide the missing information, such as the words of the argument, or the mother’s phone conversation, and with it to construct the narrative itself, which is sufficiently open to individual interpretation. It must be acknowledged that there is also a danger in this approach, in that the individual may not be sufficiently inspired or interested to take on such a substantial role in the creation of the meaning of the text, and who on reflection may wonder what exactly the film was about. If we return to the design considerations of the soundtrack and the film as a whole, in terms of what the audience should know/think/feel both during and afterwards, this film’s conclusion leaves each of the three outcomes as relatively obscure. Like the poem, the film lays out several metaphors and allows the individual to create meaning for themselves. Peirce describes the immediate interpretant as “the effect the sign first produces or may produce upon a mind, without any reflection upon it” (CP, 8.315). The eventual meaning, or dynamical interpretant, is

\(^{89}\) For the full text of the poem, see Appendix L – The Road Not Taken.
“whatever interpretation any mind actually makes of a sign” (CP 8.315). As with the poem, the film’s immediate meaning may not be apparent, and a rereading or subsequent reflection may suggest a different interpretation.

7.4 Eleven Thirty

*Eleven Thirty* (Ciallella 2012) tells the story of a family struggling to cope with life lived in temporary accommodation, as the father has to work away from his wife and their two daughters, Jessie and Sally. This film was a student project involving a combination of professional and student filmmakers. Students were responsible for the location recording and the early stages of sound editing. My involvement came at the post-production stage. There were problems with some of the location sound recorded by the students, due to poor technical quality, the inclusion of noticeable background sounds, or occasionally insufficient clear diction on the part of the actor. In an industrial context, as problems occur, they might be fixed on set either by alerting the director or first assistant director to the problem to allow for rerecording a troublesome line, or waiting for a temporary background noise to abate. This did not happen here because of the relative inexperience of the student crew, which demonstrated how relatively minor problems with relatively simple solutions have the potential to become bigger problems later if not noticed and dealt with immediately.

During post-production and prior to the sound editing process beginning in earnest, the director, producer and picture editor had each made notes on the sound fixes, changes and additions that would need to be made. Subsequently, a spotting list was created by the initial sound editor who was a student working on the film. My role at this stage of post-production was to provide advice or to help fix the problematic sound recordings, and to suggest improvements.

7.4.1 Background and challenges

Many of the problems related to noisy recordings. There were also some lines of dialogue that were potentially problematic, either because of the quality of the recording or the lack of clarity in the actor’s performance of the dialogue.

The typical problems included:

- Dialogue recordings were very quiet compared to background noises.
- Fluctuating background noise levels, whether from changing the microphone direction or from the riding of levels during take.
• Dirty dialogue delivery, for example, where a line of dialogue is recorded along with another sound, such as the scrunching of paper. Where this happened it is customary to record a new version with a clean version of the line, either on camera or as audio only.

Having played no part in the production sound recording, my first involvement with the film began at a relatively late stage in terms of the choices that affect sound, either directly or indirectly. Initial dialogue spotting had been performed by the writer of the film, who had some experience of sound editing and who had raised the possibility of some lines of ADR being required. An ADR session had been arranged with the actors, whose lines were to be rerecorded (although none of this ADR was actually used in the final mix of the film). My involvement with the project began after the ADR spotting and ADR recording had been completed, and preliminary dialogue editing had been done. With a relatively short amount of time in which to work, approximately two full days before a preliminary mix session with the director, further dialogue editing began by initially listening to the film in its entirety, in order to determine the dialogue that may still need to be rerecorded and spotting for any supplementary sounds that were either missed or unavailable during production. Once preliminary dialogue editing had been undertaken, backgrounds and additional sounds were included, along with the elements of the musical score as the soundtrack began to take shape.

The location in which the film is set is a semi-rural roadhouse. The actual location used for the majority of the filming was an actual roadhouse, and thus had the continuous noise of a petrol or diesel generator running. The film production itself also required the use of generators to power the film lights on location. As a result, much of the location sound contains a large amount of noise that would normally be removed if possible, or where this was not possible would result in ADR. Since the actual location matches the story’s location, the noise of generators can be part of the sonic landscape by choice, if not necessarily by design. Therefore, what was initially considered a problem can occasionally be incorporated into the design of the soundtrack.

7.4.2 What happened in practice

Two scenes will be discussed here. The first scene relates to the dialogue intelligibility.90

Listening for dialogue intelligibility means the focus is purely on the dialogue delivery, in terms of both sound quality and clarity of enunciation. It is notoriously difficult to convince

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90 Eleven Thirty, chapter 2 from 02:37-02:50, audio tracks 1-full mix, 2-dialogue.
anyone who has been involved with the film for a long time, who has heard the material numerous times, and may have been intimately involved in the production, that a particular line of dialogue is proving to be difficult to understand for people hearing it for the first (and in all likelihood, only) time. It can be likened to an optical illusion, such as a 3D poster or a Rorschach image. Once the image is recognised it is difficult to erase from the mind. This was the case with two lines of dialogue in this particular film.

In order to corroborate or disprove my own opinion, the two lines – (02:40) “Mum’s sad again isn’t she?” and (03:11) “Lucky there’s a babysitter...” – were played to a colleague who had no involvement with the film and no prior knowledge of the script. He also did not understand what was being said. We both agreed that the subsequent line in each case and the intonation of each made sufficiently clear the kind of thing that had been said. This made the lack of intelligibility of the preceding lines of dialogue less of an issue. Replacement dialogue could have been used for reasons of clarity, but it would have been at the expense of production sound, so the ADR alternative was not considered for the final mix.

Once intelligibility concerns are overcome, the actual levelling out of edits between shots becomes the concern. By gradually smoothing out the abrupt changes between edits, the literal elements of the soundtrack appear as a naturalised and seamless continuum, which then reflects a similar property back on to the sequence of edited images.

Both of these lines of dialogue indicate the subservience of sound to the needs of the story. The lines of dialogue, whilst imperfect, are retained because the performance matters more than the intelligibility. The generator noise, which would normally be problematic as an indicator of the production process, is retained as it is appropriate for the location where such noises are commonplace. Taken in isolation, these examples of imperfect recordings could be problematic. However, in the context of the film they provide sufficient narrative information, as the meaning is derived from the individual sound-sign as well as its context.

The second scene being discussed illustrates the soundtrack used literally as well as non-literally, with some sounds straddling the two.91

The scene begins with the mother tidying the caravan after her children have gone to bed. She picks up a plastic bag and appears to consider whether it could be used to end some of her problems as she looks at her sleeping children.

The visual representation is shot in such a way as to allow the sound to do this work. The sequence begins with a wide shot of the caravan, followed by a shot of the open window.

91 Eleven Thirty, chapter 6 from 12:36 to 15:05, audio tracks 1-full mix, 3-music.
The soundtrack contains a night-time ambience and sustained musical background that intensifies as the camera moves from the bag in the mother’s hand to her face (see the figures below).

The sequence later shows the younger girl in the bed. The visual images predominantly show static images of the mother’s face and the child’s face as the shot and reverse shot while the soundtrack builds in intensity (see the figures below).  

The music gradually builds in intensity as the mother continues to gaze at the child, whilst holding the plastic bag.

We see the same shot of the child, and as the light intensifies we hear the music intensify and the sounds of the passing truck whose headlights fill the caravan with light.

Once the truck has passed the music dissolves away and darkness returns to the caravan. The mother drops the bag, which makes a noticeable sound as it hits the floor of the caravan. The mother loudly exhales a breath, which wakes her elder daughter.

The sequence allows the most mundane literal sounds of a passing truck and a plastic bag to depict both a dramatic turning point and a return to reality. The music in this sequence is not used as a melodic score and is not designed to be ‘listened to’, but merely ‘heard’. It is therefore designed to work as a subliminal narrative component to help build the tension of

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92 See Glossaries – Film and sound terms: ‘shot/reverse shot’.

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the scene. Once the tension is released the music disappears, and we return to the reality and a literal soundtrack containing no music for the remainder of the scene.

7.5 **Eleven Thirty in Peircean terms**

The types of listening required to make judgements on the merits of particular sound treatments, editing decisions and alternatives can be analysed in terms of the Peircean model. Issues related to the recording of particular sound elements, such as dialogue, the prevalence of background sounds caused by the impact of the filmmaking process on the location recordings, and the construction of meaning through the soundtrack, can be examined using elements of Peircean semiotics.

7.5.1 **Dialogue intelligibility – Icon, index and symbol**

Dialogue intelligibility was a crucial aspect of the film. Since one of the actors was very young, it made the enunciation of some of her lines of dialogue potentially problematic. As with Chion’s listening modes, Peirce’s semiotics provides the vocabulary to distinguish the properties of the sound (reduced/iconic), the reference to the thing that makes the sound (causal/indexical), and the learned associations generated from the use of the sound (semantic/symbolic).

First, the quality of the voice recording was considered, focusing on the iconic properties of the voice both alone and in the context of the other background sound elements. Various attempts were made to enhance the sound recording for greater intelligibility, including transplanting the line of dialogue from other takes in the search for a clearer delivery. The background sounds were put in at a level that did not obstruct the intelligibility of the voice, although occasional sounds were used in between lines of dialogue, such as a chair scraping across the floor.

Where other takes were substituted for the synchronous recording, care was taken to ensure that a proper relationship existed between the sound and the image so that they would appear as one single event. Lip synching the substituted recording to the visual image ensured that a proper indexical link was created.

Once the iconic and indexical aspects of the recording had been considered, its symbolic meaning could be examined. There was some doubt whether the recording was of sufficient clarity for the spoken words to be deciphered correctly. Here the symbolic meaning is contained both in the words themselves and also in the way they are delivered. Even where the actual words were obscured, it was felt that there was sufficient meaning conveyed
through the way the words were spoken. The intonation combined with the more intelligible reply from the girl’s older sister, enabled sufficient meaning to be gleaned from the context. The interpretant can therefore be created even where the object, which would normally help to create it, is insufficient by itself.

8.1.1 Abduction – Using sounds as signs

As with many films, the soundtrack contains both literal elements, such as dialogue, and non-literal elements, such as the music score. Many of the component sounds in this sequence straddle the literal/non-literal divide. The truck’s iconic component is simply a loud, deep and threatening sound in this context. Indexically, it suggests that there is a truck close by and since we have heard trucks earlier in the film, we are invited to assume that the truck is either really there at that moment (at 11:30) or that the truck is somehow an aural manifestation of something dangerous always nearby. Symbolically, the truck, together with the other sound elements that accompany the sequence, suggests a moment of tension.

The three principal sound elements of the sequence, the plastic bag, the truck and the music, have each been introduced already, and therefore have some potential for the audience to attribute meaning to them. The music score for the film uses variations on the theme and similar sounds at various scenes, and transitions between scenes (03:51 – 04:39 and 07:01 – 08:20). The passing truck has been introduced in the opening sequence (00:25), and a second time (04:15) before we hear it in this scene (at 14:25). The plastic bag can be seen and heard (13:35), thus establishing it as a recognisable element later on. This prior knowledge of sound elements within the text allows the audience to make the abduction, in order to fill in the narrative gaps. The abduction being:

- that a particular musical theme may link two scenes, or
- that a sound/image combination can later be suggested by using only the sound, such as the truck, or
- that simply hearing the plastic bag indicates that a particular moment has passed.

The audience is given pieces of the jigsaw with which to make sense, and therefore to create a part of the narrative for themselves.

The sound that accompanies this sequence begins and ends with the commonplace sound of a plastic bag (13:50). Running parallel to the literal soundtrack is the music score, which consists of increasingly loud drone sounds. As the images suggest, a more subjective

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93 Eleven Thirty scene 6 from 12:34 – 15:00, soundtracks: full mix / music / fx.
representation of the soundtrack uses the oncoming truck to also integrate a non-literal sound effect, which acts as an emotional response the scene. Once the truck (and the danger) has passed the only sound that remains is the plastic bag, which falls to the ground and brings us back to reality. Whilst the music cue supplies a non-literal/emotional guide, the plastic bag supplies a literal reference to reality. Between the two extremes of the non-indexical musical score and the indexical sound of the plastic bag are the other sounds, primarily the truck, which acts as both a metaphorical sound-sign as well as an indexical sound-sign. The truck acts as literal and non-literal sound effect, indicating an actual object while helping to convey some of the emotional content of the scene.

7.6 **Weewar**

*Weewar* (Stasiuk 2006) is the story of the first Aboriginal man in the colony of Western Australia to be convicted under colonial law for carrying out a traditional spearing under Aboriginal law of the man who had killed his son. Set in 1840, in what was then a very new colony (Perth was chosen as the capital of the colony in 1829), the film aims to depict life as it would have been then. Weewar’s son was killed by another Aboriginal man, Dyung, and as payback he was permitted to avenge his son by spearing his attacker. After finding and spearing Dyung, Weewar was hunted, captured, tried and convicted of his murder.

*Weewar* is a dramatised version of an actual historical event that is fundamentally important to the Nyungar people of Western Australia, as it marked the moment when their law was superseded by the law of the English colonists. It is therefore a special example for examination, since it is a drama that brings another dimension to the analysis and to the production of the soundtrack, the issue of authenticity of representation. Glen Stasiuk, the director of *Weewar*, explained the significance for the Nyungar people of the story being told in their language and from the perspective of their Nyungar warrior ancestor:

> Oh, it’s an important story because from our perspective over here, Nyungar’s [sic] in this budja, this part of the country, in this country that we call Nyungar. We don’t often get films made about us and our people. So to tell a story about the first Nyungar man to be tried under white law in the WA colony from 1840, it’s just important for historical purposes. For children to learn about some of the history back then in colonisation. But also for Nyungars to feel proud that their language is being spoken on camera for one of the first times on an ABC production. And also that their stories are being told now from Nyungars about Nyungars in Nyungar country (Maza and Stasiuk 2006).

*Weewar* is thus an important cultural document both in presenting a significant event in Nyungar history and also because it is one of the rare films in the Nyungar language. It uses
the natural environment and culturally significant sounds that are recognisable to a Nyungar audience.

7.6.1 *Weewar* as ethnographic drama

Whilst in dramatic film the appearance of realism may suffice, in ethnographic drama the film must not merely work as a film, but must also be faithful in its representation of the culture. The Australian feature film *Ten Canoes* (de Heer and Djigirr 2007) has arguably done more for the Aboriginal people of Arnhem Land than a documentary film could have done. As a genuine feature film that has been widely released it has given a voice to the community it portrays. Through their participation in the film they also had an opportunity to recapture some of what was in danger of being lost. In the words of director Rolf de Heer’s (2006): “They have brought back, from a faraway place, some of their culture.” The demands on an ethnographic drama are twofold: it must work as a film, but also as an authentic ethnographic document.

The Nyungar elders in *Weewar* are played by Nyungar actors. All the actors who are portraying Aboriginal characters are Aboriginal themselves, as were the writer, director and much of the crew. The locations used in the film are also significant to the story, and so there was a sense of cultural importance to the filmmaking. For *Weewar*, effort was spent during production sound recording to ensure that wherever possible the original dialogue recordings were usable for the film, rather than relying on future rerecording. The script detailed many of the sounds that should be heard, which are particular to specific locations, and which have particular significance in Nyungar culture.

Since the story concerns a pivotal moment in the history of the Indigenous people of Western Australia, it stands also as an important cultural document, and as a result there are some demands on the filmmakers that the story be faithful to the historical events. Being set in 1840s there were very definite sounds that must not appear, such as the generators that powered the lights in the night scenes, and some other sounds that must appear and be correct, such as the sounds of insects, frogs and birds particular to the location. In a story specifically about and for the Nyungar people, cultural authenticity was essential, as the sounds would be immediately recognisable to them as the sounds of their environment. The music used in the film is either vocal only, sung in the Nyungar language, or clapping sticks, which are a traditional instrument to the Nyungar people. This was the first broadcast drama in which characters actually spoke the Nyungar language, and therefore it is an important document as a representation of their culture. Since the story is based on historical fact, a certain level of authenticity was expected.
7.6.2 Background and challenges

The sounds of the environment are fundamentally important in the depiction of a place, both in life and in film. In *Weewar* they had additional resonance. Were inauthentic sounds to be used they would immediately draw attention to themselves and raise questions regarding the authenticity or falseness of the film. As a result, all the natural sounds in the film had to be recorded in the real locations. The particular sound of wind in the some of the trees, the insects and frogs, are all specific to the locations used in the film. They are also to a large extent the real locations from the real story.

The script for *Weewar*, by Karrie-Anne Kearing and Glen Stasiuk (2005), contained many of the references to sound that appear in the final film. With sound integral to the story from the outset, the director, director of photography and other crew, were aware of the way it was to be integrated with certain shots and sequences in the film. In addition, the picture editor produced a picture cut that closely matches the intentions of the original script in terms of its use of sound. Space was left by the editor, knowing that particular sounds (having been specifically mentioned in the script) would be inserted during sound post-production.

From a sound practitioner’s perspective this is an almost ideal starting point, in that the script takes account of the way sound is to be integrated into the story. Other documents produced from the script, especially the shot list, become the ‘bible’ for many of the director of photography’s crew on set. With grip, camera and lighting departments all working to the shot list, it is often only the script that contains any reference to sounds other than dialogue.

7.6.3 What happened in practice

Is it possible for a fiction film set a century and a half ago to have any value as an ethnographic film? As an ethnographic record, *Weewar* contains Nyungar actors speaking the Nyungar language in Nyungar locations. Whilst the recordings were authentic, in the sense that they were not rerecorded or replaced, they were occasionally ‘cleaned up’. The sound recording for the film was relatively straightforward. Dialogue was recorded synchronously as the camera filmed. Background ambiences were recorded in between filming set ups, away from other people, to capture the natural sounds of the environment, such as the wind through the trees, the various species of birds, frogs and insects native to

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94 See Appendix I – Script from *Weewar*.
the area. As a result, the soundtrack of *Weewar* is recognisably a portrayal of the sonic landscape of the Nyungar people.

One of the guiding principles of ethnographic filmmaking, described by Timothy Asch as reflexivity (cited in Crawford and Turton 1992, 199-200), was that the participants were shown the films, and their comments and suggestions were sought. *Weewar* was premiered to an audience of Nyungar community representatives and was warmly received. It was broadcast on ABC (Australian Broadcasting Corporation) Television as part of the Deadly Yarns series of short films on the Message Stick program, and also as part of a double bill with *Ten Canoes* (de Heer and Djigirr 2007) at the Fremantle Outdoor Film Festival 2007.

The film was commissioned as part of an ABC series of Aboriginal stories by Aboriginal filmmakers to be shown at a timeslot that necessitated a general rating. The two violent sections of the film, the spearing of Dyung and the capture of Weewar, needed sound to present the action without jeopardising the rating. As a result, the spearing does not contain much in terms of the sound of the spearing itself, but instead focuses on the final breath of the victim. Similarly, the sound of the capture of Weewar, as he is struck by a rifle butt, was initially done differently in a previous rendering of the scene. The sound of someone being knocked unconscious or at least pacified with a rifle butt to the head could be portrayed in a way that highlights pain and violence. However, although the reality may have been brutal, it was felt that an overly realistic sonic portrayal of the incident would jeopardise the film’s chances of screening at a timeslot that required a general rating. Instead, as with the spearing scene, the focus is shifted to voice reaction sounds rather than the impact sound.

### 7.7 *Weewar* in Peircean terms

In seeking to apply Peirce’s semiotic concepts to the soundtrack of *Weewar*, it is possible to attend to the structural macro level of the sound design of the film as a whole, as well the individual elements that are used to support the overall structure. In *Weewar*, the key story aims that were reinforced through the soundtrack were first, the authentic portrayal of the characters, language, natural landscape and history being told, and second, the dramatic portrayal of Weewar’s story.

In *Weewar*, the Peircean semiotic concepts of the sign again help illustrate the use of sound both at the micro level of individual sound-signs and the macro level of the soundtrack as a whole. Two principal aspects of the soundtrack from *Weewar* will be used to illustrate some of the Peircean concepts at work. First, the rowing sounds are used to illustrate the transition
of a particular sound from a purely iconic sound to an indexical sound, and ultimately to its use as a symbolic sound. Second, the importance for this film of indexicality and the depiction of the real is examined through the treatment of dialogue, sound effects and music.

8.1.2 Rowing sounds – Icon, index and symbol

Immediately after the film’s opening dedication title screen, and while the picture is black, we hear the sound of rowing, although it may not be immediately obvious that the sound is that of rowing. The remainder of the opening sequence combines the dialogue of the defence lawyer scene, and shots alternating between close-ups of Weewar and long shots of him running through bushland. These choices stem from the original script and were integral to the picture editor’s choices for the film. Sound is prominent in the script, as we can see from the opening lines (Kearing and Stasiuk 2005):

FADE IN: Sound-scape of boomerangs clapping and traditional singing. Cue sound of water lapping up against a boat.

1. EXT. BOAT ON OCEAN
Sound of water lapping peacefully (boomerangs clapping quietly underneath). WEEWAR sits in a colonial row boat heading across the ocean to Wadjemup (also known as Rottnest Island). Close-up of WEEWAR’s eyes.

FLASH BACK: Sound of boomerang clapping strong and steady.

2. EXT. WEEWAR RUNNING
Medium close-up of WEEWAR’s face. His head bobs up and down as sweat beads on his forehead. His eyes express adrenaline and desperation. A sonic heartbeat complements the pounding of his feet and heavy breathing.

3. EXT. BOAT ON OCEAN
Shot of WEEWAR face with water surrounding him in the background. Sounds of water lapping and oars rowing.

These concrete examples of sounds in the script signal that sound other than dialogue is being used to create the story. The original opening sound effect was that of water lapping against the boat but it was subsequently replaced by the sound of rowing, partly because it fulfilled the need for boat sounds and partly because it provided the “sonic heartbeat” specified in the script. Whilst the sound of creaking oars rowing was not mentioned in the script, the fact that the script highlighted a sound at all for the opening scene left a space for the sound around which the other elements would work. We are not shown the origin of the sound, but instead are shown a character in close-up. The image starves the viewer of information and so the soundtrack is given a more equal role in the unfolding story.

95 Weewar chapter 1 from 0:00-0:41, chapter 6 from 5:10.
Interestingly perhaps the sound of rowing was created from very short sections of rowing recorded via radio microphone as the actors were rowing in the ocean for a distant MOS shot. A bug microphone had been attached to one of the actors immediately prior to them setting off in the boat to allow long shots to be filmed. Luckily, sufficient snippets of this sound were recorded to allow it to be used for this quite different purpose. It is both an authentic sound of the actual boat being rowed, which itself was similar to the kind used to transport prisoners, whilst at the same time a fabrication born of necessity. The rowing sound, originally recorded for use in a later scene, ended up being used more prominently in the opening scene and the end credits in place of music. This illustrates how working in both production and postproduction phases of *Weewar* afforded a level of control that is unachievable otherwise. The rowing sound in Peircean terms has three functions:

**Iconic** – The sound of rowing is initially heard without a visual reference to its source. The sound’s characteristics are merely iconic, in the sense that it is presented as purely the sound itself. In Peirce’s terms, it is “a mere quality” (CP, 5.71), a *Firstness* without reference to anything else. At the start of the film, the sound of rowing is heard while the picture is black, and with no visible cue the sound is ambiguous. Even when Weewar is seen in close-up, there is no clue as to the source of the sound.

**Indexical** – Only towards the end of the sequence is the rowboat containing the four men seen and the source of the sound becomes apparent. Once the origin of the sound becomes clear as the pictures appear on screen it takes on meaning as an indexical sign of rowing (the object of the sign), and can thereafter represent the boat being rowed.

**Symbolic** – At its final usage, over the end credits, it now has become a symbolic sign that represents not simply the boat but Weewar’s journey, and similarly the journey that other prisoners made. The final scene uses the same boat rowing sounds, and when the final song is sung the rowing sound rather than music remains over the end credits.

By the final scene of Weewar being transported to Rottnest Island, what was a relatively benign sound at the beginning of the film gradually accumulates more meaning, as each stroke represents his removal further and further from home and closer to the prison island. By the time the sound is used in isolation over the end credits, the relatively simple sound has become a symbolic sign representing both the boat trip as well as the journey to Weewar’s final destination, where he and many other Indigenous prisoners spent their remaining days. The meaning of the sound develops from the initial interpretant, the sound that the rowing makes, to dynamical interpretant representing Weewar’s journey to his final destination, with the final interpretant embedding references to all the other prisoners who followed. This highlights Peirce’s differentiation between an idea and a sign: “The meaning
lies not in the perception but in the interpretation of the perception” (Peirce and Hoopes 1991, 7).

### 8.1.3 Elders scene – Dialogue indexicality and symbolicity⁹⁶

Immediately after the initial title sequence, there is the fireside scene in which the elders give their judgement to Weewar. The three elders are all Nyungars speaking in Nyungar language. This scene was shot at a relatively remote location because two of the three characters were unable to travel to Perth. It was therefore imperative to record sound that was usable as there would be no opportunity to rerecord. A portable generator was being used to power some production lights, and the maximum distance possible between the set and the generator was around 100 meters. In an otherwise quiet, still, flat bush location, 100 meters does not provide sufficient isolation and so various noise reduction and filtering techniques were used in post-production to remove the generator noise leaving only the voices, and background sounds, such as crickets and the sound of a distant dog.

The sound recordings of the elders had both a simple synchronous relationship with the image, but also an equally important cultural significance transcending the filmic action. Prior to the scene being filmed, two of the Indigenous actors performed a welcoming/blessing ceremony since the location was an actual Nyungar meeting place rather than simply a film location. To rerecord the voices would destroy the link between the location and what the three elders were saying, which was, in effect, the words of their direct ancestors. The voices work both as the simple indexical signs of the characters themselves, as well as a symbolic link to the words of their ancestors. The voices are also symbolic, in the sense that the language being used is in fact a symbolic representation unfamiliar to some and familiar to others, but also symbolic in the sense that it represents the Nyungar culture since there are so few films that contain Nyungar (or any Australian Indigenous) language.

This scene illustrates some of the complexities of indexicality for sound. The sound-image relationship has its own indexical link, with synchronous sound recordings acting as a proof of the reality of the representation as it actually was. The sound quality of the recording in this case was less than ideal, and so the iconic qualities of the sound recording, the firstness in Peirce’s terms, were manipulated to remove those aspects of the sound recording that compromised clarity or intelligibility, or otherwise betrayed the artifice of the filmmaking process.

⁹⁶ Weewar chapter 2 from 0:39 – audio track 1: full mix.
In this particular film, based as it is on an historical event, the representations in the film provide an indexical link to a particular group of people and to real historical events. The initial object of the sound-sign in the film may be the character speaking the words and the initial interpretant is the message of those words. In the context of Weewar, the dynamical object of the sound-sign can also be interpreted as the words spoken by the elders’ forefathers in 1840.

8.1.4 Hunting scene – Sound effects indexicality and symbolicity

In this sequence, Weewar, having speared Dyung, is pursued and eventually captured by two policemen. The clapping sticks provide the musical score to the otherwise naturalistic sounds of footsteps and ambience, which were captured during filming. The animal sounds (birds, insects) in this sequence are all from location sound recordings with the exception of the sounds of a bird’s wings flapping. The natural sounds of the scene were captured on location in order to present as faithful a representation as possible. Here the needs of the story were counterbalanced by the need for an authentic representation, since a sound that did not fit the landscape would potentially stand out as being fake. Sound effects provide both an indexical and symbolic link to the specific location, as well as performing a more traditional narrative function indicating something off-screen, such as a bird flying way.

Naturalism briefly departs when Weewar, realising that he is trapped, picks up and twirls a fallen branch to use as a weapon, and its sound is similar to that which might be used in a martial arts movie, exaggerating the speed of the motion and suggesting his skills as a warrior. The moment of twirling the wooden club is a moment of licence, which attempts to heighten the drama whilst not destroying the authenticity of the overall representation. Different audiences may interpret the sound sign differently. The symbolic meaning of the heightened sound effect may represent speed and mastery for some, whilst others may understand it as a link to other cinematic genres, learned through prior experience.

7.7.1 Music indexicality and symbolicity

For many people, the sound of the didgeridoo is synonymous with authentic Aboriginal music. For the Nyungar community in the story, clapping sticks and vocal chants are the more common form of traditional music. For this reason, the musical score of the film contains only Nyungar singing and clapping sticks. Again whilst a western audience may not immediately make the link between the sticks and the Nyungar culture, to a Nyungar audience the sticks are not only familiar but authentic. Vocal music also appears both within

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97 Weewar chapter 4 from 3:22, audio track 1: full mix.
the film and as scored music. The elders perform a traditional ritual song as part of the film’s action. Sung music appears in two other places in the film, which is also traditional vocal music sung in the Nyungar language with the only non-vocal instrument being clapping sticks (often boomerangs are used).

The music cues in the film are included in the accompanying DVD, including:

- **Elders Chant** (chapter 2). The first music is heard immediately prior to the title screen, which precedes the picture cut by a few seconds, performed by the elders at the meeting with Weewar. It is the only source music that is actually performed on screen, the score is superimposed.

- **Boodja Song** (chapter 3). Vocal music with clapping sticks is again used as Weewar looks over his homeland.

- **Hunting Weewar** (chapter 4). Clapping sticks are used in the culmination to the Hunting Weewar sequence.

- **Weewar is Sentenced** (chapter 5). Clapping sticks are again used.

- **Weewar’s song** (chapter 6). Weewar looks over his homeland for the last time.

By manipulating the amount of reverberation applied to the singing, ‘Weewar’s song’ differs from the other music cues in that it gradually becomes less dreamlike and more ‘present’ as it progresses. It moves from a ‘film score’ feel and depiction, as the images accompanying it move from Weewar, on to images of his homeland, and finally to the archival photograph of Aboriginal prisoners in uniforms and chains at Rottnest Island (see the figures below), followed by the dedication that ends the film. The treatment of the music attempts to move the music from being the theme music that accompanies the final scene of the drama, to the musical representation of the plight of the many prisoners shown in the photograph.

![Weewar's song](image1)

![Aboriginal prisoners](image2)

Here, the music acts as a symbolic link between Weewar and his homeland. Superimposed onto this meaning is the meaning from beyond the film, the wider story of the many Aboriginal prisoners who shared his fate. The symbolic meaning acquires a new layer of

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98 See Appendix H – Accompanying DVD of Productions.
meaning partly because of the treatment of the singing voices, and partly through the new sound/image relationship made.

7.8 *Footprints in the Sand*

*Footprints in the Sand* (Stasiuk 2007) is an ethnographic documentary based around the story of a man and woman, Warri and Yatungka, of the Mandildjara lands in central Western Australia.99 The couple, who were prevented from marrying because of their family grouping, had eloped and were tracked by Warri’s childhood friend Mudjon. He tried unsuccessfully to persuade them to go back with him, but rather than return to their community and suffer punishment for their transgression of law, they chose to live apart from their community. Gradually, the Aboriginal peoples of the desert left for the towns and settlements, but Warri and Yatungka stayed in the desert. They had two sons who eventually left them to live in the town of Wiluna with the rest of their community, but still Warri and Yatungka kept themselves apart. Some 30 years later, Mudjon, fearful for the old couple’s welfare, set out with a party of anthropologists to find the couple. The tracking of the couple and their eventual meeting with Mudjon was filmed by two of the search party.

This documentary illustrates some of the challenges of working in documentary sound and provides us with an opportunity to show how the Peircean model of the sign applies to different aspects of the documentary soundtrack. *Footprints in the Sand* is also an example of an ethnographic documentary, which has additional ethical implications.

7.8.1 **Background and challenges**

The documentary revisits a story that had been told in an earlier documentary film, *The Last of the Nomads* (Kelley 1997). The new documentary tells the story from the perspective of the Mandildjara people rather than from the more anthropological, western viewpoint of the earlier documentary. I worked with the same director that I had worked with on *Weewar*, and the approach was similar in that the soundtrack, and indeed the film as a whole, was made in order to present the story of the Martu community to and for the Martu community.

The earlier documentary film had been based on the book, *The Last of the Nomads*, by anthropologist W. J. Peasley (1983), who led the anthropological expedition, and it was based on his recollections of the search and eventual meeting. Whilst the original film was

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99 Whilst Warri and Yatungka were believed to be the last of the Mandildjara tribe, the name Mandildjara is used interchangeably with the more common name Martu, which survives.
successful, having won awards, including a Western Australian award for the sound, there are some issues regarding the representation of the story. The first issue is the use of language. In the original documentary, there are dramatised sections where the actors playing Warri and Mudjon are seen arguing, but they are not actually speaking in the language used by the people they are supposed to be representing. The re-enactments were instead performed by Nyungar Aboriginals from Perth, around 1000 kilometres away. For the Aboriginal audience this would be the equivalent of having Norwegian people played by French actors. For a western filmmaker, it seemed that any Aboriginal language was a close enough approximation. The new documentary, *Footprints in the Sand*, would feature the authentic language.

The second issue is the perspective from which the story is told. The earlier documentary was told from the viewpoint of the western anthropologists. *Footprints in the Sand* aimed to tell the story from the perspective of the Aboriginal people themselves. All the voices in the new documentary are the Aboriginal people of Wiluna, the town where the families of Warri and Yatungka live. This decision was primarily political, as perhaps all decisions in ethnographic films must be. It was a conscious decision for the story to be told by the people and in their own words, rather than mediated through a western gaze/interpretation. From this political choice all other decisions must flow, including decisions about sound. The story is told by the people who know the story. It is their story. The camera and microphone are the audience. If the film as a whole is about these people, their story and their land, then it seems only natural that the choices of images and sounds in the film must reflect this.

Extensive use is made of archive footage of the meeting with Warri and Mudjon from the earlier documentary. This was taken with an eight millimetre film camera, although no sound recordings were made.

### 7.8.2 Sound techniques and application

Where many documentaries rely on observational techniques, *Footprints in the Sand*, is noticeably more formal and stylised. Participants were seated either individually or in small groups with the stationary camera, and they were asked to tell the story of Warri and Yatungka. There is little use of the observational documentary style, where the camera follows the participants about their business. What matters here is the story that the people are telling. In this particular culture, in common with many Australian Aboriginal cultures, great importance is attached to the tradition of oral storytelling, sitting and listening to elders, as they had listened to their elders. In this sense, the camera and microphone fill the role of surrogate listener/observer while the story is told. Possible misleading biases could
be lessened through using longer takes, and since the participants were not filmed ‘unconsciously’ and knew they were being filmed, they were in a position to better determine the content of the sequence and give feedback (Asch, cited in Crawford and Turton 1992, 199). Any question that they were unhappy with or any content that they felt might be misunderstood could be clarified on the spot.

Does this make the documentary less real? Yes, in the sense that it is more obviously staged. The participants sit and talk in front of a camera. Are more observational documentaries therefore more real? In a sense, no they are not. The fact that the director’s questions and instructions are removed from most documentaries does not indicate that the camera crew invisibly and unobtrusively followed events. Continuity editing remains a standard technique imposing a narrative structure. As an audience we are usually kept unaware of gaps in time, unless explicitly indicated. Even observational documentaries can resort to deception in order to give the impression of reality. In the documentary, An American Family, missing audio from one scene was entirely recreated after the fact (Ruoff 1993, 38). To an audience listening there is little or no evidence with which we can determine the authenticity of a soundtrack. In the end, only the participants and filmmakers will know whether something is real, partially real or replaced.

Whilst documentary productions share many production principles with the ethnographic documentary, the latter are more keenly tied to the sound gathered during production. The recordings are required to be authentic, in that they are recordings of what they purport to be. Material cannot be rerecorded, nor should sound effects be used that would be likely to mislead the audience, or misrepresent the participants or their culture.

After making several trips to the community in Wiluna and travelling to the isolated locations, the director laid the groundwork for the location crew to film the interviews required for the film. In an effort to make the participants comfortable with the idea of being filmed and recorded, lavalier radio microphones were used extensively, instead of the more intrusive boom microphone being held overhead by a sound recordist, which are more commonly used in drama and some other documentaries. Lavalier microphones can be clipped onto clothing or into shirt pockets so that they are effectively invisible to the camera whilst being close enough to capture a very clear voice recording. In film terms, the disadvantage of this practice is that the recording is overly dominated by the voice since the microphone is much closer to the person speaking than the camera’s perspective would

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100 See Glossaries – Film and sound terms: ‘lavalier’. 
suggest. Any natural balance between the direct sound of the voice and the natural ambience is lost.

Music is used almost entirely in conjunction with the narrator/voiceover in *Footprints in the Sand*. When we are hearing the Martu people tell their story, we do not need to hear music or any sound other than their voices and their natural environment. To the Martu community, listening to the music is significant, it is sung in their language and written about places they know. Instrumental music is also used, but again this is written and performed by musicians from that community. To a broader audience, the music may not have this level of significance, but it still performs its usual filmic functions. The music carries with it meaning that is embedded, just as a classical Hollywood score may carry with it the idea of romance, drama or suspense. The music used in the film helps to reinforce the feeling that the film is *from their perspective* rather than being *about them*. The music is in a sense representational music rather than simply dramatic music.

Where possible, field recordings of the locations were made for later use, to augment the lavalier recordings. In other words, separate recordings of the ambient sounds were made so that they could be mixed in with the lavalier microphone recordings to give a more natural sound. These included the sound of the wind in the trees, the insects and birds, paying attention to the time of day so that the ambient sound would match the time of the dialogue recordings.

### 7.9 *Footprints in the Sand* in Peircean terms

The aim in the soundtrack, as with the film as a whole, is not to deceive but rather to construct faithfully a story important to the Mandildjara people. To borrow Robert Sklar’s (1975) phrase, it is “artifice in the service of truth.” The means of the artifice is still hidden. As an audience we cannot see microphones, the crew’s shadows or reflections of the camera. What we are left with is hopefully a faithful representation of the participants, one that they can watch and listen to without a sense of betrayal. The power relationship between filmmakers and subjects is made a little more even. It is also an empowering process, with subjects being more in control of the process than is usually the case.

Peircean semiotics can illuminate the functions of sound in documentary, or in this example ethnographic documentary. What is left in or out of the soundtrack is a deliberate choice. As we shall see, many choices take on a greater resonance in the context of a documentary, for
example, the use of dialogue and voiceover, the choices relating to music, and the use of sound effects including the sonification of silent archival materials.

7.9.1 Narration and dialogue

The direct narrative components of the documentary are from narration and dialogue. If we are to take seriously the responsibility of capturing and preserving the customs, language and traditions of peoples, then we must hear them speak rather than speak for them. Thus, whilst some ethnographic filmmakers historically have preferred the use of voiceover to protect the image from subtitles, the decision here was to keep the original voices and use subtitles where required. The use of the real voices and the language of the people, rather than that of a documentary ‘interpreter’, adds great power to the representation. The voices, intonation, expressions and emotions of the participants say much more about the subject than any well-meaning anthropologist could ever do. The only voice in the soundtrack that does not belong to a member of the Wiluna community is that of the narrator. An Aboriginal man, David Ngoombujarra, although not from the Mandildjara people, was suggested by the community to do the narration as he is a widely known and respected actor, and was thought to be an ideal choice. The narration was recorded without reference to the pictures and was directed by the director of the film.

The surrogate audience to the oral tradition of storytelling is the microphone and camera. In the context of a documentary film on a particular Aboriginal culture, the use of sound takes on a political dimension. Language and culture have such a particular bond that to deny both the context and the meaning of the spoken word in an ethnographic documentary film is to deny the autonomy of the participants. The spoken language could easily have been downplayed by the documentary makers, functioning simply and symbolically as an exotic tongue that is not recognisable to ‘the audience’ and only needs to be appreciated as recognisably ‘foreign’. In a documentary, where participants do not speak or where their speech is rendered mute or interpreted through voiceover, or on whose part selected clips are used to portray a snapshot of their culture or society, the documentary maker assumes all the responsibility for the creation of the narrative. At the same time, this is potentially disempowering to the participants, preventing them from creating and telling their own story.

In Peircean terms, the dialogue acts as a simple indexical link between the visual and auditory subject, the person talking. It also acts as a direct indexical link between the documentary participants in the film and the community in question. The images are used to
support the spoken word. The voices are in the foreground, and for much of the soundtrack, dialogue is the focus of attention rather than the visual image.

The Peircean model also takes into account the prior knowledge and experience of the interpreter of the sign. The assumptions on the part of the filmmaker about the prior knowledge of the intended audience impact on the interpretation given to the soundtrack. The meaning of the sound-signs, in this case the spoken language of the interview participants, can be different for different audiences. The sounds of the voices, their intonation and individual differences allow the audience to see and hear the participants as unmediated individuals, rather than as mysterious ‘others’ heard and described through a third party.

7.9.2 Music choices

In “Notes on Music in Ethnographic Film”, Even Ruud described the task for ethnographic filmmakers using music: “to represent, or perhaps better, to introduce reflexivity with regard to the way in which life-orientations are coded and conventionalised in musical styles” (cited in Crawford and Simonsen 1992, 228). In Footprints in the Sand, all the music was written and performed by Mandildjara people, by the families of the people in the story. The music is stylistically very influenced by country music, which is popular in much of rural Western Australia. This represents the modern Mandildjara people better than pseudo-classical or synthesised ‘background’ music. Conventional practice in documentary filmmaking is for music to be used to accompany the images (Lomax 2009, 327-328). However, music need not be treated as a coat of paint to be applied to make the film appear finished. It can be used to give another dimension that is relevant to the subject of the film, and which in turn can help the audience in their understanding of that community.

The musical score in the documentary was composed by musicians from the Martu community, playing music that strongly resonates with many people from that community. The guitar music that comprised the majority of the score, was composed and played by a member of the Martu community. It was recorded to playback of the film, so that the musician could see the images and hear the other elements of the soundtrack, such as dialogue, with which it was going to be synchronised. The other musical pieces were performed by a four-piece Martu band. The lyrics sung are in the Martu language. The end title music (Chapter 12, 24:27-25:15) is a full band version of an original composition. The opening title music (Chapter 1, 0:10-1:55) is the same musical piece sung a cappella. The opening music was actually created from the vocal takes from the band recording, used in isolation from the instruments to focus the attention on the sound of the voice and the
language being used. The same musical composition using the same vocal performances in the context of the country music style, with electric bass guitar, electric guitar and acoustic guitar, creates a different feel to the composition compared to the *a cappella* version.

Therefore, the music provides both a narrative function inside the film and to a broad audience, but also provides a referential and indexical link to the community in question. For the community both the lyrical content and the country style of the music reflect a recognisable part of the Martu culture. To a wider audience the opening title *a cappella* music immediately sets the scene foregrounding an unfamiliar language. The end title music resumes the unfamiliar language but this time positions it within the more familiar surrounds of country music instrumentation. The guitar music, also composed and played by a member of the Martu community, serves a conventional function in that it is used to guide or reinforce the mood of the sequence.

The meaning of the music can therefore be interpreted differently by different audiences. The music provides an indexical link to the community through the recognition of the language being sung, content of the lyrics and, for some, a recognition of the voice singing. It also provides a symbolic link to the community through the style of music being used, both in the *a cappella* introductory sequence, and in the country music performance at the end. For a wider, country music audience the music may tend toward a symbolic rather than indexical meaning since they will not be aware of the specific cultural significance. The introductory vocal music is recognisably from a male voice, singing in an unfamiliar language. The guitar music is recognisably played by a guitar and may be interpreted as ‘sympathetic’ in some way to the mood of the sequence with which it is synchronised. The end title music is recognisably a band playing a song, and the lyrics may well be recognised as unfamiliar, so it may not be apparent that the lyrics are the same as the introductory music.

7.9.3 **Sound effects and sound editing**

As with the music, sound effects fulfil both a subliminal narrative and a grammatical function. Whilst the image and sound are linked in the final product, when films are being made the sound perspective need not be yoked to the camera perspective. For example, this means that problems immediately arise where visual editing cuts between shots of continuous dialogue. Convention dictates that the sound perspective remains stable when cutting between, for example, medium shots and close ups of a supposedly continuous event, despite the apparent shift in camera perspective. It does not mean that the naturalness of the sound recording in relation to its surroundings need be compromised. Therefore, whilst the
sound of the dialogue recorded for the interviews is adjusted to remain at a consistent level and perspective in order to provide intelligibility, the environmental ambient sounds can be added back in to better match the actual sound of the location and make the soundtrack more natural, or rather less unnatural.

During filming in remote areas, the unfamiliar presence of the cars and camera crew is as disruptive to the wildlife as it may be to the humans. Therefore, special techniques need to be employed to capture the ambient natural sounds. By waiting patiently, and by recording when other crew members were busy elsewhere, it was possible to capture the sounds of the insects and birds as they gradually emerged when the disruption appeared to cease. It is typical that after weeks and months of filming, participants become familiar with a camera and the novelty fades, and participants gradually stop acknowledging it and resume their normal, everyday lives.

Where possible, all the elements in the documentary are authentic in the sense that we see the actual participants, in the real locations, speaking the real language. The soundtrack serves a direct indexical function. All the dialogue is from recordings during production (occasionally ‘cleaned’, but original). The recordings have been filtered to remove unwanted sounds, leaving the sound of the voices intact. Some sound effects and backgrounds have been added in as the recordings were made almost entirely with lavalier microphones, which tend to pick up a greater proportion of the voice rather than background sound. The addition of the environmental sounds is subtle, but presents a more realistic soundtrack by adopting techniques that apply equally to dramatic and documentary style productions. As with drama production, documentary sound utilises manipulation of the soundtrack in order to hide the means of the artifice and of the means of production.

During production, the emphasis on the indexicality of the voice recordings presents a potential problem, in that this downplays the sounds of the environment and therefore removes or undermines the indexical link with the location visible on screen. As a result, background sounds are added in to readjust the balance between the documentary representation and the lived reality. To a broader audience, the sound of backgrounds may simply provide the grammatical function, and be taken as a sign that the documentary is complying to normal documentary standards of production, and that the sounds match either the experience or expectation of what the location would sound like. A Martu audience might well be more attuned to the sound of backgrounds, such as birds, the wind through particular trees, or a certain time of day at a particular location. As such, the background sound serves a grammatical function, and reinforces the fact that what is contained in the documentary is a faithful representation. The objects being represented in the sign can then
legitimately help to create the interpretant, which is not simply the story being told through the words, images and subtitles, but one that is supported by other more subtle aspects of the documentary soundtrack.

7.9.4 Silent archive materials and sound

The film uses some silent footage from the earlier documentary, *The Last of the Nomads* (Kelley 1997). Integrating the silent footage into the film presented the choice between using the archive material as a standalone or presenting it with accompanying sound. In the end, both options were used. For example, the sequence (Chapter 5: 07:19 – 07:40) shows a distant fire burning and two land rover shots, which are accompanied by what could be the sound of the fire and of the vehicle driving on the dirt road. This first usage of the archive material with accompanying sound occurs as the voices in the soundtrack describe the fire and the sound of the vehicle coming through the sand dunes. The decision was made that sound could accompany this short sequence, as it supported both the visual shot of the car driving through the bush and the words being spoken by Geoffrey ‘Yullala Boss’ Stewart and Jimmy ‘Mad Dog’ Morgan:

> I realised it wasn’t the wind causing the fire to jump. Something was climbing the sand dunes.
> Making a noise?
> The noise became louder and louder on the sand dunes.

Here the visual archive is used to illustrate Mr Stewart’s recollection, and sound is also used to support both the silent archive and to illustrate his story. This type of additional sound strays from the previous use of only dialogue and natural ambient sounds from the location in the sections of the documentary comprising interviews. Its use here can be justified on the grounds that in doing so its purpose is to illustrate rather than mislead, as it performs a narrative role in representing the type of sound that might have been heard for the first time. In the same way, the visual archive material is used in this sequence to illustrate a car driving up the dunes, it is not the car. Both visual and sonic representations are used to illustrate Mr Stewart’s recollection. Its use does not seek to misrepresent the interview subject or mislead the audience. Following all the archive sequences are shown without added sound.

The archive visual material reveals itself as such partly by the noticeable marks and scratches on the image itself, in contrast to the pristine image of the new material. Also by the noticeable faster running speed of the sequences, due to the camera running at a lower frame rate during filming than that used during playback, which is characteristic of older
films. There is consequently a visual clue as to the age of the extracts and thus their source. The addition of sound to match the archival material would be problematic, in terms of the story of the documentary and the reasons for the documentary itself. Adding sound where it was not there before could potentially lead the audience to question whether there are other manipulations.

Adding sound to archival footage presents a further problem in that there is no way to determine what the sound would have been. Creating sounds for groups of people in archival footage would immediately run the risk of the documentary being seen as a fabrication. Either the recognisable participants on screen would not match the voices of the soundtrack, or else the unfamiliar participants on screen might be voiced by recognisable voices. Any possible benefits are outweighed by the risk that the addition of fabricated sound would undermine the indexicality, and therefore the truthfulness of the representation to the Martu audience. The only archival footage that is ‘sounded’ is that of the land rover driving, which need not have a soundtrack component, but its presence was not thought to undermine the intentions of the film.

### 7.10 Self-Reflexive Practice Summary

When describing the role of the practitioner in sound, it is tempting to rely on the industrial model of the soundtrack as a hierarchy of sounds that are either dialogue, music or sound effects, with each crew position fitting within that same schemata. When describing the soundtrack we have alternative models, such as Tomlinson Holman’s division of the soundtrack by function (direct narrative, subliminal narrative, grammatical). As discussed previously, there are times when it makes sense to use both forms of classification in an examination of the practice and the product.

The usefulness of the Peircean model is that it provides a way of framing the soundtrack according to meaning. It allows us to describe how sounds of whatever kind have the potential to be meaningful, and how that meaning can be created or manipulated for the purposes of storytelling, or more broadly ‘meaning-making’. It gives us a vocabulary to describe how meaning is made through sound-image relationships, and how the different sound elements and sound processes work toward this goal. The model can be applied at both the micro level of a single sound and to the soundtrack as a whole. It is flexible, in that particular sounds need not only belong to one class but may belong to multiple classes and have multiple functions. Its focus is on the meaning rather than the content of the sounds themselves. By thinking about sounds as sound-signs the Peircean model accounts for all
types of sounds, how they are interpreted, and their use in conjunction with images, which is
the fundamental province of film and all other audiovisual media.

The Peircean model can thus illuminate aspects of the practices of film sound that have so
far evaded proper analysis since they could not be fully theorised using the tools that are
commonly applied to visual aspects of cinema. Having initially been applied to the analysis
of the film text, and then used to describe the practice of film sound, this chapter has shown
how Peircian semiotics can also elucidate the processes of practice during practice. It can
provide both the conceptual framework that can be applied to the processes involved in
creating elements of the soundtrack, as well as a means to understand how the sounds
themselves, in conjunction with the image, will be used to create meaning for the audience.

This thesis has shown that much of the work involved in sound production is concerned with
the manipulation of sound-signs in order to produce a desired effect in the mind of the
audience. Whether working in fiction or non-fiction, the sound producer attempts to
influence what the audience should know, think or feel. The principal aim of the sound
producer is the success of the soundtrack in aiding the story being told. Particularly in non-
fiction productions, there is an ethical dimension to the soundtrack and the choices that
govern its construction. Given that the manipulation to achieve the desired end is both
deliberate and fiendishly difficult to detect, there is a supplementary duty on sound
producers to consider the impact of their work on the audience and whether it has the
potential to mislead or misrepresent.
8. Findings and Conclusions

8.1 The aims of the research

A fundamental problem facing anyone wishing to practice, study or teach film sound is the lack of a theoretical language to describe the way sound is used and an overarching framework that adequately explains how film sound works in practice. Whilst there are a growing number of books, conferences and journals geared toward the critical examination of film sound, or sound in other audiovisual media, there are few texts that are sufficiently grounded in the corresponding day-to-day work of practitioners. This research is an attempt to use the experience of practitioners within the industry to inform the theory and, through the application of Peirce’s semiotic model, identify and provide a critical language that allows theory to inform the practice.

First, the methodological strategy adopted was to select a model that could be tested for its suitability as a means of analysing and describing sound. Second, industry practice was examined, in order to map the model to the actual work undertaken. Third, the model was used self-reflexively in relation to my own practice, in order to test the ‘new’ theory, to explicate previously completed work, and to inform my future practice.

This thesis shows how Peircean semiotics can provide the framework and the language to analyse and describe both the product and the practice of film sound. It can be applied at micro and macro levels of analysis, being equally applicable to individual sound elements and the soundtrack as a whole. It can be used to explore what the audience hears and what the practitioners do as they manipulate sound for effect. Its flexibility also allows it to accommodate other film sound theories. The Peircean model has the potential to provide both the justification for sound production practice and the means to bring sound production out of the shadows. By gaining the means to elucidate previously concealed sound production processes, it is possible to give this practice the acknowledgement it merits as a fundamental and influential element of any audio-visual artefact that cannot, and should not, be taken for granted.
8.2 The findings of the research

8.2.1 The Peircean model – A metalanguage of sound

An initial driving force for the research was the belief, or at least the suspicion, that there was an underpinning rationale shared by many sound practitioners in their approach to their work that had not yet been satisfactorily elucidated. During this research, many of the practitioners interviewed brought up the issue that work in sound is inadvertently downplayed. This is partly because it is ‘invisible’, in the sense that it is difficult to determine what work has actually been done, but also because the work in progress is actually heard by relatively few, and even where this work is heard, it is not often immediately apparent what end is being achieved by the work. Part of the problem of analysing and talking about sound, is the lack of appropriate or consistent vocabulary. A language with which to describe the purpose and function of sounds and sound practices might go some way to removing the shroud of unfamiliarity of the work of the sound practitioner. The Peircean model and its vocabulary has been shown to be useful in analysing both the soundtrack as a whole, as well as the specific sounds and sound/image combinations. It provides the means to go beyond the technical operations to describe the functional aspects of sounds. Peircean semiotics, used as an overarching model into which other elements of film sound theory can be incorporated, has shown that it is versatile enough to provide a comprehensive and universal approach that can be applied equally to both the analysis and practice of film sound.

8.2.2 The Peircean model – A practice-based theory of sound

What does the Peircean model comprise? The key concepts that are particularly useful in relation to sound are summarised in Appendix K – Peirce’s Model Applied to Sound. In addition to providing an overarching framework and a language with which to describe sound, the Peircean model has a number of specific benefits:

- It can be used as a means of analysing individual sounds and sound-image relationships, as well as the soundtrack’s role in the narrative.
- It helps uncover and explain the creative processes involved in the production the soundtrack by illustrating a coherent theoretical basis for the practice.
- It facilitates the critical examination of the practice by providing a language to explain processes and the theory embedded in the practice, which explain how sound is used to create meaning.
• It takes into account the role of the audience and of individual interpretation in creating meaning.

• It takes into account the possibility of meaning becoming modified over time or through collateral experience.

• It integrates Peircean semiotics into existing sound theory, and thus provides a pedagogical framework with which the practice of film sound can be taught.

The development of a conceptual framework that can be applied to all kinds of sounds, regardless of their function or positioning on the hierarchy of the soundtrack, allows collaborative and informed discussion between individuals and departments, practitioners and theorists alike. Adopting Peirce’s semiotic model allows for sound to be conceptualised as a system of signs rather than simply sound types, such as dialogue, sound effects or music. It provides a means of describing how sound can be used to fulfil its many filmic functions. It also furnishes the language tools to help explain not only the sound itself but what happens when it is heard by the listener, the process of understanding what happens when sounds are listened to in a particular context.

The task of creating the soundtrack can be described in terms of a series of questions about what the audience should know, feel or think as they experience the film. This type of approach focuses attention on the decisions that influence how well the story is told, or rather how the story will be understood by the audience. It shifts the focus from the classification of the sound to its function in the soundtrack, where each element of the soundtrack is selected and manipulated to serve the needs of the film.

The types of focused listening described by Michel Chion affect the decisions that are made about the individual elements of the soundtrack, as well as the overall view of the soundtrack. In Peircean terms, these properties of sounds are reframed as sound-signs, having iconic, indexical or symbolic relationships to the things they represent, which are manipulated by the producer and interpreted by the audience. This model of the soundtrack does not seek to overthrow the many useful, existing film sound models developed by theorists and practitioners. Indeed, the models suggested by Rick Altman, Michel Chion, Walter Murch and Tomlinson Holman can be successfully integrated into the broader Peircean model. Similarly, whilst the industrial model typically delineates sounds as either dialogue, music or effects, the Peircean model can be applied to each family of sounds, enabling the classification of sound elements in terms of their particular function and role within the soundtrack.
8.3 Limitations of the research and recommendations for future research

Whilst this research explicates the potential application of the Peircean model to film sound, it is acknowledged that it merely offers a glimpse of the wealth of ways in which sound is used and interpreted. The film examples used in this research are offered as illustrations of the potential of the model. The interviews with the eight practitioners who kindly took part in this research can only provide a snapshot of industry practice rather than a statistically significant survey. In a study of this kind the scope is restricted by virtue of limitations on methodological practice and practical realities. Where self-reflexive practice is the mode of inquiry, there is the potential for deeper insight, but at the same time a more subjective perspective.

It should also be acknowledged that musical sound is only lightly touched upon here, lying outside the scope of this particular study. Whilst some musical elements are discussed in the films under analysis, this is another area that warrants further study.

Having suggested a means of analysing the process, whereby meaning is created from sound and through sound/image relationships, there are other areas where the Peircean model may be usefully tested, including non-fiction genres, such as television sport, news and current affairs, or in other areas of audiovisual media, such as video games. Future research using this model could be extended to address a deeper and broader range of productions and practices. Beyond its application to the analysis of audiovisual productions, the Peircean model may also be applied to other areas of sound research, such as psychoacoustics, audio-related industrial design and data sonification.

The issues surrounding the ethical use of sound, particularly in non-fiction contexts, also merit further study. New technology expands the ways sound can be manipulated without the knowledge of the listener, and where this may be acceptable in a fiction context, issues are raised in circumstances where the listener believes the representation to be truthful or accurate. Therefore, increasingly the ethical implications of sonic manipulation, editing, replacement and other decisions taken in the soundtrack will need to be considered.

8.4 Re-examining the soundtrack – Implications of this research

In some sense, the creation of the soundtrack is an exercise in problem-solving. There are sounds that need to be used, but which may require editing or replacement in order for the narrative to be maintained whilst the artifice remains hidden. There are sounds that are
added or manipulated that are designed to go unnoticed, but are judged to suggest a feeling that would not otherwise be present. There are relationships between sounds and images that can yield an interpretation of the narrative, either explicit or implicit. Each element, be it sound or image, is only a part of the whole, and they are co-dependent or interdependent. The soundtrack depends on the image and the image is dependent on the soundtrack. As seen through the Peircean semiotic lens, the practice of film sound can be more clearly illustrated as a creative endeavour, rather than technical.

For those involved in film sound, a recurring concern is the perception of sound practitioners and their work by others involved in film. Sound production can too easily be dismissed as a sequence of overly technical operations, reinforcing the belief that the work being done is technical rather than creative. The 1938 *Motion Picture Sound Engineering* handbook presents the analogy of the violinist at Carnegie Hall whose technical mastery appears effortless:

> If the re-recorder is successful, the audience is not conscious of his technique but only of the result achieved. The director and producer watching the re-recorder work out the details, however, may think him and his tools very mechanical, for in spite of what is going on inside his head (the important part of re-recording), his hands are performing a multitude of mechanical operations, and his conversations with his assistants are in terms of machines (Research Council of the Academy of Motion Picture Arts and Sciences 1938, 72).

The Peircean model highlights the process of meaning-making. When applied to film sound practice, it uncovers the way sound is creatively manipulated at every stage, often using technical means, to achieve a particular aim. This aim is frequently described in broad terms as serving the needs of the story. In more practical terms, it means serving the director’s wishes, so that sound can be integrated in the overall narrative to suit the needs of the story.

For those working in film sound, there is an implicit acknowledgement that these decisions, whilst often technically based, are made in the interests of the film as a whole. It is a two-part process that begins with the question: What do you want the audience to know, think or feel? Once this is determined, the second part of the process is answering the question: How best to go about achieving this end? The Peircean model can also demonstrate to those not directly involved with the production of the soundtrack that the practice of film sound is end-directed, in the sense that decisions about sound are taken based on the effect they produce: what the audience will think, or feel, or know. Rather than perceiving sound as a superfluous or auxiliary step that is applied at the completion of a creative process, it can instead be scrutinised as a fundamentally important aspect of the creation of the film.
8.5 Implications for working practices

In talking to industry practitioners during this study, it became apparent that they had a shared concern about the way sound was viewed within the wider industry. The increasing pressure on time to complete the work to the standard required, especially in post-production. Each worked with the utmost professionalism on their productions and valued the work of their collaborators and colleagues in sound and in the wider industry. None was particularly concerned with technology or with tools, but each was passionate about sound and its potential to help in telling stories.

Sound is frequently employed as a means of representing reality in concert with the images. However, practitioners are keenly aware that often there is a need, and the potential, for this to be fabricated, manipulated or recreated if necessary. For those involved in sound for non-fiction, a high standard of professional and ethical practice is the norm. For practitioners, critics, analysts, teachers and students of film sound, some guidelines may prove useful in beginning an overdue discussion about the ethics of sound practice.

Constraints caused by insufficient time or money are problems common to most sound practitioners at some time or other, as they are with any other creative endeavour. Occasionally, the biggest impediment to a more imaginative use of sound are colleagues whose understanding or appreciation of sound’s creative potential means limited involvement in the design of the production, or insufficient acknowledgement of the potential for sound to change the meaning of the text. Where a director or producer values sound and sees its importance in the finished film, the impact is felt throughout the production. Similarly, some practitioners enjoy a less traditional method of production, collaborating with those who value sound, and facilitating the early involvement of their sound colleagues when their opinions, concerns and suggestions can be incorporated into the foundation of the film, rather than being used as a coat of paint to be applied to the finished structure.

By uncovering some of the underlying principles of the way sound functions as a sign, this research adds weight to the argument that sound’s storytelling potential is too often limited by it being seen as an appendage or afterthought, rather than an essential element of any audio-visual artefact. Often the work is done so deftly as to hide itself, which means the creative labour involved risks being attributed elsewhere. For those looking in on the world of sound, the attention is easily put on the technology and the tools of the trade rather than the value that sound adds, and with no knowledge of the journey taken to arrive at the finished soundtrack any work is already invisible. To those behind the curtain, intimately involved in the production as the soundtrack takes shape, the impact of sound on the finished
article and how the soundtrack affects the audience is clear. Using Peircean semiotics, the practice of film sound can be shown to be primarily about decisions that determine what the audience should know, think or feel. This thesis adds to the call for sound to be recognised as a full and genuine creative collaborator in the creation of the film text, whose potential should be maximised at each stage of the film’s development and production.
9. Glossaries

9.1 Film and sound terms

Film and sound terms with particular meanings and that are mentioned in the text are included here. Job titles are capitalised, for example, dialogue editing is performed by a Dialogue Editor.

Above the line

The creative members of a production, such as director, writer, producer and actors, who receive prominent credits. See also ‘Below the line’.

Acousmatic

Sound that is heard without seeing its source. Acousmatic music is music that is heard with the source remaining unseen.

Acousmètre

A voice-character, specific to the cinema, which derives power from its visual origin being withheld.

ADR, ‘looping’

Automatic Dialogue Replacement or Automated Dialogue Replacement. A process that involves the rerecording of an actor’s dialogue in post-production for technical, performance or other storytelling reasons. Usually done in a recording studio in sync with picture.

Ambience, ambiance

The background sound of a location that is often created in post-production to either augment or replace the original location’s background sound. See also ‘Atmosphere’ and ‘Room tone’.

Atmosphere, atmos

Although sometimes used interchangeably with ambience, atmos is best described as the result where ambience is the raw material. See also ‘Ambience’ and ‘Room tone’.

Assemble, assemble edit

An unfinished edit where the shots are arranged in the sequence in which they will appear in the finished film.
Background – see ‘Ambience’

Below the line
The production staff, such as grips, electricians and script supervisors, and typically the entire sound department, who are not included in the list of ‘Above the line’ credits. See also ‘Above the line’.

Boom
A telescopic arm used for mounting a camera or microphone. A boom pole (or fish pole) is a simpler, hand-held version of the heavier boom. Typically two to five metres in length, it allows the microphone, which is attached to the end of the pole, to be manoeuvred into position by the boom operator.

Boom Operator
The sound operator who holds the microphone, which is mounted on a hand held pole, in order to get the microphone as close as possible to the sound source without being visible on camera.

CGI
Computer Generated Imagery. The process of generating and animating elements to be composited into a scene as if the elements were present when it was shot.

Contrapuntal
Sound that does not appear to fit the sequence with which it is synchronised, or which otherwise appears to contradict or juxtapose with the other filmic elements.

Clapperboard, ‘clapper’, ‘slate’
A board that shows the scene/take/shot number, shown to the camera at the start of a ‘take’. The same information is also read out aloud. To give a head sync or tail sync of a take the hinged section on top of the board is ‘clapped’ shut. This ensures that there is both a visual and aural mark for each particular take, which can be used to sync the rushes.

Comb filtering
The effect produced where a sound is reproduced and combined with the original sound but delayed by a few milliseconds. The metallic effect produced is known as ‘comb filtering’ because, when viewed on a spectrum analyser, the resultant graphical representation resembles the teeth of a comb.
**Cross-fade**
The process of joining two separate audio clips by overlapping them, simultaneously lowering the volume of the preceding audio clip while raising the volume of the following audio clip, with the aim of easing abrupt transitions between the two.

**DAW**
Digital Audio Workstation. A computer-based recording and editing system used for sound.

**Dialogue editing, Dialogue Editor**
Sound editing that focuses on dialogue recorded during production along with any ADR. The Dialogue Editor’s job is to assemble, synchronise and edit all the dialogue in a production, with the aim of producing a clear dialogue track for the Rerecording (or Dubbing) Mixer to work with.

**Diegetic sound / non-diegetic sound**
Music or sound effects that appear to emanate from the ‘world’ of the film. This is in contrast to non-diegetic sound, such as the music score, which accompanies the film but often does not appear to come from within the story world.

**DME**
Dialogue, Music and Effects. A file with dialogue, music and effects split into separate stems for foreign language dubbing or trailer editing.

**Delivery requirements**
After the mix of a project is finished the sound post-production team (usually the Rerecording Mixer or their assistant) must deliver the completed soundtrack in a variety of formats to satisfy the production company and the film’s distributors.

**Dipped / undipped**
Where an M+E version of a program is being made the music and effects can be either dipped or undipped. For example, where there is narration in a documentary, the volume of music and effects may be lowered for the duration of narration and be raised again once it ends. For an M+E mix this ‘dipped’ version of the music and effects is tied to the duration of the narration. For foreign language versions (FLVs), the M+E is usually undipped and can be tailored to the requirements of the new language version. See also ‘M+E’ and ‘FLV’.

**Dolby 4-2-4**
The forerunner to Dolby Digital and other discrete 5.1 formats, such as DTS, which used a matrix to fit four channels, namely left, centre, right, and surround (LCRS), into a two-
channel delivery system, such as the analogue two-channel stereo track on a 35mm film print, which can be decoded back to the four-channel LCRS for playback.

**Establishing shot**
A shot generally shown at the beginning of a scene to indicate a change in location or time.

**Final mix, full mix, main mix**
The original language version of the production comprising all the dialogue, music, and sound effects elements, as opposed to the M+E mix, and FLV. Stems or alternate mixes that are also created as part of the delivery requirements.

**FLV**
Foreign Language Version. Films that are created for international release are often required to have new dialogue elements in place of the original language dialogue. A foreign language version of the soundtrack needs to be created, separate to the original language main mix, which contains a full soundtrack minus the dialogue and is locally replaced for each foreign language version.

**Foley**
Formerly known as post sync effects. The creation of footsteps and other sync effects performed in sync with a projected image. Where production dialogue is replaced by ADR, foley is often required to fill in the missing sound effects. This new recording is free from any background noise, and can be used to support or replace the sync sound in the final mix and may also be used to fill the M+E mix. Named after the technique’s pioneer, Jack Foley. See also ‘M+E’ and ‘ADR’.

**Foley Artist, Foley Walker**
A person who performs the foley sound effects.

**Intertitle**
Intertitles (or title cards) are full screen text titles containing commentary or textual dialogue spliced into the film.

**Lavalier microphone, lavaliere, ‘lav’ or ‘bug’**
A small (often wireless) microphone that can be hidden in the clothing of the performer and which is used in place of, or in preference to, a microphone held out of shot by a Boom Operator.
**Leitmotif**
A leitmotif is a musical theme that comes to represent a character, place or theme through association. Leitmotif, from *Grove’s Dictionary of Music*, is defined as: “a theme, or other coherent idea, clearly defined so as to retain its identity if modified on subsequent appearances, and whose purpose is to represent or symbolise a person, object, place, idea, state of mind, supernatural force or any other ingredient in a dramatic work, usually operatic but also vocal, choral or instrumental.”

**Looping – see ‘ADR’**

**LT/RT, LTRT, L₁R₁**
Left total/right total. The Dolby name for the matrix encoded two-track Dolby Surround, Dolby Stereo mix. This mix is a four-channel mix encoded into two channels of audio that can be decoded back to its four constituent channels, namely left, centre, right, and surround (LCRS).

**Mix stems, stems**
A mix stem is typically a group of channels or tracks that have their speaker positions defined. For example, an atmosphere track stem could consist of five tracks designated as left, right, left surround, right surround, and sub. The same could apply for music stems with the addition of an extra centre track. Dialogue is usually treated differently as most would be placed in the centre channel with only special effects located in the other channels. Spot effects are often mixed to three-track stems, namely left, centre, and right, as well as the six-track stem described previously.

**MOS**
MOS is the term for ‘without sound’ (Mit Out Sound or Motor Only Sound), either because no sync production sound is required or because it will be added later. The benefit of shooting MOS is that the crew, and most importantly the director, need not be silent during shooting. The origin of the term ‘MOS’, is disputed. The most likely is the technologically descriptive Motor Only Sound, which referred to the electro-mechanical system of synchronisation between sound recorder and film camera requiring the camera’s motor only.

**M&E, M+E**
Music and Effects (pronounced ‘emanee’). The M&E is a music and effects mix minus the dialogue. This mix is essential for foreign sales of the film or television series, as another language can be dubbed over this existing music and sound effects to create a foreign language version (see also ‘FLV’). Any resultant loss of sound effects in the mix that were
on the dialogue tracks are replaced by using the foley to fill out the mix, creating a fully filled M&E.

**M/S**
Mid/Side. A stereo recording technique that uses two microphones, typically a forward facing cardioid and a sideways facing figure-eight. When decoded this allows the width of the stereo image to be determined later, rather than fixed during recording. The technique is mono-compatible by using only the forward facing microphone.

**OMF**
Open Media Framework. A file format intended for transferring media between different software applications on different platforms. It is commonly used for transferring audio from a video editing system to a DAW. See also ‘DAW’.

**Non-diegetic sound**
Music or sound effects that do not appear to emanate from the ‘world’ of the film. Frequently the music score that accompanies the film does not appear to come from within the story world and cannot be heard by the characters in the story, but sits outside it.

**Pan, panorama, panning**
In a single loudspeaker system, all sound appears to come from the same source. In a two loudspeaker system, the sound appears to come from anywhere along an imaginary line between the two extremes (a kind of audio ‘panorama’), by adjusting the relative levels of the signals feeding each speaker. The control that adjusts the relative level between the speakers is then a panorama control, in practice a ‘panoramic potentiometer’ or ‘pan-pot’. The action of adjusting the relative levels of a particular source between two speakers is known as ‘panning’.

**Pre-lap**
A sound edit that precedes the picture edit.

**Post-production**
The final stage of the filmmaking process commonly involves picture editing, sound design, visual effects, and outputting the film to a format suitable for release.
**Post sync dialogue** – see ‘ADR’

**Post sync effects** – see ‘Foley’

**Premix**
Premixing is the act of mixing edited sound elements so that the final mix can be accomplished with less work, involving level, equalisation, effects or panning. The mixing of a large project is often simplified by pre-mixing various components prior to a final mix.

For example, dialogue tracks are commonly pre-mixed to a smaller number of tracks, while being processed through dynamics and background noise control devices. There is also a substantial reduction in the number of sound effects and music tracks, such as premixing 24 tracks into a 4-track LCRS premix. Dialogue premixing often does not actually reduce the number of tracks that will go to the final mix, but instead just copies a cut track across with careful equalisation and fader moves.

**Pre-production**
The planning stage before shooting commences, including casting, location scouting, and budgeting.

**Principal photography**
The main period of filming in which shooting occurs with the main actors. This differs from visual effects photography and B-camera shooting. See also ‘Production’.

**Production**
The stage at which principal photography occurs. See also ‘Principal photography’.

**Production sound**
Audio recorded on set during production, which is typically dialogue. This is in contrast to ADR, foley and audio created by the Sound Designer.

**Quarter-inch**
Prior to the move to digital recorders, location sound recordists relied on a reel-to-reel recorder, such as the Nagra. The format of reel-to-reel recording on magnetic tape is often simply referred to as ‘quarter-inch’ (the shorthand), to describe both the recording format (magnetic tape) and the width of the tape media, which is typically quarter-inch for a two-channel recorder for location sound, where a studio machine might be half-inch, one-inch or two-inch.
**Rerecording (dubbing)**
The process of mixing together all of the elements of a soundtrack that have been created during editing. The dialogue, foley, other effects and music are literally rerecorded as they are played back from their recorders onto a new master recorder, hence the term ‘rerecording’ (known as ‘dubbing’ in the UK). The Rerecording (or Dubbing) Mixer is responsible for the balance of the final soundtrack.

**Reverberation**
A reflection of a sound from multiple surfaces. This is in contrast to an echo, where there is generally only one surface reflecting the sound and the echoed sound is much clearer.

**Room tone**
Background sound recorded on set for the purpose of enabling the seamless modification and removal of audio in post-production. An atmosphere track recorded on set for each scene of a film. The microphones are positioned as they were in the take or slate so as to record a background as similar as possible to the previously recorded dialogue. It is then transferred, along with the selected dialogue takes for that scene, and used to fill out any gaps in the dialogue tracklay. Then it is mixed into the dialogue pre-mix so as to achieve a smooth and seamless background to the scene when cutting between takes or when using ADR. See also ‘Background’ and ‘Atmosphere’.

**Rough cut**
The first cut created by a picture editor.

**Shot/reverse shot**
A film editing technique where the perspective of a visual shot views the action from the opposite side of the previous shot. For example, during a conversation between two actors, giving the effect of looking from one actor to the other, and also suggesting that the two characters are looking at each other.

**Shotgun microphone**
A highly directional microphone commonly used to record production sound.

**Sound design, Sound Designer**
The term sound design has two specific but different meanings. The role of sound designer can refer to the person responsible for the overall sound of the film. It also describes a person responsible for creating unique sounds from scratch. This term, borrowed from live theatre, has come to mean the sound equivalent of production designer or director of photography.
**Sound Mixer**
Also Production Sound Mixer or Production Sound Recordist. The person responsible for recording and mixing production sound on set, and who along with the Boom Operator comprises the typical production sound department.

**Spotting session**
After filming is complete and during the editing phases of a project, a sound spotting session or music spotting session often takes place. The composer or music supervisor, or sound editor will meet with the director and/or editor to spot the film for placement of sound effects and music. Scenes or moments where specific musical cues will occur can be discussed. Problematic dialogue recordings, particularly those that need ADR, as well as any required foley effects and designed sound effects, and the overall feel of the soundtrack can be revisited or determined.

**Stem – see ’Mix stems’**

**Stereo**
Multichannel audio that is often (but not limited to) two channels. Two is the minimum number of channels for stereo. 5.1 is a stereo format, for example. Two-channel audio is often combined into a single stereo file or track with outputs for the left and right speakers.

**Sync, sync sound**
Synchronised or synchronous recordings that were recorded at the same time as the visible images and which need to retain a synchronous relationship.

**Take**
The record of the number of times in a slate, a sequence of lines is filmed/recorded.

**Undipped – see ’Dipped’**

**Walla**
The sound that imitates background murmur, suggesting conversation but that contains no coherent or meaningful spoken words. It is designed to simulate background chatter without drawing attention to any particular recognisable meaning that might compete with the foreground dialogue in the scene. ‘Walla’ is the name commonly used, and ‘Rhubarb’ is the UK equivalent for the same process, particularly in radio.
**Wild, wild lines, wild tracks**

Wild lines are audio elements that are not recorded synchronously with the image. Wild lines are recorded on set without the camera rolling. These are often used as a back-up in cases where the sync takes are thought to be too noisy to use.
9.2 Peircean semiotic terms

Abbreviated from The Commens Dictionary of Peirce’s Terms (2012), except where otherwise indicated.

**Abduction**
Hypothesis, as a form of reasoning (a posteriori reasoning).

**Argument**
Any process of thought reasonably tending to produce a definite belief.

**Categories, Universal Categories**
Modes of being, fundamental conceptions, which include Firstness, Secondness, and Thirdness.

**Dicent**
A sign represented in its signified interpretant as is if it were in real relation to its object. A sign that is a sign of actual existence for its interpretant.

**Dynamical interpretant**
The actual effect that it has upon its interpreter. See also ‘Final interpretant’ and ‘Immediate interpretant’.

**Dynamical object**
The object determined through collateral experience. See also ‘Immediate object’ and ‘Object’.

**Final interpretant**
An idealised interpretant. The effect that the sign would produce upon any mind on which the circumstances should permit it to work out its full effect. See also ‘Dynamical interpretant’ and ‘Immediate interpretant’.

**Firstness**
Indicated by a quality of feeling. The mode of being of that which is, positively and without reference to anything else. See also ‘Secondness’ and ‘Thirdness’.

**Icon**
A Representamen whose Representative Quality is a Firstness that possesses the quality signified.
**Immediate interpretant**
The effect that the sign first produces or may produce upon a mind, without any reflection on it. See also ‘Dynamical interpretant’ and ‘First interpretant’.

**Immediate object**
The initial object as represented in the sign. See also ‘Dynamical object’ and ‘Object’.

**Index**
A Representamen whose Representative Quality is a Secondness that is in real reaction with the object denoted.

**Interpretant**
The effect of the sign produced in the mind of the interpreter. See also ‘Dynamical interpretant’, ‘Final interpretant’, and ‘Immediate interpretant’.

**Legisign**
A sign whose nature is of a general type, law or rule.

**Object**
That which the sign stands for. See also ‘Dynamical object’ and ‘Immediate object’.

**Qualisign**
A quality that is a sign (Firstness).

**Reality**
The state of affairs as they are, irrespective of what any mind or any definite collection of minds may represent it to be. The real may be defined as comprising characteristics that are independent of what anybody may think them to be.

**Representamen**
The representation is the character of a thing by virtue of which, for the production of a certain mental effect, it may stand in place of another thing. A Representamen is the subject of a triadic relation to a second, called its Object, for a third, called its Interpretant. This triadic relation being such that the representamen determines its interpretant to stand in the same triadic relation to the same object for some interpretant.

**Rheme**
A sign whose signified interpretant is a character or property.
**Secondness**
Dependence. The mode of being of that which is, with respect to a second but regardless of any third. See also ‘Firstness’ and ‘Thirdness’.

**Sign**
“A sign is anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its Interpretant, that the latter is thereby mediately determined by the former”.

**Signifier / Sign Vehicle – see 'Representamen'**

**Sinsign**
An actual existent thing or event that is a sign (Secondness).

**Symbol**
A Representamen whose representative quality is a Thirdness, which represents it object, independently of any resemblance or any real connection. A symbol is a Representamen whose representative character consists precisely in it being a rule or habit that will determine its interpretant.

**Tertium comparationis**
A basis of comparison. From the Latin meaning ‘the third element in comparison’. The factor that links or is the common ground between two elements in comparison.

**Thirdness**
Tending toward a law or general character. The mode of being that which is, in bringing a second and third into relation to each other. The mode of being whereby the future facts of Secondness will take on a determinate general character. See also ‘Firstness’ and ‘Secondness’.

**Universal Categories – see ‘Categories’**
10. Appendices

Appendix A – Sound Effects List for King Kong

Appendix B – Script Extract from No Country for Old Men

Appendix C – Information Letter

Appendix D – Consent Form for Interview

Appendix E – Biographical Information on Interview Participants

Appendix F – Sample of Interview Questions

Appendix G – Sample Interview Transcript

Appendix H – Accompanying DVD of Productions

Appendix I – Script from Weewar

Appendix J – Peirce’s Classifications of Signs

Appendix K – Peirce’s Model Applied to Sound

Appendix L – The Road Not Taken
Appendix A – Sound Effects List for *King Kong*

Sound Effects List and Cost Estimate, July 19, 1932

From the notebook of Murray Spivack (Goldner & Turner, 1976, pp. 263-267)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorilla</td>
<td>$50.</td>
</tr>
<tr>
<td>Chest Pounding</td>
<td>50.</td>
</tr>
<tr>
<td>Stegosaurus</td>
<td>30.</td>
</tr>
<tr>
<td>Arsinoitherium</td>
<td>30.</td>
</tr>
<tr>
<td>Triceratops</td>
<td>10.</td>
</tr>
<tr>
<td>Egothomus</td>
<td>30.</td>
</tr>
<tr>
<td>Sea Monster</td>
<td>30.</td>
</tr>
<tr>
<td>Pterodactyl</td>
<td>10.</td>
</tr>
<tr>
<td>Bird Wings</td>
<td>15.</td>
</tr>
<tr>
<td>Gun Powder</td>
<td>75.</td>
</tr>
<tr>
<td>Experimental</td>
<td>100.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$430.</strong></td>
</tr>
</tbody>
</table>

Effects List

(Blue Revision – 5/18/06 – 61)

Wind – fix and match stock shot
Sound of Parrot
Distant traffic rumble
Background to suit stock shot of dock
Parrot – wants to fight
Ship moving slowly through oily water Foghorn
Whirring shadow flies past
Surf noise
Drums and chanting
Ship's clock striking eight bells
Ship bell - striking eight
Parrot - talks
Air sucking back into accordion - Parrot flies away squawking
Drums from shore
Officer's whistle - distant bell
Bosun's whistle
Drums
Surf noise
Twenty-ft. drum - small drums - curious drumming (off)
Kong roars and drums his chest
Sailors firing
Fight noise
Birds
Parrot - wants to fight - squawks - spike-tailed beast advancing - beast charging and
being fired at - gas bombs - beast collapses - shot
Water splashing
Kong splashing through stream
Dinosaur upsetting raft - screams and splashes
Dinosaur and shrieks of sailor
Dinosaur crunch into man
Triceratops trying to follow Kong - Fight between them - Kong hurling boulders - one
of the Triceratops charging men
Sailor hearing noise - strikes head on branch
Tree crash and beast goring man as before
Arsinoitherium starting after men
Kong putting girl in tree - Kong snarls
Two-horned beast approaches - Kong roars four times - beats chest - Kong rocking
log - men screaming and falling - Log falling into ravine - Kong yammering
Men landing in mud
Log and men landing in mud
Insects - lizards - spiders
Girl's screams - fight as done in test seq.
Stegosaurus disappears - Parrot squawks
Vultures feeding on meat-eater
Distant crashing sound
Man runs through pool - waterfall
Sea monster lunging at Kong - fight between them
Hisses - grunts
Sea monster dying
Kong beats chest
Screams from girl - parrot talking
Bird pterodactyl wheeling dives for girl
Kong catches bird and kills it
Driscoll and girl dive into water
Water noise - sub outlet - water sucking
Water roar
Kong roars
Water noise
Kong returning
Kong beating his breasts - roars and breast drumming heard from behind wall
Second mate blows whistle
Arm of Kong crushing or beating sailor
Kong throwing himself at Gate
Gate wrenching loose – rips from hinges
Gate falls in
Kong stands in the Gate – snarling and beating his chest
Kong Charging after men – knocking huts over – tears up tree – tears roof off hut –
    bits Witch Doctor in two and throws him aside – terrific snarl as Kong sees girl
    – bomb bursts – knocks man with sweep of paw who catapults thirty or forty ft.
    Landing against wall of hut
Breathing of Kong after being gassed
Telegraph message being sent
City office – with wireless noise over same
Wireless ceases – Press noise supersedes it
Street noise, etc.
Crowd and street noise
Ship ploughing through rough sea – possibly Kong’s howls heard from ship
Whistles blow – sound to suit stock shot
Sounds to suit stock shots
Voice over radio
Dialogue and possible street noise
Crowd roar off
Kong snarls – frightened whine
Flashlight working
Kong making whimpering noises – then roars
Kong snaps chains – beats his chest – rushes at scenery door
Kong picks up Roadster and throws it thru window – woman screaming – general
Kong leaps across street – confusion from be-low
Airplanes taking off
Noises to suit action
Kong beating his chest
Planes flying and diving
Kong grasps plane out of air – crumples it – hurls it away – plane lands in street below and bursts into flames – Kong roars – plane whizzes past and fires into Kong – Kong roars and pounds chest – planes attack to-gether - Kong falls and lands beside burning plane.
Appendix B – Script Extract from No Country for Old Men

99  INT. SECOND-FLOOR HALLWAY – DUSK  99*
Moss is mounting the stairs from the lobby. The carpeted hallway is lined by transom-topped doors. Moss goes to a door halfway down on his left.

100  INT. HOTEL ROOM – DUSK  100*
Moss enters a room with old oak furniture and high ceilings. He sets the document case next to the bed. He unzips the duffel and takes out the shotgun which he lays on the bed, and then goes to the window. He parts the curtain to look down.

The street is empty. Mexican music floats up faintly from a bar somewhere not far away.

101  INT. HOTEL ROOM – LATER  101
The room is dark. The music is gone.

We are looking straight down on Moss lying, clothed, on the bed. We are booming straight down toward him.

After a beat he shakes his head. He opens his eyes, grimacing.

MOSS
There just ain’t no way

He sits up and turns on the bedside lamp.

The shotgun and document case are on the floor by the bed.

Moss swings the document case onto the bed and unclasps it and upends the money onto the bed. He feels the bottom of the case, squeezing it with one hand inside and one hand out, looking for a false bottom. He eyeballs the case, turning it over and around.

He starts riffling money packets.

He finds one that binds. It has hundreds on the outside but ones inside with the centers cut out. In the hollow is a sending unit the size of a Zippo lighter.

He holds the sender, staring at it.

A long beat.

From somewhere, a dull chug. The sound is hard to read—a compressor going on, a door thud, maybe something else.

CONTINUED
The sound has brought Moss's look up. He sits listening. No further sound.

Moss reaches to uncradle the rotary phone by the bed. He dials 0.

We hear ringing filtered through the handset. Also, faintly, offset, we hear the ring direct from downstairs.

After five rings Moss cradles the phone.

He goes to the door, reaches for the knob, but hesitates.

He gets down on his hands and knees and listens at the crack under the door.

An open airy sound like a seashell put to your ear.

Moss rises and turns to the bed. He piles money back into the document case but freezes suddenly—for no reason we can see.

A long beat on his motionless back. We gradually become aware of a faint high-frequency beeping, barely audible. Its source is indeterminate.

Moss clasps the document case, picks up his shotgun and eases himself to a sitting position on the bed, facing the door.

He looks at the line of light under it.

The beeps approach, though still not loud. A long wait.

At length a soft shadow appears in the line of light below the door. It lingers there. The beeping-stops.

A beat. Now the soft shadow becomes more focused. It resolves into two columns of dark: feet planted before the door.

Moss raises his shotgun toward the door.

A long beat.

Moss adjusts his grip on the shotgun and his finger tightens on the trigger.

The shadow moves, unhurriedly, rightward. The band of light beneath the door is once again unshadowed.

Quiet. Moss stares.

The band of light under the door.
The sound has brought Moss's look up. He sits listening. No further sound.

Moss reaches to uncradle the rotary phone by the bed. He dials 0.

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The shadow moves, unhurriedly, rightward. The band of light beneath the door is once again unshadowed.

Quiet. Moss stares.

The band of light under the door.
Moss stares.

Silently, the light goes out.

Something for Moss to think about. He stares.

The hallway behind the door is now dark. The door is defined only from his side, by streetlight-spill through the window.

Moss stares. He shifts, starts to rise, doesn't. A beat.

A report—not a gunshot, but a stamping sound, followed by a pneumatic hiss.

It brings a dull impact and Moss recoils, hit.

He winces, feeling his chest.

The door is shuddering creakily in.

It is all strange. Moss gropes in his lap and picks something up. The lock cylinder.

The creaking door comes to rest, ajar.

Moss fires. The shotgun blast roars in the confined space and for an instant turns the room orange. The chewed-up door wobbles back against the jamb and creakily bounces in again. Moss has already risen and is hoisting the document case.

Moss finishes draping his shotgun by its strap across his back and climbs out onto the ledge with the document case. He swings the document case out and drops it.

The bracketing for the hotel's sign gives Moss a handhold. He grabs it as inside the room the door is kicked open. Moss swings down as, with a muted thump, orange muzzleflash strobos the room.

Moss drops.

Moss lands and grabs the document case and straightens. He is at the hotel entrance, standing in the light coming through the etched glass of the double doors.

He looks at his own shadow thrown onto the street. He plunges through the doors into the lobby as a gun thumps and crackling shot chews the sidewalk.
Appendix C – Information Letter

Dear xxxxxx

We invite you to participate in a research study looking at working practices in the production of film and television soundtracks. This study is part of a Doctoral Degree in Film Sound supervised by Associate Professor Gail Phillips and Associate Professor Martin Mhando at Murdoch University.

Nature and Purpose of the Study

Sound is a relatively under researched area of film and television theory. The working practices involved in the creation of film soundtracks and their place within the film production process are largely unknown outside of the industry. A theory of sound production that was fully grounded in this industry practice would be an important addition to the body of knowledge on Film Sound Theory.

This study aims to bring a theoretical perspective to the many ways that sound is used in films using film sound practice as its starting point.

As well as providing an historical overview of some of the major developments since the advent of film sound, a substantial part of the project will consist of a comparative study of a number of directors and sound professionals and their working practices, perspectives and ideas relating to sound in film.

Additionally, a component of the thesis involves a reflexive examination of my own experience as an industry professional through my work on a number of short drama and documentary soundtracks.

What the Study will Involve

If you decide to participate in this study, you will be asked to be interviewed about your experiences and working practices regarding the production of film and television, with particular regard to the soundtrack. It is estimated that the interview session will take approximately 60 minutes.

Voluntary Participation and Withdrawal from the Study

Your participation in this study is entirely voluntary. You may withdraw at any time without discrimination or prejudice. All information is treated as confidential and any names of other practitioners or films that you refer to in the interview will not be used in any publication arising from the research without your consent. If you withdraw, all information you have provided will be destroyed.

If you consent to take part in this research study, it is important that you understand the purpose of the study and the procedures you will be asked to undergo. Please make sure that you ask any questions you may have, and that all your questions have been answered to your satisfaction before you agree to participate.

Where quotations or excerpts from interviews are to be used in the research you will be given access to the quotations or excerpts to ensure that they accurately reflect your views.
Benefits of the Study

While there is no guarantee that you will personally benefit from this study, you will be making a valuable contribution to an area that has up to now been sadly neglected. The knowledge gained from your participation may help future filmmakers by illustrating how film sound can be, and is used, to enhance the film as a whole.

If you are willing to consent to participation in this study, please **complete the Consent Form.**

If you have any questions about this project please feel free to contact either myself, Leo Murray on +61 8 9360 2349 or l.murray@murdoch.edu.au or my supervisor, Associate Professor Gail Phillips on +61 8 9360 2349 or g.phillips@murdoch.edu.au.

My supervisor and I are happy to discuss with you any concerns you may have about this study.

You can expect to receive feedback in around 2 weeks

Thank you for your assistance with this research project.

Sincerely

Leo Murray

PhD Candidate and Lecturer in Sound and Audio

Murdoch University

South Street

WA 6150

AUSTRALIA

Tel +61 8 9360 2349

Fax +61 8 9360 2978

This study has been approved by the Murdoch University Human Research Ethics Committee (Approval 2009/213). If you have any reservation or complaint about the ethical conduct of this research, and wish to talk with an independent person, you may contact Murdoch University’s Research Ethics Office (Tel. 08 9360 6677 *(for overseas studies, +61 8 9360 6677)* or e-mail ethics@murdoch.edu.au). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix D – Consent Form For Interview

Film Sound Practice and Theory

Participant

I have read the participant information sheet, which explains the nature of the research and the possible risks. The information has been explained to me and all my questions have been satisfactorily answered. I have been given a copy of the information sheet to keep.

I am happy to be interviewed and for the interview to be audio recorded as part of this research. I understand that I do not have to answer particular questions if I do not want to and that I can withdraw at any time without consequences to myself.

I agree that research data gathered from the results of the study may be published. I have also been informed that I may not receive any direct benefits from participating in this study.

I understand that I will be named in the research on the basis of my industry profile.

I understand that all information provided by me is treated as confidential and will not be released by the researcher to a third party unless required to do so by law.

_________________________________  ______________________
Signature of Participant         Date

I agree that my name be included in the research (please tick yes or no)

Yes    No
Investigator

I have fully explained to _____________________________ the nature and purpose of the research, the procedures to be employed, and the possible risks involved. I have provided the participant with a copy of the Information Sheet.

_________________________________  ______________________
Signature of Investigator          Date

_________________________________
Print Name

_________________________________
Position
Appendix E – Biographical Information on Interview Participants


  Sound recordist and long-time collaborator with directors Rolf de Heer and Paul Cox. Based in Adelaide and beginning working in the late 1970s working in television documentaries, series and features. Recent work includes *Red Dog*. Other credits include *Bad Boy Bubby, The Tracker, Alexandra’s Project, Ten Canoes* and *Crocodile Dreaming*.


  Director of several feature films, and notable for attention to sound in the filmmaking process. Described as an ‘aural auteur’ for his willingness to experiment with sound and the importance it takes in his films. Credits include: *Bad Boy Bubby, The Tracker, Alexandra’s Project* and *Ten Canoes*.


  Sound recordist who began as a cameraman with BBC and later moved to sound, Graham Ross has worked on drama and documentary, in film and television including the television film *Threads* and *Tumbledown*, and several series with natural history filmmaker David Attenborough. Graham has also worked on a number of feature films including *Earth* with director Deepa Mehta. Other credits include *Threads, Tumbledown, Earth*.


  Working primarily as a dialogue editor who began in 1985 and who has worked on several award winning Australian television series such as *McLeod’s Daughters* and several feature films. Other credits include *Samson & Delilah, Suburban Mayhem* and *Beneath Hill 60*.


  Working initially as a film editor, and now primarily as a dialogue editor specialising in television drama. Credits include *Spooks, Oliver Twist* and the *Red Riding* trilogy.
• Steve Haynes (SH) – http://www.imdb.com/name/nm0371553/
Initially working at Yorkshire Television’s film unit in the late 1960s Steve has worked as dubbing mixer, re-recording mixer and ADR recordist, working on a number of long-running television series such as Heartbeat and Silent Witness as well as television features such as Red Riding 1980. Later specialising in ADR and working on feature films. Credits include Hunger, Atonement, Slumdog Millionaire and Enduring Love.

• Ric Curtin (RC) – http://www.imdb.com/name/nm1140154/
Sound editor and dubbing mixer, beginning as a music recording engineer in London before moving to Perth, Australia, and into film and television in the late 1980s. Working primarily in television documentaries such as Death of the Megabeasts and The Secret History of Eurovision, with numerous short films and advertising credits, and more recently feature drama Blame.

• Glen Martin (GM) – http://www.imdb.com/name/nm0552348/
Sound recordist, dialogue editor and sound effects editor, beginning in the 1970s with television dramas such as The Sullivans and McLeod’s Daughters. More recently specialising in television documentaries such as Jandamarra’s War and Bom Bali. Often working as both sound recordist and sound editor on a project such as the feature drama Blame.
Appendix F – Sample of Interview Questions

Background information

- Hypothesis that sound is concerned with the manipulation of meaning.
- Construction rather than recording to create Representation.
- Critiques of sound analyses.
- Argument for usefulness of sound theory.
- Argument for usefulness of semiotics in sound theory.

1. What guidance was there from script or director regarding sounds?
2. What level of authenticity in the final soundtrack, if any? What position did authenticity play in specific projects?
3. What level of realism (hyper, non-real) is there in particular films, or sequences?
4. Where do the sounds come from, for instance, what is the source of the recordings? (BGs, hard effects, water, engines, footsteps and so on)
5. Is there an overall sound plan?
6. What differences did you notice or remember between the start of the project, middle and the final edit and mix?
7. What notes do you typically get from Production Sound recordings? Is there typically any useful material other than dialogue?
8. What research did you do about the real thing? (Dialogue Music and Effects)
9. Are there key moments where realism / common sense is overtaken by necessity or the needs of the story?
10. How are the dramatic reconstructions and documentary sections treated?
11. Do you have any feelings on the approach to realism in documentary/film – Are there any guiding principles - artistic / professional / authentic / storytelling
12. Is there a hierarchy or general working principles in terms of what should be heard?
Appendix G – Sample Interview Transcript

Skype interview with Tony Murtagh
Saturday, 07 August 2010

“Samson & Delilah the intro starts with the song Sunshine Day and morphs into the band playing outside the room where the main character is sleeping …”

(02:11 – 03:39) Was that an original thing from the script or was that a sound decision?

“Warwick had choreographed that. Because there is that Charlie Pride… Having grown up in Alice Springs himself there is very much a connection with a Charlie Pride Country and Western music. And if you actually look at that opening sequence he actually shot that whole ‘waking up in the morning, sniffing the petrol’ to playback – to music. He actually played the song back on set, and you’ll notice that at the very start of it it’s all 50 frames per second, slow motion, all this sort of very sleepy sort of stuff. And he does this in-camera effect with the camera and recranks just before he starts to do the drumming in time with the music. And so actually it goes from 50 fps it actually changes and you don’t notice the changes to current present reality speed – 25fps – but to be in time with the music he had playback music for him to do this, to walk out.”

(03:39 – 04:54) Kind of a Sergio Leone kind of thing, isn’t it?

“Yeah well that OUTITW and sort of stuff where they were doing camera moves to music, and so forth. Part of the actual dialogue editing is pretty much all the sync stuff. Like if there is any sync effects recorded on location. So any rolling over in bed, pulling the bed clothes up, all of that. And that whole opening sequence had playback music on top of it which David Tranter, who is the sound recordist who has recorded of all Warwick’s stuff (who is an aboriginal sound recordist from Alice who came through Karma) he was just great. He absolutely nailed everything. Every time there was something like that, where there was music playing. He would immediately lock the set down straight afterward and said. ‘Righty-o, for post we need you to go through the whole actions again - Take off the actual bedclothes. Pick up the can. Do all the sniffing. Dead quiet’. So we’ve got wild tracks to actually lay over the top of it.”
“So we had all that. Another problem that we had that occurred quite a bit was the fact that both Marissa and *** - both of them had never acted before. There was the situation - being totally green – often Warwick would go through a rehearsal process but even while he was shooting he would call directions.”

“Yeah, at the actual actors, going ‘Come on. You’re pissed off with him. Show it. Show it’.”

“In terms of the ambiences presumably if there was that much coverage of the dialogue and stuff there was quite a lot of material - ambiences, and birds and wind and all that sort of stuff - so you are not relying on library stuff?

“Julia was looking after the atmospheres and a certain amount of effects. Liam was mainly doing all the sound design elements. There was a whole irony of a lot of this. One of the reviews in the paper said ‘‘Samson and Delilah’ - the movie with no sound in it, because there was no major dialogue or no major music. Some reviewer wrote this. At times there would be 40 or 50 tracks of atmospheres layered. And very complex. And a lot of the time it wouldn’t even be featured all at once – one would come, in one would come out. And also there was this whole identity thing - I don’t know where it came from – whether it was Warwick or it was in the script. It was a case of Samson was represented by a cockatoo and Delilah was a crow. So like any of those sort of sequences where he is up on the hill, looking down and petrol sniffing, you’ll hear in the distance cockatoos and that sort of thing. It was almost like a signature identity thing - a part of the whole film.”

“Another thing, I think it was Warwick’s sister who, when they were in the tent stages, she would pick up specific things like “That bird is not from this region”. Like if an atmosphere was put in, and it was a tropical North Queensland bird or something like that, it was a case that they were very aware that “Ah, that’s not local to this…. You wouldn’t hear that type of bird here. We’ve got to get rid of that one.”

“There was a similar thing with an aboriginal film and a doco here...

“This is interesting as far as a lot of the times where, what works dramatically and what is exactly correct, are two different things. Often times people record
the exact gun or the exact sound for something, but the bottom line is that the actual location recording is pretty piss poor. It’s a case where we’ve got to add a cannon explosion to it, or something else, to give it some meat and some impact and some guts to get it across. We are creating drama.”

(09:32 – 11:07) It’s primarily a question for Warwick, I guess, but in terms of as he was making it – with the real cockatoo and stuff like that. Who was the audience that he was making it for? Was it a wide audience, or was it Indigenous people from that area who would recognise the fact that he’d gone to the trouble of making sure the sounds were the real ones?

“I think they were pretty faithful to the Indigenous audience and also something that was always playing on the mind – and this was in the spotting session before we even started to tracklay the film - was that this was up for… and it’s in the schools now as an HSC study text - and I know there’s a couple of times where he first starts to sniff petrol I put down for a loop – the loop guys or the loop group - to actually get some pretty chronic sort of stuff, and Warwick was very much “No, let’s pull back from that. I really don’t want to feature the whole drug type thing – the petrol sniffing – I really don’t that to be the main feature of this” because it is and could be off-putting and like it could be glorifying the whole thing of putting it into schools and so forth. One thing I was very aware of the fact before we even started track-laying.”

(11:07 – 13:05) The section where Samson’s hearing- was that actually in the script as well or was that an idea that came later on?

“It was in the script and something that Warwick tried to explain in the post-production stage. He wanted to actually focus on the health issues of aboriginal communities – or the lack of. And he’s got hearing problems, and it’s the case with a lot of aboriginal camps where they don’t have a lot of access to chemists or doctors, or things like this. The kids will get hearing infections, they’ll intensify, get worse, they’ll get burst eardrums, and a lot of the young aboriginal kids suffer from hearing damage, even as far as in the schools they have implemented a program in aboriginal schools where they are putting speakers in the classroom and the teachers will actually wear a lapel mic. And be amplified because a lot of the kids have hearing problems. And one his ears was supposed to be worse affected than the others. So in the mixing stage, Rob who mixed it was supposed to make one more muffled and also that scene where
Delilah gets kidnapped. The side of the car that pulls up was the side of his bad ear as well, but also combined with that fact was his state of mind at that point in time was stoned on petrol and things like that where he was in a haze and not quite there.

(13:05 – 14:02) Similarly where she is hit by the car?

“Yes, a bit off with the pixies. But again there was also the other fact of being careful not to play with or glorify or make it attractive, especially the scenes that were being shown to kids in schools that this is a cool thing to do. I think the main thing was, I remember seeing an interview with him saying he was more pissed off that there wasn’t actually the care for younger kids or younger teenagers in a lot of the aboriginal communities but there’d be money given by the government to specifically there was no one in the younger teenagers or younger kids to look out for them.”

(14:02 – 17:23) I was going to say about the abduction scene, it plays both the hearing thing but also the audience being filtered through his hearing, kind of subjective.

“Yes, it’s a situation – often when you do a film – especially start off films with different directors. Also I think it’s a generational thing. As younger directors are coming through they are more au fair with terminology. They are more familiar with different phrases and term for communication, where if you get an older type director and you start throwing terminology like “Would you like this diegetic, non-diegetic, contrapuntal, whatever… “ there’s a very big risk that you’ll come over as a wanker. So it’s a situation at the start that you don’t want to get people off-side. It’s a situation where you can say pretty much the same thing. I can say “Would you like to play this scene subjectively or objectively. Would you like to be hearing this scene through his ears as he’s hearing it, or would you like to hear it as a member of the audience, as an outside person watching it?” which is basically saying the same thing.”

“Interestingly - I think it was on Beneath Hill 60 – I think there was something where the director Jeremy Finn was in the spotting session was saying “I want some sort of non-diegetic sound here to come in to highlight the mood, emphasising it as ‘not of the real world’ whether it’s a low drone or some other of synthetic effect or organic effect which is basically to create a mood or the feeling of someone being upset, or someone has died, or something like that.”

“A lot of these terms overlap as well. There was a situation where someone said “Can you use some form of non-diegetic drone or uneasy feeling”. Somebody might say “Can you play up the internal logic of what that actor is feeling at this point in time.” Like if the guy is
going through anguish and turmoil, can we highlight or portray his internal feelings at that point in time in the soundtrack. There’s no right or wrong way as far as communicating. It’s whatever works. There was one article about the guy that did the matrix stuff…..”

(18:42) – It’s interesting that you bring up The Dark Knight because that was probably one film in the last ten years that got noticed for the sound design because of the voice stuff. Whether that was Richard King’s idea

(21:37) – Longer term it’s trying to convince directors and 1st ADs and other crew that it’s the performance that you are trying to save?

“People have got George Miller, plus also Peter Weir is the same. A situation where you change a word.. Often what you’ll do as far as dialogue – someone drops and line or there’s a crackle of paper over a line you’ll and get another line. Fingers crossed it’ll be pretty close to the original line.”

(25:40) - In terms of using things like drones, or putting sounds that obviously have connotations, or some other meaning, are there ever times where you’ve thought ‘that’s getting a bit hackneyed?’ Or if we do that it might look good now but in five years’ time it’s going to be seen as a bit of a stereotype?

(26:07 – 31:48) “It’s interesting like using elements of… If you have sounds that you have recorded that are connected to the original location and take those, I think you are far better off trying to get real or organic sounds that are from nature if you can. An example is the clip out of Inception – Richard King used whale drones – during the explosion for some story of scary element to it. Often you can use different elements within that. Using the Bow Bells… (27:09)

(27:34) “It’s also a thing where these things become almost a signature tune for a character, event, location – those sort of things to help tell the story. There was something similar - that thing in The Terminator – something for the liquid man. A sustained note which was actually done by the music composer. A held note of an orchestra, pitched down, stretched it and looped it and ended up wherever this person appeared…. That’s really the signature tune whenever we see the silver man, we return to that theme. And if anything is sitting around it, it has to be pulled out, made space so this can sit up top.”
“I suppose it’s one of those things where you can only try certain elements and often when we’re dealing with directors we’ll try different things, throw things up and go “yeah, that’s not bad. Leave it there as a test at this point in time. Or a lot of the time, you’ll be working on a theme, and you basically hitting your head against a brick wall, and move on, and something that were trying for another theme that didn’t work you’ll actually use for another scene. It’s like that old adage – ‘a craftsman knows how to avoid mistakes, but an artist knows how to use them’.”

“I’m sure there are a lot of situations where we’ve done things in films and used them in other films.

“Drop everything before a big impact, to give it a more dynamic effect. Introduce something pre-emptive – it even goes back to the old horror films where you hear the heartbeat. It might not be as blatant as that, it could be some very high pitch thing going on in the background, and you don’t know whether it’s part of the environment - a fluoro buzz or something – but then slowly builds and builds until something happens that has that dramatic effect.

“A bit similar to The Godfather thing where Anthony shoots the police superintendent, in the restaurant, where he goes out the back, and gets the gun from the toilet. They were talking about music and so on, saying we don’t want to go there. We don’t want to have suspense music. And eventually it was the sound of the subway trains - Metal wheels on metal tracks braking, getting louder and louder until finally at the point where he blows his head off and all the trains stop, and all you hear is the gun drop to the ground and it just goes silent. Having the same effect as music used dramatically as music but you are using the real sounds around you.”

Clever sound design

“Listen to the original exorcist. Some of them are not overly complex, but there’s really effective and subtle use of sound effects. I think there’s a lot of very clever things going on in those earlier films. People do fall into a bit of a Sound Design 101 stereotype. You can actually buy the Sound Designer toolkit one.”

Establishing shots

“What’s really frustrating which happens more and more where we often get sent a DVD of a rough cut, to start thinking about things and looking at things and you’ll
look at it and go ‘Great. There’s a whole lot of spaces for us to develop the sound design theme here. Or we can do soundscapes that don’t interfere with the dialogue. Once you fall into the whole talk talk talk and it’s butt edited one scene to another really it’s a case of if you’ve a pretty full on scene, to actually take in what’s gone on. As far as process a really powerful sequence, if you’re going straight from that to someone talking and dialogue straight away it’s bad cutting on behalf of the editor and director. You should give a bit of ‘wow that was really powerful.’”

Space

(34:42 - 35:59) “The biggest danger of this whole MTV generation of producers as well – not just Australia. And they’ll go ‘Oh let’s keep it tight. Keep it pacy. Take out space. Tighten it up.’ A classic example in the first Matrix where Hugo Weaving beats the shit out of Neo on the train station and they showed it to whoever it was and the producer has said ‘too slow, take it back, re-cut it’ and to the editor’s credit called up Dane Davis who was the sound designer, and said ‘I know you’re not due to start yet but can you do a mini track lay of this one scene – adds the whooshes, punches, grunts groans - all that sort of stuff’ They did a mini track lay and mix. They sent this back to the producers, lied to them and said they’d re-cut it, and of course they turned round and said ‘Fabulous. Terrific. I told you it needed re-cutting’.”

Suburban Mayhem cars, tyres, and specific sound effects – sound recordist or specific sounds?

(44:05) “They didn’t have a lot of time on location to record cars. There were some car elements that I know the guy - who was the car guru was on Superman at the time – and he had provided the Chrysler Charger, a V8, a commodore. I think they were turbo cars and had a specific whine to them and we were having to be relatively faithful to the actual cars themselves rather than going to a generic library. I didn’t do it. Liam [Egan] went out around Linfield they did a number of car passes at speed down rounds and things like that in pretty quiet streets. And also car approaches, idles, turns off. Start, idle, depart. Those sort of things. A number of the tyres were library purely to have the clean separation. Things like the burnouts we all recorded at Film Australia in the car park after everybody had gone home. And the guy came out and brought the cars out and brought two sets of spare tyres, and oil and did two sets of burnouts in the back.”
“I know the first time we did it we freaked because he actually blew the tyres and of course with steel belted radials the steel flies up and it actually chipped some paint. We went “Oh god, production is going to kill us for this”. And he was fine, he was like “Don’t worry. I’ve got touch up paint. I can fix that up. Not a problem”

So you were using the real cars for doing the sound effects?

“Yes. It was the actual burn out car was the Holden and so forth that was in the film.”

Real sound effects. Realism.

(46:57 – 48:13) “I had a similar situation. They did a series here at ABC in Sydney on a series called Fireflies which was about the volunteer fire brigade. A lot of this stuff was like - land cruiser, four wheel drive, paddock-bashing through the bush and things like this. Most of the library sound effects are ‘car start, car idle…’ and this was all stop-start going through the bush, hitting brush and bouncing around and all this. I’d just come off doing the first two series of McCloud’s Daughters, down in Adelaide and there were all these utes and 4WDs that we had recorded down there which I had access to. They tried to rebuild it a couple of times and was rejected by the production company. I got a call and went in and was able to rebuild a lot of this. Some of it was interior travelling. Some was a vehicle outside travelling along with cars, paddock bashing through the bush. It’s that very uneven sound that you want, through potholes and that sort of stuff which is not easy to find”

Swapping sound effects motorcycle motorbike, foley on location

(48:20 – 49:00) “We had a pretty good network amongst the sound editors and put it out there and said ‘has anybody got any good recordings of…’ Eventually we paid for a trail bike rider to go out. We showed them the film first… It’s interesting how often you do that.”

No Country for Old Men and There Will Be Blood sound design

(50:50 – 51:54) “At the same time as There Will Be Blood and No Country for Old Men I think there was a step back which was really good where there this whole loud, big ‘oh there’s a space - fill it with music score’ where it was a case of real minimalist, ‘take a step back. We don’t have to mob. We don’t have to do a ‘Matrix 3’ hammering the audience the whole time where they come out exhausted. Any soundtrack needs some dynamics and
some sort of contrast otherwise it does become a wall of noise. As with script, lighting, camera you’ve got to have variation. You’ve got to have wide shots, close ups, light, dark, funny, sad. You’ve got to have the contrast for the different aspects. If it’s all loud it just becomes boring.”


(52:30 - 56:03) “In the early stages Paul [***]. There was some talk about ‘how do you want to play the soundtrack?’”

“He did make comparisons to *Idiot Box* which Liam was the sound designer as well, which was very hard, loud, sharp, in-your-face. I know a number of times there were things that would appear jarring and you’d go wow. They were trying to come across, to reflect the Katrina character of here’s a brash, really in-your-face, hard, rough sort of character and the soundtrack was mirroring her. I know that even in an early stage there were points where we’d come into a scene and we’d be using a production piece of music like a rock n roll song and it would just cut half way through a word. Like really loud half way through a word, or the other option is coming out like chopping it. There’d be some debate at time whether we’d use some effect to transition it to something else whether you could echo it off or explosions or do things. And it was a case I want it to be brash. I want it have an edge to it. It was a stylistic choice. It wasn’t going to be an ultra-smooth feel to the soundtrack. We wanted to have that edginess and grit to it. I know initially I personally I thought, ‘Right o’. You’re always trying to make things as smooth and seamless as possible. This is going for the other side. But it works. “

**Producer Director decisions and input consensus**

(55:12 – 56:05) “It’s one of those things where… in a mix where there’s always be one, two or three options to a scene. You’ll talk to the mixer and they’ll have their way of mixing it, you’ll have your way, and maybe the director will have their way. It’s a situation where, having a look at all three, see what the best consensus is for how to play the scene. I hate to be the meat in the sandwich. I’ve seen it where the producer has said I want it louder. The director says I want it softer and the mixer going ‘who’s writing my check?’”
Killing scene perspective sound and POV

(56:32 – 57:58) “It could have gone for the whole blood and gore, the baseball bat the head sort of scenario. I think we actually pulled back on that. We got the father to do a fair bit of ADR and it was great. Blood curdling sort of stuff. And I think the sound was getting really gruesome. I think we pulled back a bit. It’s amazing how often people don’t let the audience use their own imagination. The classic person who did all that was Hitchcock, using the audience to fill in what’s going on. The most frightening scene in The Birds you see a beak for two seconds and that’s all. You never see the birds. Or waiting for the attack. It’s the threat, the Damocles sword over your head”

Practical Film Sound Theory or Philosophy?

“You might want to feature a certain character in foley or in ADR as well.” “Embedding sounds such as screams in Monsters Inc.”

“The bottom line is that if you want to get into doing a whole lot of recreation stuff” “A lot of time we’ll do things off our own bat.”

“Trying to get sounds that are pertaining to a certain story, whether it’s a location.” “King Fu panda – all the Jack Black character was supposed to be fun and bubbly.” “Contrast of feels and styles.”

“Hopefully you’ll talk to people who say well if you hear the sound or notice the sound you’ve blown it.”

The back door to the brain. Come in without being noticed.

(1:08:44 – 1:11:31)

“You watch Bambi over his dead mother, and it’s a case of the violins are going in the background and you’ve got a tear in your eye, and you’re being totalled twisted emotionally by the soundtrack.”

“At what point in time in a film what needs to be told. What is the story and how can the soundtrack help tell that story? Hey, if it’s a great performance - magic shot, magic words – get out of the way. Let them take it. Some times less is more. Pull back and leave space for somebody. If the performance lives people think we should put a music cue in here, put
screaming violins… Yeah you can, but it’s a situation where a pretty powerful moment, and
a magic performance. “

(1:12:39) “There is a lot of danger of saying ‘typical way of dealing with this is have the
suspense theme come in here, or the slow violins’ or whatever. Maybe it’s a case of rather
introducing a drone or something like that, it might be spotting of a distant sound, whether it
be a squeak of a train, a bird, or something else. Kids playing in a park in the distance,
whether it be something else that doesn’t necessarily go with this but could contrast. It’s also
one of those things that directors being brave in shooting not the obvious – a case of ‘let’s
have a dirty big close-up and run all the dialogue from that’. Maybe having a shot of a
cutaway or something like that or another thing that Hitchcock used to do which was hear the
dialogue and focus on someone else who’s listening to that. Or how else can we deliver the
same message rather than?”

Sound as a problem – profile of sound

(1:17:50) “10% of the program and 90% of the trouble”
Appendix H – Accompanying DVD of Productions

The four productions referred to in Chapter 7, are included on the accompanying DVD. The films are listed below with a brief description of my role on the production, the audio tracks available on the disc, and a brief synopsis of the production.

The Road Not Taken (Drama, 2011, 7 mins)

Role: sound editing and mixing, including music mixing.

Audio tracks: 1-Full Mix | 2-Dialogue | 3-Effects | 4-Music | 5-Voiceover.

Synopsis: This film is an adaptation based on Robert Frost’s poem “The Road Not Taken”. A girl reflects on her painful past, and the paths laid out to her through life’s journey.

The Road Not Taken is discussed in sections 7.2 and 7.3. This film is used as an example of relatively little direct narrative sound, which then deliberately creates ambiguity in the soundtrack and allows for sound to be used as a metaphorical rather than literal part of the narrative. First, it illustrates how the Peircean model applies to sounds used metaphorically, and second, how the Peircean concept of abduction applies to the soundtrack and the creation of the narrative.

Eleven Thirty (Drama, 2012, 19 mins)

Role: post production sound editing and rerecording (mixing).

Audio tracks: 1-Full Mix | 2-Dialogue | 3-Effects | 4-Music | 5-Atmos.

Synopsis: Set in remote Western Australia, in 1992, it follows the life of a family struggling to stay together as they travel from jobsite to jobsite.

Eleven Thirty is discussed in sections 7.4 and 7.5. This film is used to illustrate how the Peircean model can be applied to some of the practical aspects of sound production in areas, such as dialogue intelligibility and sound effects editing.

Weewar (Drama, 2006, 8 mins)

Role: location sound recording, sound editing and mixing, music recording and mixing.
Audio tracks: 1-Full Mix | 2-Temporary sound mix from picture edit.

Synopsis: Weewar tells the story of a Bindjareb Warrior who, in 1842, carried out a tribal payback by spearing another Indigenous man for killing his son. Weewar’s trial became the test case that determined that British law prevailed over traditional Aboriginal law.

Weewar is discussed in section 7.6 and 7.7. This film illustrates the potential one sound to be used as a sign in multiple ways depending on its context and prior use. It is also used to illustrate concepts relating to indexicality and symbolicity, particularly with respect to dialogue and sound effects where they refer to actual people, places and events.

Footprints in the Sand (Documentary, 2007, 24 mins)

Role: sound editing and mixing, music recording and mixing.

Audio tracks: 1-Full Mix.

Synopsis: Footprints in the Sand tells of the extraordinary search for Warri and Yatungka, believed to be the last of the Gibson Desert people who ‘came in’ out of the desert for the first time in the late 1970s.

Footprints in the Sand is discussed in sections 7.8 and 7.9. The film is used to develop some of the ideas raised in the discussion on Weewar. Dialogue, effects and music each play multiple signifying roles in this documentary. The experience of working on Footprints in the Sand also raises some ethical questions relating to the practices of film sound, which come to the fore in an ethnographic documentary film.

Disc layout

The main menu of the disc lists the four productions.

Pressing the title or menu button at any time will force a return to the main menu.

Each of the productions shown on the main menu screen has three related submenus:

Information submenu

This contains a synopsis of the film and lists my responsibilities in the production.
Chapter selection submenu

Chapter points are included in each film, which are selectable either by the chapter buttons on the DVD remote control or directly via the chapter selection menu for each film.

Audio selection submenu

Where the film has alternative or supplementary audio tracks, the different audio tracks are available on the disc.

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Appendix I – Script from Weewar

WEEWAR

by

KARRIE–ANNE KEARING

Re-writes by Glen Stasiuk (Director)

(As part of the Deadly Yarns Initiative 2005)

FINAL DRAFT
AUGUST 2005 – (changes October 2005)
© KARRIE–ANNE KEARING
9 WILSON ROAD, PINJARRA
FADE IN: Sound-scape of boomerangs clapping and traditional singing. Cue sound of water lapping up against a boat.

1. EXT. BOAT ON OCEAN
Sound of water lapping peacefully (boomerangs clapping quietly underneath). WEEWAR sits in a colonial row boat heading across the ocean to Wadjemup (also known as Rottnest Island). Close-up of WEEWAR’s eyes.

FLASH BACK: Sound of boomerang clapping strong and steady.

2. EXT. WEEWAR RUNNING
Medium close-up of WEEWAR’s face. His head bobs up and down as sweat beads on his forehead. His eyes express adrenaline and desperation. A sonic heartbeat complements the pounding of his feet and heavy breathing.

3. EXT. BOAT ON OCEAN
Shot of WEEWAR face with water surrounding him in the background. Sounds of water lapping and oars rowing.

CUT TO:

4. EXT. WEEWAR RUNNING
WEEWAR still sprinting through the bushland. Bushes rustle as he brushes by. WEEWAR quickly looks over his shoulder.

CUT BACK TO:

5. EXT. BOAT ON OCEAN
WEEWAR sits across from HENRY TRIGG, WEEWAR looks back as the oarsman continues to row towards the Island.

CUT TO:

FADE IN: Sound-scape of clapping boomerangs throughout the scene. Nyungar language spoken throughout the scene.

6. EXT. CAMPFIRE
A campfire meeting of Nyungar men and elders begins. They are finishing a song and smoking some fish by the fire. They talk in language (in Nyungar with subtitle) as the camera circles around them. Each of the elders declares their notion and then nods their head as the
camera finishes on WEEWAR. The crackle of the campfire complements the ambience.

ELDER 1
Yes! Us elders say kill one of them. (Kia! ngarlark boordier maarman wangkiny barminy kain ballup)

ELDER 2
Yes! Yes agree – kill Dyung! (Kia! Kia barminy Dyung!)

ELDER 3
His family killed your son. He must be speared! (Barl moortung barminy noonar norp. Gidgal barl!!)

A BINDJAREB warrior spear is handed to WEEWAR to perform the payback. A loud clap of the boomerangs is heard. Then silence.

FADE TO:

7.EXT. DYUNG & POLICE ASLEEP
DYUNG is seen lying asleep by another camp-fire. In the distance some POLICE play cards in the shadow of a tent. WEEWAR creeps through the bush – DYUNG senses something and awakes from his sleep. His eyes open with fright and then a look of realization creeps over his face accepting his fate. A shadow from the glow of the campfire highlights WEEWAR raising his arm with the warrior spear. A loud clap of the boomerangs indicates the death of DYUNG as the fire flickers and jumps. Hearing DYUNG grasp for one last breath the POLICE run after a figure in the bush in the middle of the night.

CUT TO:

8.EXT. WEEWAR’s BOODJAH
Dawn. Extreme long-shot of ocean (from hills location). WEEWAR stands defiantly on the hill-side staring out. He turns and kneels to blow on the ashes of the fire to fan the flames. WEEWAR’s face in the light of the fire as it springs into life. Traditional singing and clapping of hands is heard. This is HIS country – his BOODJAH.

CUT BACK TO:

9.EXT. WEEWAR ON BOAT
Close-up of WEEWAR on the boat – water lapping. WEEWAR first looks at TRIGG then the PRISON GUARD who is in control of the rudder of the boat and we can see the disappearing coastline behind him. As he lowers his head his sight follows the chains that the GUARD is holding
that lead to WEEWAR. WEEWAR raises his head and addresses TRIGG.

WEEWAR
(Thinking he is facing death)
Are you going to hang me? (Noonar barminy nguny?)
(He grips the chain around his throat)

TRIGG
(Vaguely understanding. Sympathetically shakes his head slowly and whispers)No.

10.EXT. TRACKING WEEWAR
Two POLICEMEN on horseback observe an Aboriginal TRACKER. The TRACKER kneels down and pokes at an old fire. His POV focuses on some barely visible footprints in the dirt. His hand rises to indicate to the POLICE that WEEWAR is traveling in a southerly direction.

11.EXT. WEEWAR CHASE
Sounds of boomerangs clapping build in speed and volume. WEEWAR looks around alertly and startled – a crow calls out (and flies off) as if to warn him. He jumps up from the ground and then starts to run through the bush fast and steady.

CUT TO:

12.EXT. AMBUSH
Close-up of the boots of white POLICEMEN in pursuit. We return to scenes of WEEWAR RUNNING from earlier – in real time. Dust from WEEWAR’s feet rises from the ground. WEEWAR stops and turns to look around. He can not hear the sounds of boots and via his POV the surrounding landscape is still. Fast cutting of his POV indicates his anxiety. There is a sound (gun being cocked) – WEEWAR’s eyes widen with surprise. CUT to black with muffled noise of struggle and arrest.

13.INT. COURT ROOM
Through the POV of WEEWAR – fast cutting and distorted audio. Both image and audio overlap. Cut-aways of JUDGES well manicured hands, LAWYERS wigs, white mouths speaking (distorted) English, WEEWAR’s eyes darting (unsure what is happening). WEEWAR looks on confused and out of place as the two LAWYERS approach the case with ability and zeal. Voices (almost) overlap.

DEFENCE LAWYER
Such laws are not calculated to deter men from crime, until they shall be taught their value; for we must recollect the savages
have laws of their own that they are bound by imperious custom to obey. No man, we know, can serve two masters.

PROSECUTION
It is ridiculous to exclude the natives of our law on the grounds that we acquired the possession of this colony through occupancy rather that conquest as he is part of the tribe of Pinjarra who resisted and was accordingly attacked and conquered in the fullest sense of the word.

DEFENCE LAWYER
The laws of his country, of his forefathers, of his religion, requires the death of someone also subject to the same laws, he proceeds to fulfill the laws of his own country, and executes their vengeance, not his own, upon the doomed individual.

PROSECUTION
It is now necessary to advance his civilization by teaching him that to kill his fellow savage, when in the society and the protection of the white man, was also a crime.

JUDGE
(The Hammer strikes ) Guilty!

CUT TO:

14. EXT. ROUNDHOUSE PRISON
Sound-scape of two boomerangs clapping continues. The pace of WEEWAR as he is led out of the roundhouse prison matches the boomerang clapping audio - traditional singing is heard underneath. WEEWAR, in full chains, is escorted by two GUARDS towards HENRY TRIGG.

CUT TO:

15. EXT. BOAT ON OCEAN
The oar of the boat pierces the ocean. The camera tracks along chains to the face of WEEWAR. We return to the scene from earlier (scene 9.) – WEEWAR faces TRIGG.

WEEWAR
(Thinking he is facing death)

Are you going to hang me? (Noonar barminy nguny?)

(He grips the chain around his throat)
TRIGG
(Vaguely understanding. Sympathetically shakes his head slowly and whispers)

No.

HENRY TRIGG (cont)
(Compassionately to WEEWAR in broken English and Nyungar)

No, no, your ... noonook ... sentenced to Rottnest Island ... Wa ... Wadjemup...

WEEWAR
Looks pensive and frightened - bows his head.

TRIGG (cont)
Henry Trigg is my name. I will oversee Construction of a Lighthouse you ... noonoo b to work natives.

One of the OARSEMAN GUARDS gives a wry smile.

WEEWAR (broken English/Nyungar)
Nguny not understand ... nguny katatjin burt ... why Governor sulky with me?

TRIGG
I heard ... ni dwonk ... that for following your law you are being punished by our law ... djanga law.

WEEWAR
(bows his head and shakes it - then defiantly raises it to speak)

If djanga kill djanga Nyungar not bother ... whena djanga barminy ... kill ... Nyungar - Governor bossman not care!

TRIGG
(looks on uncomfortably - starting to understand the situation)

WEEWAR (cont) (in Nyungar and animated vocal)
Minning Nyungar barminy nguny moort - Nguny barminy baluk! (If Nyungar kills my family - I will kill his!)

Nindja ngarlark war! (this is our way!)

Waves lap up against the side of the boat. Inside the boat WEEWAR stares at HENRY TRIGG. In the background the oarsman continues rowing. HENRY TRIGG looks on uncomfortably as WEEWAR lowers his head solemnly. WEEWAR
despondently grips the chain around his neck and then raises his head sadly back up to HENRY TRIGG. HENRY TRIGG sadly shakes his head, extends his hand and places it on WEEWARS. He then looks down in remorse.

WEEWAR pensively looks towards the Island of ROTTNEST and then sullenly looks back towards the mainland – his home (mia-mia) – his country (boodjah). His POV fades. Sounds of water lapping continue and fade.

FADE TO:

16. PHOTO

A photo of Aboriginals (Nyungars particularly) chained and imprisoned at Rottnest (Wadjemup) is panned on screen. Traditional Nyungar sound-scape is heard.

DISSOLVE TO:

17. TITLE.

White with a black background:

"In memory of the many Aboriginal people who died in exile on Rottnest Island Prison never to see their homeland again"

CREDITS
Appendix J – Peirce’s Classifications of Signs

Peirce's Trichotomy of Signs (CP 2.243-253)

<table>
<thead>
<tr>
<th></th>
<th>(A) Signs in themselves</th>
<th>(B) Signs in relation to objects</th>
<th>(C) Signs interpreted to represent</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Qualisign</td>
<td>Icon</td>
<td>Rheme</td>
</tr>
<tr>
<td>Second</td>
<td>Sinsign</td>
<td>Index</td>
<td>Dicent (Proposition)</td>
</tr>
<tr>
<td>Third</td>
<td>Legisign</td>
<td>Symbol</td>
<td>Argument</td>
</tr>
</tbody>
</table>

Peirce's Ten Classes of Signs (CP 2.254-65)

| (I)         | Qualisign                    | Icon          | Rheme | (Rhematic Iconic) Qualisign | A feeling of “red” |
| (II)        | Sinsign                      | Icon          | Rheme | (Rhematic) Iconic Sinsign   | An individual diagram |
| (III)       | Index                        | Rheme         |       | Rhematic Indexical Sinsign  | A spontaneous cry |
| (IV)        | Dicisign                     | Dicent (Indexical) Sinsign        |       | A weathercock or photograph |
| (V)         | Legisign                     | Icon          | Rheme | (Rhematic) Iconic Legisign  | A diagram, apart from its factual individuality |
| (VI)        | Index                        | Rheme         |       | Rhematic Indexical Legisign | A demonstrative pronoun |
| (VII)       | Dicisign                     | Dicent Indexical Legisign         |       | A street cry (identifying the individual by tone, theme) |
| (VIII)      | Symbol                       | Rheme         |       | Rhematic Symbol (~ic Legisign) | A common noun |
| (IX)        | Dicisign                     | Dicent Symbol (~ic Legisign)      |       | A proposition (in the conventional sense) |
| (X)         | Argument                     | Argument (~ative Symbolic Legisign) |       | A syllogism |
The sign’s own phenomenological category determines the relation to the object and interpretant – where the object and interpretant cannot be of a higher order than the sign, and the sign-interpretant relation cannot be of a higher order than the sign-object relation.

Thus, rather than being 27 (3 x 3 x 3) possible classes, only 10 are logically possible.
Appendix K – Peirce’s Model Applied to Sound

- The Sign (sound-sign) comprising three parts: signifier, object, and interpretant.
  
  For our purposes the sound acts as the signifier. The object is whatever is being represented in the sound-sign. The object of the sound-sign need not be a physical object, and rather is simply whatever is being represented or signified: an idea, a person, an inanimate object, a film or anything else. The interpretant of the sound-sign is “the effect produced in the mind” (CP, 8.343).

- The Universal Categories:
  Firstness – which relates to a quality.
  Secondness – which relates to a fact.
  Thirdness – which relates to a thought.

- The types of reasoning used to determine the interpretant:
  Abduction (possible inferences) – the hypothesis stage used to make a guess to explain some phenomena.
  Induction (probable inferences).
  Deduction (necessary inferences).

- Sign-object relations:
  (1) Iconic – (Firstness) characteristics of a sound, such as loudness, pitch, regularity, timbre and so on, without regard to anything else.
  (2) Indexical – (Secondness) facts about two Objects, such as a causal link between sound and its origin, or a sound representing a visual object.
  (3) Symbolic – (Thirdness) facts about several Objects, which can be described as a synthetic fact or ‘general rule’, such as a spoken language, or a depiction of a romantic scene through a use of particular instrumental music.

- Division of the Object:
  Immediate Object referred to in the sign.
  Dynamical Object (from collateral experience), such as metaphor and the process of tertium comparationis.

- Division of Interpretant:
Immediate Interpretant – surface level without any reflection upon it.

Dynamical Interpretant – the actual effect produced in the mind, the interpretation of the sign.

Final Interpretant – the end of the process of semiosis.
Appendix L – The Road Not Taken

The Road Not Taken by Robert Frost (1916)

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.
Bibliography


Iwerks, Ub. 1928. Steamboat Willie. DVD. Produced by Walt Disney. USA: Walt Disney Productions.


Kelley, Mathew. 1997. The Last of the Nomads. DVD. Produced by Peter Du Cane and Samantha Kelley. Australia: Wildfilm.


Kubrick, Stanley. 1964. Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb. DVD. Produced by Stanley Kubrick and Victor Lyndon. USA: Columbia Pictures.


Steiner, Fred. 1976. *King Kong* (Linear Notes from LP). USA: RKO.


Wagner, Richard. 1851. Walkürenritt or Ritt Der Walküren [Ride of the Valkyries]. In *Die Walküre [The Valkyrie]*.


