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A practice-based investigation in composing contemporary horror film music for The Cabinet of Dr Caligari

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A Practice-Based Investigation in Composing Contemporary Horror Film Music for *The Cabinet of Dr Caligari*.

by
Dominic Waldock

A thesis submitted in partial fulfilment of the University's requirements for the Degree of Doctor of Philosophy
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Dominic Waldock

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Certificate of Ethical Approval

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Abstract

My PhD research is a practice-based investigation into sound design and music composition with special reference to recent examples in horror cinema. These include the critically-acclaimed works of director James Wan such as *Insidious* (Wan, 2010) and *The Conjuring* (Wan, 2013) film series, as well as David Robert Mitchell's *It Follows* (Mitchell, 2014), Scott Derrickson's *Sinister* (Derrickson, 2012) and Jordan Peele's Oscar-winning *Get Out* (Peele, 2017) among others. I classify significant elements in the development of horror sound and discuss them in detail: including nature, hauntology, the uncanny, instrumentation, liminality, leitmotif, diegesis, spectromorphology and silence. These are then incorporated into my own work including two test short films designed to allow the applications of various compositional techniques, before culminating in the sonic reimagining of the 1920 silent horror film *The Cabinet of Dr Caligari* (Wiene, 1920).

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Chapter 1: Introduction

1.1 The Subject Area

The involuntary nature of human hearing ensures that no individual is safe from the effects of sound and even when an auditory source provides useful information, it can often be borne of an impending danger. It is the sonic potential for ambiguity that is often applied to the development of soundtracks in contemporary horror cinema. Throughout history, certain elements in music have been associated with fear and unease but these have developed over time. Audiences in the present day would, for example, not be expected to experience a piece of music or art originating from centuries earlier and react in an identical manner to those for whom the music would have been regarded as contemporary. Bellano, however, remarks upon the diminished seventh chord and its longevity in the lexicon of Western music. He describes its dissonance and numerous routes towards resolution as justification for its perception as an ambiguous musical device. Even as its use began to diminish in the early 20th century, it saw a revitalisation in works of silent cinema such as *Nosferatu* (Murnau, 1922) (Bellano, 2019, p. 70-71). The underlying thematic malice of the tritone interval is another notable example of an older compositional tool which still holds some cultural sway.

> "Music and sound specifically attack the nervous system both physically, with the aid of psychoacoustic and, in a more abstract way, via culturally developed forms clueing the audience in on something, because one interprets the use of the tritone as a sign for the presence of evil or understands the melody of the *Dies Ire* [sic] as the announcement of the Last Judgement. But most often the soundtrack works at different levels simultaneously." (Heimerdinger, 2012, p. 4)

With the exponential success of the film industry throughout the 20th century and the technological advancements that came with the application of sound and colour vision, cinema projection was able to bring detailed worlds to the eyes and ears of the general public. Audiences were now able to witness in-depth narratives play out on-screen, manifesting complex emotional responses. The role of sound through this artistic medium has, from one perspective, a wider potential scope for experimentation when compared with the visual component. It is not confined to the same restraints. A camera lens can only present so much information in one shot and relies upon the willing participance of human sight to absorb this, whereas any accompanying audio is not only more immediately difficult to ignore, but also holds the potential to present multiple layers of reality at once. The blending of music and sound design projects both diegetic and non-diegetic elements simultaneously, forcing the listener to identify accordingly. Its scope within the horror genre can therefore be understood as a way for the 'monster' to reach out from the constraints of a cinema screen and into the theatre: a technique heightened even further by the placement of surround speakers and sophisticated spacial manipulation.

> "In the cinema to look is to explore, at once spatially and temporally, in a "given-to-see" (field of vision) that has limits contained by the screen. But listening, for its part, explores in a field of audition that is given or even imposed on the ear; this aural field is much less limited or confined, its contours uncertain and changing." (Chion, 1994, p. 33)

1.2 Overview of the Thesis

My thesis looks at the ways in which music and sound design are used to evoke a sense of fear in audiences of twenty-first century horror cinema, for the purpose of influencing my creative practice and resulting in a commentary of my own work wherein I attempt to reimagine sonically the seminal 1920 silent horror film, *The Cabinet of Dr Caligari* (Wiene, 1920).

In order to provide some context to the primary musical component of this research, I consider the presentation of fear as an emotional reaction both in the natural world and in works of fiction, including how this may have changed in recent years.
When considering the concept of sound in a broader sense within horror cinema, questions arise of why one may feel unease upon hearing certain sounds and how much this can depend on its contextual position in space and time, in addition to any cultural or instinctual origins. This thesis looks to address these questions in order to inform my professional practice.

1.3 The Research Questions

This research attempts to collate my developmental experience as a music practitioner with my numerous analyses as an academic. The thesis is an investigation into the following questions:

- *Through what means do modern horror composers and filmmakers devise effective sonic environments for the production of fear-based emotions in audiences?*
- *Can the aforementioned techniques be classified in a way that is accessible for both enthusiasts and for professionals to apply to their own work? If so, how does this classification manifest itself?*
- *How can the toolkit of the contemporary creative practitioner aid in the revivification of older works of horror cinema, particular those of the silent genre for which no fixed original music exists?*

These components for research are unified by my own passion for the subject area, along with the desire to better my professional skillset for future application in both the academic and professional fields. Through reflective commentary on my compositional processes for films *A* (2018) an *B* (2018) which culminated in the sonic reimagining of the 1920 silent horror film *The Cabinet of Dr Caligari* (Wiene, 1920), all the while informed by my extensive filmic and literary study, this thesis acts as a conceptual model for my aspirations as researcher and practitioner.

1.4 My Position Within the Field as Researcher and Practitioner

The broader aim of this project is to establish my position within the academic field of music, while expressing a clear interdisciplinary link into the realm of film and media. This thesis has allowed me to hone my substantial foundational knowledge of sound design and music composition, including its application in visual media, while providing me with footing along paths of research including film and psychology. The significant practical components have acted as vast sources for creative outlet towards my ongoing role as music practitioner and composer, giving me the opportunity to improve my skills regarding writing, recording and production. Films *A* (2018) and *B* (2018) enabled my collaboration with industry professionals and helped to extend my artistic skillset in relation to filmmaking as a whole.

Chapter 2: Key Concepts

2.1 Overview

This chapter will outline a number of primary themes within the thesis, acting as a taxonomy where relevant. The study's focus on a particular media form, historical period, genre and the effect of its applied sound design on audiences incorporates far-reaching branches of academia. It is important to address these to the extent of their relevancy as they informed my resulting compositional work for *The Cabinet of Dr Caligari* (Wiene, 1920).

2.2 The Invocation of Emotion in Music

> Suspense is essentially a product of ignorance as to the future course of events. This ignorance may arise either because the present course of events, though in a sense understandable in itself, presents several alternative and equally probable consequents or because the present course of events is itself so unusual and upsetting that, since it cannot be understood, no predictions as to the future can be made. (Meyer, 1961, p. 27)

Meyer's hypothesis of suspense as a product of ignorance is magnified in the context of film music as the audience has both a visual and audio element for which they must predict future events. Often the manifestation of suspense within horror cinema is produced by the culmination of all events leading up to the point of delay presenting themselves as unusual and upsetting. This is due to the nature of underlying themes such as death, violence and fear. However, there are also instances within horror where the series of events seem more coherent and invite several potential consequents.

> The stimulus situation creating doubt and uncertainty must, of course, be progressively intensified if suspense is to be maintained or increased. For as we become accustomed to a given stimulus situation, even an unpleasant one, its effectiveness tends to diminish. (Meyer, 1961, p. 28)

Here, Meyer suggests the limitations of his proposal while outlining a key criticism of some works of horror cinema which fail to engage their viewers fully. That is to say, that as soon as the main threat is manifested fully and given frequent, uninterrupted screen time (usually near the climax of the film), its frightening effect is dampened. This idea can be equally applied to the sonic elements of a horror film, as the repetition or overuse of loud, dissonant phrases can lose their initially uncomfortable effect on the listener. This can be used to argue why sequences in horror cinema are often left absent of music, so as to prolong its potential effectiveness if or when it is eventually used.

Ruth Finnegan's writings on the topic of emotions in music take into account the importance of context in relation to how they are manifested. She considers the ways in which culture has shaped the individual's ability to manage their emotional reactions depending on pre-conceived notions of an environment or situation (Finnegan, 2003, p. 187). The prevalence and popularity of the horror film over the past century will have an undoubting effect on the ways in which audiences perceive their emotions through the medium of cinema when compared to real-life, primeval instances of fear.

Igor Stravinsky writes of reactions to his own works, wherein the ears of the untrained public reacted in a confused manner upon hearing his use of dissonance (a technique used abundantly in the soundtracks for horror cinema). He attributes this to the inadequate state of societal music

education of the time, but this is likely to still have some influence over audience's emotional responses to sound and music in the present day (Stravinsky, 1947, p. 35).
Stravinsky goes on to outline the psychological effect of another fundamental musical device. That is, the doubling of an orchestral part within a musical score. He considers the result to be that of an illusion of strength, which translates to audiences as a moment of shock. These observations show the extent to which each compositional choice, whether primary or subtle, may influence a specific emotional reaction in listeners (Stravinsky, 1947, p. 131).

> Imagine a painting, in which a figure is staring out of the canvas towards a point outside it. The figure wears an expression of intense misgiving; his arms are raised as though in preparation to defend himself; his body is poised for flight. Surely it would be perfectly reasonable to construe this figure as in a state of fear. A painter may in this way create a portrait of fear far more expressive than anything that we know from life, without depicting the object feared. (Scruton, 1999, p. 236)

The above extract from Roger Scruton's discussion of the work of Hanslick, can be considered in the context of music and sound design. The composed score for a film may succeed more effectively at bringing about feelings of fear and tension in viewers by portraying the feared object sonically, when compared to its presence being made visual apparent on-screen. Scruton describes the musical attempt to present emotion as depriving listeners of the vehicle of sentiment and producing a reaction that is free-floating. The ambiguity and uncertainty of this state has potential to be utilised in the retention of suspense for longer durations within a piece of horror cinema (Scruton, 1999, p. 236).

2.3 Audience Engagement in Film and Film Music

> Music draws filmgoers into a film's world, measure by measure. It is, I will argue, at least as significant as the visual and narrative components that have dominated film studies. It conditions identification processes, the encounters between film texts and filmgoers' psyches.
> (Kassabian, 2001, p. 1)

Kassabian suggests the importance of addressing the engagement between filmgoers and film scores from an analytical perspective. She separates film music into two types, that of composed score and compiled score. The term 'assimilating identifications' is mentioned as a new phrase coined by Kassabian, and describes the way in which a perceiver will find themselves in the position of a character or setting in film quite naturally, regardless of whether they have any real relationship with that identity (Kassabian, 2001, p. 2).
Kassabian explains the differences between composed score and compiled score and how the former requires little to no historical relationship between the perceiver and the music as they will unconsciously assimilate themselves into the story, whereas a compiled score (comprising mainly of pre-existing songs (OR POPULAR MUSIC) heavily relies on the musical history of the perceiver. If a song that is already popular to the public is used in a film, then any individual with previous knowledge of it will immediately bring their own associations (Kassabian, 2001, p. 3).
This information is of interest to my own analysis of contemporary horror films in which a large proportion of works seem to have a composed score rather than a compiled one. This is to be expected, partly due to the fact that popular music is rarely intended to evoke fear in the listener. Therefore, unless used in a juxtaposing way (such as Tiny Tim's "Tiptoe Through The Tulips"

played as diegetic music in *Insidious* (Wan, 2010) it would likely be ineffective to use a compiled score in a non-parodical horror film.

The work of Chion often relates to the engagement of audiences in film by focusing on the act of listening at a more fundamental level. His explanation of the three modes of listening provides a concise overview which allows for quick classification within the cinematic realm. This is helpful for readers to truly perceive the visual and sonic elements while revealing the extent to which the format can be manipulated to ensure audiences are not entirely free in their interpretations. This is particularly relevant in the horror genre wherein often it is the intention of the filmmaker to encourage the manifestation of fear and tension related to uncertainty, which can often be of a sonic nature.

> Let us note that in the cinema, causal listening is constantly manipulated by the audiovisual contract itself, especially through the phenomenon of synchresis. Most of the time we are dealing not with the real initial causes of the sounds, but causes that the film makes us believe in. (Chion, 1994, p. 28)

Chion also points out the uniqueness of technology in its ability to record and repeat audio with complete accuracy. When applied in the context of film music and sound design, viewers are given the opportunity to partake in reduced listening which is otherwise impossible due to the nuanced differences produced by natural attempts at live reiteration. This different perspective that focuses more on the qualities of a projected sound rather than its pragmatic identity has the potential for effective use in horror by forcing the listener to examine unfamiliar aspects of what may be an otherwise familiar sonic object. This leaves room for ambiguity in regards to its purpose and suggests a level of intellect behind its manipulation.

> However, reduced listening has the enormous advantage of opening up our ears and sharpening our power of listening. Film and video makers, scholars, and technicians can get to know their medium better as a result of this experience and gain mastery over it. The emotional, physical, and aesthetic value of a sound is linked not only to the causal explanation we attribute to it but also to its own qualities of timbre and texture, to its own personal vibration. So just as directors and cinematographers—even those who will never make abstract films—have everything to gain by refining their knowledge of visual materials and textures, we can similarly benefit from disciplined attention to the inherent qualities of sounds. (Chion, 1994, p. 28)

2.4 Descriptions of Sound in Film and Literature

Such nautical tales as *Moby Dick*, *The Odyssey* and *The Voyage of Maildun's Boat* are noted as key examples for the use of sound in fiction (Toop, 2011, p. 4). Toop's writing on the eeriness of hearing voices in relation to Mladen Dolar's work on Kafka's *The Castle* (Dolar, 2006, p. 169) is relevant to my research and strengthened through a connection with Michel Chion's term: acousmatic voice, including his observation that voice without a body is uncanny and the body to which it is assigned does not reduce the effect (Toop, 2011, p. 8). Distant voices have often been used in film and television to evoke fear or uncertainty and this can be seen clearly in films such as Insidious (Wan, 2010) where a threatening voice is heard quietly on a baby monitor (INSIDIOUS Official, 2019). Other examples of this are the sounds of ghostly children heard around the house in *The Others* (Amenábar, 2001).

Toop's idea of the unstoppable power of nature over man is also mentioned by Meyer in relation to the film *Antichrist* (Trier, 2009) by Lars von Trier (Meyer, 1961). Weather is often used in film to depict emotion or mood, and pathetic fallacy can be effective (although sometimes cliché) in horror. The foley of wind, rain or thunder is often made more present than would normally be experienced

in the real world. In David Robert Mitchell's *It Follows* (Mitchell, 2014), during a scene set in an abandoned car park, through the numerous building exits it is clear that there is some wind but nowhere near as severe as suggested by the foley at the time. There is no music during the clip, so the violent gusts of wind are an auditory focal point and appropriately depict the sense of an oncoming threat. Due to the nature of the antagonist in It Follows: its biological and disease/like manifestation and its apparent invulnerability to any obstacle, it can be said that Toop's (and Meyer's) idea of the inexorable forces of nature has been applied here to accentuate the feeling of fear on the audience.

2.5 Audience Engagement in Electro-Acoustic Music

Westerkamp's analysis of the electroacoustic work *Cricket Voice* by Andrea McCartney, examines the first-hand experiences of listeners upon hearing it for the first time. A collection of fifty-one listener responses enabled the tracking of patterns in sonic interpretation and overall mood of participants. A notable example of this would be the observation that seven individuals referred to a feeling otherworldliness, despite the predominant use of natural field recordings (particularly those of crickets). This information helps to support the development of ideas around the depiction of nature in both my own compositional work and notable contemporary horror films. The unpredictable and subsequently threatening presence of the natural world acts as an almost infinite pool of sonic material to draw from (McCartney, 2002, p. 46).

McCartney continues by delving into the geography of modern life, wherein people's residence in either urban or rural areas has a distinct effect on their experience when hearing *Cricket Voice*.

> Yet cricket sounds in the city are still framed by traffic and other familiar machine sounds. In the country they are more naked. And when Westerkamp works with the sound of a single cricket in a still desert night, this is the cricket sound at its most naked. Then when she slows down the sound, bringing its pitch lower, she evokes the image of what is for some an unbearable intimacy with the cricket, in which it is enlarged and deepened, seeming to emanate from a much larger organism, and perhaps humans can feel relatively diminished in comparison, therefore more vulnerable.
> (McCartney, 2002, p. 47)

Horror cinema often focuses on the removal of background noise in order to focus on a specific sound which can greatly enhance the tension in the moment. This feature is being discussed here through McCartney's analysis of *Cricket Voice* and goes on to delve into the concept of sound scale wherein, in this case, the crickets have been modified to sound enlarged and in close proximity to the listener. These effects are clearly applicable to my own composition and have the potential to increase feelings of vulnerability in audiences.

McCartney's reference to seminal works of horror such as *The Fly* (Cronenburg, 1986) and *Alien* (Scott, 1979) in relation to sound recordings helps to strengthen the source's relevance to my own study. In particular her observation of wind noise to indicate the hostile environment of the planet in *Alien*, alongside the closeness of the crew's breath within their respective spacesuits provides two key identifiers in the development of tension through environment.

> Although Westerkamp intended listeners to hear an intimate encounter with a cricket that would bring them closer to this alien species despite their anxieties, some listeners experience this encounter in her piece as uncomfortably close, an anxiety that I believe has been maintained and extended by the use of sound to underscore drama in contemporary science fiction soundtracks.
> (McCartney, 2002, p. 48)

Here, a significant observation has been noted in regards to how the public responded in contrast to Westerkamp's original intentions as composer. The argument can be made that the anxiety McCartney speaks of is clearly present in modern day audiences, providing further justification for my exploration into the use of particular soundscapes for the purpose of building tension and fear in both existing work and my own.

2.6 Spectromorphology

This sub-chapter looks at the ways in which spectromorphology is being used to combine sound design with soundtrack in order to produce a more effective narrative for the audience in modern film. Rudy builds his theory through an in-depth aural and visual analysis of *Black Hawk Down* (2001), which seamlessly incorporates the helicopter sound into its orchestral score throughout. Drawing on Schaffer (1966) and Chion's (1994) definition of a sound object (Rudy, 2004, p. 1), as well as Smalley's definition of spectromorphology, Rudy states that the net effect is to make a subconscious connection between the layer of sound and the layer of music, noting that it functions as a device meant to create tension by removing the boundary normally set up between those two elements within sound design (Rudy, 2004, p. 2).

Spectromorphology relates to my study of music and sound design's roles in 21st Century horror films most notably, in *Insidious* (Wan, 2010). Throughout a scene halfway through the movie, the noise of the room's ceiling fan is partly treated as a musical element (Adam The Prowler, 2015). Initially, the accent with each full rotation of the blades is doubled by a constant 'hum' on G. This fades as the camera pans upwards to face an invisible threat seen by one (portrayed by Lin Shaye) of the several characters present; at which point the low frequencies of the fan sound are amplified and the high frequencies removed. From then on the intense pulsating produced with each spin acts almost like a racing heartbeat; emphasising a sense of danger.

2.7 Hauntology

Fisher's evaluation of the term 'hauntology' holds striking relevance to some of the broader underlying themes essential in the facilitation of this thesis. The concept observes the return of elements of the past; a definition which Fisher extends to a subsequent failure of the future. He argues that since 2005, electronic music which had previously been synonymous with the invocation of an unknown and futuristic atmosphere could no longer achieve this effect. The results of this was a sudden halt in sonic innovation as the culture become accustomed to the compositional framework cemented by the electronic music scene (Fisher, 2012, p. 16).
Fisher goes on to suggest that this loss of artistic style broadens to a lack of ability to conceive of a world radically different from the one in which we currently live. At this point Fisher translates his findings into the world of film wherein his work can be directly associated with this postgraduate study.

> F]rom the outset, a whole battery of aesthetic signs begins to distance the officially contemporary image from us in time: the art deco scripting of the credits, for example, serves at once to program the spectator to the appropriate 'nostalgia' mode of reception . . . [T]he setting has been strategically framed, with great ingenuity, to eschew most of the signals that normally convey the contemporaneity of the United States in its multi-national era: the small-town setting allows the camera to elude the high-rise landscape of the 1970s and 1980s . . . , while the object world of the present day—artefacts and appliances, whose styling would at once serve to date the image—is elaborately edited out. Everything in the film, therefore, conspires to blur its official contemporaneity

> and make it possible for the viewer to receive the narrative as though it were set in some eternal thirties, beyond real historical time. (Jameson, 1991, p. 20-21)

Here, Fisher brings about the discussion of 'nostalgia mode' by referencing Jameson's description of Lawrence Kasdan's *Body Heat* (Kasdan, 1981). This concept is represented most clearly and recently in the setting of David Robert Mitchell's *It Follows* (Mitchell, 2014) - a significant work for analysis within this study. The displacement of objects from different eras paired with a manipulation of camerawork can aid in the overall effect of a film on unsettling its audience. These subtle but potentially detailed filmic decisions can also manifest sonically and Fisher's writing here brings clarity to the technique from which I can begin to develop my practice.

> The Caretaker subjects 1930s tea- room pop to degradation (delay, distortion), rendering it as a series of sweet traces that are veiled by one of sonic hauntology's signature traits, the conspicuous use of crackle, which renders time as an audible materiality. (Fisher, 2012, p. 17)

Delving further into the auditory side of hauntology, Fisher explores both historical and technological features such as the use of crackle. This expression of audible materiality holds the potential to bring forth a distinct layer of reality to the cinematic world, one which I have identified in key analyses and later aimed to utilise within my own compositional process.
As these devices help to bridge the gap between viewers and the medium through which they experience film, Fisher (Fisher, 2012, p. 18) alludes to Nigel Kneale's TV play *The Stone Tape* (Sasdy, 1972) which presents in fiction the very idea of a physical object's ability to retain and subsequently transmit information from a previous time. This mention lead my research into the writings of psychic researchers who proposed that the phenomena of hauntings may be recordings of traumatic events from the past.

2.8 Conclusion

These key concepts will be addressed in further detail, particularly in their relation to contemporary works of horror cinema, in Chapter 4. Each branch of this study manifested from the thoughts and processes culminating from the thesis' initial research questions. The aim is to utilise these to form a coherent explanation of why audiences find themselves afraid (or not) while watching horror films and how this is directly influenced by the music and sound design. This should also allow for direct application of themes and techniques to my creative practice, as discussed in Chapter 5.

Chapter 3: Research Methods

3.1 Introduction

This chapter aims to provide an outline and explanation for the chosen methodology of this PhD thesis by stating the ontological and epistemological positions within its research framework. This cross-topic study incorporates aspects of music and film, with some focus on psychological elements in order to support and justify the resulting creative practice.

3.2 Methodology

3.2.1 Methodology within the Performing Arts

The thesis comprises of mainly qualitative data, due to the largely interpretative nature of the Performing Arts and the subsequent difficulty in producing truly objective results. The use of quantitative material in support of those arguments posed within this research, such as the ways in which music and sound design are used to evoke fear in filmic works of contemporary horror, would require unrealistically large samples of participants recorded through surveys or interviews in order to be deemed sufficiently reliable.
One significant factor for consideration regarding the musical component of this study is the analysis of audio recordings. A considerable volume of collated information derives from the study of film clips, particularly in regards to their sonic components. In some cases where written scores are available, a researcher is able to identify notable points within a piece of music with published evidence of, for example, a particular use of harmony or instrumentation. In the case of these analyses of contemporary horror cinema, few scores are obtainable and so the validity of information gathered relies on interpretative aural skills alone.

3.2.2 The Approach

The topic of fear in film must, to an extent, be approached from a post-positivist perspective. Although one individual may be, on average, more likely emotionally affected through their viewing of a cinematic example of a particular sub-genre of horror (e.g. “Slasher” films), this is unlikely to represent the full spectrum of audiences’ tastes. Therefore, no matter how much evidence is provided to support a certain filmic formula’s effectiveness in scaring audiences, to seek an all-encompassing or scientifically proven example of this without room for criticism is unrealistic. The existence of many truths brought about by the subjectivity of music and cinema, aligns relativism as an appropriate methodological approach in regards to the ontology of this thesis.

Consequently, the epistemological view of this PhD research is EMIC-based, in contrast to the realist ETIC practice (NurseKillam, 2015). Although it seemed appropriate to immerse myself in the related subject area of horror cinema, it was also imperative that I recognised the opinions of other experts within the field and incorporated these in order to develop my own ideas. Bias is difficult to avoid in a research topic as subjective as this and I believe that my experience is valuable to the overall purpose of the thesis. It was, however, essential that I addressed and understood what could be most accurately described as the “insider” view of horror film music and sound design

creation, by researching those professionals and academics closely aligned with the cinematic style.

When considering the role of 'practice as research' within the context of this PhD project, it seemed appropriate to begin with the application of compositional ideas borne of my various sonic analyses in cinema. Short films *A* (2018) and *B* (2018) acted as appropriate canvases for experimentation in this regard and hold opportunities for other academics and practitioners to utilise them as creative tools due to their versatility.

3.2.3 Rationale of Choice

This research is intended to provide musicologists, composers and filmmakers with an insight into current sonic and musical tropes within horror cinema, while identifying a taxonomy of themes which could be argued to enhance the effectiveness of sound design and music composition in scaring present-day audiences. The theoretical framework chosen appropriately serves this intended outcome by both analysing the compositional aspect of horror writing through a series of case studies and by applying the collection of contemporary techniques learned to a mixture of new cinematic material alongside a reimagining of an older work in the form of *The Cabinet of Dr Caligari* (Wiene, 1920). These two primary elements complement each other in a way that is intended to bring about further understanding as to how we can produce more effective sound design in horror cinema. Not only this, but the research may enable academics and professionals to predict the direction of public opinion in the future, developing innovative ways to evoke a sense of fear in viewers.

3.2.4 Methods of Data Gathering

My methods of data gathering include a number of literary texts alongside personal analyses of several horror films released since the beginning of the twenty-first century. These two main research foundations have allowed for the critique of modern horror cinema in detail. The literature studied during the research process was acquired in part through recommendations from my supervisor, particularly in regards to works such as Paul Rudy's *Spectromorphology hits Hollywood: Black Hawk Down - a case study* (Rudy, 2004). The relevance of this text became apparent while studying the film *Insidious* (Wan, 2010), with music composed by Joseph Bishara. An effective aural technique became apparent wherein a diegetic foley sound was transformed to become less real and more musical in nature. Upon this discovery, Rudy's analysis of *Black Hawk Down* (Scott, 2001) bears a clear connection, where a similar device is used with the sound of helicopter blades and an orchestral score (Rudy, 2004). This concept shared between the films is known as spectromorphology, originating from the field of electro-acoustic music. The introduction of these ideas of sound design combined with music to produce an effective impact on film audiences encouraged the widening of the initial research questions which originally focused more exclusively on horror film scores.

Because of this revelation, the relevant areas of study broadened to the ways in which we as humans perceive certain sounds. This led to the work of David Toop, who in his chapter "Drowned by Voices" from *Sinister resonance: The mediumship of the listener* discusses the depiction of "scary" sounds in classic fiction such as Kafka's *The Castle* (Toop, 2011). Therefore, in order to provide context, the research within this thesis extends to the subject of storytelling and narrative, no longer necessarily constrained through the lens of film.

3.2.5 Position as Researcher

It is important when collecting data, to retain an awareness of the role of a researcher within the development of a thesis such as this. Krüger states the importance of acknowledging that your "observations are always filtered through interpretive frames, and are never objective and neutral." (Krüger, 2008, p. 75). This point held particular significance while analysing different horror films. As each individual's response to fear stimuli is different, I could not rely solely on my own reactions to each film as a universal truth. One way in which a reasonably accurate impression of the quality of a piece of cinema was attained, was through the examination of film review databases such as Rotten Tomatoes. This type of evidence can provide justification for the inclusion or omission of certain filmic works.
Krùger goes on to say that "what you notice/omit will depend on your awareness of own biases, and (quite practically) on the opportunities for observation." (Krüger, 2008, p. 75). My awareness of my own bias towards the sub-genre of supernatural horror forced me to seek out acclaimed examples of recent films which may not have been situated clearly within that style. However, it was important for this research to be controlled by the limits of what could be observed. If a film, regardless of critical review, presents no substantial musical or sonic qualities to be analysed in depth, then the researcher is not obliged to attempt to justify its presence within the thesis. This argument does, however, open the question as to the ubiquitousness of silence in horror cinema, and whether it can be presented as an effective compositional tool within sound design.

3.2.6 Rigour and Validity Control

When carrying out any form of academic research, a high level of validity and rigour is of paramount importance. This has been achieved within the thesis by the assurance that each utilised source is accurately cited. Although accessible online literature can originate from anywhere, certain assumptions of validity can be made if a source has been supported by a university or relevant professional organisation. In the case of some literature I was able to rely on the word of fellow academics at Coventry University whom, as specialists in music, have considerable experience in the collection of relevant and valid data for research purposes.

Atop a foundation of academic knowledge, several sources of information originate from publicly accessed websites such as the film review database Rotten Tomatoes, as well as the entertainment sites of Rolling Stone and Den of Geek among others. Although the former is repeatedly edited and updated by potentially unreliable members of the public, this does allow for an insight into the broader views of film audiences in regards to horror cinema. Therefore these review sites can be useful when collating evidence proving that, for example, The Conjuring (Wan, 2013) is a critically acclaimed horror film. Furthermore, websites such as Rotten Tomatoes outline the noteworthy and often differing opinions of the public and film critics. To completely dismiss the views of the everyday cinema-goer in favour of individuals from the professional field would be unrepresentative of the whole population.

3.2.7 Ethical Concerns

The potential risks of ethical breach vary between subject areas and data collection methods. When it comes to my own thesis, the main themes of study are unlikely to cause harm to participants. The majority of included research comes from publicly accessible sources of literature and video, wherein the authors are responsible for any distribution of their ideas. When the information within a piece of text begins to develop what may be interpreted as a certain viewpoint

from the perspective of the writer, it is important not to assume this as fact but instead suggest reasoning behind why this could be the case. The only thing that the researcher can be reasonably sure of, is the published words within a source. Any questions that manifest from that source are open to interpretation.

Although this work does not involve or focus on any vulnerable groups of people, as it focuses on a genre of film that is known to intentionally play on people's fears and emotions it is important to take this matter of sensitivity into account. The ethics application for this thesis through Coventry University is up-to-date and was approved at the time of thesis submission.

3.2.8 Review and Conclusion

Upon reviewing this thesis' methodological choices, I feel confident that the outline shown has aided me in producing effective results towards the completion of my thesis. Qualitative study is appropriate in the field of sonic and filmic analysis. Despite a surety in my ability to produce competent work through my ontological and epistemological views, I have also maintained an awareness of the possible limitations that can come about from this chosen methodological approach. Working with smaller sample sizes can reduce reliability when compared to other research attempts in the field, and referencing some non-academic sources of information to support my own views when it comes to each horror film could potentially be seen as less valid. However, I believe that any sub-categories of learning or research that may have otherwise remained intellectually unsubstantiated earlier within my research process have been appropriately strengthened.

3.3 Practice-based Research Methods

3.3.1 Overview of Portfolio

The practical component of this PhD submission comprises the music and sound design for two short films entitled *A* (2018) and *B* (2018), created in collaboration with filmmaker Nathanael McGirr. The final and most substantial portion of the practical portfolio is a sonic reimagining of the 1920 German Expressionist silent horror film, *The Cabinet of Dr Caligari* (Wiene, 1920).

3.3.1.1 *B*

The first completed film entitled *B*, is just over one minute in duration beginning and ending with a few seconds of black screen. The clip consists of one shot on the first floor landing of a dimly lit house. An old radio sat atop a cardboard box acts as the focal point at the centre of the shot as the camera slowly zooms outwards. The zoom ends at 0:37, leaving a static shot until the end. The only visual movement in *B* is that of shadows on the wall to the right, suggesting the source originates from the more brightly lit room on the left.

Early on in the compositional process, it was decided that these shadows should be ignored sonically. This was due to a desire to keep the plot as vague as possible, so that visual influence on viewers was minimal and sonic influence maximal.

Fisher describes the idea of "hauntology" as the quality of (dis)possession that is proper to human existence as such, the way in which the past has a way of using us to repeat itself. He discusses the various manifestations of this in film and television, including within the horror classic The

Shining (Kubrick, 1980), regarding The Overlook Hotel as an example of a place stained by time. Composer James Leyland Kirby (also known as The Caretaker) wrote what he intended as music to be heard within this hotel. Despite the film being set in the modern day, Kirkby's work consists of 1930s ballroom music that is "subjected to delay and distortion, rendering it as a series of feet traces that are veiled by one of sonic hauntology's signature traits, the conspicuous use of crackle, which renders time as an audible materiality." (Fisher, 2012).

These ideas were considered in the development of *B*. The presence of an old radio provides a source for an array of auditory information. Mcluhan describes radio as a hot medium, in that it extends one single sense in high definition with the potential for high amounts of data. (McLuhan and Gordon 2015). These data are not constrained to the time at which the film is set and can therefore be used to replicate Fisher's concept of haunting.

Due to limited resources and time shared between myself and Nathanael, the scope for *B* as a piece of filmmaking had to be restricted to its most fundamental elements. The narrative ambiguity and short duration did, however, seem advantageous to the application and experimentation of various compositional techniques. There were fewer non-musical elements to encroach upon or distract from my soundtracks which, in turn, produced a more streamlined and professional-looking artistic product.

3.3.1.2 *A*

A was the second to be completed and came about from a discussion around the idea of horror archetypes. Located in a wood with no clear or recognisable landmarks, *A* follows an individual via a first-person camera style through the trees for slightly over one minute. There are three clear sections, the first of which is a calm stroll as the camera explores the surrounding woodland until 0:36. At this point the individual stops in a small opening where a stone of ambiguous meaning protrudes from the ground. They gaze upon it until 1:01, at which point the camerawork returns to more dynamic movements as they walk away, back onto the path through the woods. Despite a broad narrative idea being held by both myself and Nathanael before filming, it became apparent that the visuals of *A* could be interpreted in more than one way that would drastically alter what could be perceived as the storyline.
Although the whole film takes place within the wood, it seemed important to trigger a clear tonal change upon discovery of the clearing so that its purpose seemed more uncertain to viewers. The propensity of people's relationship with the idea of walking through an area such as this could be seen to relate often on a nostalgic level. Forests have throughout history acted as pathways from one place to another that bring along with them the true enjoyment of exploring the beautiful and tranquil aspects of nature. However this is juxtaposed with the idea of the unknown which will beckon us away from the path. These themes have maintained their importance through the numerous and repeatedly relevant adaptations of old folk stories such as Little Red Riding Hood.

Similarly to the aforementioned film *B*, *A* was created on a negligible budget but provides a completely different visual experience. The handheld camera style and outdoor location utilises the 'found footage' style of filmmaking often associated with the horror genre, without explicitly revealing enough of a plot to be immediately categorised as such by viewers.

3.3.1.3 Variations on *A* and *B*

Due to the abundance of ideas brought forth by these two films and the analyses carried out beforehand, I went on to create a second variation to *B* with distinctly separate techniques. In addition to this, I attempted to overlay *A* and *B* with preexisting music by Béla Bartók and György

Ligeti respectively. The third movement of Bartók's *Music for Strings, Percussion and Celesta* (1937) had previously been used in horror classic *The Shining* (Kubrick, 1980), while Ligeti's *Lux Aeterna* (1966) entered popular culture through Stanley Kubrick's 1968 film *2001: A Space Odyssey* (Kubrick, 1968). The purpose of this exercise was twofold. Firstly, it would act as a control for the validity of the visuals in *A* and *B* and discern whether they could be interpreted stylistically as works of horror cinema irrespective of the application of my own music. Second to this, Bartók's and Ligeti's works as examples of twentieth century compositions would help to evaluate whether my own scores for the two films truly utilised ideas borne of the modern era and did not simply imitate music which could have been written several decades previous.

3.3.1.4 *The Cabinet of Dr Caligari* (Wiene, 1920)

The bulk of my practical component comprises a sonic reimagining of *The Cabinet of Dr Caligari* (Wiene, 1920). An example of German expressionist cinema argued to be the first true horror film (Ebert, 2020), its famous visual style comprised sharp angles and distorted perspectives providing an unusually chaotic experience for viewers despite its conception as a silent film which, due to technological restraints of the time, could not be accompanied by synchronised sound. Its significance in the history of horror filmmaking along with its distinct and striking imagery seemed to lend itself aptly to a reworking with newly composed contemporaneous music and sound design, one which would coincide with the centenary of its original release. These reasons, along with its ubiquitousness as a resource (in contrast to many lost works), accumulatively set *Caligari* apart from many other potential choices of film originating from the early decades of silent horror cinema. Particularly its non-real and stylised approach which, when paired with the natural imperfections of aged footage screened in the modern era, seemed to provide a fruitful canvas for contemporary horror composition.

> The pronounced artificiality of the set, in which both frame and internal plot unfold, undercuts realist conventions. Painted shadows, dagger-shaped windows, a pale sky against which bare trees stand out in bizarre shapes—these visual markers of instability create a cinematic space of paranoia and distrust. (Andriopoulos, 2008, p. 94)

Despite all evidence in support of its commercial and critical success, this attempt at the application of features of modern composition and sound design to *Caligari* is at least partially at the mercy of its age. Münsterberg speaks of audiences at the time of its original release finding themselves in awe not only regarding its striking narrative, but also because of the recent technological advancement that allowed it to exist. It therefore cannot be ruled out that a significant component of the film's effectiveness as a work of horror is based on its historical placement in the early days of cinematic projection, where viewers found the visual format similarly alien to the abhorrent actions of Dr Caligari and his somnambulist, Cesare on-screen.

> At the same time, the paradoxical narrative structure of Wiene's film can also be read as a self-reference to the "peculiar oscillation" in which, according to Münsterberg, the spectators of early cinema alternated between the insight into the mediality of the filmic projections and an intermittent suspension of disbelief. (Münsterberg, 1916 cited in Andriopoulos, 2008, p. 102)

> "As Münsterberg wrote in regard to the cinematic simulation of depth and motion, describing a "conflict" between the viewer's perception and knowledge: "We certainly see the depth, and yet we cannot accept it."" (Münsterberg, 1916 cited in Andriopoulos, 2008 p. 102)

Although uncredited, the original 1920 score for was written by Italian composer Giuseppe Becce, who worked on numerous German silent movies as director of the music department for Decla-Bioscop AG which later became Universum Film AG (UFA). When the film was acquired for distribution in the US by Goldwyn Distributing Company, conductor Ernö Rapée was hired to compile a soundtrack of existing music by composers such as Schoenberg, Stravinsky, Prokofiev, Strauss III and Debussy (Robinson, 1997). English guitarist, songwriter and experimental musician Bill Nelson was requested by the Yorkshire Actors Company to compose a soundtrack to their stage production of the film in 1981. This was released under the title Das Kabinett. An opera was adapted from the film in 1997, for which American composer John Moran wrote the music. American composer and director of the Club Foot Orchestra Richard Marriott, composed a modern score to the film for the orchestra to perform in 1987. American-born composer and conductor Timothy Brock wrote a score for string orchestra in 1996 that was commissioned by Bertelsmann/ BMG to be adapted for the film's restoration in 2014.
Bristol-based four-piece Minima contributed the music to what was initially an improvised temporary exhibition on Sleeping & Dreaming at the Welcome Trust in London, 2008. After this, they began to perform the music to *Caligari* regularly at screenings and festival, which culminated in its use within the Compass Presents group's multi-media event based on the film that was first shown in March 2014, going on to win the 2015 Media/Innovation Award in the Installation/ Exhibition/Live category (*The Cabinet Of Dr. Caligari (Das Cabinet Des Dr. Caligari)* 2019).
Additionally, composer Lynne Plowman was commissioned by the London Mozart Players to compose an original score to the film, first performed as live accompaniment on Tuesday 28th April 2009 at Riverfront in Newport. It is scored for a chamber orchestra of eleven musicians (Plowman, 2019).

3.3.2 Justification

3.3.2.1 *B* and *A*

After carrying out extensive audio analysis around key examples of contemporary horror cinema, it seemed natural to translate these findings into new work. My role as a composer is continuously and vitally influenced by my growing knowledge as a researcher and the clearest way to evidence this was by applying that knowledge to fresh, unbiased moving image. The purpose of film *A* and film *B* was to provide two different canvases to write for, both of which allow for open interpretation. Neither movie has an obvious narrative to follow but each contains notable settings, objects, lighting, and camera movements that allow for substantial sonic creativity. Enough visual stimuli is present to potentially categorise each film in the horror genre, without over-stimulation which could render the sonic and musical aspects less impactful on audiences' experiences.

3.3.2.2 *The Cabinet of Dr Caligari* (Wiene, 1920)

My decision to devise a a sonic reimagining of *The Cabinet of Dr Caligari* (Wiene, 1920) came about for a number of reasons. The film had been mentioned as an early influence of Joseph Bishara's by the composer himself in an interview with Dejasu (Dejasu, 2013). Having written the music for a number of key contemporary films from my analysis including James Wan's works *Insidious* (Wan, 2010) and T*he Conjuring* (Wan, 2013), I decided it relevant to also research one of the older films that had inspired Bishara's compositional approach. In addition to this, *The Cabinet of Dr Caligari* (Wiene, 1920) celebrates its 100th anniversary since release in 2020, which will

coincide with the completion of my PhD and therefore a potential release and/or screening of my own contribution to the film. Finally my experience of the film's narrative and impact on cinema as a whole was extremely limited before this stage, meaning that my compositional work will feel completely new, with no obvious biases one would normally gain from having watched the film and listened to its original score. I decided that it was important for this lack of prejudice to remain and have therefore only watched the film with no sound while working on my own music and sound design.

From a pragmatic perspective, *Caligari* is of a justifiably substantial duration to flesh out the practical part of this PhD project. An issue which arose frequently in the earlier stages of research was the format for which the practical output could be based around. If I were to compose work within the horror genre of moving image, it would be potentially problematic to rescore a well-known film due to its preexisting soundtrack and highly detailed sound design. Too many biases would arise from the perspectives of both myself and viewers who were hypothetically familiar with the original version. If I were to attempt the task of acquiring the rights to a popular film with its foley retained but music removed, it would present sizeable constraints from the perspective of both time and legality with no concrete guarantee of resolution. Alternatively, a full reproduction of the film's sound design (including dialogue) to an equally high level of professionalism would not be feasible by one individual in the time allotted and would likely be jarring to audiences aware of the movie beforehand.

Another option remained at this point. This was to consider creating new cinematic work for which music and sound design could be composed. *A*, *B* and their respective variations are the result of this train of thought but their effectiveness lies within their short duration, ambiguous narrative structure and subsequent lack of resources required. An attempt to produce a feature-length film would require vast amounts of time, funding and personnel with no guarantee of a high cinematic standard appropriate for postgraduate submission.

Due to the numerous issues stated above and their notoriety within the industry, choosing a seminal work of horror cinema from the silent era seemed to provide me with the ideal environment for composition. The footage from *The Cabinet of Dr Caligari* (Wiene, 1920) is regarded as cinema of the highest calibre providing plot, structure and exemplary acting performances. The absence of a fixed soundtrack and its non-existent sound design allows for completely open interpretation from the perspective of the composer. Furthermore, the super-real visual effects lend themselves particularly to use of pronounced sound objects. In order to retain a lack of musical bias and prevent a desire to pastiche, I made sure to avoid listening to any music that had been later set to the film.

I decided to write for the US print of *Caligari* rather than the original German version due, in part, to its inclusion of English-language title cards. As my analytical research on existing works of contemporary comprises entirely English-speaking films, I thought this decision to be most appropriate. To be able to understand the title cards throughout *Caligari* allows me as a composer to better understand the development of plot and character dialogue and therefore more appropriately apply my creative process. This translates, perhaps to a greater extent, to prospective audiences of my completed work who are likely to be predominantly English-speakers. The visual quality of this copy is low and includes some footage presented at double-speed or abruptly skipped which I have decided to incorporate into the sonic environment. I saw these elements as potential ways to enhance the stylistically expressionist and 'non-real' themes within the film.

The compositional process for *Caligari* manifested various considerations. Its position as a product of German Expressionism naturally associates it with the musical expressionist movement of the same era. Commonly linked with the likes of composers such as Arnold Schoenberg, Alban Berg

and Anton Webern; Adorno saw the style as the literary idea of a scream which sought to eliminate all of traditional music's conventional elements. This music for which fear lies at the centre of its depiction would seem to complement examples of expressionist horror cinema such as *The Cabinet of Dr Caligari* (Wiene, 1920) and so several features of the era were incorporated into my own score. These included sudden changes of dynamics and heavy dissonance (Adorno and Tiedemann, 2009). It was important however, that my work did not focus solely on a particular historical musical movement with the risk of becoming pastiche. The purpose of this practical component was to bring *Caligari* into the contemporary world of horror cinema. This would require precise decisions in regards to how much inspiration is drawn from earlier works compared to how much is based on the current film music landscape.

A key feature of my work is manifested in the blending of music and sound design, including their locations within or outside the film's diegesis. Use of a theme to represent the fairground within which *Caligari* is often set provides a musical backing with precise choice of instrumentation and irregular use of chromaticism to blur the boundary between the conventionally lighthearted location and its true, sinister purpose. It therefore succeeds, on the surface level at least, to present to viewers a detailed and literal narrative setting alongside the sense of mood and foreboding that would commonly be accentuated by non-diegetic score.

In addition to this I have decided to focus firmly on the age of the original film. Its lower resolution, variable frame rate and evidence of visual imperfections due to the use of celluloid film reel cause the overall cinematic experience to deviate considerably from that which is expected in a modern screening. These features allow for *Caligari* to be, with a relative degree of accuracy, placed within a historical timeframe by present-day viewers who may not be familiar with it previously. This acknowledgement however, has the potential to bring with it a sense of uncertainty at being presented (via a detailed *hot medium*) information of a time period disparate from their own. The visuals contained within *The Cabinet of Dr Caligari* (Wiene, 1920) both intentional and due to natural deterioration, act as hauntological signifiers such as those observed by Fisher. Also referenced in part by Fisher is the concept of the stone tape (Fisher, 2012).
It was theorised by numerous parapsychologists that a haunting may be caused by the replaying of a traumatic event by the absorption and subsequent recording of energy into an object of that time. To reflect this, my sonic reimagining of *Caligari* includes techniques such as the underlying sound of a projector reel to displace the physical format of the screening. Static distortion is also placed sporadically throughout the film, often to depict visual blots or sudden frame skips. Despite the purpose of this practical component being an attempt to make contemporaneous an example of century-old horror cinema, to sonically avoid its age entirely risks the possibility of an excessively jarring viewing experience which fails to marry the audio and video into a believable blend. The additions of static, projector sounds and intentionally depreciated sound quality through filtering and distortion act as key compositional tools to set my work apart from other scores for *The Cabinet of Dr Caligari* (Wiene, 1920). I assert that the use of these is justified in both their uniqueness and relevance within the horror genre as hauntological markers.

Alongside those features discussed above, leitmotifs as a valuable and relatively conventional staple of film were devised in accordance with the main cast of *Caligari*. Traced back to the early seventeenth century but most commonly associated with the work of Richard Wagner, these musical phrases have often been used to signify the appearance of specific characters originally within opera and more presently in cinema. My decision to incorporate leitmotifs reflecting the presence and personality of the film's protagonists and antagonists alongside more general stylistic themes, was encouraged in no small part by the lack of dialogue. Although the addition of some diegetic sound seemed feasible and potentially effective, it would not have been possible to apply a script to *The Cabinet of Dr Caligari* (Wiene, 1920) without excessive poetic license and a clash

with the actors' miming. The absence of each character's voice compounded by harsh monochrome visuals forces the viewer to rely on a smaller range of information in order to track what is happening and the intentions of those on-screen. Leitmotifs were chosen partly to bridge this narrative gap brought on by the style and technological restrictions of the 1920s, so as to feel easier to follow for twenty-first century audiences. Musical phrases to indicate Dr Caligari, Francis and Alan's respective love for Jane and the city of Holstenwall's many avenues of bureaucracy (including the town clerk's office and the police station) among others, help to provide the often ambiguously understated score with a clearer structure. These are complemented by the addition of sound cues such as, for example, crows to symbolise death and vocal moans in the presence of danger. The culminated effect of these devices is intended to aid viewers in their classification of the audio-visual world, so as to inform their overall understanding of the film's plot. However, in order to retain a significant level of mystery essential to the intended effect of horror cinema this collection of leitmotifs and themes is used sparsely, with substantial variation and a gradual erosion over time in regards to its clarity.

Chapter 4: Results, Part 1 - Sonic Analysis of Horror Cinema

4.1 Contextual Overview of the Modern Horror Scene

Malaysian-Australian film director James Wan had already made a name for himself in the 2000s as creator of the *Saw* film franchise alongside Leigh Whannell. The pair became well-known for their use of extremely graphic violence intended to shock audiences. After their success, Wan handed over directorial responsibilities to other filmmakers for the *Saw* sequels and sought to prove that he could make a "classic, old-fashioned haunted house film" and show that he could "make scary films without relying on blood and guts," (Collis, 2017).

The extensive use of gore in numerous original films (e.g. *Saw*, *Hostel*) and remakes (e.g, *The Hills Have Eyes*) in the 2000s helped to form an unfavourable image of the genre that seemed to champion on-screen violence as an easy way to disturb filmgoers at the surface level. *Saw* (Wan, 2004) repeatedly pays homage to Italian 'Giallo' horror films directed by Dario Argento such as *Deep Red* (Argento, 1975) (IMDB, 2021), while Eli Roth created *Hostel* (Roth, 2005) because he missed the type of movies made in the 1970s such as *Texas Chainsaw Massacre* (Hooper, 1974) and believed American movies had gone soft (Cameron, 2006). Although some of these earlier films became renowned for their innovate use of sound, such as the music composed by the prog rock band *Goblin* for *Deep Red* (Argento, 1975), the heavy reliance on a strong visual and violent component brought into the 2000s almost guaranteed effective results and reduced the need for suspenseful pacing for the more recently inspired films by the likes of Wan and Roth. As the formula was repeated, some audiences seemed to become fans of this 'torture porn', of which director Eli Roth was hailed the creator. David Edelstein states that Roth's film used excessive violence to excite audiences like a sexual act (Edelstein, 2006). The 'consumer' mindset of instant gratification had been translated into horror cinema, allowing for potential shortfalls in other areas of the filmmaking process such as dialogue, acting, pacing, story and even music; as often heavy visual components leave little room for audio to be acknowledged to the same depth. James Wan's desire to stray away from his earlier career as a proficient director of gore-filled horror films not only attempted to change the stylistic landscape of contemporary horror cinema, but perhaps subconsciously allowed room for the use of more creative sonic and musical techniques that would have been lost in the torture porn era previously.

In order to understand the significance of *Insidious* (2011) and its context further within the development of modern horror, we must look at its impact upon general release on 1st April 2011 (Benardello, 2010). It has been praised for not demanding gore and instead working on atmosphere and story (Berardinelli, 2011). It "prefers to creep up on you from behind than slap you in the face with a blood-drenched hand" (Ogle, 2011) and "its creepy set pieces, quick cuts and blasts of music will have you both squirming in your seat and jumping out of it" (Goodykoontz, 2011). Alongside these favourable reviews, it holds a score of 62% for audience ratings and has therefore translated reasonably well between the often disparate opinions of professional critics compared to the general public.

The plot of *Insidious* is focused on a married couple (played by Patrick Wilson and Rose Byrne) and their three children whom have recently moved house. One of the sons, Dalton, falls into a coma after experiencing a traumatic event in the attic and after three months of no change in his state, he is moved back into the home. From this point onwards the family are tormented by a number of paranormal disturbances which gradually worsen to the point where they are forced to move house again. When these disturbances continue they hire demonologists Elise (Lin Shaye, Specs (Leigh Whannell) and Tucker (Angus Sampson) to investigate. There are many notable moments of effective horror up until this point, but Elise's initial entry into Dalton's room which will

be referred to as the ‘Sketch’ scene (Adam The Prowler, 2015), is a clip that required deeper analysis.

The score for *Insidious* was composed by Joseph Bishara, who had previously contributed to the sound design for John Carpenter’s *Ghosts of Mars* (Carpenter, 2001). In a 2011 interview with Jason Comerford for Howlin’ Wolf Records, Bishara spoke about his compositional process beginning with him sending music composed by Iannis Xenakis to James Wan, in order to establish a tone for the film (Comerford, 2011).

James Wan’s *The Conjuring 2* (Wan, 2016) is widely regarded as one of the more successful horror sequels in recent years. Listed in several modern horror film top tens from sources such as Blumhouse, and earning the no.1 spot on Den Of Geek’s list of the best horror movies of the twenty-first century, it generally impressed both critics and audiences alike. Similarly to the first film, *The Conjuring 2* is inspired by the lives of real paranormal investigators Ed and Lorraine Warren. The score, also composed by Joseph Bishara, was a significant source of data for musical analysis.

In addition to the works of the aforementioned director/composer duo of Wan and Bishara, further examples of modern horror cinema are provided in this thesis for their varying merits relating to features of sound design. Included are such works as *Sinister* (Derrickson, 2012), Under The Skin (Glazer, 2014), *It Follows* (Mitchell, 2014) and *Get Out* (Peele, 2017). The following subchapters will consider what devices are most important in the devising of an effective sonic experience when aiming to develop feelings of fear and tension in audiences.

> Suspense music and sound basically function in the same way, only in this case, tension is created with different means, like the use of a sustained high tone, a deep drone (or the combination of both elements), an annoying repetitive motive (ostinati), or specific noises like the howling wind. These means are supposed to cause unease in a subtle way: the spectators are to feel that something bad lurks nearby and ideally get into a state of stress. The startle often comes at the end of such a phase of suspense, which consists of, or is supported by a so-called acoustical or musical stinger. This stinger is supposed to make the audience leap out of their seats. (Heimerdinger 2012: 6)

4.2 Selected Elements and Relevant Analyses

This chapter outlines significant factors observed within the composition of music and sound design in horror cinema, observed throughout extensive literary and filmic research. This includes analyses of numerous scenes from selected horror films, predominantly from after 2010. The relevance of each film has been considered based on research into their popularity, their average review among professional critics and public audiences, and their attempts at progressing the horror genre as a whole through innovative techniques or ideas. Each specific scene was chosen because they were found to contain effective and noteworthy features to be discussed within the thesis.

4.2.1 Nature

In film, the threatening elements of nature are knowingly fictionalised and therefore dependent on the decisions of filmmakers and composers to incorporate them in a way that retains the potential to stimulate a physiological response in viewers. This sub-chapter focuses on the presentation of those diegetic sounds derived from the natural world and the ways in which they are perceived within the human listening experience.

Similarly to sight, the act of hearing shapes our perception of the surrounding environment at any given moment. Sight allows us to observe and develop detailed knowledge regarding the surface-level visual components of an object. Whereas, as suggested by Romain Brette, a sound has the potential to reveal to a certain degree the spatial positioning, shape, internal structure and volume of its source. Although both senses provide valuable information, it is the visual component which primarily allows an individual to move about within a space, as sonic events cannot be physically interacted with (Brette, 2012). The temporary nature of sound waves in contrast to visual data (which are often persistent), means that that which is heard is inevitably less predictable. This factor, paired with our inability to cease fully the continuous auditory processing of the world around us, can be used to highlight the effectiveness of sound in evoking feelings of fear and uncertainty in the horror context.

In *Audio-Vision*, Michel Chion provides three modes of listening as a foundation for classifying the auditory experience. Reduced listening focuses on the quality of the sounds heard regardless of their source or purpose, whereas semantic listening considers the language within which a message may be interpreted. The way threat is assessed and perceived in both physical and cinematic reality, utilises the remaining mode: causal listening. This is the most common form and consists of listening to a sound in order to gather information about its cause or source. The attempt at identification is prone to deception without proper support from accompanying visual evidence (Chion, 1994, p. 25-26). However, if the video and audio components are placed in synchresis (described as “the forging between something one sees and something one hears.”) (FilmSound, 2020) as often done in cinema, then viewers’ perceptions may be manipulated further by what the filmmaker wants them to believe (Chion, 1994, p. 28). The prevalence of causal listening in film is therefore unsurprising.

> “Indeed, it would seem that film and television use sounds solely for their figurative, semantic, or evocatory value, in reference to real or suggested causes, or to texts—but only rarely as formal raw materials in themselves.” (Chion, 1994, p. 31)

In his writings on sonic art, composer Trevor Wishart considers the reaction of human beings to naturally-occurring sound and its subsequent impact on present events (Wishart, 2002). He describes those sounds which inevitably impute intention due to their living source as ‘utterances’, while noting the clear correlation between a source’s intelligence and its listeners’ clarity in understanding the meaning behind their sonic expression. For example, predatory and animalistic sounds within a limited vocabulary can be more easily identified by human prey if housed within the low cerebral capacity of a lion, as their intention can be confidently guessed as one within a narrow range. The physical threat in this scenario is no less great, but may subsequently be easier to quantify with less room for misjudgement. Whereas in contrast an ‘utterance’ produced from a higher level on the intelligence hierarchy would, by definition, result in a far wider and more complex range of potential intentions. The consequence of this would be a reduction in the listener’s ability to predict what may occur next, paired with an inability to react with any certainty. This is bound to result in a heightened sense of confusion with a clear pathway towards a fear response, despite the ambiguous level of threat determined in this situation compared to the former example.

> In general, non-music sounds produced by individuals creatures may be taken to indicate or express something about internal state, reaction to environmental events, responses to utterances by other creatures and so on, becoming more involved, convoluted and to some extent detached as we move up the cerebral hierarchy, finally reaching the etiolated heights of Artistic manifestation. At whatever level, the sense of utterance, whether as indicator, signal, symbol, sign or syntactic or semantic-syntactic stream enters into our perception of the events. (Wishart, 2002).

The innateness of human vocal utterance allows for quick identification and response upon being heard, bringing with it the presumption of a certain intelligence. Distinctions can be made between the purpose of non-semantic levels of utterance in the horror context compared to that of a more simplistic animal cry; although both have their uses. Where the laughter of the Overlook Hotel's caretaker in *The Shining* (Kubrick, 1980) may be heard in a way which instils feelings of psychotic intent or insanity, the growl of an approaching werewolf in *Dog Soldiers* (Marshall, 2002) is likely to signify a much more immediate sense of danger.

The range of sonic qualities that can be derived from the human voice lends itself to the horror genre through its potential to represent the alien and the familiar in turn. Hand refers to an excerpt of Ramsey Campbell's "The Trick" (Campbell, 1980) from his collection of horror stories entitled *Waking Nightmares*, where the protagonist describes a face she saw at her bedroom window as a child. Although primarily a visual description, Hand regards the most powerful moment as that which relates to a voice emanating from the face as a car's engine struggling to start (Hand, 2014, p. 16). Its significance is based in its mundanity and familiarity. That any individual in the modern world could so easily manifest this sound in their mind's ear is what causes the result to induce fear.

In addition to the natural reactions manifested upon hearing a scream, sob or whisper in their expected environments, it is important to consider the effect of their placement in both space and time. Schaeffer's concept of acousmatic sound can be defined as a situation wherein one hears a sound without seeing its cause and the merits of this device have been exploited frequently in works of horror fiction (Chion, 1994, p. 32). Toop identifies examples of this in the writings of Mladen Dolar on Franz Kafka's *The Castle* (Kafka, 1926), wherein the protagonist 'K.' hears the hum of countless children's voices through the telephone (Dolar, 2006, p. 169) (Toop, 2011a, p. 8). This technique is inversely replicated in James Wan's *Insidious* (Wan, 2010), when Renai hears the threatening mutters of an adult voice through a baby monitor (INSIDIOUS Official, 2019). Both of these scenarios involve the aural identification of a human voice within unexpected contexts, providing a source of confusion and disturbance to the respective characters. The scene from *Insidious* supports Chion's argument on how acousmatic sound draws our attention to sound traits normally hidden from us by the simultaneous sight of the cause (Chion, 1994, p. 32). The focus on the antagonist's voice rather than their physical presence in the house makes Renai slow to react, but heightens her ability to glean in-depth information. She can accurately calculate their emotional state through the tone of voice, volume and stresses while semantic analysis of their language reveals intent. In this case the dialogue ends abruptly with the shouted line, "I want it NOW!".

A consequence of this device's application when compared with the use of an animal call is the presence of a higher intelligence. This brings with it a wider range of potential outcomes including acts of malevolence for which only creatures of high intellect are capable.

In his writings on causal listening, Chion notes the human inability to recognise the source of most sounds when removed from their expected context. It is, however, observed that a key exception to this is upon hearing the voice of a specific person. This does not translate to other animal species where each member produces a call too indistinct for humans to recognise individually - regardless of whether the sound heard comes from a beloved pet or a wild animal (Chion, 1992, p. 26). The use of the human voice in film therefore traverses the space between hostile alienation and complete familiarity. The uncertainty brought forth in the mind of a protagonist upon hearing threatening whispers from outside their home can be effectively dispelled by the sound of their partner arriving home and calling their name. Conversely, the comparatively easy identification of a dog growl even when separated from its visual component would do little to aid in the

assignment of its source to either the family pet or a feral creature which poses a far greater threat.

Despite Schaeffer's prediction that acousmatic sound would encourage the act of reduced listening, it was found to instead heighten listeners' competence in causal listening as the lack of visual component increased their desire to identify its source quickly. The combination of these effects could be applied in horror cinema with the potential for significant results. The consequences manifested due to separation of audio from origin are based on confusion and lack of information. But, what is born from this, is a desire to bridge the disconnect in order to either quash or confirm fears of imminent danger. Therefore, if executed correctly, audience members may find themselves trapped in an experience which begins with the introduction of a sonic trigger that could signal unimaginable horrors while, simultaneously, feeling compelled to investigate its source. This technique feeds directly into the careful balancing act attempted by filmmakers within the horror genre: to paralyse viewers with fear in a way that slightly outweighs their instinct to flee the cinema screening altogether.

> Schaeffer thought the acousmatic situation could encourage reduced listening, in that it provokes one to separate oneself from causes or effects in favor of consciously attending to sonic textures, masses, and velocities. But, on the contrary, the opposite often occurs, at least at first, since the acousmatic situation intensifies causal listening in taking away the aid of sight. (Chion, 1994, p. 32).

Hand (2014, p. 9) describes the use of echo, wherein one's own voice is momentarily detached from the self, as immensely uncanny. He suggests that this technique, along with other forms of reverberation, is effective in producing feelings of alienation attributed to acousmatic sound in the horror context such as those things that go 'bump in the night'. Disembodied voices are often used in horror cinema to help create an evocative soundscape, as identified in the 2012 film adaptation of *The Woman in Black* (Watkins, 2012) (Hand, 2014, p. 13).

Returning to *The Castle*, we can identify further examples of literary description which outline the use of familiar human vocal expressions such as laughing and screaming in an unusual setting. In this instance the utterance is seemingly directed at K., by a group of strangers in unison and does not appear to have been facilitated in an organic manner. The consequences of this are the inevitable questioning of their intentions (and mental stability), paired with a heightened awareness of our lone protagonist's vulnerable position.

> …K. found the two men on either side of him, with all their strength, as if there were no other way of making him understand, they pushed him in silence towards the door. Something in all this delighted the old man, who clapped his hands. The woman bathing the children laughed too, while the children suddenly started to scream madly. (Kafka, 2014, p. 185)

Sinister (Derrickson, 2012) contends with a similar issue wherein writer Ellison Oswalt, upon discovering a series of tapes in the attic of the house he has bought, despite knowing the building's past as a location for violent crimes, proceeds to watch them for further detail (DynamicVisionsHD, 2012). One of these videos entitled "BBQ '79" abruptly presents the slow and calculated murder of a family and is accompanied by a seemingly intentional diegetic soundtrack (extracted from "Silence Teaches You How To Sing" by Ulver) consisting of vocal loops. These include hoarse breaths and groans which do not seem to be presented visually on-screen, triggering a similar sense of confusion as to their purpose, intention or origin. Chion notes that reduced listening can only be fully realised upon repeated examination of the same sound and therefore must be recorded, as any attempt at recreating the sound in real time would inevitability produce a unique iteration (Chion, 1994, p. 30). The utterances utilised in this scene from *Sinister* are repeated mechanically which after initial hearing allows them to be classified as

sonic objects appropriate for the aforementioned listening technique. Viewers' initial instinctual reactions to the sounds of these human expressions are quickly dispelled and replaced with a more focused analysis of their sonic qualities. Despite its original form as a silent film, when approaching my sonic reimagining of *The Cabinet of Dr Caligari* (Wiene, 1920) it seemed important not to ignore the presentation of characters who, at times, seem to converse on-screen. Therefore, the potentially significant effect of human voice in the horror context is something that can be translated into my practical portfolio as both synchronised diegetic foley and acousmatic sound.

> "The voice is a problematic but perhaps unavoidable subject when dealing with acousmatic sound. Voices, material and metaphysical, are ambivalent things, suggesting but never guaranteeing presence, meaning, and subjectivity." (Rugger, 2016, p. 65)

It is worth noting the religious element of the human voice in the context of horror cinema as its prevalence is significant. Choirs are often affiliated with a church for which they will perform choral music during worship services. The representation of religious texts through this medium have established clear societal presuppositions. Rugger intuits from the writings of Brian Kane on acousmatic sound, that the practice of clausura (that is, the practice of separating a part of a religious house to the exclusion of the community), "can be understood as a technique to render the sensuous audition of human voices as angelic and transcendent." (Rugger, 2016, p. 64). Therefore the use of this music style within film is likely to manifest themes of good and evil, along with a supernatural element for which the horror genre is particularly well-suited.

Wan incorporates this into his well-received sequel, *The Conjuring 2* (Wan, 2016) with the introduction of a demonic entity presented in nun's clothing. The juxtaposition here acts as an intentional aberration, one that is accentuated by the inclusion of musical elements. A sustained, non-diegetic vocal line performed by a female vocalist is heard to waver slightly in pitch upon the nun's initial appearance. After Lorraine Warren follows the demon into another room in the house, a tape recorder in the room plays a rendition of the well-known Christmas carol "Hark! The Herald Angels Sing". The major tonality and lyrical content celebrating the birth of Jesus Christ paired with the purity and innocence encapsulated within its performance by a children's choir, stands at stark contrast with the atmosphere at this point in the film. Additionally, its religious context brings focus to the antagonist who is not on-screen at the time but whose presence and influence is consequently impossible to deny. Rugger comments further on this ambivalence in the human voice by describing its ability to suggest but never guarantee presence, meaning and subjectivity regardless of its material or metaphysical manifestation (Rugger, 2016, p. 65).

Sounds originating from the natural world can inform one of their surroundings. The presence of animal species in certain geographical areas may allow an individual to focus in on their current location, subsequently evaluating their level of safety and closeness to familiar environments. An urban dweller is more likely to associate the sounds of domestic pet cries (e.g. cats meowing) and common vermin (e.g. pigeons) as comfortable, because their residential setting has enabled them to become appropriately accustomed. In contrast, members of rural communities will classify significantly different animal calls within this category. Additionally, from a broader perspective, built-up urban areas with higher population densities produce a larger overall quantity of noise and so the presence of nature-based sounds is likely to be as clearly identified by those living there. This observation was discussed in part by McCartney's study of the electroacoustic piece, *Cricket Voice* (Westerkamp, 1987) composed by Hildegard Westerkamp.

The piece utilises field recordings of crickets through sonic manipulation and when presented to a group of fifty-one listeners, manifested notably emotional responses. Seven participants alluded to the idea of an alien encounter, outer space or a sense of being 'out of this world' (McCartney , 2002, p. 46). McCartney notes that although crickets are present in both cities and countryside,

the piece more accurately portrays those heard in a rural setting due to their nakedness . These observations culminate in the belief that the science fiction film series, *Alien*, may be a contemporary depiction of urban dwellers' alienation from unfamiliar wilderness environments. Despite Westerkamp's intention to bring the sounds of crickets to the fore in order to stoke curiosity, its effect is to facilitate in some listeners at least the desire to eradicate the source; a feeling shared by the human protagonists of the *Alien* franchise (McCartney, 2002, p. 47).

The Oscar-winning film *Get Out* (Peele, 2017) provides a direct example of this type of sound being utilised in modern horror. An example from an early scene depicts the drive taken by Chris and Rose to the latter's parents' countryside estate. Having lived in the city for his whole life, Chris is immediately thrown into unfamiliar surroundings with reduced communication to the outside world. During the journey their car collides with a deer which is flung into the woods by the roadside. At the moment Chris and Rose exit the vehicle to inspect the dying animal, the sound of crickets becomes noticeably louder. Some participants of McCartney's study would attest to the unsettling effect this may have on audience member and protagonist alike. Despite the crickets in Get Out yielding no real threat, the amplification of their call and the removal of familiar urban sounds such as human conversation or the mechanics of the car help to emphasise the "alien" aspect of the surroundings. As Chris approaches the dying deer, the volume of the crickets continues to increase and the texture is altered by the clear focus on individual cricket "voices" that sound far closer and louder than they realistically would in those circumstances. The sound of the wounded deer which seems to particularly affect Chris, was projected from the voice of director Jordan Peele himself (Sharf, 2019). This scene reflects the story told later in the film by Chris regarding the death of his mother from a hit-and-run that he witnessed. In both instances he is unable to react quickly enough to help, and is almost paralysed by fear.

A further key observation from the aforementioned study of *Cricket Voice*, is the prevalence of wind sounds in *Alien* (Scott, 1979). The propensity of aggressive terrestrial weather is highlighted clearly as crew members begin to explore the planet LV-426, indicating a potentially hostile environment. Sonic and consequential similarities are noted in the the amplification of the crew's breathing heard closely from within their space suits, providing audiences with the illusion of close proximity so as to share the experience of on-screen characters intimately (McCartney, 2002, p. 48).

The sound of weather as a device to promote feelings of danger can be identified elsewhere in the horror genre.

> Like a biblical plague, the enigmatic rattle of acorns falling on the cabin roof in Lars von Trier's 2009 film *Antichrist*, is a certain prediction that sciences of the mind will not repel the chaos forces of nature soon to be violently unleashed. (Toop, 2011, p. 17).

It Follows (Mitchell, 2014) blended the supernatural and the biological realms with an antagonist that presented itself as a metaphor for sexually-transmitted disease. As Jay has the mysterious details of this monster explained to her by the man who placed her within its crosshairs, Mitchell presents viewers with a glaringly open abandoned car park (two minutes of a movie, 2017). The shell of the building is bare enough to fully allow the elements in despite its vast size and the protagonist's location within its very centre. To accentuate the threat, wind sounds are heard clearly against a deafening absence of other sounds - both diegetic and non-diegetic. The resulting effect of this audio-visual collaboration is to lay foundations early on in the film's narrative as to the power and inevitability of chaotic nature.

These ideas are allowed to penetrate further into much sturdier examples of human-made shelter within the likes of André Øvredal's *The Autopsy of Jane Doe* (Øvredal, 2016). A comparatively safe environment established in the film's opening by the father-and-son coroners' competence and optimism, paired with their secure location inside the lower levels of the building is not enough to keep out the forces which seek to infiltrate. The sound of a storm outside is heard by the two men

initially to little effect, however it soon begins to directly manipulate the signal output for their radio. Until this point, the speaker has provided welcome diegetic music with a generally upbeat tone to emphasis the positive and care-free environment these protagonists wish to retain despite the nature of their profession. As such a crucial emotional stabiliser, for this piece of equipment to be so abruptly halted is to upset the dynamic within the room as a whole. Whether construed as a random act of nature or as a more purposeful and malicious attempt to impede, when weather is shown to manipulate in these contexts it can aid in the vivid evocation of the horror experience.

Giving conscious motive to inorganic components of the environment was, as a filmic device, observed by Lehrich in his analysis of the 1964 Japanese New Wave film, *Woman in the Dunes*. The music and overall sound was devised by Tōru Takemitsu who incorporated a crackle into the score. The film's premise revolves around the fate of a man and woman trapped in a house surrounded by inescapable sand. Lehrich remarks that despite the visual focus on two significant characters, the sand itself is represented as a third by Takemitsu's sonic input alone. This idea is accentuated by the camerawork, which is shown to drift away during the sex scene to suggest an external and perhaps alien perspective (Lehrich, 2014, S231).

The example above alludes to the idea that diegetic sounds, including those originating from the natural world, can be manipulated in ways which allow them to become part of the score and subsequently non-diegetic musical objects. This is something I have further explored in my sonic reimagining of *The Cabinet of Dr Caligari* (Wiene, 1920) through the inclusion of wind sounds, birdsong, crow calls and church bells at particular moments with varying manipulation. It is also possible for this situation to be reversed, wherein music enters the narrative world within a film, becoming quasi-diegetic. This technique may facilitate the creation of a new layer in the reality of cinematic experience, something which will be discussed further as the thesis progresses.

4.2.2 Hauntology

The broad and often varied definitions attributed to the term hauntology originate from Jacques Derrida's writings on Karl Marx (Derrida, 1994). Its translation into the world of film and television is addressed more recently by the likes of Fisher, who helps to identify its key sonic features. As a filmic concept, hauntology is often manifested through the placement of clear signifiers referencing a different era to the one within which the movie is set. The intention of this is to bring about feelings regarding a lost past, or an unfulfilled future. Fisher remarks upon, "a whole battery of aesthetic signs which begin to distance the officially contemporary image from us in time," in Lawrence Kasdan's 1981 film, *Body Heat* (Fisher, 2012, p. 17). It comes as little surprise that these dark themes lend themselves effectively to the genre of horror, exemplified in Stanley Kubrick's *The Shining* wherein a caretaker's brings his family to an off-season job at the remote Overlook Hotel. The building his haunted by supernatural forces responsible for turning the previous staff to commit murder. Fisher sees the idea of haunting here as intrinsically resistant to the contraction and homogenisation of time and space.

> "It happens when a place is stained by time, or when a particular place becomes the site for an encounter with broken time." (Fisher, 2012:, p.19).

In the case of *The Shining*, it is more than ghostly figures present within the walls of The Overlook as the entire hotel is aesthetically reminiscent of an earlier period. It is as if reality has been unable to move on since the violent crimes were committed, securing the inevitability of history to repeat itself into the present. These ideas may understandably generate feelings of unease in those who experience them and have been utilised at times to great effect in more recent examples of horror cinema.

Composer James Leyland Kirkby (aka The Caretaker) produced a selection of pieces designed to be heard within The Overlook Hotel which Fisher notes as comprising signature traits of sonic hauntology. These include the use of 1930s ballroom music subjected to delay and distortion, with the conspicuous use of crackle which renders time as an audible materiality (Fisher, 2012, p. 18).

The hauntological framework can be observed to spread into areas such as parapsychology, where observations have helped to establish significant public interest in supernatural phenomena. The Stone Tape theory speculates that haunting may be actual recordings of traumatic events physically imprinted onto objects or locations. Fisher credits the 1972 television play *The Stone Tape* (Sasdy, 1972) for its significance in relation to hauntology. With music composed by the BBC Radiophonic Workshop, their experimentation with electronics translated *musique concrète* into incidental music (Fisher, 2012, p. 18).

Technology designed to record audiovisuals over the past century has progressed rapidly, with each format rendering the former obsolete within mainstream culture. Each release becomes associated with a particular era, imprinted into the collective memory. An individual born now is likely to perceive the past through lenses restricted by the technological limitations of each decade. With this lack of clarity comes the potential for what could be called ‘hauntological unease'. The high standard of recording for both sound and vision in the present day is one to which most have quickly become accustomed. Because of this, the imperfections of earlier formats are vulnerable to identification and subsequent criticism. Even the standard-definition television from which our current broadcasting quality transitioned most recently, can now be seen for its limitations in regards to visual detail. Two statements an observer may conclude from their experience while viewing media predating the current standard are as follows: “The information housed within this format does not produce a clear enough picture of events,” and, “This information no longer represents our world today.” The latter statement represents a key theme of Fisher’s hauntological analysis: that representations of eras different to the present can remind us of the past we have lost or the future we no longer feel destined to achieve.

In addition to this framework, recorded history is tainted by the biases of those who created it. One considerable disconnect between a field recording of birdsong captured fifty years ago and the ornithological sounds one hears outside their window at dawn (besides the disparate technological restriction), is that the former has been chosen for reasons that the present-day listener is unlikely to accurately confirm. The vast archives of recorded material that this generation has inherited, still paints an incomplete picture when put alongside our day-to-day perception of the world around us.

Why has this particular footage of a series of fleeting moments been recorded, trapped in a slowly decaying form and preserved for future generations to peruse?” This is a question raised by the home video tapes found in Scott Derrickson’s 2012 film, *Sinister*.

The Super 8 films span from 1966 to the present day, providing brief windows into the lives of families who previously occupied the house now owned by writer, Ellison Oswalt. Although little is revealed within the footage to clearly place it in a particular era, the format itself alludes to technology that was popular for the production of amateur home movies since its initial release in 1965, until replaced by the advancements of digital photography (Lipton, 1975, p. 11). The hauntological purpose of Super 8 here becomes more apparent when considering the disparity of the years during which each tape was recorded. The people depicted in “Pool Party ’66” are related in no way to those in “Sleepy Time ’98” besides having lived in the same house decades apart from each other. It suggests therefore that someone (or some*thing*) has organised the collation of these tapes into a single cluster of memories, using the same camera to preserve a sense of displaced time.

The tape entitled “BBQ ’79” uses effects such as distortion and static to represent imperfections in the visual projection (DynamicVisionsHD, 2012). This piece of film along with the others, carries with it a familiar title one would expect upon obtaining old family videos. The juxtaposition caused by this blending of familial innocence and heinous acts of violence, is something that attempts to tarnish any feelings of nostalgia or warmth one may hope to experience.

The use of technology as a conduit for diegetic sound or music in film is often seen in the horror genre. James Wan’s first instalment in the *Insidious* franchise utilises the unique qualities of vinyl recording in one noteworthy scene. As Renai carries out household tasks within the home that her and the rest of the Lambert family have recently moved into, she starts up a vinyl record of "Nuvole Bianche” by contemporary classical composer, Ludovico Einaudi (INSIDIOUS Official, 2019). The camerawork and foley at this point is focused closely on the physical action of needle to groove, while the scene continues on with an absence of non-diegetic elements. Out of sight and with no marked visual change, the recording is heard to be aggressively interrupted and replaced with Tiny Tim’s 1968 rendition of the popular song originally published in 1929, “Tiptoe Through The Tulips”. The choice of diegetic music here is particularly significant for its upbeat tempo, major tonality and light instrumentation comprising ukulele and high falsetto vocals. The resulting combination of these elements is widely recognised in western music to portray moods such as joy, playfulness and innocence. Kassabian states that if a song that is already popular to the public is used in a film, then any individual with previous knowledge of it will immediately bring their own associations (Kassabian, 2001, p. 3). This surety from the perspective of film audiences that Tiny Tim’s song gives them a certain feeling, is likely to be taken by surprise when put in a horror context. The influence derived from returning the soundtrack to that of an earlier era, complemented by the aged attire of a ghostly boy dancing to the music, hints at a lasting hauntological presence for which the Lambert family cannot hope to fully escape. The static imperfections, etched within the vinyl, are laid bare to both listener and character. The tension and unease manifested from these directorial and compositional decision need not rely on the common conventions of violent threat or darkness, as this narrative sequence is played out in broad daylight with seemingly no real danger to the lone protagonist present to witness it. The aged footage of *The Cabinet of Dr Caligari* (Wiene, 1920) was impossible to ignore during the compositional process for my practical portfolio, encouraging me to use its visual decay as a hauntological device by representing it in the sound design.

David Robert Mitchell’s *It Follows* (Mitchell, 2014) takes a more ambient approach with its hauntological elements. The film’s overall aesthetic seems intent on displacing viewers’ reflexive presumptions - when it is set. Despite the presence of touchscreen technology in the form of a young protagonist’s handheld device, in general characters are seen to transport themselves in an older generation of cars and watch black and white film on CRT televisions. These directorial decisions alongside expansive shots of derelict buildings across Detroit, seem to blend with borders of reality and fiction while persistently echoing images of a past to which this group of teenagers seem to neither belong nor be unfamiliar with.

Video game composer Richard Vreeland (aka ‘Disasterpeace’) scored the movie. His work in the genre of chiptune combined with the influence of John Carpenter, encouraged the man also known as Disasterpeace to compose a soundtrack solely based around synthesised instruments (Yanick, 2015). The result of this is a distinct sonic quality that references back to Carpenter’s early adoption of the synthesiser in films such as the 1978 slasher, *Halloween* (Carpenter, 1978), something that some reviewers have approvingly alluded to (Harris et al., 2020). Although Vreeland’s other compositional choices draw on a variety of channels for inspiration, his instrumentation helps to accentuate the hauntological effect of Mitchell’s visual ambiguity.

4.2.3 Uncanny

> With the word unheimlich [‘uncanny’], the German language seems to have produced a rather fortunate formation. Without a doubt, this word appears to express that someone to whom something ‘uncanny’ happens is not quite ‘at home’ or ‘at ease’ in the situation concerned, that the thing is or at least seems to be foreign to him. In brief, the word suggests that a lack of orientation is bound up with the impression of the uncanniness of a thing or incident. (Jentsch, 1906, p. 2)

Ernst Jentsch was one of the earliest writers on the ‘uncanny’ in 1906. Sigmund Freud expanded on the concept a further thirteen years later. Jentsch observed the universal feeling of unfamiliarity in human response, while this did not always result in an uncanny effect from person to person or with repeated iteration (Jentsch, 1906, p. 2-3). Its successful application within horror cinema is therefore reliant on detailed observations of misoneism. Removal of sensory information such as the absence of visual light at night-time or, in contrast, an environment comprising a plethora of noise that overwhelms an individual’s hearing is likely to cause discomfort in a significant proportion of people (Jentsch, 1906, p. 6). The surreal animations of David Firth often utilise the latter example by introducing sudden distorting moments of sound, as heard in the second episode of his *Salad Fingers* series (Firth, 2008) when the eponymous protagonist hallucinates due to blood loss and witnesses a living projection of his normally inanimate finger puppet, Hubert Cumberdale.

Both Jentsch and Freud regarded one of the strongest effects of the ‘uncanny’ to be that caused by the uncertainty of an object’s position as an animate or inanimate object (Freud, 1919, p. 5). Visually, this concept would be reminiscent of wax figures (Jentsch, 1906, p. 9). Those inventions which attempt to at least slightly resemble the human image are, in their limited accuracy, likely to manifest feelings of discomfort for some individuals. This phenomenon translates into the auditory landscape when one manipulates utterances, or attempts to simulate utterance through external means. The capabilities of the voice to accentuate feelings of fear and tension in horror cinema extend further than those discussed in the earlier ‘nature’ sub-chapter with the addition of this ‘uncanny’ element. Whether sourced from a human body or not, the listener’s attempt at identification of sound that draws on the familiar without becoming immediately apparent is capable of exacerbating their anxieties in a way that transcends a standard state of threat which brings with it at least a small amount of intellectual understanding (Jentsch, 1906, p. 8).

> Conversely, the same emotion occurs when, as has been described, a wild man has his first sight of a locomotive or a steamboat, for example, perhaps at night. The feeling of trepidation will here be very great, for as a consequence of the enigmatic autonomous movement and the regular noises of the machine, reminding him of human breath, the giant apparatus can easily impress the completely ignorant person as a living mass. (Jentsch, 1906, p. 8)

The final act of James Wan’s *Insidious* sees Josh Lambert enter a realm known as ‘The Further’ in order to rescue his son (SalemAlFakirFan, 2011). This reality is seen to be geographically similar to the terrestrial world but with a series of alterations, many of which could be characterised as uncanny. Numerous human figures which cross paths with Josh behave abnormally. One individual is shown to stand in the corner of a room facing the wall while sobbing. A family scene is frozen in time where each member is shown to wear excessive make up, altering their otherwise seemingly ordinary presentation. The only sound is that of the father figure whistling, despite his lack of physical movement. The cheery tune, heard at this time, gives a far more unsettling impression when placed within this uncanny scene, as too many elements expected from living objects have been forcefully altered through the family’s fixed, mannequin-like state.

Feelings of the uncanny can be achieved both through displacement of sound from where it is not expected and through the altering of quality to a normally familiar sound. In Jennifer Kent's 2014 film *The Babadook* (Kent, 2014), the eponymous antagonist is presented through illustration and hallucination as a human-like figure with notable deviations from the norm. These include unusual height, long claw-like hands and a large-mouthed pale face. To match this image, a brief scene where protagonist Amelia Vanek answers the phone to the voice of the Babadook reveals a slow and croaking iteration of its own name (Icon Film Distribution, 2014). This peculiar vocal performance transmitted through the personal and heavily filtered output of a phone line becomes a powerful statement of the 'uncanny', leaving viewers in a repeating state of confusion as to the nature of the monster.

The previously discussed tape from *Sinister* entitled "BBQ '79", is a prime example of uncanny vocal work (DynamicVisionsHD, 2012). The collection of voices heard comprise a range of qualities including breathlessness, pain and conversely an almost song-like falsetto wail. The way these utterances are mechanically looped through production techniques only enhances their peculiarity, as despite the listener's sonic familiarity increasing with each repeat, the meaning behind them remains a mystery.

Freud disputes Jentsch's claim that it is a lack of intellectual certainty that strengthens the 'uncanny' effect (Freud, 1918, p. 7).

Jentsch goes on to note the propensity for automated objects designed to imitate a certain animate action to be perceived as 'uncanny'. He suggests that its intensity is often in correlation to its physical size, regarding mechanised dolls or toys as too small to produce enough of a reaction. This can be disputed however, in the popularity of James Wan's *The Conjuring Universe* franchise. Films based on the real-life cases of paranormal investigators Ed and Lorraine Warren were met with critical acclaim and sparked renewed interest in their most well-known supposedly haunted artefact, Annabelle the Doll. The subsequent *Annabelle* spin-off films often utilised the uncanny image of dolls as a horror technique. Arguably however, its achievements could be more attributed to Annabelle's alleged influence on the surrounding environment which outweighed its physical size. For example, *Annabelle: Creation* (Sandberg, 2017) presents a scene wherein the demon housed within the doll is released, initially taking the form of a young girl who had died years earlier. As the girl turns her head, she is revealed to wear a monstrous face, accompanied by a voice much larger and more aggressive than would that would normally be attributed to a child. This scene resembles one of the most significant twentieth-century works of horror, *The Exorcist* (Friedkin, 1973) and outlines the longevity of effectiveness in relation to the use of uncanny voice displacement.

The subsequent sequel *Annabelle Comes Home* (Dauberman, 2019) sees Annabelle housed in a glass case within the Warren's secure artefact room (Movieclips, 2020). After her release, she is shown to affect several automated objects in a way that transforms them into the 'uncanny'. As Daniela finds herself trapped in the darkness, a television switches on of its own accord. As low level static is heard, the picture is revealed to project Daniela's exact position within the room but curiously, it allows her to see herself a few seconds in the future. This is, arguably, a technique which builds upon the components discussed earlier in this subchapter, by including the concept of time. As Daniela watches her immediate future unfold, a toy monkey is seen to begin moving erratically, causing it to fall off the shelf. This event is repeated in the real world moments later, but this time the distorted cry of the monkey breaks the low level ambient sound. Despite the lack of threat produced by the physical presence of the toy, its actions still have the potential to produce a sense of unease due to both the sonic violence impacted by its screech and inexplicable activation in an otherwise seemingly empty room.

Delving into the concept of the uncanny holds vast potential for horror filmmakers who, if hoping for commercial success, must attempt to trigger fear response in at the very least the average viewer.

The effectiveness of a film to bring this about cannot be measured only by the more mentally vulnerable within a society, as according to Jentsch, individuals within this group risk similar feelings of unease even throughout daily life. Consequently, audience members of a more robust mental stability are those which the 'uncanny' may aid to frighten on behalf of filmmakers' efforts.

> The affective position of the mentally undeveloped, mentally delicate, or mentally damaged individual towards many ordinary incidents of daily life is similar to the affective shading that the perception of the unusual or inexplicable generally produces in the ordinary primitive man. (Jentsch, 1906, p. 7)

Although the concept is mainly described within the visual field, it can be argued that the equivalent 'uncanny' effect in sound would follow a similar formula wherein a recognisable source is manipulated in order to feel incomplete. In the same way an automaton is commonly represented to mimic the actions of a human short of complete accuracy, a deep and resonant voice projected from the body of a small child has the potential to deviate from the norm to a similar degree. This idea translates into the previous chapter regarding hauntology, particularly in regard to the presentation of sound sources through aged technology. The imperfections fixed into a vinyl recording, or the transmission of utterance through radio frequencies infiltrated by waves of static can be said to produce a similar 'uncanny' reaction as they fail to perfectly reproduce their intended listening experience. The lingering influence of the uncanny can therefore be partly attributed to the creative decision in film to present older and less refined technologies, despite the capability of modern recording techniques to recreate sound and vision with remarkable degrees of precision. The score for Jonathan Glazer's sci-fi horror work *Under The Skin* (Glazer, 2014) consists of intentionally poor quality viola recordings. Composer Micah Levi did this intentionally both within the production and performance components so that the music fails to be perceived with true clarity. This compositional decision seems to match Scarlett Johansson's portrayal as an extraterrestrial who presents herself in human form but struggles to deviate from her clearly alien behavioural tendencies. The pairing of Levi's imperfect soundtrack with Johansson's role resulted in an effective representation of the 'uncanny', undoubtedly contributing to the critical success of Glazer's film.

> It's a lot of harmonics, and distortions of speed–which is a distortion I'm really interested in, anyway–and then just doing impressions of that. But it depends on what it needed. A lot of the sound is a mixture of bad recording technique, on my part, and not-fine playing. Violas are so harmonic because they contain a lot of air. A viola is not solid, the sound it produces is like a photocopy of a photocopy of a photocopy of something, because you get an airiness, and creepiness, and there's a struggle in that. The vibrato doesn't ring out. It's dead. A lot of the score uses microphones, and any sort of difference of expression there is created by the clashing of microphones. (Lattanzio, 2014)

The 'uncanny' mainly manifests itself within *The Cabinet of Dr Caligari* (Wiene, 1920) in relation to its visually striking, angular set design and unexpectedly bold use of makeup on the characters. These unique features, particularly in relation to popular contemporary examples of cinema, allow for new interpretation by modern audiences. I intend, through my sonic reimagining, to utilise these visual components by complementing them with appropriate music and sound design composed to further the 'uncanny' effect.

In his writings on the 'uncanny', Freud tells an anecdote regarding his walk through the streets of a town in Italy. He focuses on the idea of returning to a familiar place repeatedly where each time things have changed drastically (Freud, 1919, p. 11). A common narrative in visual media, examples of this technique applied to the horror genre can be found in the likes of teaser *P.T.*, released for the PlayStation 4 in 2014. The game was originally intended as a demo to advertise

the upcoming release of an instalment in the popular *Silent Hill* franchise and restricted players to a single ground floor corridor of a house. Upon reaching the door at the end of the building the protagonist finds themselves back at the start, but with each iteration unsettling events gradually unfold. A radio begins to transmit varying messages, the scream of a baby is heard through a monitor and ghostly figures appear intermittently. The development within *P.T.* fixed to a looped environment seems to align itself closely with Freud's observation of the 'uncanny' effect and the techniques used are easily transferred to the cinematic format. Additionally the musical term 'leitmotif' (defined as an associated melodic phrase or figure that accompanies the reappearance of an idea, person, or situation) (Merriam-Webster, n.d., Definition 1) would, if utilised correctly, hold the potential to reproduce a similar experience in listeners. This will be discussed later on in the subchapter on leitmotif.

4.2.4 Instrumentation

Having explored key elements regarding the development of an atmosphere of fear and tension in modern horror cinema, it seems appropriate at this point to discuss the more literal aspect of the composer's toolkit. Choice of instrumentation is often influenced heavily by the visual element in film. Whether chosen to match a cinematically-presented ethnography or historical context, or designed to reflect a single tone colour such as in Alfred Hitchcock's *Psycho* (Hitchcock, 1960), it is essential for a film's overall presentation that the composer takes several factors into account when considering their sound world (Smith, 1991). In the context of the horror genre, pre-conceived notions commonly held by audiences as to what emotions particular instruments are likely to evoke cannot be discounted. It is likely that the impact of such works as Bernard Herrmann's score for *Psycho,* solely written for string orchestra, has contributed significantly to the shaping of public opinion.

The generally positive reception to James Wan's *Insidious* (Wan, 2010) can be partly attributed to its accompanying score by Joseph Bishara. He chose to use a limited palette of strings and piano, but used an array of extended techniques in an attempt to utilise their sonic potential. Bishara's first step in writing music for any film is to decide on the instrumentation. In an interview for Cinema Knife Fight, he remarked upon his early musical and cinematic influences. Fascinated by the imagery of The Cabinet of Dr. Caligari (Wiene, 1920), Bishara spoke of the ways in which the visual and sonic elements bleed together, affecting the music itself. On the topic of his compositional process he discussed his own enjoyment of experiencing extreme dynamic range and finding attention to little things in the mix that are barely there (Dejasu, 2013). Due to the effectiveness of Bishara's scores and his personal influences, I also favoured the use of strings as part of my instrumentation for the sonic reimagining of *The Cabinet of Dr Caligari* (Wiene, 1920).

> A friend of mine found a rusted piano shell, which I recorded using hammers. Live instrumentation consisted of a string quartet, a piano and the rust piano setup. The compositional process involved structured figures that were explored by the musicians who would improvise switching notes, moving pitch, repeating, slowing down and fading away. I do a lot of manipulation, from plugins to running through odd instruments, also lots of experimental instruments twisted up.
> (Comerford, 2011)

The audience is made aware of these musical elements from the very beginning of *Insidious* (Wan, 2010) wherein percussive strikes, most likely produced from the rusted piano shell, accompany the lingering title sequence. The camera gradually zooms towards a sinister face in the window as each string instrument performs a musical phrase that jumps to a high pitch and then aggressively wavers downwards with purposefully severe vibrato. The effect produced is that of a wailing chorus. As the word "Insidious" appears on screen, the listener is hit by a cacophony of strings bearing resemblance to the work of Krzysztof Penderecki. A high violin note is sustained as the

introduction continues, while other strings softly bend upwards in pitch with the appearance of each credit. A slow melodic viola line is introduced, that later repeats the notes G# and E accompanied by a lower A# and E in the cello, causing dissonance that is repeatedly resolved and recreated. This harmonic restlessness is a common device in the development of sonic unease, particularly when paired with use of the aforementioned performance techniques.

> The musico-acoustic suspense techniques used are: tremolo, glissando, ostinato, extreme registers, sustained notes, *sul ponticello.* So, these are effects, sounds and figures well known from Romantic music carrying a specific semantics, as well as from various modern or avant-garde musics - in very dense and extreme forms - in which those semantics have survived. (Heimerdinger, 2012, p. 8)

An early scene where Dalton enters the attic sees the return of percussive strikes produced by the piano shell (INSIDIOUS Official, 2018). This time however, they present a clear homage to the work of composer Toru Takemitsu for the Japanese anthology horror film *Kwaidan* (Kobayashi, 1965). Drawing upon his use of non-synchronised sound and extended silence, Bishara places the hits unaligned with any visual stimulus, enhancing their unexpectedness and highlighting the shell's sonic timbre which could be mistaken for a diegetic event from within the house.
Later in the film, a paranormally sensitive woman (played by Lin Shaye) is brought to the house to try and communicate with the entities residing there. A scene accompanied by Bishara's track "Hooves For Feet" portrays the moment at which she notices something in the corner of the ceiling and, horrified, begins to describe what she is observing for her assistant (portrayed by writer Leigh Whannell) to sketch (Adam The Prowler, 2015). The string quartet ensemble changes randomly between phrases of fast tremolos to large pitch bends. The lack of a tonal centre reflects how the invisible threat is not fully understood and the the way in which each instrument avoids resting for long on a single note or chord dissuades listeners from the possibility of a musical resolution.

James Wan's *The Conjuring 2* (Wan, 2016) provides another key scene with which to analyse the application of musical score in horror (AHS FX, 2016). Upon the appearance of the demon nun Valak in the Warren's family home, a low frequency "thud" is heard which lends significant presence to the figure despite its position far away in the distance. It is important for filmmakers to convey a sense of danger for the viewer even if, logistically, the threat is not close enough to cause that danger. As the cinematography gives us information concerning the space and distance between protagonist and threat, in order to achieve this irrational fear in audiences responsibility falls primarily to the audio. The 'thud' gives presence and power to Valak, without need for the director to rush straight into a visual attack. This functions as a way to maintain a slower narrative pace while still providing consistent tension; a difficult balance to achieve in horror cinema.
The next fragment of audio heard immediately afterwards is a high female wailing voice sliding slowly upwards in pitch. This vocal line seems to replicate a cry more so than a conventional melody, which could be perceived as an exclamation of pain or loss amongst other associated feelings. It becomes underpinned with high sustained strings typical of the genre but fairly low in the mix, and later on a collection of whispers. Here as previously mentioned in the writings of Toop, Wan and composer Joseph Bishara are harnessing the potential of the voice for causing fear and uncertainty.
As Lorraine (portrayed by Vera Farmiga) is left with a view of the nun painting now surrounded by darkness, a low frequency rumble is sustained and gradually increases in volume. She moves closer to the image, staring intently and a distant horn plays a single note that slightly lowers in pitch as it dies away. This choice can often reflect an individual character and may at this point be signifying Lorraine's vulnerable position surrounded by a malevolent force. She switches the lamp

back on and the rumble immediately stops but the horn line continues briefly through use of heavy reverb. Bishara has chosen to precisely follow the visual cues by removing and re-entering music as and when we may expect the level of threat to change. Lorraine's appropriately human response to look to light as a source of safety is accentuated by the sonic change.

Wan follows up with a trio of loud sonic events. The door slams shut seemingly of its own accord, then each of the room's windows follows suit. During this, vibrato strings and horns both hold notes a semitone apart from each other creating another dissonant clash. A low-pitched male choir is heard at this point and combined with high strings, leaving room for the predominantly mid-level sound effects including Lorraine's fast breathing to be heard clearly. Music any higher in the mix and closer to the frequency of her breath may run the risk of reducing the viewer's ability to experience the scene from her perspective, or remove them from the event entirely.

The wailing voice heard at the very beginning of the scene is used next, as the camera follows a shadow making its way across the room. This single line clearly signifies the presence of Valak and its female form, ensuring the audience that its presence has definitely returned. The climactic moments of the scene ares accentuated by heavy vibrato strings and similar sounds to those used in *Insidious* (Wan, 2010) of piano strings being struck.

The music of Michael Abels in the hypnosis scene of *Get Out* (Peele, 2017) is noteworthy for its effectiveness in drawing the protagonist from one reality and into his own mental prison. A musical theme on the harp is introduced upon the discussion of Chris' deceased mother. It comprises slow arpeggiated two-note chords that vary in their intervals. The decision to use a harp at this point, an instrument often described in the hands of angels and therefore commonly associated with a certain religiosity, is significant as its soft and mellow tone contrasts the distressing visual scenes. The tone evoked here suggests malevolence in Missy's determination to hypnotise Chris. An additional line is introduced doubled between pizzicato and legato strings. The string section becomes more full and starts to accompany the harp at the point where it is revealed that Chris did nothing to try and help his dying mother. This is followed by Chris' confession that he refused to help due to a belief that doing so would make it real, which is emphasised by the introduction of a repeated rhythmic pizzicato strings line on every quaver, later doubled by percussion. The increased musical movement juxtaposes Chris's inability to move and gives the impression that his fate is rapidly approaching.

After the visual cue of Chris falling through the floor as commanded by Missy's hypnotic influence, the instrumentation becomes lower in pitch as a cello section strikes four loud chords with large gaps of silence in between. This progression of C minor, B minor, Eb augmented fifth and E minor is repeated once with inversions changes and gradually increased pitch. Harmonically, this sequence emphasises the Western music idea of minor chords retaining a sense of both dread and ambiguity by repeatedly modulating. The Eb augmented fifth chord stands out harmonically while accentuating dissonance before resolving to a subsequent E minor chord for which the B and G are maintained. The theme introduced earlier in the harp and strings returns as Chris begins to focus back on the room his physical body is trapped in where Missy continues to stir her tea.

The significance of certain instrumental choices in the minds of moviegoers brings with it the potential for critical failure. Works such as Jason Zada's *The Forest* (Zada, 2016) are scored with a conventionally string-based horror soundtrack. Bear Mcreary's composition is ominous and sad from the opening post-title scene, irrespective of its otherwise neutral visual stimuli (eg. shots of a city and airport). This attempts to generate low-level tension unnecessarily early, arguably providing viewers with familiar context to prepare themselves for any subsequent on-screen threat. The 'fear' effect is further diminished by the combination of drones and voices alongside instruments typically associated with Japan. The collection of chimes, drums and woodwinds does well to provide geographical information, but without noticeable deviation from formulaic scoring it

poses the risk of distancing audiences further from the horrific premise of *The Forest*. This decision may have hindered the film's ability to scare as assigning the score to a real and living culture regardless of whether it is different from the viewer's, makes the experience less mysterious. Being able to understand the physical reality within a horror film, as well as the sounds/music heard allows the audience to become more comfortable.

4.2.5 Leitmotif

The widely used technique of leitmotif most commonly associated with the operas of Richard Wagner, has the potential to be a strong signifier of mood in horror cinema. If a motif has been introduced early and effectively to represent the presence of a particular antagonistic character, then its reiteration at a later point in the narrative can be relied upon to revive the same fear-based emotions in audiences. At this point the music becomes an invisible indicator of malevolent presence, retaining a level of uncertainty that a visual reveal would otherwise rapidly dispel. The universally acclaimed *Doctor Who* episode "Blink" (MacDonald, 2007) contains an effective example of this in relation to its primary antagonists: the Weeping Angels. Their visual presence is guaranteed by their biology to be static, therefore relying heavily on composer Murray Gold's score to signify their malicious intent. He does this through the use of a short screeching violin phrase that enters suddenly with a focus on rhythmic movement (in contrast to the Angels' on-screen stillness) and the physical, timbral qualities of the instrument. As the Weeping Angels are only ever shown to be inanimate statues and often blend in with the setting, audiences are coerced into becoming aware of their presence through the frequent return of Gold's theme. Despite the reservations of critics such as Adorno that the leitmotif is likely to become devalued from a musical perspective due to its strong link to the announcement of a particular character, it remains a popular technique across the fields of film, television and video game music (Adorno et al., 2005, p. 36).

Although there is validity to Adorno's claim that leitmotifs allow audiences to orient themselves more easily, this does not negate their utility in the horror context (Adorno et al., 2005, p. 36). Its familiarity can for example be exploited for its 'uncanny' effect if repeated with manipulation. Micah Levi's score for *Under The Skin* (Mitchell, 2014) focuses primarily on a returning three-note theme which presents itself most notably during scenes in which Scarlett Johansson's predatory alien character consumes her human victims (JustTheClips, 2020). These moments are visually contrasting to the rest of the film's authentic real-world imagery, providing clear visual stimuli to audiences that a significant event is about to play out. This is emphasised by Levi's music which, as the film progresses, begins to deteriorate in various ways. The pitch wavers microtonally while the rhythm is altered and the composer's intentionally use of poor-quality recordings makes the music seem almost incomplete. The combined manifested effect is that of a lingering, haunting leitmotif which guides listeners back to a theme they recognise before applying jarring alterations upon its repeat.

4.2.6 Liminal Moments

Drawing upon the definition of 'liminal' as "between or belonging to two different places," it seems appropriate to consider the state within which the composer or sound designer is working throughout a scene in horror cinema. Often the pivotal moments in notable works of horror exist as one reality transported into another, particularly in the paranormal sub-genre. If the narrative is to step into the world of ghosts or monsters, it is likely to suggest this transformation visually and sonically to audiences. An example of the former would be that of the locking and unlocking of

doors in The Others (Amenábar, 2001). Grace's overprotectiveness of her children's sensitivity to light causes her to insist upon each room in the house being 'prepared' for them. This is done through the process of drawing curtains and ensuring the doors have been locked so that the children cannot escape into an unprepared room. When she begins to suspect paranormal activity in the house upon hearing noises from other rooms, the drawn-out process of her unlocking the door in an attempt to witness this activity acts as a liminal moment between the real and the abnormal. As a viewer, there is a feeling of relative safety in the first room, and a gradual discomfort in the thought of entering the second room as it is visually separated by a locked door. The ways in which the presentation of the liminal can be achieved sonically are numerous but we will focus on a few key examples in order to gain insight into its application across the contemporary horror scene.

When *The Autopsy of Jane Doe* (Øvredal, 2016) first presents us with the eponymous corpse, one of the first signs of supernatural presence is not shown through the body itself but instead through the radio. It begins to intermittently lose signal causing the music to blend into static. Static is frequently used as a liminal moment and incorporates the use of technology such as television or radio. The noise produced by static can be perceived as an effective wall of sound that is difficult to attribute to a specific meaning. This allows for a strong disconnect between whatever his heard before or after it. Actress Olwen Catherine Kelly shows no movement throughout the film, meaning her unsettling presence in the room is only felt indirectly. The choice of radio manipulation early on in the film is a clearly indicator of this and helps to alert viewers as to a distinct change in reality. The world has now become home to the supernatural.

Another noteworthy example of liminality in recent horror film is from the Oscar-winning *Get Out* (Peele, 2017). During the film, Rose's mother Missy offers to carry out hypnotherapy on Chris in order to stop his addiction to smoking, to which he declines. However later on she manages to convince him begrudgingly to persevere with the treatment. The scene in which this occurs, despite being set indoors still contains the constant chirp of crickets. As the two characters joke about the cliche elements of hypnosis such as the dangling of a pocket watch, the conversation progresses onto the idea of focal points being used to in order to heighten suggestibility. This discussion encourages viewers to seek out a visual focal point, while an auditory one is subtly introduced. The stirring of a teaspoon across a cup can be heard clearly and within a few repetitions begins to feel unnatural. Here the decision has been made to loop a single sound effect, instead of recording numerous varied stirring sounds. This, as previously mentioned in relation to the utterances heard in "BBQ '79" from Sinister (Derrickson, 2012), places the stir within the realm of reduced listening according to Chion's constraints, emphasising its sonic quality and subliminally encouraging hypnotic participation of the audience alongside Chris (Chion, 1994, p. 30). When discussing Chris' childhood memories regarding the death of his mother, he is asked to remember the sound of rain from that point. The rain is added into the sound world, despite being in Chris's head and not in the present space. This emphasises an idea of warped reality, in which neither the protagonist or the audience can rely on what they see or hear as truth. Aside from its use as a way of linking the narrative between the present and a memory from Chris' past, it acts as a liminal moment from the real world to whatever may come next.

Rain can be suggested to hold similar sonic qualities to those of static, in that it can produce a constant output of wide-ranging frequencies made up of slight variations in pitch blended together in a way that may mask other sounds. Therefore the rain in *Get Out* (Peele, 2017) could be regarded as a natural equivalent to the radio in *The Autopsy of Jane Doe (Øvredal, 2016).*

The Cabinet of Dr Caligari (Wiene, 1920) presents at least one significant example where one could apply the discussed techniques regarding the manifestation of a liminal moment. Specifically the focus given to Cesare's initial awakening at the fairground lends itself to this

effect. The way the scene is shot, particular with a long close-up of his facial expressions seems to suggest intense internal transformation for the character from the sleeping realm, to reality.

4.2.7 Spectromorphology

The blending of music and sound effects within film has been discussed by Paul Rudy in his analysis of *Black Hawk Down* (Scott, 2001). Rudy focuses on the use of the helicopter sound and how it is transformed into orchestral and electronic musical material through the process of spectromorphology. He states that "the net effect is to create a subconscious connection and interdependence between the sound effect layer and the music layer, and also to function as a tension creating device and to obliterate any distinct boundary between elements within the sound design" (Rudy 2004: 2).

> The two parts of the term refer to the interaction between sound spectra (*spectro-*) and the ways they change and are shaped through time (*-morphology*). The spectro- cannot exist without the -morphology and *vice versa*: something has to be shaped, and a shape must have sonic content. Although spectral content and temporal shaping are indissolubly linked, we need conceptually to be able to separate them for discursive purposes- we cannot in the same breath describe what is shaped and the shapes themselves. (Smalley, 1986, p. 107)

A scene discussed earlier in the sub-chapter on instrumentation from *Insidious* (Wan, 2010) wherein psychic Elise describes the physical form of a demonic entity which is invisible to others, provides an example of spectromorphology in contemporary horror cinema (Adam The Prowler, 2015). Throughout the clip, the noise of the ceiling fan is partly treated as a musical element. Initially, the accent with each full rotation of the blades is doubled by a constant "hum" on G. This fades as the camera pans upwards to face whatever Elise (Lin Shaye) has spotted. The low frequencies of the fan sound are amplified and the high frequencies removed. From then on the intense pulsating produced with each spin acts almost like a racing heartbeat; emphasising a sense of danger. This is an important tool for a scene in which most of the characters, along with the viewers, cannot physically see the threat. Therefore the sense of dread created has to rely heavily on both Shaye's performance and the sound design. Elise's description of the creature can be heard relatively clearly at the start, although her speech is whispered and rushed as if to avoid provoking it. However as the scene progresses it becomes more difficult to make out what she is saying due to the volume of the fan and accompanying score. This ensures that the viewer learns very little about the nature of the entity, but just enough to be aware of how threatening it could be. Upon revealing the drawing, a knock on the piano shell is heard. This is followed unexpectedly by a much larger collection of noises including the clinging of piano strings aligning with no particular visual cue, not unlike the compositional approach of Toru Takemitsu in the anthology horror film *Kwaidan* (*Ghost Stories*) (Kobayashi, 1965). It would have been predictable to do this at the point where the light is switched on and the ceiling shown, but in an attempt to scare the viewer the sound is brought forward. This may have been done due to the surety of no creature being shown visibly upon illumination of the room, in order to build the scene to a higher level of tension.

This spectromorphological concept is explored further in the third instalment of the *Insidious* franchise, *Insidious: Chapter 3* (Whannell, 2015). After the protagonist, Quinn Brenner, is involved in a collision with a car, she is shown to be undergoing surgery in hospital (xxanaxx, 2015). As the sound of her erratic heart-rate monitor becomes a sustained tone (indicating the stopping of her heart), it begins to waver and splits into two instrumental voices. These pitches separate through panning and slight frequency modulation, becoming a synthesised musical element which underlies a visual transition from the terrestrial world to the supernatural realm of The Further. This

device therefore contains within it several different purposes. Its initial diegetic nature clearly outlines the medical dangers Quinn is experiencing, while its transformation into a musical element introduces subtle dissonance to imply uncertainty and the abnormal as the camera leaves the operating room behind for The Further. The heavy reverb added also implies a substantial level of scope to this new reality, allowing for the otherwise 'silent' sound world to echo outwards into the unknown.

4.2.8 Diegesis

The term 'diegesis' is defined as "the spatio-temporal world depicted in film," (Oxford Reference, 2011) and in part comprises the sounds which are heard within a film's narrative. The importance of diegetic sound in the development of cinematic fear and tension is apparent from the numerous analyses of contemporary horror works carried out for this thesis, particularly in regards to its interaction with non-diegetic elements. Diegesis has therefore been a crucial element in my compositional approach for the sonic reimagining of *The Cabinet of Dr Caligari* (1920), particularly due to its original format as a silent film wherein no diegetic sound is present.

As remarked upon in the previous subchapter on hauntology, *Insidious* (Wan, 2010) utilises technology in the form of a record player in order to transmit diegetic music into the filmic reality. Additionally, the clear foley sound of vinyl being removed and replaced with another disc guarantees a physical presence in the living room that is otherwise known to be empty at the time from the perspective of the protagonist, Renai. Upon hearing this change from her position outside the living room window, Renai notices the ghostly presence of a dancing boy and hurries inside for confirmation of this supernatural encounter. Created here is a strong juxtaposition between the sonic world and the actual experiences of the protagonist. Regardless of the ghost boy's seemingly harmless intentions, its physical power in changing the music and choice of a lighthearted tune only exacerbates Renai's feelings of discomfort. Additionally, up to this point the vast majority of music in *Insidious* is non-diegetic, whereas this record player is a shared experience by the audience and the character. Diegetic music such as this has the potential to enhance listener experience, causing individuals to feel more closely linked to the vulnerability of the protagonist.

The Conjuring 2 (Wan, 2016) further explores the potential of diegetic music and sound in the horror context through the use of a tape recorder and subtle foley choices respectively (AHS FX, 2016).

The entrance of a choral recording projected from the recorder is, due to its drastic dynamic change, likely to startle audience members. But in order to further enhance any manifested feelings of discomfort, the volume is also increased within the diegetic space (referring to the limitations of the speaker's output rather than the overall mix of the soundtrack) to a point where distortion begins to occur.

A subtle but effective element of sound design is used throughout this scene from *The Conjuring 2* (Wan, 2016). Both in media and in real eyewitness accounts of paranormal activity, a common occurrence is that of electrical disturbance e.g. lights turning on and off of their own accord, faulty appliances, etc (Nickell, 1995). This is a frequently used horror trope that many viewers will have come to expect from films of the genre. However, in the case of this scene the decision has been made to give Valak a more physical presence in the room without being seen. There is precise placement of foley signifying the sound of the tape recorder being switched on and then shortly afterwards the sound of the lamp switch being clicked, followed by a gentle creak of floorboards. These brief but significant events tamper with the expectancy of the audience, as where some sound designers may have implemented a loud, prolonged and aggressive 'zap' from a short-circuiting light, or the chaotic noises of a spirit causing mayhem in the hardware of a tape

recorder, instead the audience is left with two gentler, clearer sounds that cement the already developing idea that this hostile entity is insidiously intelligent with enough physical presence to press a light switch as a human finger would. The subsequent assumptions to be made regarding the demon Valak are therefore more likely to be focused around ideas of calculated actions of evil, which suggest a more personal attack on the protagonist: Lorraine.

As the scene progresses to the slamming of doors and windows, seemingly caused by Valak, with each movement a noise that initially sounds like scraping begins to form a more animalistic tone upon repeat. This 'roar' is undeniably threatening, cementing the idea that this entity wishes to do harm or at the very least, prevent Lorraine from leaving the room. Here, two significantly different forms of diegetic sound have been positioned atop one another to produce unique sonic qualities. Their placements are unusually precise, giving rise to questions as to whether the creature responsible for the shutting of the door and windows is attempting to mask their monstrous voice, or perhaps in contrast hopes to accentuate the aggression behind their action through the layering of these two distinct sounds. Either way, the compositional choices here manage to feel contemporaneously effective whilst still being believable in the context of *The Conjuring's* (Wan, 2016) filmic reality.

Later on, as the demon's shadow reaches the painting the sound of each hand making its way into the physical realm and grabbing the frame is sonically exaggerated. Every click of bone is accented within the mix to give a sense of close proximity, a technique which can often be impactful when attempting to bring audiences within more physically immediate reach of the narrative, especially for those scenes in which the protagonist is most vulnerable.

Returning to the tape labelled "BBQ '79" from *Sinister* (Derrickson, 2012), the encouragement of reduced listening brought on by the careful placement of looped vocal utterances upon Ellison Oswalt's viewing of the home movie provides a key example of the important distinctions between diegetic and non-diegetic sound (DynamicVisionsHD, 2012). As the utterances are synchronised with a visual change, the audience is forced to assess whether they are to be acknowledged from Ellison's perspective (diegetic) or from within the non-diegetic space. The initial reaction is to attribute the vocal wails to the sudden introduction of disturbing imagery, suggesting a move to diegetic sound within the context of "BBQ '79". It is not until the voices become more structured in their reiterations that they may be perceived as non-diegetic, perhaps alluding to a chosen soundtrack. Although the vast majority of music within *Sinister* (Derrickson, 2012) was newly composed by Christopher Young at the time, this particular scene instead comprises what Kassabian would refer to as a 'compiled score' (Kassabian, 2001, p. 1). That is, pre-existing music used as part of a film's soundtrack for which it was not originally written. Usually works are chosen for their supposed effectiveness in portraying appropriate moods and examples of successful compiled scores are still recognised within the contemporary horror genre. Most notably, Martin Scorsese's piece of 'film noir' (Merriam-Webster, n.d., Definition 1) entitled *Shutter Island* (Scorsese, 2009) uses a variety of existing music compiled by Robbie Robertson to underscore its dark and mysterious themes, including works by the likes of Krzysztof Penderecki and John Cage.

Depending on its popularity within the public sphere, a consequence of compiled scores can be am increased likelihood of audiences bringing with them their own preconceptions of how the music is to make them feel. This risks a reduction in the overall effect produced by the overall cinematic experience. In the context of "BBQ '79" from *Sinister* (Derrickson, 2012) however, the music chosen is that of Norwegian experimental band Ulver and is unlikely to have been listened to previously by the majority of audience members. This therefore allows the excerpts from "Silence Teaches You How To Sing" to be experienced more intimately alongside the visuals of "BBQ '79" and for its unusual collection of both traditional musical elements and manipulated sounds to influence how the filmic reality is perceived. If the listener is to identify Ulver's music as purely non-diegetic then it can simply be regarded as an effective placement of compiled score.

But as it is heard to be synchronised perfectly with the super 8 footage projected in front of Ellison's eye, this opens up the potential for direct influence within the diegetic space. Questions as to whether "Silence Teaches You How To Sing" (or at the very least its raw sonic elements) has been intentionally imprinted onto the home movie itself are liked to be raised by at least some audience members. The overall effectiveness of the scene is a testament to the combined directorial and compositional choices which result in an extension of horror elements surpassing the constraints of cinematic media. Ulver's inclusion of sporadic distortion further accentuates the idea that sonic devices can have a physical impact on film. When these sounds are used as the backing for an aged video tape presenting visual evidence of a violent crime, they become additional elements of aggression that may be heard to attack the very medium that confines them. This ultimately feeds back to the ideas discussed earlier in the subchapter on hauntology as to the prevalence of the use of older forms of technology in contemporary horror cinema. The more imperfections manifested in an audio visual format (whether they are brought on by limitations of the era or by gradual decay over time), the more potential there is for these to utilised by composers and sound designers as signifiers of a malevolent force contained within them.

In *The Autopsy of Jane Doe* (Øvredal, 2016), the focal horror element is an unusual corpse being examined by two coroners. In order to play with audiences' assumptions and avoid persistent contemporary clichés such as reanimation, the body is never shown to move. Therefore any supernatural elements must manifest themselves elsewhere in the space. One of the earliest ways in which this is done is through a focus on the radio playing in the examination room. During the film's introduction of the two main protagonists it is played loudly, and the lightheartedness of the music style heard contrasts the morbidity of the autopsy being performed at the same time. It is clear that the radio is being used as an indicator of safety for the viewer, and a distraction from the more traumatic aspects of the job for the two coroners. Therefore upon arrival of the 'Jane Doe', one of the first signs of supernatural presence is not shown through the body itself, but instead through the radio. It begins to intermittently lose signal causing the music to blend into static. In the case of *The Autopsy of Jane Doe* (Øvredal 2016), the radio broadcast heard prior to static interruption is presumably chosen and therefore enjoyed by the two protagonists. However as soon as this is disrupted, anything that is heard next is known to be out of their control. Instead of throwing the audience straight into a clearly hostile environment with cliché horror sounds, the song is replaced by the song "Open Up Your Heart (And Let The Sunshine In)" by The McGuire Sisters (McGuire et al. 1954). As stated by Kassabian, "If a song that is already popular to the public is used in a film, then any individual with previous knowledge of it will immediately bring their own associations (Kassabian, 2001, p. 3). Therefore this conventionally upbeat and happy piece of music placed within an unnerving setting such as a morgue, will likely juxtapose those associations, aiding in the enhancement of confusion and subsequent tension. A significant aspect of this is due to the titular lyrics being literally related to what is happening on screen, as the coroners open up the corpse's chest to reveal her heart.

When analysing *Get Out* (Peele, 2017), two scenes in particular revealed a wealth of information regarding the importance of sound design and music in the building of fear and tension. The earlier subchapter on nature covers most significant points of analyses for the deer collision scene, mainly in regards to the elements of the natural world and how they can be perceived as alien or foreign in certain contexts. It is appropriate however to briefly return to this point in the film from a more focused diegetic perspective. The term 'sound scale' is defined as "the apparent size attributed to characters and objects by the characteristics of the sounds they make." (Altman, 1992, p. 252). An important in the development of sound design, the presence given to each individual component of foley is expected within the filmic context to broadly follow a preconceived set of rules. There are certain sounds for which audiences may expect a high or low

level of volume and to hear the opposite risks the breaking of the cinematic illusion. This observation also translates into the audio-visual space. As most film and television is experienced with stereo or surround (5.1 or 7.1 setup) sound, the expectation of contemporary viewers includes the accurate positioning of sounds in relation to their visual source. It would be unexpected, for example, to see a door slam on the extreme left of a camera shot and hear the related sound predominantly through the right ear of a pair of headphones. Equally, if the same door was positioned distantly into the background but heard loud and close in the mix, a similar reaction is likely to occur. Taking these elements of sound scale into consideration within the horror context allows for an additional route for composers and sound designers to directly influence audience experience.

Throughout the deer collision scene, the relentless chirping of crickets is heard far louder in the mix than one would expect to hear in the diegetic environment. Their sound scale has been enlarged beyond their physical size and number, with calculated dynamic and frequency changes to emphasises particular moments in the film. This may allude to the idea of the protagonist experiencing some auditory hallucination as he is forced to confront emotional turmoil. Chris' surroundings, although consisting predominantly of natural world elements, seems to therefore react more personally and with hostility to his presence.

It Follows (Mitchell, 2014) also presents a recurring diegetic device related to sound scale throughout, influenced seemingly by both the antagonist's premise and the choices regarding cinematography. Many scenes contain a single camera shot which often remains in one position, moving only through gradual 360° rotation. Besides giving the film a notably unique visual aesthetic, this technique encourages audience participation in the identification of 'It'. The entity is explained to be able to present itself as any human being, but can only approach them at a slow walking pace. It restricts its target to the last person who was 'infected' and only makes itself visible to that individual and the audience. As every subsequent scene is therefore known to inevitably result in the presence of 'It' and the camera work prioritises its identification through wide angles and continuous rotation, in order for important dialogue between to be heard between the protagonists, their voices are often more present in the mix than they realistically would be if heard from the camera's position. Regardless of how far away they are seen to be conversing, listeners are always provided with the sonic information with intimate closeness. The consequence of this is a warped sense of how close to danger they appear, as we cannot sonically track whether a character's proximity to 'It' is increasing or decreasing over time. This is a strong example of how the combination of audio-visual elements can transfix audiences, even if, as if often the case in the horror genre, they are expecting unpleasant and disturbing to manifest before them.

Having previously discussed the hypnosis scene in *Get Out* (Peele, 2017), particularly the choices of composer Michael Abels relating to instrumentation and the liminal transition from the real world into the realm that Chris is being manipulated to enter, the significance of diegesis becomes most apparent as he, upon Missy's request, 'sinks into the floor'. The scene reaches a moment in which the music strips away and the environmental foley begins to slow down, causing their low frequencies to be emphasised. The heavy reverb rumble as Chris enters 'the sunken place' and his subsequent falling suggests a vastness to the space. His movements and the accompanying muffled audio also accurately represent the feeling of being underwater. The sound worlds within both the living room and 'the sunken place' are vastly different. We very briefly experience the two simultaneously near the end of the clip and the sound of the tea being stirred is unnaturally loud in contrast to the enormous distance shown between Chris' position and the living room. If this is to be seen as an indicator of the physical rules within 'the sunken place', then it brings about the possibility that despite being trapped in a hypnotic state, Chris' senses in the real world are still highly receptive. He can seemingly still see, hear and perhaps feel what is happening in the living

room with no agency to react to it. This feeling of powerlessness and Missy's seemingly insidious intent contributes to overall feelings of dread expected in the horror genre. Furthermore, in order to compound these effects the sound designers have forced the viewers to share the vulnerable protagonist's sonic experience. If he remembers the sound of the rain from the night of his mother's death years before, we must hear it along with him. If he becomes hypnotised by the repetitive sound of tea being stirred then we must hear it loudly and clearly. If he falls into a mental state where his voice is silent and his hearing muffled, then we must experience this also.

4.2.9 Silence

It seems pertinent, after focusing on the influence of music and sound design, to conclude this analytical section of the thesis with a sub-chapter relating to their noticeable absence. The placement of any sound within film is bound to shape the presence of silence. The lack of information given by its existence can be equally unsettling to a plethora of chaotic noise, as neither are likely to enable audiences to gain further insight into narrative developments. One thing which silence may encourages, unlike excessive sound, is a heightened sense of focus from listeners who await further aural instruction. To stimulate this physiological response can place an individual in a more vulnerable state, which explains the prevalence of the 'jump scare' technique in horror and the common lack of sound before its reveal. Silence can, however, be used more sophisticatedly and with precision to produce an effective overall experience of fear and tension. As Toop attests to in his writings regarding the book, *The Haunting of Hill House* (Jackson, 2009).

> On arrival, Eleanor finds herself drawn into silence, trying to put her suitcase down without making a sound, walking in stocking feet, conscious that the housekeeper had moved soundlessly: 'When she stood in the middle of the room the pressing silence of Hill House came back all around her. I am like a small creature swallowed whole by a monster, she thought, and the monster feels my tiny little movements inside.' (Toop, 2011, p. 132). .

In the critically acclaimed first instalment of *The Conjuring* franchise (Wan, 2013), music is removed in many important parts of the narrative including the introduction of the family and the entering of their new home for the first time. As the film progresses to its more supernatural moments, this pattern recurs. A notable scene in which the the mother plays a game of 'hide and clap' with one of her daughters, builds gradually to an effective anticlimax (Ing Diego, 2014). This is done by a distinct absence of music and a focus on sparse foley. As the mother is blindfolded and attempting to find her child by listening to the closeness of her claps, she, unlike the audience, is unaware of what may be occurring around her. The slow pacing of the scene, along with an overwhelming sonic silence means the mother has no information to suggest the proximity of a ghostly presence. If intense musical ideas were introduced here to, in some ways, accurately reflect the real danger she is in, the diegetic and non-diegetic elements would likely feel out of place with one another. The audience is, through silence, being encouraged to experience the scene through the mother's position of vulnerability, despite having the troubling visual knowledge that she does not possess. Without this room to focus more on what is being presented on-screen, the scene may not have been so well-received as sound is repeatedly a source of interference in the human experience.

> "There is always something about sound that overwhelms and surprises us no matter what—especially when we refuse to lend it our conscious attention; and thus sound interferes with our perception, affects it." (Chion 1994: 33)

As Lorraine follows the demon Valak through her house in *The Conjuring 2* (Wan, 2016), the non-diegetic strings slowly fade and the only notable foley is that of the door creaking open (AHS FX,

2016). This change of location from corridor to room is used as a reset for previously built-up suspense, as upon entering no music can be heard and the foley is minimal and unobtrusive. The room itself matches this indifference, with no signs of anything out of the ordinary for the first few seconds. Normally in being lead closer to the source of the threat, tension within a film will rise gradually in a way that viewers can understand and reasonably predict. However the decision to place this brief interlude of audio silence alongside little visual terror in the middle of a scene can be seen as an attempt to take audiences by surprise. Wan has chosen to follow up this moment with a jump scare, but, he throws the viewer expectations by showing a painting of Valak on the wall clearly with no audio cue, even as Lorraine eventually notices it. It is common in horror cinema for loud musical stabs, often with a percussive element, to be used at the peak moment of built-up suspense. But in delaying this device, the sound designer has created what could be described as a 'sonic purgatory'. Everything up to this point suggests a jump scare is imminent and our bodies and minds should be adjusting in anticipation, but the moment where audio re-enters is left too late and we begin to relax, becoming more vulnerable in the process.

A similar example is found later on as the ominous low-frequency rumble used within this scene is suddenly removed and Lorraine switches the lamp back on. The tension built in the preceding two minutes is momentarily interrupted with a wide shot of the room emphasising daylight and its consequent brightness and space. A contrasting aesthetic to those commonly presented in horror cinema, this focus on light can help to lead viewers into a false sense of security. If the threat that has been built up previously seems to be fading away, then its eventual arrival can be even more impactful.

Due to the extensive duration of *The Cabinet of Dr Caligari* (Wiene, 1920) and its frequent changes of scene, there are naturally numerous moments where it seemed appropriate to allow most musical elements to drop out, allowing for relative silence to dominate. This not only enables the narrative information to be more easily absorbed at appropriate times, but also gives audiences moments of reprise before or after the more intense scenes of horror that often comprise dense, complex sound design.

5.3 *B*

In June 2018 I began developing my own body of practical work that would help to unify the research accumulated in my written analyses. I contacted Coventry University graduate and filmmaker Nathanael McGirr, with whom I discussed my ideas for a series of short film clips that would most effectively present my compositional output (McGirr, 2018). The intention was for these to act as a blank canvas for a wide range of music and sound design techniques, influenced directly by notable examples of contemporary horror cinema. For this, it was decided that each clip needed to provide enough relevant visual stimuli to potentially be categorised in the horror genre, without over-stimulating and therefore rendering the sonic and musical aspects less impactful on audiences' experiences. In order to achieve the desired effect a combination of traditional and modern horror themes were incorporated, despite the brief and ambiguous narrative structures.

Figure 1: Still from B showing the interior location, and radio as the focal point.

5.3.1 *B1* (Dom Waldock - Music, 2018)

Throughout the duration of *B1*, the radio's output comprises static sounds, an old weather broadcast, a piece of music for solo ukulele in a conventional pop style, a separate piece of music for solo honky-tonk piano in a ragtime style, and recordings of a "real-life" exorcism. These pieces of audio are overlaid, disrupted and manipulated with increasing intensity as the film progresses. Sounds were chosen in part to reflect Fisher's idea of "nostalgia mode" which he used to describe Lawrence Kasdan's *Body Heat* (Kasdan, 1981). He mentions that in the film, "a whole battery of aesthetic signs begin[s] to distance the officially contemporary image from us in time." (Fisher , 2012). This is what I have chosen to do with my selection of sounds, which help to warp the viewer's sense of time. Additionally, the reverb begins as close as possible and gradually becomes heavier and more separate from the reality of the visual setting, warping the viewer's sense of space.

Figure 2: Still from B showing the gradual camera movement away from the radio.

At 0:33, what can be regarded as the first clearly non-diegetic sound is introduced. A sudden low frequency noise hits and resonates for approximately fifteen seconds. This was produced by lowering the pitch of a double bass plugin beyond normal range, adding tape delay and heavy reverb. Until this point, the frequency range in *B1* is based entirely on middle pitch and high pitch sounds, further accentuating the impact of the double bass "boom". The placement of this "boom" does not correlate with any visual development. This decision was influenced in part by the work of Japanese composer Toru Takemitsu on the soundtrack for Masaki Kobayashi's *Kwaidan* (*Ghost Stories*) (Kobayashi, 1965). Simington quotes Takemitsu directly as saying that he, "wanted to create an atmosphere of terror. But if the music is constantly saying, "Watch out! Be scared!" Then all the tension is lost. It's like sneaking up behind someone to scare them. First, you have to be silent." (Simington, 2018). Although the double bass "boom" is not preceded by silence, there is a clear absence of non-diegetic and lower frequency sound. This, combined with a lack of narrative change to prepare the viewer for any sonic changes, ultimately determined its placement at 0:33.

Another musical feature fades in from 0:34 in the form of a string section. The instruments are panned heavily both to the left and right and sustain notes of different pitches. Slow glissandi are performed on each pitch at random until 0:57. The increasingly dynamic movement of pitch, and refusal to remain on the chord produced initially was chosen to give the sense of descent into chaos. This gradual lack of order is mirrored in the muddying of sonic information from the radio as the reverb increases.

A sound of a similar timbre and pitch to the double bass but with more rapid pulsation, gradually increases in volume from 0:48 to 0:57. This was created using a soft keyboard plugin to produce a more sustained sound.

At 0:57, the primary scene in *B1* cuts to black and the music is removed also. The only sounds heard in the final few seconds of darkness are those from the radio that, due to a manipulation of space and reverb, have seemingly reached much further than the confines of the first-floor landing from which the originated. The decision to do this was founded on a desire to make viewers feel as much like they are in the film as possible. The low-volume static of the radio at the beginning forces them to listen closely and enter the film's world willingly. By the end, the radio has grown sonically to a point that spills out of the narrow corridor and, potentially, into the mind of the viewer. This happens in contrast to the camerawork, which zooms out further away from the radio.

5.3.2 *B2* (Dom Waldock - Music, 2019)

In January 2019 I began to work on an alternate version for the sound design and music in *B.* Entitled *B2*, the visuals are unchanged from that of *B1* (Dom Waldock - Music, 2018), having decided that the cinematography was appropriately ambiguous enough to be heavily influenced by my compositional approach. In order to incorporate a broader spectrum of ideas analysed in contemporary horror cinema, this second version would include some noticeably different techniques to the first, however the collection of sounds emitting from the radio were kept the same in order to capitalise on its role as focal point within the film.

B2 starts with a pulsating, rhythmic synth bass note which is introduced during the black screen, prior to the introduction of any visual cue. This is to immediately suggest a pace and level of movement to the viewers, which is especially important in a film of this short a duration. The bass sustains in a loop throughout *B2*, within occasional fluctuations in volume and filter levels in order to make room in the frequency range for other sounds, as well as to prevent the repetitive nature becoming overwhelming or uninteresting to the listener. At the moment where the room is shown at 0:03, a collection of new sounds are introduced suddenly in a similar vein to that of a horror stinger. Stingers have been used frequently in horror cinema in order to accentuate the effect a sudden visual stimulus, particular one that is suggestively horrifying in nature such as the shower murder scene in *Psycho*. Bellano argues that the 'shrieking motif' used by Herrmann in this scene can only be described as a stinger upon its first note, as the function is immediately negated by the subsequent obsessive repetition of the sound and by its inclusion in a wider orchestral pattern (Bellano, 2019).

In order to maximise the effect of my stinger, it hits only once upon the introduction of its visual stimulus and then the sounds, consisting of a variety of high-pitched synth chords and a loud, reverberating drum hit, are sustained until 0:13 at which point they suddenly drop away with a slight drop in pitch. The reverb lingers briefly before giving way to a choir low in the mix that gradually bends in pitch in order to remain sonically both real and artificial in nature. The intention of this is to compound the confusion already instilled by the lack of clear narrative.

At 0:18, a second bassline fades in with a more complicated rhythm and a conjunct, tonally ambiguous melody. My decision to create a predominantly electronic-based musical score for *B2* was primarily influenced by my analysis of films such as *It Follows* (Mitchell, 2014), which was written by video game music composer Disasterpeace. He, also referencing Herrmann's work on *Psycho* as well as the influence of director and composer John Carpenter, wrote his own stabbing stinger to help represent the gradual approach of threat in *It Follows* (Mitchell, 2014) (Herman, 2019). He also restricted himself to a purely electronic instrumentation for the film in the same way Carpenter did for his early horror films, while Herrmann restricted himself to string orchestra to match the then-obsolete black and white visuals of *Psycho*. The focus in *B2* on technology in the form of a radio and the information it can transmit, made applying a more contemporary palette of electronic sounds more relevant in some ways than some of the sounds used in *B1* (Dom Waldock - Music, 2018).

The low, resonant drum hit is re-introduced at 0:24 with the addition of a subsequent snare hit that echoes on a dotted rhythm fading into the distant. The purpose of this is to emphasis the feeling of movement both sonically and in the gradual camera zoom presented on screen. In addition to this, the distance and duration of the echo suggests a space larger than that of the house interior, warping any previous constraints viewers may have unconsciously placed on their predictions as to what reality the film is presenting to them.

A repeated sound similar to that of an alarm noticeably out of time with the underlying rhythmic bass and percussion parts, gradually increases in volume until becoming most clear around 0:32. The persistence of this single, high pitched tone is intended to hint at a sense of danger and emergency in a more practical sense, as if to warn those watching that something is about to

happen imminently. At 0:38 to support this, I suddenly remove a portion of the electronic frequencies for a brief second, replacing them with more raw material sounds before returning to normal as if the hardware producing this film is physically tearing or being damaged as it is being viewed. This compositional decision was heavily influenced by *Sinister* (Derrickson, 2012), wherein a collection of old tapes are shown to hold evidence of gruesome murders and the sound design effectively incorporates the natural age of the technology and mechanical sounds of the projector reel within the music. As mentioned earlier in reference to *B1* (Dom Waldock - Music, 2018) and Hauntology, Fisher writes extensively on the concept of haunting in the context of physical objects, including stone tape theory defined by T. C. Lethbridge's idea that haunting may be actual recordings of traumatic events (Fisher, 2012).

With the addition of a reverse cymbal to mimic the musical equivalent of a sharp intake of breath in preparation for an impact, the stinger from the opening of *B2* is reintroduced at 0:45. This was a late addition to my compositional process, recommended by supervisor Dr Tom Williams upon realisation that after the initial force and tension felt in the intro had dissipated, the ending was left feeling comparatively feeble for a film intended for the horror genre. With the quick sonic ascension and second release of the stinger at 0:45, *B2* can maintain its intensity till the final second for maximum cinematic impact. This relentlessness is paramount to the sustained interest of horror film viewers, otherwise any feelings of tension built up early on can easily be lost later. A similar sonic technique is used in the rhythm violence video game *Thumper* (Flury, 2016), with music composed by Brian Gibson. The game guides a beetle-like creature along a track at extremely high speeds, encountering enemies progressively more difficult to defeat. In the same way that visual cues are often matched with musical ones in film, players must react to what happens on screen in order to trigger a change in the game's musical score. The sounds produced are often loud, sudden and sometimes used as a transition to the next development in the music, as well as the introduction (or successful destruction) of an enemy. The constant dynamic impact of sonic world in *Thumper* (Flury, 2016), along with its frequent variations to maintain interest, is something I have aspired to replicate here in *B2* (2019). In contrast to the gradual buildup of tension in *B1* (Dom Waldock - Music, 2018), I decided to introduce this atmosphere immediately in *B2* and attempt to sustain it throughout.

5.3.3 *B3* (Dom Waldock - Music, 2019)

After discussions with my supervisor, I decided it would be a relevant endeavour to place pre-composed pieces of music over film *B* in order to gauge its effectiveness in relation to my own compositions. For this variation entitled *B3*, *Lux Aeterna* by György Ligeti was used. This decision was made due to its already well known use in Stanley Kubrick's film *2001: A Space Odyssey* (Kubrick, 1968), and its use of cluster chords would likely give the desired ambiguous and confusing effect often required in horror cinema. The result was mainly successful, with its pitch unison introduction failing to reveal too much sonic information as the viewer is introduced to the house interior along with the radio and unclear shadow movements. As the harmony in *Lux Aeterna* becomes more complex and the choir voices begins to separate from one another in pitch, the camera zooms out to reveal more of the corridor. Although *B* at no point reaches an obvious conclusion, the music in this variation does help to develop a gradual sense of unease and tension. This idea of precomposed music in cinema is not uncommon, most notably in Martin Scorsese's noir thriller *Shutter Island* (Scorsese, 2010). In fact one of Ligeti's other works - *Lontano*, was also used in this film.

5.4 *A*

5.4.1 *A1* (Dom Waldock - Music, 2018)

Figure 3: Still from A (Dom Waldock - Music, 2018) showing the forest path at the beginning of the film.

For the sound design and music composition entitled *A1*, I decided to focus on the three sections sonically to coincide with the changes on screen. Although the whole film takes place within the wood, it seemed important to trigger a clear tonal change upon discovery of the clearing so that its purpose seemed more uncertain to viewers. The propensity of people's relationship with the idea of walking through an area such as this could be seen to relate often on a nostalgic level. Forests have throughout history acted as pathways from one place to another that bring along with them the true enjoyment of exploring the beautiful and tranquil aspects of nature. However this is juxtaposed with the idea of the unknown which will beckon us away from the path. These themes have maintained their importance through the numerous and repeatedly relevant adaptations of old folk stories such as Little Red Riding Hood.

Figure 4: Still from A (Dom Waldock - Music, 2018) showing the closeness of the trees in relation to the camera perspective before the stone is revealed.

A1 begins with the slow introduction of foley sounds. These include footsteps, the sounds of branches breaking and birdsong to vaguely reflect the setting of the film. The first non-diegetic music fades in at 0:25. This ethereal electronic pad has been enhanced with heavy reverb to give a large space, but sustains a chord with close harmony intended to reflect one narratively unclear source: the stone on the floor of the clearing. As the individual in the film approaches this, the sound grows louder, and is accompanied by sparse electronic distortion. This was applied to emphasise the invisible presence of something powerful, which is seemingly affecting the auditory experience without any visual evidence. A crucial aspect of horror film music composition analysed both in modern cinema and my own work, has been the need to retain filmic tension even during the absence of a clear visual threat. This becomes primarily relied upon through the work of the composer, and is especially obvious in films such as *B1* (Dom Waldock - Music, 2018).

From 0:34 to 0:36, as the film's sole character begins to come to a stop upon entering the clearing, a sudden grating vocal sound reaches a crescendo. This was created by recording the human voice making a 'shhh' sound, adding distortion and reversing so that the initial attack is heard at the end. The sound then suddenly drops out leaving room for a low, but narrowly filtered rumble. The vagueness off its sonic quality combined with its relentless sustain and, at that point, more severe electronic distortion, is used to maintain the idea that something on screen is emitting a presence of some sort that would not normally be associated with what looks to be an inanimate object. This low rumble is accompanied by a collection of other voice sounds, including other 'shh' noises, whispers and indeterminate speech. My decision to include a clearly human sonic world at this point is a direct reference to Fisher's discussion of stone tape theory, as it is a common feature of horror stories across various mediums that objects or locations themselves may hold a feeling of fear or haunting within them. To suggest this of the stone in *A1* is to allow the manifestation of a clear horror element, in a film which visually may not necessarily be interpreted as an example of the genre if not combined with my music and sound design.

Figure 5: Still from A (Dom Waldock - Music, 2018) showing the clearing in the forest and the stone.

Figure 6: The opening title credits from The Cabinet of Dr Caligari - A Sonic Reimagining (Dom Waldock - Music, 2020) at 00:00.

5.4.2 *A2* (Dom Waldock - Music, 2019)

With a similar intention to the third variation of film *B* (Dom Waldock - Music, 2018), I decided to place a different piece of pre-composed music over *A*. In this case, the third movement of *Music for Strings, Percussion and Celesta* by Béla Bartók was chosen. This piece was also used by Stanley Kubrick, in his horror film *The Shining* (Kubrick, 1980) and therefore seemed relevant - especially in regards to the concept of hauntology. Opening with a xylophone that begins on what note that erratically increases in tempo, it takes a short amount of time for the matching forest visuals to develop a tense atmosphere. One aspect that seems to allow these two separately created media pieces to complement each other. Is the wooden, natural sound of the xylophone. Its timbre seems to feel appropriate when paired with images of a wooded area. The structure of this movement means that as the clearing is entered and the stone, so is the string section introduced with its lead melodic line. The tonal and rhythmic ambiguity of this melody accentuates what is intended as a confusing moment in the film. The accompanying dynamic ascension adds to this gradual buildup of tension, and only begins to lose its value when the music continues on past the relatively short duration of the clip.

5.5 *The Cabinet of Dr Caligari - A Sonic Reimagining* (Dom Waldock - Music, 2020)

For the introductory title sequence from 00:00 to 00:58, I have chosen to use a selection of complex sounds, some of which are heard later on in the film to depict particular locations. Included is the field recording of a crowd at a music concert. The intention of this is to depict the idea of an unsettled audience at a cinema before the film has begun. The way in which the sound of the projector reel and natural impurities of the tapes were used in *Sinister* (Derrickson, 2012), seemed effective in warping the idea of reality in the filmic narrative. This is something I have attempted to recreate at the start of *Caligari* by inputting the sound of the projector being turned on, along with the ambiguous sound of audience members so that viewers are immediately forced

to evaluate within what reality the film has been set. Along with the aforementioned field recording, I have displaced musical themes written for later in the film within the sonic space here, all of which are filtered to ensure a lack of clarity so that they may be revealed fully later on.

At 00:58 the cacophony begins to fade out and slow down as a subtle hint towards the idea that the projector reel has in some way malfunctioned. Technology has often been used in horror cinema for its ability to 'haunt' through its transmission of information in spaces that would not normally have the capabilities to do so. An example of this is a supernatural entity's distorted voice through a baby monitor in *Insidious* (Wan, 2010) as previously mentioned in the subchapters on nature *(INSIDIOUS Official, 2019)*. The use of older technology as forms of media introduces the idea of nostalgia, age and memories of a time gone by. Because of this it can be especially effective in modern horror, as the lower quality of film or audio makes its already depreciated information harder to experience fully. As *Caligari* forces me to work with this, I decided it was important my music and sound design used its age as a compositional tool, rather than ignore it.
As the previous sounds fade out, a sustained string section plays a slow musical phrase in a conventional minor key. Overlaid is a raw violin recording, wherein the percussive and timbral elements of the instrument are the focus so as to provide a more physical experience to viewers. This is also used later in the film, often at points involving one or more of the protagonists to signify their journey. A three-note harp melody consisting of B, E and C# is heard softly at 01:28, and repeated with progressively more uncertain harmony. At 02:18, text is displayed mentioning the arrival of a travelling fair into Holstenwall. To express this, I have introduced a fairground theme written for strings and brass section. This is used repeatedly throughout the film, but often manipulated or reversed. 02:55 sees a vignette-style closing around Dr Caligari's face, to emphasise his importance as the main antagonist. To reflect this, the low sustained string line begins to descend chromatically and the fairground theme slows down. Lehrich uses the term "distorted iconism" to describe the manipulation of sound in order to suggest transcendence. It seemed important to present the doctor early on in a way that suggested an air of power and influence beyond that of other characters (Lehrich 2014, S215). This effect continues onto the shot of the two men at the beginning of the film who seemed to drift away into memories of the past.

Figure 7: The vignette reveal of Dr. Caligari at 02:55.

The structure of the film is such that 03:06 sees the start of the telling of past events. As Alan paces in his room, the only two clear sounds are that of the projector reel and church bells. My decision to use church bells here was to prevent an unnaturally sudden drop in the level of sound heard, and also to set the scene in a way that is not too suggestive of a certain mood. The harp theme returns briefly at 03:23, when Alan is seemingly distracted by smells from outside. At this point the sounds of the fairground are softly reintroduced in the background, to suggest that it is beckoning him out of his house. The sound of a crowd is heard as the poster Alan picks up advertising the fair is presented on screen. This is partly intended to place viewers in the mind of the protagonist, who is imagining the experience of attending the event with his friend, Francis.
With the scene change to the office where Dr Caligari is applying for his permit, at 04:24 a new theme (written for this scene away from the visuals to avoid applying a through-composed method throughout the entirety of the film) is introduced. Also for violin and strings but with the addition of a marimba line that focus on the three-note motif played earlier in the harp, this piece of music is designed to suggest a certain level of pomposity on the part of the men Dr Caligari is speaking to, while also staying tonally ambiguous and progressively more uneasy, particular in the string section when Caligari presents his name. Upon being told to wait at 05:04, the low strings once again begin to descend, but to contrast this a few seconds later the violin lines perform extensive rising glissandi. The extended techniques, improvisatory feel and heavily percussive violin parts throughout were directly influenced by Joseph Bishara's use of a string quartet for the score of *Insidious* (Wan, 2010) which, despite its high regard among modern cinema, played upon many older classic horror tropes such as screeching violin tremolo lines upon the presentation of the title card.

The music changes significantly at 05:19, where Dr Caligari approaches the man sat at the desk in order to confirm his request for a permit at the fair. A collection of string sounds low in the mix becomes louder, with heavy reverb and distortion added to muddy the sonic qualities of the instruments as well as their underlying tonality. Accompanying this are much closer, pizzicato violin parts placed sporadically across the space with no identifiable direction other than a focus on the same collection of pitches heard in the opening harp line. This section of music builds gradually as Caligari is once again shunned by the office workers and his patience grows shorter.

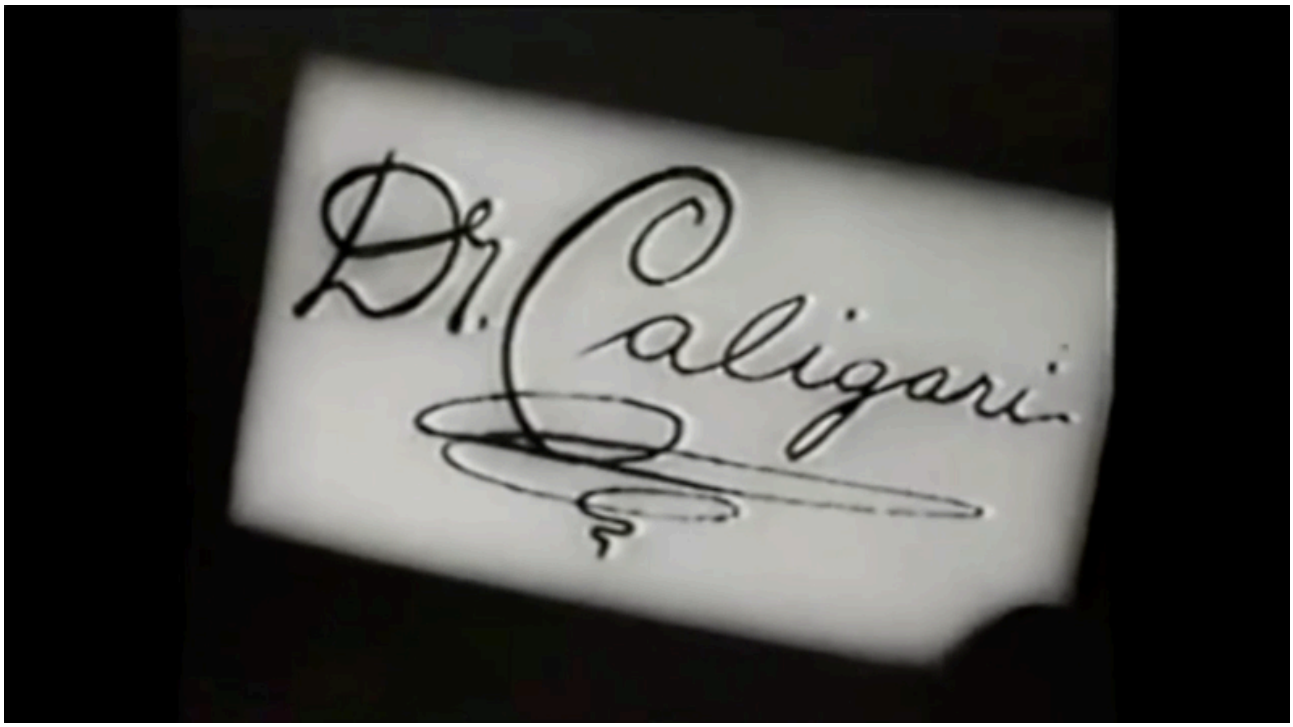

Figure 8: Dr. Caligari presents his identification to the town clerk at 04:53.

When the scene returns to the fairground, the appropriate sounds return (although reversed as a subtle attempt at confusing the viewer) as well as more striking violin glissandi as Caligari appears on screen. It is important that the audience is consistently reminded of his propensity for wrongdoings, even if the nature of these is at this point unknown. The only other clear diegetic sound introduced at the fair is at 07:39 when Caligari rings his handbell to encourage people to watch his performance. I decided to include this sound to both suggest a level of aggressive manipulation from the antagonist, while ensuring viewers feel compelled to experience his show from the perspective of other characters in the diegetic space.

Upon the change of scene to that night at 08:09, multiple violin tremolo lines become present. They fluctuate with harmonics and focus on the percussive sound of the bow on string to produce a grating effect as the text tells of the beginning of a strange series of murders. The church bells heard by Alan earlier are heard once more, but detuned to reflect the idea of funeral bells and approaching death. The sinister violin line continues on briefly into the next daytime scene at the fair as the Alan and Francis enter, so as to foreshadow anything that may happen in their future.

The performance of 'The Cabinet of Dr Caligari' begins at 09:50 as Caligari appears on stage ringing his bell once again to gain the attention of the crowd. A snare drum roll is used to traditionally depict two reveals: the first of which is the drawing of the curtain, and the second is the opening of the coffin at 10:33 to reveal Cesare asleep. The second snare roll repetition is warped to move through the space as the doors open, to emphasise an otherworldliness to what has been revealed. Immediately afterwards a low breath-like drone is introduced along with the a collection of sporadic harp chords. As Caligari announces his spell to awaken Cesare and the cameras focuses on a close-up of his face, the sounds of the fairground theme or once again heard, but with heavy reverb and delay to give a warped sense of how Cesare is experiencing everything around him as he transitions from a dream to the real world. At 11:15 the build up of manipulated sounds reaches a dynamic peak before being suddenly removed when Cesare's eyes open fully and stare forward at the camera. At this point all that can be heard is a filtered field recording with very little sonic change other than some wind movement. This sudden absence of complex sound is intended to surprise the viewer and force them to listen harder at what can be regarded as one of the most intense parts of the film so far. It can also be interpreted

as a reflection of how Cesare senses his surroundings, as his human body seems to act in an often uncanny way.

Figure 9: Cesare opens his eyes at 11:15.

It is important to note that during Caligari's performance, the sound of the projector is temporarily removed, so as to suggest that even the non-diegetic sound design makes way for the antagonist to perform his magic. This is an attempt to extend the threat of Dr Caligari's character further than that of a fictional character. The projector sound returns at 11:50 when the camera shot turns to Alan and Francis who, mesmerised by what they have seen, decide to go up and speak to Cesare. During this time sustained violin double stops are played, and the background strings from the office scene begin to increase in volume once again. More violin parts including tremolo line are introduced as Cesare returns to the screen and announces Alan's impending death at 12:38. As Francis takes his friend away to console him about this recent revelation, the strings slowly begin to die down.

The two men walk into the next scene as a lamplighter illuminates the street, addressing the change from day to night. At 13:17, a title card is presented on-screen with the words "MURDER" and "REWARD". For this section, piano sounds are used heavily. A bass line is played loudly in the lowest octave for a standard piano, following the pattern C, Eb, C, A. This is accompanied by a higher register melody which focuses on an interval of a major seventh between the two parts. This dissonance is intentional and synchronised with the presentation of the title. The initial movement from C (with B) to Eb (with D) and back to C (with B) hints at a tonality based on C harmonic minor, however this centre shifts as the bass note reaches A (the major sixth of C) and is accompanied by a descending melody from A to Ab/G# in the higher phrase. Although intended as a love theme, its introduction at this point means that it must reflect both the foreshadowing of Alan's death (amongst the other murders), as well as his and Francis' subsequent meeting with Jane. In conjunction with the aforementioned G#, the three-note harp ostinato returns with a rearranged order of B, C# and E and a change from C# to C natural upon the second repeat.

The next short scene from 13:49 is viewers' first truly intimate moment with Caligari. He is presented alone, briefly leaving his cabin before checking the perimeter and returning back inside. This suspicious activity gives little away but is crucial in developing a villainous foundation to the doctor's character. Human voice is first used as part of the score's instrumentation here. A collection of vocal sounds, including laboured breathing at varying pitches and random muttering are placed here on a loop. The intention of this is to force the audience into a physical closeness with Caligari and, as a consequence, enhance the vulgarity of his intentions. This vocal loop is used repeatedly throughout, often at these personal moments but also as acts of malevolence are carried out. The human nature of the instrumentation encourages viewers to interpret the murders as the calculated crimes they are. As utterances without assigned physical bodies presented on-screen, viewers are encouraged to participate in acousmatic listening from which they may begin to question the filmic reality further.

> Acousmatic sound draws our attention to sound traits normally hidden from us by the simultaneous sight of the causes—hidden because this sight reinforces the perception of certain elements of the sound and obscures others. The acousmatic truly allows sound to reveal itself in all its dimensions. (Chion, 1994, p. 30)

Upon the opening and closing of the cabin door, diegetic sound effects are used. This decision, although in stark contrast to the original style of silent era cinema, has been made to emphasise the undeniable differences in format compared to contemporary horror films in a way that compounds the development of tension through the film's score. The universe being presented

on-screen dips in and out of numerous realities in an attempt to confuse and ultimately disturb viewers. The distance between a cinema's physical existence and the film that is being screened within it is formed by a number of factors. Audio-visual technology projects previously recorded and edited footage. This has a tangible effect on an audience's immediate surroundings through lighting and sonic frequencies which vibrate both air and objects within the room. Its restriction to this format, however, acts as a semi-reliable predictor for what audiences can expect to experience while in the theatre. For example, the growl of a monster amplified through a speaker in the room is only a simulation of threat and although in turn has the potential to simulate real fear in the viewer, the sound system is not capable of physically manifesting the entity shown on screen. In the case of silent film, another layer (in this case, diegetic sound) is usually removed as well. Therefore the careful and sporadic insertion of diegetic sound into this modern reimagining of *The Cabinet of Dr Caligari* (Dom Waldock - Music, 2020) is a horror device intended to not only force a feeling of closeness and intimacy with the characters and setting presented visually, but also to occasionally tear away at the viewer's perceived filmic reality.

Figure 10: Francis and Alan discuss their mutual romantic interest in Jane at 14:25.

The scene change prompted by a title card at 14:09 sees Francis and Alan walking home as they discuss their love for Jane. A new piano theme is introduced here to symbolise the progression of friendship between the film's protagonists. The repeated phrase drifts off at the end of each bar and is played with heavy rubato so as to avoid a noticeable fixed tempo but still reflect the movement of the two men. This short clip provides a brief interlude of safety before the first murder on-screen is shown at 14:46.

Cesare's attack on Alan happens swiftly and as such provides little time for tension to be developed through the score. Despite this however, attempts have been made to accentuate the violence shown through the addition of previously used wind field recordings, radio static and manipulation of a vocal scream effect. The sound is distorted, time-stretched and artificially swells to a piercing volume as the struggle between murderer and victim intensifies. The sonic output here is intended to match the stress of the scene's narrative while simultaneously outlining the age of the footage being shown, as if the intensity of the murder is causing physical deterioration

to the film reel. The shadow of a knife being brought down upon Alan coincides with an abrupt end to the scream as the scene changes to a woman making her way through the city streets.

While processing the news of his friend's murder, Francis remembers that it was prophesied by Cesare at Caligari's somnambulism performance. In the build-up to this from around 16:00, the three-note harp theme returns with an irregular rhythm and the projector audio heard throughout the film begins to gradually crescendo, moving erratically across the sonic space. Francis, for the first time, looks seemingly towards the camera at 16:20 and approaches closer. Although this could be explained away as the character staring into the distance, deep in thought; the ambiguity of his initial direction change allows for viewers to momentarily consider a break in the fourth wall. The sporadic nature of the manipulated projector audio hints at this idea, and a low vibrating hum building towards the title card impends an uncertain plot development.

Figure 11: Cesare carries out his attack on Alan at 15:07.

16:37 sees the reiteration of the office theme in a drastically altered way. Layered, detuned and slowed down with the addition of expansive reverb, the music is barely recognisable in comparison to its origin. This has been done for a number of reasons. The scene sees the introduction of the police station as Francis intends to reveal information on the murders that he believes to be relevant. Due to the authoritative nature of this setting, the brass-led instrumentation seemed appropriate. The normally clean sound of the orchestration has been muddied in this case however - its sense of rigidity in tonality and timing faded. The intention of this is to breed doubt in the actions and influence of the police In Holstenwall. The reuse of the office theme here retains the score's familiarity to the viewers, confirming the police station's location with the same town. It also aims to ensure that Caligari's underlying presence as the story develops is not forgotten.

As Jane rushes to Francis at 18:11, the friendship theme returns. This iteration sees a destabilisation of its tonality with unpredictable pitch changes and the addition of high-register chords, the first of which is synchronised with the look of horror on Jane's face as she reacts to the news of Alan's fate. This scene is given an underlying drone of violin recordings that have been stretched in order to sustain for long periods and are noticeably out of tune with the piano

part. The strings become more prominent and the friendship theme fades away as Jane's presence of innocence leaves. Francis begins to discuss his suspicions regarding Caligari to Dr Olsen with the addition of a low percussive rumble that resonates into the following scene.

Figure 12: Jane reacts with horror to the news of Alan's murder at 18:41.

At 20:09 a suspected criminal is identified and the vocal scream used to signify the murder at 14:46 is repeated. The crescendo reaches its peak amidst a struggle as the man is disarmed.
The next scene sees Dr Caligari tend to a sleeping Cesare. As the coffin is opened at 20:36, foley is reintroduced in order to retain the feeling of intimacy while the camera is focused on him. Once again the vocal moans are heard with the addition of subtle metallic scrapes panned disparately. These were created by recording an acoustic guitar and are intended to accentuate the physical closeness one is meant to feel during this scene within Caligari's confined cabin. As Caligari is confronted outside at 21:14, a new sonic device is presented. This comprises a series of whistle recordings that have been detuned at various pitches to gently enhance the breathiness of the instrumentation, highlight the first on-screen personal meeting of the main protagonist and antagonist (Francis and Caligari), as well as to provide a smoother transition into the next scene as the suspect is brought to the police. These compositional techniques are compiled to emphasise the significance of the scene and represent the threat of physical conflict between good and evil at this stage. Chion remarks on the power of sound to have a physiological effect on individuals, something often strived for in horror cinema.

> The consequence for film is that sound, much more than the image, can become an insidious means of affective and semantic manipulation. On one hand, sound works on us directly, physiologically (breathing noises in a film can directly affect our own respiration).
> (Chion, 1994, p. 34)

With this development comes the return of the warped office theme from 16:37, along with a new diegetic sound. Audio from a crowd of people is used as the citizens of Holstenwall and police

discuss the suspected murderer. The shot is busy and many of the individuals shown are speaking at an unnaturally fast rate.

Another side effect of the technology used in 1920 as opposed to in contemporary cinema, films of this era were shot at frame rates that differed from the now standardised 24fps ('frames per second'). Cameras were often hand-cranked and as such the speed would change according to this. Additionally theatres would adjust the frame rate for screening. The consequence of this is that people's movements on-screen are unlikely to match their real-time pace and consequently not what modern audiences would expect to see. In addition to this, *The Cabinet of Dr Caligari* (Wiene, 1920) is plagued with visual imperfections including the occasional sudden skip in time. A notable example of this is at 22:46 when, after being demanded to awaken Cesare, Caligari barks and the other characters in shot jarringly change position in the space of a single frame. Another signifier of the film's age and its subsequently tarnished footage, this skip along with others throughout have been sonically identified through the sudden use of static. In this particular example it has the enhanced effect of matching the visual aggressiveness of Caligari's shout along with the visual blip so as to suggest a link between the two. The doctor's voice becomes fully manifest shortly afterwards at 23:11, as he audibly cackles with laughter upon escaping suspicion.

If the fictional antagonist can be portrayed to have influence, however slight, on the mechanical restraints of 1920s camerawork, then his reach has the potential for translation to present-day cinema. It is upon this 21st century researcher to reinvent the way *The Cabinet of Dr Caligari* (Wiene, 1920) is perceived whilst attempting to retain its horror elements. One could argue that expanding the perspective of a filmgoer in 2020 beyond the confines of simply watching a century-old film confined to its historical and technological limits, is *crucial,* if aiming to achieve a full cinematic horror experience. The classification of blemishes in the film's visuals and the addition of diegetic sound to a prominent work of the silent era are two key ways in which I have endeavoured to do this.

Figure 13: Francis and Alan discuss their mutual romantic interest in Jane at 23:27.

The next title card is accompanied abruptly by the sound of heavily time-stretched violin. It has been doubled with an identical line pitch-shifted down below the instrument's conventional range.

The love theme returns upon the appearance of Jane sat alone at 23:26. The innocence of her character is often complemented by subtle birdsong, however briefly, while she is the primary focus on-screen. At this point in the film she is still yet to have encountered any threat or danger and therefore acts as the occasional presence of hope through the overarching darker themes. The instrumentation thins out and focuses on the lower register as the scene quickly moves to the questioning of the murder suspect. Here, the filtered sound of low-pitched static crescendos slowly upon the man's appearance. The frequencies are intended to replicate an imposing physical presence with a chaotic energy. From this comes the muffled, distorted sound of a man's voice.

The way this scene is presented is key in the context of the film for a number of reasons. The suspect is clearly a villainous individual and admits to the attempted murder of an old woman earlier that evening. But crucially he also admits to simply being an opportunist, having tried this in the hope that her murder was blamed upon the other killings affecting Holstenwall. From a narrative perspective it is important here to accurately reflect the heinous nature of the man's intentions, while also alluding to a core plot development - the protagonists are beginning to understand that a far greater evil is at work here.

In order to achieve the result outlined above, a new "criminal" theme is introduced. This fresh material identifies the murderer as an individual with no affiliation to Dr Caligari, Cesare or any other characters so far depicted on-screen. The three-note harp motif is not heard for the duration of this scene in order to suggest a stray from the path in the pursuit of the true culprit. Before this point it is played as Jane's appearance reminds Francis of his past (01:28), when Alan hears the distant sounds of the fair (03:23) and again as Francis comes to terms with who may be responsible for Alan's death (16:02).

A chattering percussion sound is used to to transition into the next scene. It moves around the space as the vignette closes and opens on Jane outside, walking through the fair. At this moment the warped strings become distant, reverberating through the more open spaces of the town and leaving room for a return of the fairground theme reversed. As Caligari's performance tent is shown, momentary blips of static force themselves into the sound world to signify both the protagonist's and the viewer's increasing proximity to evil. This static becomes deeper and more imposing on the close-up of Caligari's face at 25:19 as the frame seems to skip his movements. Resonant hits from a detuned piano are heard sporadically and the percussive chatter returns as Jane accepts his invitation into the tent. A fast, walking double bass line gradually becomes apparent to depict an encroaching danger and slow violin glissandi are placed more prominently in the mix. The opening of the second door on Cesare's coffin is reflected by foley in an otherwise non-diegetic scene to bridge the gap between the layers of filmic reality. The bass line comes to an abrupt end as Jane flees, having come face to face with the true villain and perhaps a foreshadowing of her own fate.

Figure 14: Jane witnesses the awakening of Dr. Caligari's somnambulist at 26:18.

Church bells are used at 26:32 to accompany the funeral while reciting a melody heard within the love theme. This scene, despite its morbid overtones, acts as an exceptionally brief respite from the clear threat present in both previous and future scenes. For this reason the decision was made to keep the sound world clear and unambiguous with eerie string instrumentation to build a sense of tension. The only other sound heard besides church bells and the projector reel, is that of crow calls which are typically used to represent death due to their presence in folklore and interest in carrion.

As night falls at 26:49, the wind field recording becomes the sonic focus as a mask for Francis' covert movements and a reminder of the chaotic forces at work. Slowly a collection of string sounds resonate across the scene before fading as he peers through the window at the sleeping pair of Caligari and Cesare, at which point the vocal moans return for a short time.
Upon the shot of Jane sleeping, the only sound remaining is that of the wind effect. At 27:41 as Cesare creeps against the wall, the warped sound of a much larger number of crows pitched low marks the film's descent into progressively more tragic events and strongly hints at the approaching threat of death. His entrance through the window is slow, focused and faced towards the camera. For this scene and its similarities to Cesare's initial awakening scene at the fair, the same wind effect has been used with the intention of highlighting his sleep walking state. At a much slower rate, the scream effect heard during Alan's murder is used once more as he makes his way ever closer to Jane. The murder weapon is raised at 28:40 accompanied with a reverse cymbal. The sound has been pitched lower and comes to a sudden halt to replicate the sound of a blade being unsheathed. This abrupt drop in music volume coincides with Cesare's hesitance as he observes the sleeping Jane. He inches closer with his hand, accompanied by the love theme wherein each note is sustained by strings causing heavy tonal dissonance. The three-note harp motif reappears also, its second iteration concluding with a sforzando as Jane awakens.

This moment lends itself to the jump scare technique. A staple of modern horror cinema, its difficulty to execute is compounded in the usual silent format which would have been limited to

only the score orchestration and involving no diegetic sounds to simulate the feeling of closeness to viewers. However in this contemporary reimagining of *The Cabinet of Dr Caligari* (Dom Waldock - Music, 2020), the wider use of sounds and effects available along with the addition of occasional diegesis allows room for the use of potentially effective jump scares.

A physical struggle ensues between Jane and Cesare at 28:58 coinciding with the sudden increase in dynamics. The instrumentation includes choir, violin and an erratic timpani part amongst other sounds. The volume waivers unpredictably in order to sonically reflect the visual violence of the scene, almost as if the music's peak is attempting to burst out of its cinematic constraints. In an attempt to obfuscate the lines between diegetic and non-diegetic audio, the score is muffled at 29:10 as the men in a nearby bedroom are awoken by sounds of the attack and run to Jane's aid.

As Cesare is spotted carrying Jane away, a quick percussive rhythm is introduced to portray the haste of his escape and the ensuing manhunt. The love theme melody is darkened by a drop of several octaves and relentless repetition by a harp. Church bells ring out once more across Holstenwall, muddied by the surrounding score including stretched violin glissandi. After his failed kidnap attempt, Cesare collapses at 30:41. This concludes the percussive ostinato and a rattle sound dies away into the next scene as Francis is shown returning to Jane from outside the window of Caligari's cabin.

The friendship theme accompanies the traumatised woman with the addition of a slow chromatic ascent doubled by a distorted synth part. The high frequencies are amplified to cause a continuously rising siren sound so as to not allow the audience to calm fully from the experience of the previous scene. The three-note harp theme is also present to signify the deliberation between protagonists as they relay conflicting accounts of the evening's events. Jane's surety of Cesare's guilt juxtaposes Francis' observation of the somnambulist asleep all night and in turn the three-note theme is played out of tune to reflect the disjointed narrative.

The police station is once again underlaid with a cacophony of brass swells and the criminal theme returns at 32:34 as Francis is taken to observe the prisoner in his cell. As Caligari is confronted at his cabin, he puts up physical resistance that is suddenly accentuated with the addition of violin that has been considerably dropped in pitch. The volume peaks and troughs to match his spontaneous movements. 33:30 marks the first moment that the doctor is placed in a position of weakness. He knows he is close to being revealed as the mastermind behind the crimes and for the first time is no longer in control of unfolding events. To reflect this the vocal noises originally used to signify his ominous presence fade away and the fairground theme - from the place of residence where his wrongdoings were carried out, is heard slowing to a halt.

A steadier, low harp ostinato is introduced along with a single sustained violin line as Caligari plots his escape. Cesare's coffin is opened to reveal a dummy, by which point he has fled the scene to all but confirm Jane's account of the attack. As Francis throws down the mannequin in anger at 33:56 it is met with a resounding boom. The percussive rhythms used during Jane's kidnapping are played more distantly and muddied as he heads in pursuit of the now confirmed culprit. The chase leads both characters to an insane asylum which at this point unbeknownst to viewers is the location from which Francis is retelling this story from the film's introduction. To suggest an air of familiarity, as the asylum grows closer the string theme heard at 01:03 is brought back hidden amidst a number of other instrumental parts.

Upon Francis entering, the three-note harp theme returns with the clarity of its earlier iterations, although surrounded by sporadic melodic flourishes as if the long-awaited answers to his questions are beginning to bubble to the surface. Aggressive static is abruptly heard soon after Francis is shown to ask the question, "Have you a patient named Caligari?". It is as if the film itself begins to distort in an attempt to suppress the final revelation of the doctor's identity. As the

introduction's string theme is repeated once again with much more presence, its conclusive low harp chord at 35:21 is disrupted with the addition of a second discordant pluck and a soft, subtle reimagining of the love theme played on a marimba. The high register and delicate performance of this lies in stark contrast of the music that has come before it, leaving sizeable emptiness in the sound world as Francis begins to focus in on his aim of finding Caligari by speaking with the asylum's director.

The office door is closed behind him at 35:36 and with it all sound is ripped away. Francis approaches the director's desk accompanied with the scraping of violent, rising violin glissandi as it is revealed to Dr Caligari himself. This moment is made impactful by a loud and resonant warped piano hit which moves and lingers across the sonic space to suggest the significance of this twist to the audience. The criminal theme, now developed and heard with resounding presence doubled by the harp, is melded with the gradual slowing down of miscellaneous sounds as Francis' suspicions are simultaneously confirmed to be true while his broader reality comes crashing down.

The music fades away and as Caligari sleeps at 36:22, all that remains is dreamlike flurries from harp and marimba. The fast development of the visuals take precedence here with only underlying stretched violin drones heard as Francis and the asylum staff begin to investigate Dr Caligari's research for insight into the origin of his unsavoury intentions. The looped whistle recordings return low in the mix as their constantly fluctuating tones disallow the soundscape to feel fully calm. Each close-up reading of psychological texts and journals from 37:03 trigger an instant increase in dynamics for the wind field recording. It is intended to mask surrounding sounds so that the literature can be focused on. As the men gain evermore information pertaining to Caligari's work, the three-note harp theme comes to the fore with repetitive delay. It rings out across the space with varying durations and rhythmic unpredictability

The film transitions into the past to witness the antagonist's progression to murder from the journal entry at 38:40, where the collection of sounds used to signify the magic trance that awakened Cesare at 11:09 is reintroduced. The subsequent scenes of Caligari's first meeting with his somnambulist are unambiguous in their portrayal of him as a villain. The slow harp motif used during his escape from the reveal of his dummy earlier in the film returns doubled by piano for more melodic clarity and stronger emphasis on the extremely low first note of each bar. After Caligari instructs his peers to leave the room, his laugh is paired with a high, grating and distorted violin tremolo along with unstable timpani hits and vocal moans.

More tremolos and expressive scrapes are used in the second flashback at 40:26, along with percussive chatters and powerful piano hits to assert the text shown regarding Caligari's temptation to begin his criminal acts.

As we return to the present, the discovery of Cesare's body is relayed to the men accompanied with non-diegetic church bells, and the distorted crow sounds return as the corpse is carried away. The presence of death, enhanced by music and sound design, is seemingly inescapable as the film progresses.

With irrefutable evidence of Dr Caligari's guilt, Francis and the asylum staff make their way to confront him at 42:41. This is perhaps the quietest moment in the whole film, comprising only the sound of the projector reel. The extent of Caligari's malice is not fully known so this sonic decision leaves viewers with very little to prepare them for what may happen next. Sounds and musical phrases used previously begin to re-enter at a painfully slow pace as Cesare is revealed to his master. The discordance peaks upon Caligari's restraint and imprisonment as despite what may seem like a successful apprehension of a murderer has been carried out, the manifestation of the doctor's insanity and the magnitude of his crimes leave little room for comfort for viewer and protagonist alike.

44:54 marks the first return to the original time period present at the beginning of *The Cabinet of Dr Caligari* (Dom Waldock - Music, 2020). The same shot is shown to present Francis sat on a bench with an older man after having recited the story of the mountebank just visualised on-screen. With this comes another return of the original string theme, but not wavering in pitch and distorted to suggest technological deterioration over the passage of time.

It is revealed that Francis, an asylum patient, has been narrating from inside the establishment since the beginning. Crowd sounds and aggressive voices span the surroundings as the asylum is shown to house numerous individuals including Cesare and Jane, the latter of which is signified by the friendship theme. The piano part is modified to include alarm-like phrases repeating disjunct intervals at the end of the original melody line, so as to reflect Francis' futile attempts at gaining her attention.

Caligari's final appearance at 47:16 as the asylum director sees the return of the vocal moans and Francis' accusatory words are matched with low piano hits. A sudden frame change during his struggle at 47:36 sees the number of asylum staff restraining him multiply impossibly. This skip of time once again triggers a burst of static, contributing to the overall decay of the footage. The three-note harp theme is heard once more from 48:15 as Caligari's explains his diagnosis of Francis' 'condition' and the chords rings out as a vignette closes around the doctor's face to bring an end to the film.

Chapter 6: Conclusion

6.1 Summary of Findings

The undertaking of this research project has greatly enhanced my personal academic experience, allowing for further insight into related subject areas in the future. Having analysed several works of contemporary horror cinema, this action culminated in the classification of factors observed to influence the effectiveness of their sonic components. The nine subchapters presented earlier provide their respective contextual information, including how they have been applied within the horror genre. The subsequent commentary of my compositional process regarding *A*, *B* and *The Cabinet of Dr Caligari* (Wiene, 1920) seeks to outline how elements such as nature, hauntology, the 'uncanny', instrumentation, leitmotif, liminal moments, spectromorphology, diegesis and silence have been incorporated to produce new, contemporary pieces of horror audio.

6.2 Reflection of Compositional Process

The short films *A* and *B* created in collaboration with Nathanael McGirr proved to be ideal canvases for the experimentation of ideas. Both clips allowed for variation, ensuring I was prepared to translate the most effective techniques to a larger work. *The Cabinet of Dr Caligari* (Wiene, 1920) was chosen after considerable deliberation which ultimately paid off as the film allowed for a great deal to be achieved. It felt initially unnatural to study the film with no sound, but this did allow me to not have my compositional decisions influenced by potential bias from hearing earlier soundtracks. Much of my work on the film was through-composed, however some scenes of particular significance were focused on as individual entities. I also, from an early stage, considered the concept of leitmotif to ensure audience familiarity to certain characters and events as they recurred throughout the feature length film. It was at times a challenge to look past the technological restrictions of the footage, including its low resolution and subsequent limited visual detail in comparisons to contemporary works of cinema. This is why I decided to use these factors to my advantage by focusing on their relation to concepts such as hauntology and the 'uncanny'. My time writing for *Caligari* often encouraged the undertaking of reduced listening, allowing me to become more acutely aware of sonic qualities in both the diegetic and non-diegetic space.

> However, reduced listening has the enormous advantage of opening up our ears and sharpening our power of listening. Film and video makers, scholars, and technicians can get to know their medium better as a result of this experience and gain mastery over it. The emotional, physical, and aesthetic value of a sound is linked not only to the causal explanation we attribute to it but also to its own qualities of timbre and texture, to its own personal vibration. So just as directors and cinematographers—even those who will never make abstract films—have everything to gain by refining their knowledge of visual materials and textures, we can similarly benefit from disciplined attention to the inherent qualities of sounds. (Chion, 1994, p. 31)

6.3 Achievements of the Study and its Impact on the Field

I believe this research has successfully identified many elements of music and sound design in contemporary horror that can now be known to aid in the creation of critically effective film. This thesis will therefore be a notable contribution to the academic fields of music and film, as well as a source for professional development. In addition to these broader impacts, the sonic reimagining of *The Cabinet of Dr Caligari* (Dom Waldock - Music, 2020) is a significant example of

how contemporary techniques available to the modern composer can be utilised to revivify older pieces of visual media, without falling into attempts at pastiche or by ignoring their age entirely.

6.4 Critiques and Limitations

After my completion of *The Cabinet of Dr Caligari* (Dom Waldock - Music, 2020), it became apparent that certain elements of analysed sound had been used more than others. This, however, can be justified in part by my personal compositional approach which is bound to favour certain techniques over others. Additionally, it is possible that the features less used but discussed earlier in the relevant subchapters would be more applicable to different examples of film. Furthermore, a third short film (provisionally entitled *C*) was also created in collaboration with Nathanael McGirr but the visuals did not seem to apply themselves as well to the application of my own sonic composition and was ultimately scrapped.

6.5 The Future of Music and Sound Design in Horror Cinema

It seems clear from the findings of this research project that the future of music and sound design in horror cinema must continue to derive from earlier works of film while incorporating more advanced modern techniques of composition. More specifically, however, the blending of these two disparate components seems to be a notable source for horror-related stylistic themes. It is this blending, including elements such as hauntology that will allow contemporary composers to advance their professional portfolios. This may be further achieved through careful examination of the diegetic and non-diegetic relationship in film, as discussed in regards to spectromorphology. There are other examples of the ‘remusicing’ of silent horror films, with varying use of style and ensemble. As recently as 2020, two new scores for silent films *The Cabinet of Dr Caligari* and *A Trip To The Moon* have been composed by David Le Page of the Le Page Ensemble. To accompany the most recent and comprehensive digital restoration of *The Cabinet of Dr Caligari* (Wiene, 2014), Edison Studio composed an electro-acoustic soundtrack. Whereas composer Andy Quin regularly improvises live organ music for silent cinema, including features such as leitmotif to retain a sense of character development within the narrative (Quin, 2020). Pertaining to the use of historical mediums and musical styles such as Quin’s cinema organ accompaniments, occurring parallel to Edison Studio’s more contemporary approach, helps to justify further exploration of my research topic.

6.5.1 Further Writings and Analyses

As new and notable works of horror cinema are released, including several since the inception of this thesis, it is essential that I and other academics continue to analyse their effectiveness in relation to sound design. This will allow for the development of pattern recognition and ensure any new compositional phenomena are quickly identified for further discussion. It is important for me to not restrict my view of horror film composition to just the nine relevant subchapters examined earlier in this thesis, as other may arise through additional research.

6.5.2 The Potential for Contemporaneous Sonic Reimagining

In addition to the potential for more pieces of academic literature around the aforementioned topics, the impact of my contemporaneous sonic reimagining on my own professional experience is invaluable. I intend, therefore, to continue along a similar path of compositional work and encourage others to do so. Silent films provide a wealth of high-quality visual narratives as blank canvases for the application of new sonic ideas. Finally, I would like to see these modern

reworkings of such films as *The Cabinet of Dr Caligari* (Wiene, 1920) screened to present-day audiences, hopefully as effective horror entertainment.

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Appendix C: Ethics Documentation

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Dominic Waldock

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