Film Sound and Narrative: A Sonic Exploration of the Hollywood Paradigm

by

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An Introduction to Film Sound

[Film music] *is characterized by its power to define meaning and to express emotion: film music guides our response to the images and connects us to them.*[1]

"In real life, movement is never observed in strict silence."[2]

Film scoring is the process of composing original music for the specific purpose of film accompaniment. Sound design is the process of manipulating audio elements that have either been obtained or generated by the sound designer. The arts of film scoring and sound design consist of several techniques that have evolved concurrently throughout the development of American cinema. In this thesis, I explore some of these conventions in both film scoring and sound design. I examine how the two areas are perceived in conjunction with one another, with an emphasis placed on the way in which the two practices, employed both together and independently, can be used to imply or impact narrative. To

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[1] Kalinak, Kathryn. *Film Music: A Very Short Introduction*. New York, NY: Oxford
[2] Cooke, Mervyn. *A History of Film Music*. New York, NY: Cambridge University Press, 2008. Print. 3.

do this, I will first discuss sound design and film scoring briefly and separately, before investigating their meaningful counterpoint with one another.

The early history of film music can be traced as far back as Vaudeville; early "films" were little more than vaudevillian acts and stage tricks, recorded for demonstration at carnivals and other such attractions. In fact, in the late 1800s, the popularity of "illustrated songs" – or attractions where a short film clip would be played as the accompaniment to a live piece of music that the audience could sing along to – would suggest that the main attraction was the music itself, before the medium of film lent itself to narrative storytelling and independent interest. After the popularity of the illustrated songs began to wane in the 1910s, "perhaps in response to a widespread desire for movies to be taken more seriously," the visual element of filmmaking became the focus of attention. [3]

Later, in the case of films where the visual elements had become the main attraction, the music played in accompaniment with the film might not have been directly related to the film at all – it might not even have been the same at every performance. The music was simply a way

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[3] Ibid. 7.

to lay the groundwork for audience interest before the film had even been observed, and to maintain that interest once the viewing was underway. As silent film developed, so did the music itself, and filmmakers found that the exploration of dramatic music was crucial to the manipulation of audience emotion. In the words of the French film score composer Yves Baudrier, "If the music is taken away, there is a risk of losing the necessary minimum emotional warmth which must exist for us to believe (however temporarily) in the sentiments we are supposed to be feeling, attracting, through a sort of magic, the complicity of the audience."[4] The concept of "emotional warmth" is one that I find particularly relevant in this context. "Warmth" here refers to the emotional accessibility, rather than necessarily implying the positive emotions that the word warmth often connotes (although those are included in the definition). Baudrier's statement essentially refers to the fact that the presence of music is often the access point to the emotional content of the scene, due to music's advantage over film to draw a clear and explicit emotional response.

This realization on the part of early filmmakers that music was necessary to access the audience's emotions led to a development of the art of scoring – a development which can be traced in its earliest steps by

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[4] Ibid. 10.

following the way in which the vaudevillian piano music that accompanied early sound films adapted into the first orchestral scores. As the filmmakers became increasingly aware of the divergence between diegesis and non-diegesis, they also became increasingly aware of the qualities that defined 'appropriate' accompaniment, and the impetus for film scores to contribute something other than background noise grew. Filmmakers began applying the theories of melodrama and operatic production to their understanding of the role that film music played, resulting in early orchestral scores that were rich with dramatic, emotional content.

The earliest sound films often consisted of music that had been previously composed and selected for its perceived relevance to the new film in question. However, another distinction that is important to draw between modern film scores and early silent film music is that – in the case of a live performer – the interplay was not only between the images on the screen and the music being played, but also between the music being played and the audience's reaction to the film. Particularly in the case of comedies, the audience's reactions would determine the vigor and dynamic expression of the pianist. In addition, the volume of the audience, by necessity, changed the way in which the pianist changed,

simply out of the pianist's need to make their music heard over the ambient noise.

The earliest film scores also subscribed to a series of conventions made popular by the filmmakers' study of melodrama; the music – whether orchestral or piano – would play heavily into these established connections for the sake of evoking a particular emotional response. In this way, early musical accompaniment served as a "mood-enhancer" in films that would otherwise appear stark for the lack of emotional connection that would result from silence.[5] Watching action take place in complete silence was potentially unnerving, and the need for direct emotional communication was deeply rooted in filmmakers' desire to explain emotional intention to the audience.

Arguably the biggest responsibility carried by a film's score is the establishment and reinforcement of emotional content; even though we cannot see into the minds of the characters the film follows (as we would in, say, a novel), the music is there to support and elucidate what might be the invisible or intangible emotional aspects of the film, bringing the

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[5] Ibid. 10.

audiences even further into the psyche of both the characters and the film itself.[6]

As film music evolved, so did the conventions of thematic or emotional motifs. With this evolution came the related development of the relationship between these motifs and the action on screen; that is, whether the motif was specifically referenced in a scene or existed without any referenced source. This forms the basis for understanding diegetic versus non-diegetic sound, and its relationship to narrative. Whether sound is diegetic or not depends on whether it forms part of the film's narrative world: diegetic sound comes from the world of the film, while non-diegetic sound exists in the audience's world only, as accompaniment to the film. In other words, diegetic sound is sound that comes from a visible (or otherwise understandable) source in the film – for example, the sound of the faucet running when a character turns a tap, or the clinking sound of a spoon hitting a granite countertop. Non-diegetic sound is sound that doesn't have an apparent source in the film, including scored film music (scored here meaning composed for the sake of accompaniment), voiceovers, etc. This distinction was of great concern to the makers of early sound films, who were responsible for the reliance

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6 Kalinak, *Film Music: A Very Short Introduction,* 4.

upon the ambiguity drawn between sound that has an obvious source, and sound that does not. This distinction, which eventually developed to include the difference between synchronous and asynchronous sound, became a crucial device among both early and modern sound filmmakers alike for the tension and emotional response that ambiguity produced.

The early origins of sound design can be traced back to the 1970s, and to a couple of defining shifts in the attitude of filmmakers toward the role of sound. One such early shift involved the introduction of sound montage, or the creation and/or manipulation of sound elements for the purpose of creating a musical collage, of sorts. In other words, the songs and other sounds would combine to create a new soundscape of the artist's conception. This technique can be traced back to Walter Murch's work on the film *THX 1138*. The term "sound design" – coined by Murch – came into existence in reference to the film *Apocalypse Now*. Murch's aim as sound designer and editor for this film was to create an aurally immersive experience, in both the sense that sound was placed realistically in stereo, as well as in that the sound used and created was mixed into the audio of the film seamlessly, and with a prioritization of

verisimilitude over realism where it came to sound.[7] This is a

prioritization that is still relevant today; the most important quality of any

given sound effect is that it is believable in the context of the film. This

discrepancy between sound as a 'reality' localized in the world of a given

film and the actual sounds of reality is something that I will discuss

further in a later chapter. An important term that I use in this discussion

is "verisimilitude," which refers to what is believed by the audience to be

true or real in the context of the film.

Sound design continued to evolve following Murch's innovations

with *Apocalypse Now*, and its increased prominence resulted in a gradual

blurring of the lines between the jobs of sound designer, sound mixer,

and sound engineer within the Hollywood studio system. Despite the fact

that it cannot be condensed into a single job title within the studio system

to this day, sound design can be – somewhat reductively – defined as the

search for the "right sound." As such, there are several conventions that

have been established for the purposes of creating soundscapes that in

turn serve the purpose of constructing a reality within the film-watching

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[7] Whittington, William. *Sound Design & Science Fiction*. Austin, TX: University of Texas, 2007. Print. 19-23.

experience, however much that sound does or does not demonstrate ties to the actual reality of sound.[8]

The first aspect of film sound that I address in my work is the interplay between the two practices of sound design and film scoring. Specifically, I address how – in conjunction with one another – they can work to create a cohesive unit that seems both realistic and representative of an atmosphere or narrative arc that exists outside the visible frame. As Randy Thom (director of sound design at Skywalker Sound) mentions in an article, this is an endeavor often overlooked, as the responsibility for sound to carry narrative weight is left up to the director, whose priorities are often elsewhere (especially in the context of Hollywood blockbuster filmmaking).[9] In this thesis, I explore the interplay between these concepts, and create a new audiovisual installation that speaks to the technical and artistic conventions that have been established. To be more specific, I aim to demonstrate how the interplay between diegetic sound and composed sound may impact the viewer's perception of verisimilitude and perceived narrative arc within even a short scene.

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[8] Slobin, Mark. *Global Soundtracks: Worlds of Film Music.* Middletown, CT: Wesleyan University Press. 2008. Print.
[9] Thom, Randy. "Designing a Movie for Sound." (1999). *FilmSound.org.* Web. 8 Dec. 2015. <http://filmsound.org/articles/designing_for_sound.htm>.

For the purposes of this thesis, I am defining narrative as the connected series of events that comprise a story. The art of creating soundtracks for film has evolved such that music and sound play a key role in implying and advancing narrative; the tone of the music and the incorporation of film sounds are largely responsible for establishing the emotional content of the scene, and often indicating the direction in which the narrative will progress.[10] One goal for the creative work of this thesis is to develop a further understanding of exactly how far that power can carry, by building upon and bending the conventions of film scoring and sound design that have evolved alongside film itself.

To that end, another element of film sound that I aim to explore in this thesis is the interplay between diegetic sound and non-diegetic sound. That is to say, the potential for the interaction between these two types of sound is not limited to whether or not a sound comes from an apparent source. For example, the difference between music that is played as a part of the characters' vernacular might transition between being diegetic and non-diegetic, as in the scene from *Reservoir Dogs* that Kalinak discusses in her introduction to film music.[11] While the sound

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[10] Clair, René. "The Art of Sound." *Film Sound: Theory and Practice.* Ed. Elisabeth Weis and John Belton. New York, NY: Columbia University Press, 1985. Print.
[11] Kalinak, *Film Music: A Very Short Introduction*, 2-6.

begins as diegetic sound, played through Mr. Blonde's radio, it is gradually mixed higher over the course of the scene until it seems more like accompaniment than source music. It also fades in and out in relation to Mr. Blonde's proximity to the radio. This discrepancy between the clarity of the sound and its clear tie to location blurs the lines between what we perceive as diegetic and non-diegetic. Mark Slobin provides another example of the potential interplay between diegetic and non-diegetic sound in his discussion of source and score music. The distinction between the source music (or that heard and participated in by the characters in the film) and score music (that which is only heard by the audience) is crucial to understanding the distinction a filmmaker might be drawing between emotional underscoring and narrative or character development.[12]

Another element of film sound that I wish to explore is that of effective sound design. Again citing Thom's essay on film sound, what is often perceived as "good sound design" is a function of the perceived loudness of the effect in question.

"What passes for "great sound" in films today is too often

merely loud sound… Sound, musical and otherwise, has value

[12] Slobin, *Global Soundtracks: Worlds of Film Music,* 5.

when it is part of a continuum, when it changes over time, has

dynamics, and resonates with other sound and with other

sensory experiences"[13]

The sound effects that audiences have been conditioned to hear as 'realistic' are actually very exaggerated, to the point where they don't come close to resembling the sound that the real event would make off-screen. The most basic example of this is the punch: when a character strikes a blow on-screen, audiences have come to expect the big, meaty, sound effect that signifies to them that one character truly struck another; in reality, the sound of a person striking another makes a relatively miniscule amount of sound at all.[14] The choice to emphasize such sounds with loudness serves a couple different purposes: first, it makes the action resonate more sharply with the audience – they are viscerally connected to the action of the blow by virtue of the shock that comes with the loud, sudden noise; second, it reinforces the idea that the punch is seen as being narratively and emotionally significant to the scene. Other noises that – in reality – might make the same amount of noise are mixed down,

[13] Ibid.
[14] Engber, Daniel. "The Sounds of Violence." *Slate*. The Slate Group, 24 Feb. 2012. Web. 4 Dec. 2015.
<http://www.slate.com/articles/arts/culturebox/2012/02/drive_the_sound_editing_in_the_elevator_stomping_scene.html>.

as they don't fit into the filmmaker's curated set of sounds that advance the audience's understanding of the narrative.

The discrepancies between perceived and constructed reality form an area that I would like to explore with this thesis. In the sections emphasizing sound design, part of my process includes the exploration of the impact of realistic diegetic sound, versus the effects that comprise "good sound design." More specifically, I will work within and without the parameters of realistic sound, using amplified effects to supplement composed work, as well as more realistic recordings of diegetic sound – also in conjunction with the composed work. I will also employ elements of raw sound in my work, as raw sound is a part of the spectrum (raw, to realistic, to hyper-realistic) that is often not considered or discussed in this process. (In the course of this work, I use the term 'raw' in order to describe the quality of the sound that was obtained from the original video recording – un-doctored and unedited.) I will work with the raw sound files in order to create the library of sounds that I work with in part of this thesis, but I will also use raw sound for the purpose of illustrating the conventions of sound design, and how they deviate from reality.

One relationship I am considering in the pursuit of the exploration of diegetic sound is the impact that non-diegetic sound can have on a

scene. Because sound verisimilitude is developed entirely within the parameters of the film, sound that is neither diegetic nor scored can – for lack of a better term – make or break an audience member's perception of reality. While this is not necessarily something that I address too deeply in my creative work, it bears mentioning, as it lends more weight to the role that diegetic sound plays. Additionally, I address the distortion of perception through time displacement; that is to say, I consider – practically, in my work – the function of displacing diegetic sounds by time, adding delays, anticipations, etc. I want to explore this manipulation of sound for the purpose of changing the viewer's perception of progression and reality; using related techniques, I hope to play on that which defines the audience's perception of normalcy.

Aside from sound design, the other main component that I will be exploring in my thesis is the art of score composition. In a traditional sense, film scoring obeys many of the same rules and conventions that classically composed music has observed for centuries; the same sets of harmonies and melodic movements have generally been employed to connote specific emotions and evoke specific reactions since long before the invention of film. This, perhaps, came out of a historical tendency to draw from an existing canon of composed (maybe orchestral) music for

the purposes of accompanying silent films.[15] In my thesis, I would like to explore the effect of toying with such traditions and conventions. For example, one way in which I intend to do so is by playing into those conventions in a few different styles of composition; in other words, I plan to use the conventions for conveying emotion through music (harmonic and rhythmic progression, tempo changes, etc.) in a few styles of composition. Additionally, I plan to subvert these same conventions through the interplay of sound design and film scoring techniques. It is my goal to test the boundaries of emotion and narrative realism as dictated by convention, hopefully without breaking the intelligibility of the work.

Sound and music hold the capacity for emotional agency and manipulation. A skillful use of sound design can allow physical locations to have personalities and emotions. A skillful manipulation of composed score can create intense, thematic self-reference, adding layers to the bare bones of a story. The music of a piece can indicate the passage of time, or indicate some other change in the camera's subject. "When a sound changes over time in response to elements in the larger story, its power

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15 Cooke, *A History of Film Music,* 13-14.

and richness grow exponentially."[16] In this thesis, I will examine the extent to which the narrative and resulting emotional content implied in the score can affect an audience member's perception of the film in question. The use of composed music in a vacuum (that is, without the supporting context of a full film) will be the greatest limiting factor in this experiment regarding the potential of film sound to communicate narrative. By the very nature of working with a single scene out of context, thematic development is rendered impossible. However, the power of music to imply or refer to an over-arching story is something with which I am keenly interested in experimenting.

Ultimately, my thesis explores the interplay between the traditions of film music and film sound. Much of the sound editing process lies in creating a seamless blend between diegetic sound and composed sound; I plan to explore the boundaries between the two, and to see how far an audience member may be pushed before the obfuscation of the lines between the two breaks the perception of reality that the audience member would otherwise have been able to build. In other words, my goal is to see how far the existing conventions may be bent and/or broken, while still conveying an emotion or narrative connotation that the

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[16] Thom, "Designing a Movie for Sound."

audience will find understandable. Within this, I am also interested in subverting the assumed prominence of what is seen in film over what is heard within film. This ultimately comes down to the discussion of how much film sound conventions manipulate our perception of films: which emotional reactions on behalf of the audience come from the visual stimuli, and which come from a lifetime of exposure to the language established by Hollywood cinema? These conventions – established over years of implementation in the medium – manipulate our perception of narrative and the passage of time, as a result of the reactions and responses that we have been conditioned (by repeated exposure) to have to musical and sound cues.

The Evolution of Sound Design

As previously defined, sound design is "the creation and manipulation of audio samples for use within instruments, scores, or sound effects."[17] In general, sound designers are responsible for creating the audience's perception of the important actions taking place on the screen. Furthermore, they are responsible for creating a sense of reality for the audience. This sense of reality is based around both the auditory language that they create over the course of the film, as well as the conventions of sound design that have developed over the past century of filmmaking.

In this chapter, I will be discussing specifically the films *Forbidden Planet* and *Apocalypse Now*. These two soundtracks take different approaches to the interplay between sound design and film score, although they also have a few elements in common. Both films combine the practices of musical scoring and sound design. Both rely on the blurring between these two practices to create cohesive soundscapes, and an almost seamless blend between film sound and film music. And finally, both films use the haze that results from the employed soundtrack

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[17] Sweet, Michael. *Writing Interactive Music for Video Games: A Composer's Guide.* Upper Saddle River, NJ: Pearson Education, 2015. Print. 176.

in order to evoke the idea of the subconscious, and to create in the viewer

a sense of uncertainty with respect to what is the characters' reality, and

what is not.

One specific role of the sound designer is to work with the director

on each film to create a strategy that would be best suited to what the

director is trying to evoke. For this reason, it is far less easy to "hear" the

sound designer in his or her own work than it is to hear a composer.

However, sound designers do create a sort of recognizable 'language'

over the course of their films. Additionally, just as with film score

composers, sound designers draw from a now long-standing – yet, still

developing – set of common practices and techniques that audiences have

come to expect in order for them to buy into the sound of the film in

question.

One of the most interesting things to me about modern film sound

is the fact that many of the sounds that are required for an audience to

believe in the film are themselves exaggerated and divergent from reality.

In a transcript of a podcast from the series "On The Media," Brooke

Gladstone discusses the evolution of film sound with editor Daniel

Engber, in reference to an article he wrote on the subject.[18] In this

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18 Engber, "The Sounds of Violence."

discussion, they talk about 'drifting conventions,' particularly as they relate to the sound of a punch – which is here used as their example of the distortion of modern sound effects. They discuss how, in the 1930s, the sound of a punch would have been nothing more than the sound of "two baseball mitts being flapped together," whereas now a bunch is a louder, wetter, meatier thump.[19] The sound of a "punch" has evolved to the point where the real, recorded sound of a punch would seem fake to the audience, and impede their ability to believe in the reality of the action.

Chion also discusses the sonic conventions surrounding punches. He largely covers the same points that Engber does, adding that the sounds that audiences have come to expect when a blow is struck on the screen have to do with not only understanding, but also memory. He argues that the "clearly delineated *sound* has the advantage of etching its form and tone directly into consciousness, where it can repeat as an echo."[20] This argument clearly delineates the way in which sound design is not only supplementary to narrative development, but essential to it;

[19] Engber, Daniel. "The Reel Sound of Violence." Interview by Brooke Gladstone. Podcast. *On The Media.* WNYC, 2 Mar. 2012. Web. 15 Dec. 2015. <http://www.wnyc.org/story/190158-reel-sounds-violence/>.
[20] Chion, Michel. *Audio-Vision: Sound On Screen*. New York, NY: Columbia University Press, 1994. Print. 61.

without the sound of the Hollywood punch, the importance and resonance of the action would be lost.

Due to their dominance, Hollywood films (especially in the United States) and their accompanying sound design have had significant implications in terms of what sounds are expected to accompany visual action. Audiences have been trained to expect a certain set of sounds that accompany what they see. What is interesting to me is this: if we compare the sound of a realistic punch with that of a hyper-real punch, what parameters of believability are available for creative use? How far can one manipulate a sound so that it still remains "believable" or expected to the audience? And what effects will other manipulations of sound (i.e. moving the sound further away from the realistic in terms of time, frequency, stereo placement, etc.) have on that same audience?

In this thesis, I place a specific emphasis on the use of electronic media for the purposes of film scoring and sound design. The incorporation of electronics into the process of film scoring led to a dissolution of the barriers between film scoring and sound design, and led to the more modern way of approaching the two: as synergistic

components of a cohesive overall soundscape.[21] As film scholar K. J.

Donnelly states in an essay about contemporary film scoring and sound

design,

> *"the development of converging digital sound technology has*
>
> *allowed sound designers to use musical software to enhance*
>
> *sound effects in films and allowed music composers to produce*
>
> *their own music incorporating elements of sound effects. Such*
>
> *developments, in line with technical convergence, aesthetic*
>
> *convergence and harmonizing platforms and industries has*
>
> *meant that music is… no longer simply a "bolt-on" to films but*
>
> *integrated almost genetically on a conceptual level." [22]*

Today, elements of both sound design and film scoring are often

interchanged with one another, and the degree of overlap between the

two is largely variable.[23] This is particularly relevant in the case of

composers who employ electronic means in order to create film

soundtracks. The ability for sound to be digitally altered and combined

with both synthesizers and electronic orchestral instruments opens up

[21] Wierzbicki, James. *Louis and Bebe Barrons's <u>Forbidden Planet</u>: A Film Score Guide*. Lanham, MD: Scarecrow, 2005. Print. 36.

[22] Donnelly, K.J. "*Saw* Heard: Musical Sound Design in Contemporary Cinema." *Film Theory and Contemporary Hollywood Movies*. New York, NY: Routledge, 2009. Print. 105.

[23] Reay, Pauline. *Music in Film: Soundtracks and Synergy*. London, UK: Wallflower, 2004. Print.

doors for composers to blur the lines between film sound and film score, and to more deeply ingrain the music within the audience's understanding of the narrative. Hans Zimmer frequently employs these techniques in order to tie his soundtracks inextricably to the on-screen action – I will discuss his work more in a later chapter. One score in particular that blurs the lines between film score and sound design is Louise and Bebe Barrons' *Forbidden Planet*, which employs an electronic score and uses the film sounds as components of the musical composition. In this way, the sounds of the film and the score are inextricable from one another, and the understanding of one is likewise impossible without the other.

Forbidden Planet (1956) was the first film to employ an entirely electronic score. Originally hired to design twenty minutes of sound effects and electronic sounds, Louis and Bebe Barron ended up creating the entirety of the film's score using their own circuitry. Of particular note within this score was the overlap between sound design and film music.[24] As a result, the crossover between diegetic and non-diegetic sound – between the sound effects and the score – was a key technique

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[24] "Creating the Music and Sound Effects of Forbidden Planet." *SoundWorks Collection*. Colemanfilm Media Group LLC, 14 Mar. 2013. Web. 11 Feb. 2016. <http://soundworkscollection.com/news/creating-the-music-and-sound-effects-of-forbidden-planet>.

employed by the Barrons. This is aided in large part by two things: the film's science fiction setting, and the thematic element of 'dreams' on which the film relies. The film was pioneering, both in the creation of electronic scores, as well as in the development of science fiction as a film genre. As a result, the Barrons were able to be a part of the genesis of the association between alien or otherworldly visual elements and odd or unnatural sound effects.

Despite the fact that the score for *Forbidden Planet* was created using new media, it was not entirely a departure from traditional film scoring conventions. The "score" still relies on many musical techniques that film audiences at the time would have found familiar. This includes the incorporation of specific sounds (rather than melodies) as leitmotifs. As James Wierzbicki notes in his analysis of *Forbidden Planet*, these techniques also include elements such as "pronounced slides between one pitch and another, sustained tones enlivened by wide vibrato, and tone-colors that suggest the timbre of a human voice."[25] Wierzbicki goes on to suggest that these techniques dated as far back as the 1940s, when they were employed in films (albeit using an orchestral score) to evoke the idea of the subconscious.

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[25] Wierzbicki, *Louis and Bebe Barron's Forbidden Planet: A Film Score Guide*, 27.

One particular example of the way in which the Barrons dealt with the themes of subconscious and conscious understanding in the film was the leitmotif surrounding the Monster from the Id. In the words of Bebe Barron, "We see the monster three times, and with each appearance it is more and more menacing until finally it does extensive damage."[26] The monster has a theme – comprised of a single circuit – that serves the same function as an orchestral leitmotif: it tracks the audience's understanding of the monster's presence and character. The theme is suspenseful and lumbering, moving at a slow, steady pace as the camera tracks the invisible Id monster. As Bebe states, the monster appears three times over the course of the film. Each of these times, different sounds are layered over the circuit; droning, suspenseful undertones play under the monster's first mysterious visit, while sounds of destruction play in the third visit where the monster becomes visible and engages in a fight with the crew.

Despite the unique nature of the score itself, this practice of tracing the monster's progression with music (the definition of a leitmotif) is a very standard Hollywood practice. The use of this theme becomes more interesting near the end of the film, when it plays over the death of

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[26] Ibid. 40.

Morbius – the scientist whose subconscious was generating the monster

all along. For this sequence, the Barrons recorded the actual sound of the

circuit ceasing to function, or 'dying.'[27] In revealing that Morbius was the

source of the monster, the entire motif – including the ethereal sound

associated with the monster – impacts and changes the way in which the

audience has been taught to perceive reality over the course of the film.

The effect created by the sound of the circuit dying is such that the

audience is led to question what the leitmotif has really been tracking all

along.

The technique of blending sound effects and film score continued

well past *Forbidden Planet*, and well outside the limitations of sci-fi

films with electronic scores. Take, for example, films that use diegetic

music as the accompaniment for a scene. In her book *Film Music: A Very

Short Introduction*, Kalinak discusses a scene from Tarantino's *Reservoir

Dogs*, in which Mr. Blonde is torturing Mr. White while his radio plays

"Stuck in the Middle with You" by Stealers Wheel. Because the sound is

coming from Mr. Blonde's radio (as mentioned in the previous chapter),

its presence and audibility in the scene are impacted by the relative

location of Mr. Blonde; that is to say, when he leaves the room, the music

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[27] Ibid. 40.

fades out. However, in order to provide an adequate accompaniment for the viewer, the song is also gradually mixed so that it no longer sounds like a tinny, quiet radio mix of the song, but takes on the role of the film's score in that moment. Because of this transition from diegetic to non-diegetic sound (or, from score to source music), the song is allowed to serve two purposes. First, it is an instrument of character development for Mr. Blonde. When the song is diegetic and coming out of the radio, it is at the forefront of the audience's consciousness, and therefore impacts their understanding of the narrative. As the scene progresses and the song changes from diegetic to non-diegetic, it fades into our subconscious slightly, and makes the gruesome torture sequence more bearable, by virtue of its catchy, upbeat nature. This entire dichotomy is dependent on the assumption that audience members listen to sounds differently, depending on the way in which the auditory information is presented. The visible source cues audience attention and develops the narrative, while the lack thereof allows for more emotional manipulation. This, in my opinion, embodies one end of the spectrum of possible applications of this new idea of combining diegetic sound and non-diegetic sound. Other films use the technique to combine not only music, but also actual diegetic sounds into the film's musical space: a technique that is

particularly prevalent in the soundtrack that the Barrons created for

Forbidden Planet.

The fact that both film scoring and sound design were under the

ultimate control of one artist through this technique opened up a series of

creative doors, including the development of soundscapes for films that

were, by nature of the overlap, more musical in nature. In other words,

the inclusion of sound effects in the rhythm and atmosphere of the score

– rather than simply as interruptions or distractions – generates a more

cohesive atmosphere within the soundscapes created.

A key example of the expansion of the techniques introduced by

Forbidden Planet was the work done by Walter Murch (a prolific sound

designer and editor) on the 1979 film, *Apocalypse Now*. In the words of

Danijela Kulezic-Wilson, "By occupying the rare position of both editor

and sound specialist, and inclined to regard every aspect of a shot or a

scene as a line in a dense contrapuntal texture of audio-visual movements

and rhythms, Murch developed sound design and editing techniques of an

inherently musical nature.[28] Although Murch was not in charge of

creating the film score itself – the music instead having been created by

Carmine Coppola – he was responsible for its incorporation into the film

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[28] Kulezic-Wilson, Danijela. *The Musicality of Narrative Film*. Basingstoke, UK: Palgrave Macmillan, 2015. Print.

as a whole. As a result, the music in *Apocalypse Now* became a part of the perceivable world of the film; in other words, the score's incorporation with sound effects and other elements of sound design resulted in a soundtrack that was a complete entity in and of itself.

In her book *Sound: Dialogue, Music, and Effects*, Kalinak includes excerpts from an interview with Walter Murch. In his own words:

> *When I started the film [Coppola] said he wanted three things.*
> *First, he wanted it to be quintaphonic, he wanted the sound to*
> *fill the room, to seem to come from all sections of the room*
> *which had never been done before in a dramatic film….*
> *Second, he wanted it to be authentic, by which he meant the*
> *weaponry had to sound like it sounded in Vietnam…. The final*
> *thing he wanted was the film soundtrack to partake of the*
> *psychedelic haze in which the war had been fought, not only in*
> *terms of the music… but in general, kind of far-out*
> *juxtaposition of imagery and sound; for the soundtrack not to*
> *be just a literal imitation of what you saw on the screen but at*
> *times to depart from it.[29]*

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[29] Kalinak, Kathryn. *Sound: Dialogue, Music, and Effects.* New Brunswick, NJ: Rutgers University Press, 2015. Print. 109.

There are several key elements to Murch's approach to sound design, as established through this conversation he had with Coppola. The first – as listed above – is the consideration of space. In the effort to use sound as a point of audience absorption into the narrative, Murch notes the importance of localization by way of sound. In other words, his intention is to create a sound mix that causes the audience to perceive sound coming from all around them; this idea of localizing sound within a stereo mix was a new practice, made all the more significant due to the recent popularization of Dolby surround sound technology.[30] The second key element in Murch's approach is authenticity. This incorporates the same idea of developing a sense of verisimilitude in the audience as previously mentioned, although this pertains more specifically to diegetic sound. Just as manipulating the soundtrack within space would create a more immersive auditory experience for the audience, creating realistic diegetic sounds would enhance the audience's connection to the accompanying visuals. The more realistic the sounds could be, the more intense the experience would be for the audience member.

The final element of Murch and Coppola's approach to designing the sound for *Apocalypse Now* was the sense of abstraction that they

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[30] Holman, Tomlinson. *Surround Sound: Up and Running*. Burlington, MA: Focal, 2008. Print. 131.

wanted to instill in the audience. On the one hand, Murch was going for a soundtrack that immersed the audience in the reality that the film created for them. On the other, his intention was for the resultant soundscape to serve as its own artistic representation of what the film was attempting to convey about war. As much as *Apocalypse Now* is a war film, it is also a film that deals with the intangible concepts that surround the detached mind of people experiencing such trauma; it addresses – or forces the audience to address – the juxtaposition between civilization and savagery: the characters' identification thereby, and the blurring of lines between the two. The hope that Coppola held was that Murch would create a soundtrack that embodied these abstract ideals in departure from the strictly literal. In other words, Murch's goal was to create a film score that simultaneously rooted the audience in the on-screen action, and removed them from what would most likely be their normal perception of the action in a film about war.

An important note about Murch's technique was his acknowledgement of the hierarchies of sound. As he was responsible for mixing all of the sound of the film, he had to be aware of the prioritization of certain sounds over others, dialogue being the most

important of these.[31] However, as Kassabian notes in her 2003 article "The Sound of a New Film Form," "distinction between foreground and background sound are slowly disappearing and, with them, the distinctions among noise, sound and music."[32] In other words, the boundaries between mixing film sound and mixing the score itself are being blurred as the practices get approached from the same angle. This is exemplified very clearly in Murch's technique of using film sound as orchestration.

Let us examine the opening scene of *Apocalypse Now*. The film opens with a still shot of the jungle, and after a moment of silence, we hear a rhythmic sound that turns out to be the blades of a helicopter. Beneath that, "The End" by The Doors begins to play. As the scene progresses and the beautiful jungle façade is torn apart by explosions and more helicopters, it becomes increasingly difficult to distinguish what is percussion from the music, and what is the sound of those helicopter blades. (This use of sound effects as orchestration, as mentioned above, is key in Murch's soundtrack.)[33] As this happens, our vision is also

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[31] Murch, Walter. "Walter Murch." *Transom*. Atlantic Public Media, 1 Apr. 2005. Web. 4 Feb. 2016. <http://transom.org/2005/walter-murch/>.
[32] Reay, *Music in Film: Soundtracks and Synergy*, 32.
[33] Rothbart, Peter. *The Synergy of Film Music: Sight and Sound in Five Hollywood Films*. Lanham, MD: Scarecrow, 2013. Print. 51.

obscured by thick, brown smoke, and we realize that we are located in the hotel room of Captain Willard. We realize that we are not sure whether we are located in experience, hallucination, or memory, as we watch the superimposition of images of war and destruction over the staring eyes of Willard. The helicopters become more and more distinct from the music, and as the song fades out, the last line we hear is "all the children are insane." Just as that line fades out, the sound that we assumed to be helicopter blades plays over and image of the hotel's ceiling fan.

This whole scene gives a striking impression of hallucination, one melded to the psyche of Willard. We are introduced very early on to the idea that sound will abstract our perceptions of reality; what we hear is meant to reflect not only the action that we can see, but also the subconscious reactions and vivid hallucinations experienced by these characters that we are watching. The soundtrack is intended to imply things about the narrative that we would not otherwise understand simply by watching it unfold. The film deals with the ideas of civilization and progress, and the cost of those ideals at the expense of the people involved. Through the soundtrack, Murch seems to address the

dissolution of a person's psyche as they are put through the horror of this experience.

One of the most interesting common factors that I found between *Forbidden Planet* and *Apocalypse Now* was the way in which each film dealt with the obfuscation of conscious and subconscious experience. In each of the examples discussed in this chapter, the Barrons and Murch employed very specific techniques for subverting the presumed obviousness of 'reality.' In mixing together the sounds of the film with the music of the film, the audience gets caught in the area between the characters' experiences in the scene, and the hallucinations or subconscious thoughts that are our exclusive privilege as an audience to know.

Conventions of Film Scoring and Modes of Listening

The boundaries between sound design and film scoring may be porous, though film scoring is commonly understood "as music either directly composed or expressly chosen to accompany motion pictures."[34] Like sound design, film scoring comprises a series of practices and conventions that audiences have learned over the course of the development of modern cinema.

In this thesis and with regards to film scoring, I will refer to the conventions established in Hollywood (and otherwise American) film scoring, and the (largely European) musical conventions that it employs. The word 'conventions' here refers to several things, including melody, tonality, harmony, rhythm, dynamics, instrumentation, etc. As time has progressed, audiences have learned how to interpret these tools used by the composers. For example, in Western cinema, the simple sound of brass instruments might indicate to the audience that a heroic act or triumph is imminent.[35] Sonic indications such as these have formed a sort of code that works to supplement the action on-screen.

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[34] Kalinak, *Film Music: A Very Short Introduction,* iii.
[35] Ibid.

My primary interest lies in the limitations of the language that audiences have been trained to understand. Or rather, I am interested in the length to which those boundaries can be pushed, while maintaining a sense of understanding of creative intent. In her writing, Kalinak discusses the role that music plays in relation to the image on a screen; that is to say, whether the image counterpoints, parallels, or otherwise influences the visuals provided. There are certain boundaries that may be difficult to cross. Kalinak uses the example of the music from the shower murder in *Psycho* playing over the dance scene from *Beauty and the Beast* to illustrate this point.[36] However, there is a vast field of middle ground between parallel and counterpoint, which offers various possibilities for testing the rigidity of the established conventions. The idea of disruption is important to this principle. I talk about this briefly with respect to sound design, and I would like to broach similar ideas with film scoring. At some point when testing the boundaries of convention, the limits will break, and the result will be a relationship between the visual and auditory media that is either incomprehensible to the audience, or else will carry completely different connotations from those initially intended.

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[36] Ibid. 19.

Michel Chion also comments on the ideas of parallelism and counterpoint as they relate to film scoring in his book *Audio-Vision: Sound on Screen*. According to Chion, parallelism and counterpoint are terms borrowed from the theoretical discussion of music – often erroneously. Oftentimes, apparent counterpoint between the score and the image simply comes from the composer's desire to emphasize or point to a visual dissonance or disconnect that is occurring. Chion argues that, aside from simply supporting or negating an image, it is important to consider the full spectrum of functions that film music might serve, including "[carrying] the perception of the image to another level."[37] This principle also ties into the idea of the hybridization of film scores in terms of traditional harmonic function, as well as genre conventions, which I will discuss further in the next chapter. For now, I want to focus on Chion's idea that hearing film music simply as parallel or counterpoint is not an accurate representation of the function of a score, nor does it align with the way we have been (subconsciously) taught to listen to and experience cinema.

The idea of learning how to listen is one that applies not only to a lifetime of movie-watching experience, but also to each individual

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[37] Chion, *Audio Vision: Sound On Screen*, 38.

movie-watching experience. While it certainly remains true that audiences are trained over the course of a lifetime to distill certain information from the music that accompanies moving pictures, there is also a type of learning that comes from watching each film.[38] As the film develops, the audience becomes accustomed to the choices made by the composer and the director with respect to the implementation of the score, be it chosen music or original score. The composer's voice may be thought of as a dialect, if you will, in relation to the language formed through the interactions of Western film scoring convention and cultural understandings. Each artist interprets the rules in his or her own distinct way. What that means, in turn, for the audiences, is that part of the learning we have amassed over a lifetime of listening to film music has to do with understanding how to interpret a composer's 'voice.' This idea of learning is something that I take heavily into consideration in my own work, not only because the audience's experiences play into their reception of the art, but because I am working with a section of film that is almost too short to use as a tool for communicating my own language.

In order to discuss the ways in which film scores employ certain techniques, we must first look at the audience they are intended for. In

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[38] Slobin, *Global Soundtracks: Worlds of Film Music,* 8.

Audio-Vision, Chion talks about what he calls "the three listening modes:" causal listening, semantic listening, and reduced listening.[39] Understanding these modes of listening is particularly important to the creative portion of this project, since a large part of my intention is to disrupt the audience's understanding of narrative and emotional content through sonic means. To this end, I will first discuss causal and reduced listening, and will then return to semantic listening, as it is more important in the context of the creative work of this project.

The first of these – causal listening – has to do with listening to a sound to ascertain information about its source. In terms of film sound, causal listening would come into play in the observation of diegetic sound, and the distinction between diegesis and non-diegesis. Though one might assume that this listening is a conscious exercise in interpretation, causal listening is most frequently an unconscious response, in part because it is expected. For example, the volume level at which a sound is placed might indicate to the audience how much distance there is between the subject and the object: the sound of an approaching train might increase in volume in order to indicate the train's trajectory. In my own work, I experiment a little bit with the disruption of

39 Chion, *Audio-Vision: Sound on Screen*, 25.

the general understanding that causal listening yields. I do this in a couple of ways: in one version of the sound design, I disassociate the volume level of film sounds from the distance the camera is from the action; in another version, I play the recorded sounds over actions to which they do not correspond; in a third version, I digitally manipulate the film sounds so that they do not match the visual context (for example, a deep echo occurring when a jug of milk is placed on a countertop).

Reduced listening refers to the hearing of sound as its own entity, without consideration for interpretation or source. This type of listening is one that I associate most strongly with the idea of disruption; when sound is observed for the sake of sound, rather than for the sake of communication, it removes itself from the characteristics assigned to it by other associated perceptions. In terms of film, this means that the meaning of independent sounds divorce themselves from the onscreen action entirely. One way in which I hope to achieve this is by digitally manipulating the sounds so that they are not only barely recognizable, but also displaced in time – seemingly irrelevant to what is portrayed on the screen. As Chion states, "reduced listening has the enormous advantage of opening up our ears and sharpening our powers of listening."[40] By

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[40] Chion, *Audio-Vision: Sound On Screen,* 31.

dissociating the film sounds from the visual element entirely, the audience should be led to experience listening as a conscious act. This effect will hopefully carry on through the rest of the installed piece, and cause them to question the way they interpret the sounds and music that they hear.

Semantic listening refers to the type of listening that involves interpreting sound as a type of code or language. Although Chion spends the shortest time addressing this type of listening in his book, I find it to be the most pertinent when discussing audience relationships to film sound and score. In this type of listening, score is perceived as part of a system. This system, as mentioned above, is the language built out of centuries of European musical development. In his book, *Global Soundtracks: Worlds of Film Music*, Mark Slobin refers to the superculture, which he defines as "the dominant, mainstream musical content of a society, in effect everything people take for granted as being "normal"… The musical superculture has ideological underpinnings and strong control systems."[41] The idea of superculture, in other words, refers directly to the set of practices that modern film audiences have learned to understand. The study of the type of listening that pertains to learned

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[41] Slobin, *Global Soundtracks: Worlds of Film Music*, 3.

sound is therefore essential to interpreting and anticipating audience responses to films.

The idea of semantic listening also applies to sound design. We return again to an idea discussed in a previous chapter about the way a punch is designed to sound, as opposed to the way a punch sounds in reality.[42] The sounds associated with this particular visual incident have become so ingrained in the understanding of action that they are seemingly universal: to use a different sound would be to undermine the audience's understanding of the action. This is only one example of the way in which film sounds are interpreted as codes, almost independent of sonic reality outside of films. I address this in my creative work in one particular piece, where the sound design is mixed to be muted, correspondingly dulling the visual impact of the action.

Just as I experimented (in my creative work) with the impact that subverting these types of listening as they pertained to sound design would have on audience understanding, I am curious as to how flexible the conventions of the language of film scoring are. One particular influence of mine in this respect has been Hans Zimmer and the methods that he uses to modernize the field of film scoring. In combining modern

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[42] Engber, "The Sounds of Violence."

technology with traditional orchestration, he manages not only to move smoothly between genres of film music, but also between the paradigms traditionally associated with specific genres.[43] His compositional style also revolves around incorporating the film sound with the score, which is of particular interest to me in this project, as I focus strongly on combining the practices of sound designing and film scoring.

I approach the idea of film scoring conventions in my own work in a few ways, which I will address in depth in the next chapter, but bear mentioning now. The first of these (employed in the first scored clip in the series, section IV) is by writing a cue that more or less plays into them, and thereby more or less fades into the background of the scene. In this piece, I employ standard major harmonies and repetitive rhythmic patterns to create a sense of calm motion. The melody is the largest source of development through the piece, although even that remains more or less constant. The intention with this effort was to create something fairly unobtrusive, which would remain at the audience's periphery. In other words, it is simply meant as light accompaniment to

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[43] Cameron, Sean. "Hans Zimmer & James Newton Howard: The Dark Knight, Review." Rev. of *The Dark Knight: Original Motion Picture Soundtrack.* BBC Music. 2008. Web. 10 Apr. 2016. <http://www.bbc.co.uk/music/reviews/r83n>.

the visuals, rather than being intended to elevate or imply additional meaning.

The subsequent iterations using this version of the score play with a few different concepts; in one version, I change the instrumentation, incorporating instruments often associated with other elements of action. In other versions, I change some of the harmonies as the piece progresses in order to distort the viewer's perception of what is visually a fairly normal sequence. As the pieces progress, I move between various genre conventions, playing within each in order to further understand and illustrate the capacity that film scores have to demonstrate hybridization between genre, and resultantly, a full spectrum of potential meanings and interpretations for the audience. Ultimately, the idea of my project is to make the act of listening to film a conscious one.

The Installation

The original concept for the creative part of my thesis came from a

relatively innocuous discussion with a coworker about the potential for

bad scoring to ruin the narrative trajectory of a film. The material that I

explore in this thesis revolves around my curiosity regarding the extent to

which this holds true. Traditional film scoring theorists would assert that

film scores abide by a certain set of genre conventions in the same way

the films do. However, film genres themselves are often hybrids, so why

shouldn't the scores by dynamic in the same sense? As mentioned in the

previous chapter, much of my recent compositional influence comes from

Hans Zimmer, who is known for scores that defy strict genre convention.

Laurel Toyofuku most concisely explains Zimmer's relevance to my

creative work in her capstone project at Duke University when she states:

> *"[Zimmer's] signature style is marked by a fusion of orchestra*
>
> *with modern-day electronic synthesizers. Molding together a*
>
> *variety of techniques to create an assemblage of paradigms in*

to one coherent score, Zimmer's hybrid scores mirror the

flexibility of film genres."[44]

My initial ideas regarding this project came from a desire to explore the

subtleties of narrative implication and emotional direction. This interest –

along with the influence from Zimmer's body of work – was largely

responsible for my choice to compose using digital instruments, in order

to employ both electronic synthesizers and more traditional orchestral

sounds and explore a similar type of hybridization in my own work. As

the project developed, my sensibility regarding the ability of those who

create film sound further evolved to include sound design. This came out

of a growing understanding that the ability of film sound to direct

emotional responses – and even create a sense of narrative that might not

be otherwise present or tangible – was not limited to composed scores

alone.

In order to explore these ideas, I composed a series of musical

scores and prepared corresponding sound design, all set to a looped scene

that I filmed with some collaborators – Tyler Schaefer (the director,

cinematographer, and editor), Tom Schaefer (director and

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[44] Toyofuku, Laurel. "Film Music Genre Theory and the Hybridity of Hans Zimmer." VMS Capstone, Duke University. Web. 3 Apr. 2016. <http://people.duke.edu/~lt66/Scrolling%20paper%202/>.

cinematographer), and Carter Schaefer (the star) – early in the year. The idea of the looped clip was essential, because the repeated action would result in an increased focus on the music and its impact. The visual element itself was also very important in my conceptualization of this project. I wanted the scene to be emotionally neutral, and yet relatable to a general audience. To that effect, the clip that I shot was a three-minute scene of a young man waking up and going through his morning ritual (waking up, brushing his teeth, showering, making coffee and breakfast, packing his bag, and leaving his house), before leaving the house to begin his day. The two most important things to me were that the actor would not insert any visible emotional content into the scene, and that the scene itself involved a variety of sounds that I would later be able to work with. This resulted in a scene for which my role as a composer was not to underscore the emotional content, but to create it.

In this thesis, I discuss and interpret the ideas of emotional and narrative content frequently. When I discuss emotional neutrality, I am referring to the idea that, without sound, the audience cannot be clear what the subject might be thinking or feeling. Similarly, when I discuss narrative neutrality, I am referring to the ability of the clip to be dropped

into any genre of film – a variety of narratives, or storylines – and to fit

in (again, before scored sound is added).

Ultimately, there ended up being seventeen versions of this clip

that played in a loop over the course of three hours. Each clip

incorporated a different musical cue, or a different iteration of a

previously used cue (cue here referring to the three-minute pieces of

composition without the film sound), as well as one of a few versions of

sound design. Each soundtrack was mixed in a distinct way, based upon

both the score employed in the scene, and on the response I was hoping

to achieve from the audience. **Chart 1** provides a look at the chart I used

when I was organizing my plans for the project. During the construction

of the project, I often made a concrete choice regarding either the score

or the sound design (but not both), and let the way I created the other

element follow that precedent.

Ultimately, it was my belief that audiences would have a better

understanding of the emotional impact of each clip if they stay for a

larger number of clips, or a longer time. However, I staged the

installation and wrote the event description such that audiences could

arrive at any point over the course of the three-hour installation period,

and observe the project for as long as they felt compelled to do so. I did

this deliberately, in the interest that I might discover just how big the

discrepancy in emotional and narrative understanding was between those

who stayed only for a few clips, and those who stayed for more or less

the full cycle.

Chart 1. Planning Chart for Composition and Sound Design

Clip Number	Score	Sound Design
I	No Composed Score	Raw sound obtained from filming
II	No Composed Score	Mixed and compressed sound from filming, room noise reduced
III	No Composed Score	Same sound as II, plus Foley
IV	"Domestic" Score	Sound from II, sounds made by subject without an external device or appliance removed
V	"Domestic" Score	Sound from II
VI	Melancholy Score	Sound from II
VII	Melancholy Score with more instrumental embellishment	No Film Sound – Composed Score Only
VIII	No Composed Score	Time shift on sound from II: Anticipation
IX	Suspenseful Score #1, minimalist in nature, lower frequencies favored	Sound from III
X	Suspenseful Score #2, changed instrumentation of parts and more instrumental embellishment, particularly in the upper range	Sound from III edited to fit "horror" conventions, including higher frequencies and more reverberation; Added Foley
XI	No Composed Score	Various effects placed on sound from III, including

		added reverberation, compression, echoes, chorusing, and EQ changes
XII	Upbeat score with (relatively) minimalistic instrumentation.	"Wrong" sounds (from III) corresponding to action
XIII	Upbeat, "comedic "score with more instrumental embellishments, some changed instrumentation	Sound from III
XIV	No Composed Score	Sound from XII
XV	"Oh Lately It's Been Quiet," by OK Go[45]	Sound from III
XVI	Randomly Composed Score with flute and guitar synthesizers; various effects placed on the tracks	Various effects on sound from III, including anticipations, delays, echoes, chorusing, and other manipulations
XVII	Randomly Composed Score with wind section synthesizers	Sound from VIII

I began the creative process with the composition aspect, which I approached in five parts. I conceptualized each of what I will refer to as the "score blocks" was through the process of researching compositional techniques for genre conventions. These five blocks were the domestic or commercial block (clips IV and V), the melancholic block (clips VI and VII), the suspenseful or thriller block (clips IX and X), the upbeat or comedic block (clips XII and XIII), and the random composition block

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[45] Kulash, Damian, Jr. *Oh Lately It's So Quiet*, OK Go. Tore Johansson, 2006. MP3.

(clips XVI and XVII). However, it was very important to me to avoid simply creating what could essentially be called a list of genre clichés. In order to avoid this, I focused more on the atmosphere of the filmed clip itself, and varied elements within each composition so as to explore the potential each emotional implication was capable of. Within each block, the scores varied in instrumentation and complexity, although the basic elements of harmonic progression, rhythm, and structure remained more or less the same.

The first block – which I have designated as the 'domestic' or 'commercial' block – was actually also the first composition that I did for this project. It did not draw very heavily upon the genre conventions that I researched, nor did it fit into any of the specific classifications that came across. The words "domestic" and "commercial" are here used in their most commonplace and abstract sense, drawing on conventions that are referred to tangentially by Howard Pollack (in a discussion of Aaron Copland's work) for film scores matching a mood, as opposed to implying any kind of economic weight.[46] The intended effect was for the music to convey a peaceful scene of everyday domestic life. In writing it, I found myself thinking quite often of Michael Giacchino's score for the

[46] Pollack, Howard. *Aaron Copland: The Life and Work of an Uncommon Man*. New York, NY: Henry Holt, 1999. Print. 429.

Pixar movie "Up;" particularly the track entitled "Married Life."[47] I believe that the rhythmic element of my piece pays the clearest homage to that piece: I made the rhythmic choice of writing in triple time because I thought it would bring out the idea of choreographed mundaneness that is implicit in a daily morning routine. The piece centered on B♭ major, with a walking ostinato baseline in piano. The repetition was intended to lend itself to tranquility, changing only for a brief section in the middle of the piece, where the piece modulates to D major, and a pizzicato double bass takes over the rhythmic structure. The melodic lines are gentle, consisting of either simple piano lines or a small string section.

Overall, the idea was that I would ease the audience into their understandings of the project as a whole. With a fairly simple and unobtrusive first cue, they would be able to develop a familiarity with not only the visual element, but also with the sounds that accompanied it. That is, until clip IV, when I began manipulating the sound design differently. The change was minor: all I did was remove the sounds that were made without the subject's use of an appliance or object. The idea was that I would bring forward the sounds of these objects, while selectively removing the sounds that people would hear in a real situation

[47] Giacchino, Micahel. *Married Life*. Walt Disney Records. 2009. MP3.

where someone was getting ready for the day. Ultimately, I think the changed ended up being fairly subtle, as those sounds (breathing, footsteps, etc.) are often removed in films for the sake of sounds that pertain directly to the narrative.

The second block of composition is what I refer to as the "melancholy" cues. These cues are once again fairly simple. They rely on a minor piano progression, with some underlying cello bass lines. The melody on top is simple and plaintive, and the instrumentation is essentially just a string trio and a piano. With this score, I attempt to take the clip from tranquility to melancholy pensiveness. This is particularly my goal in the second clip (clip VII), when I add some embellishments in the piano and violin melodies, and remove the film sound entirely. In the absence of diegetic sound, I hope that the viewer finds themselves somewhat bogged down in the minor key, the slow tempo, and the short, falling melodic theme.

The third block of compositions was the suspense or thriller block. I struggled with the composition for this section, in that I found it difficult to refrain from reaching the climax of the cue before it was appropriate. As a result, this particular pair of cues underwent several drafts before I settled on the two final selections. Both cues relied

initially on minor progressions, which develop into a frequent use of diminished and augmented intervals, rather than any traditional progression at all. The first one (clip IX) is intended to be more suspenseful than the other. The score is composed of low, droning synthesizers and strings, and a reliance on sudden, stark silences. The cue builds over the course of the three minutes, although it never actually reaches any sort of apex or resolution. Additionally, the instrumentation and sound clips change fairly frequently, and are somewhat fragmented, so as to maintain a sense of discomfort in the audience.[48] The intention behind this was to create a thick sense of tension, in order to enhance the believability that something could be going drastically wrong in the narrative arc of the subject's story. When discussing this very principle, composer Hans Salter states: "In scoring horror pictures, the main element is that of creating atmosphere – the apprehensive mood, which keeps the viewer on the edge of his seat."[49] This tension would also serve as a precedent for the clip that followed, which is more far decisive in its insistence on shock and horror.

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[48] Brownrigg, Mark. *Film Music and Film Genre*, Thesis. University of Stirling, 2003. Print. 121.
[49] Whittington, *Sound Design & Science Fiction*,131.

The second clip in this block (clip X) was more musically

complex, with melodies and embellishments layered over the music from

the previous clip. I also employed more varied instrumentation, adding

even more synthesizers, as well as a few other orchestral instruments. I

think that the inclusion of clip IX was necessary as a precursor to clip X,

because clip X has instances of dramatic climax, wherein a sharp, high

pitched violin might signal a terrible occurrence. However, because the

scene in question does not lend itself naturally to horror, these sequences

of panic come off as more comedic than anything else. The fact that clip

IX focused on building suspense without a climax dulls this effect

somewhat, and prepares the audience for the possibility of something

horrible finally occurring. Additionally, in clip X, I made use of sound

design techniques that were more specific to horror or thriller films.

Many of the sounds of normal activities were made softer in the mix

(especially earlier in the clip), while certain events – such as an

accidental spill, or the loud bang of an object as it is set down – were

made not only louder, but more reverberant and dramatic as well, with

the low frequencies being heavily boosted. The intended effect of these

changes was to add to the feeling that the suspense from IX might finally

be breaking, and hopefully to have sufficiently set the audience on edge by the time it arrived at that breaking point.

The fourth block was the "upbeat," or "comedic" block. With the suspense block being a close contender, this was the block with which I had the most fun composing and designing sound. Much of my research for this clip involved learning about the conventions and practices surrounding the comedy paradigm as it pertains to both film and television, including cartoons.[50] Per many of the conventions that I learned about through this process, I played around with several instruments in this piece – the most of any of the pieces in this project. There was a syncopated brass bass section, which was my favorite, as well as several pizzicato string instruments. In the middle, I literally incorporated bells and whistles, relying on high bell tones, xylophones, and flutes for ornamentation in clip XIII. The melodic motifs across these two clips are composed largely in the mixolydian mode, which I intended to add a little bit of lightheartedness or happiness to the piece, as well as the slightest bit of blues influence to accompany the syncopated bass.[51]

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[50] Ricard, David. "Cartoon Composing: Scoring an Animated Series." *Sound on Sound*. SOS Publications Group, Jan. 2009. Web. 5 Apr. 2016. <https://www.soun donsound.com/sos/jan09/articles/supernormalscoring.htm>.
[51] Temperley, David, and Daphne Tan, "Emotional Connotations of Diatonic Modes." *Music Perception: An Interdisciplinary Journal* 30.3 (2013): 237-57. Web.

I played with different techniques for implying comedy across the two pieces. In the second clip (XIII), I used the 'bells and whistles' approach that I discussed above, adding a lot of extra instrumentation and independent embellishments. There is also more eccentric melodic development, drawing the audience's focus to the music, rather than the sound. However, the clip XII – which I find to be more successful, comically – relies on sound design for its humor. Over the bare-bones score, consisting only of a few instruments and no ornamentation (although the syncopated French horn part remains, as I couldn't part with it), the sounds are "wrong." That is to say, the sounds that play over the action on the screen are mismatched. For example, when the subject spills cereal on the table, instead of hearing a light splash, we hear a loud, metallic clanging sound. This disruption of expectations keeps the already-upbeat clip unpredictable, and therefore more fun, as well.

The final block of compositions was the randomly composed block. It was in this block that I was most interested in disrupting the audience's ability to understand emotional or narrative content. I composed the score using techniques similar to those of twelve-tone serialism. That is to say, I created my "progression," so to speak, by

2 Apr. 2016. <http://davidtemperley.com/wp-content/uploads/2015/11/temperley-tan.pdf>.

using a random sequence generator to create a random ordering of the

twelve tones. In clip XVI, I played this series of notes through a mellow,

flute-based synthesizer, being careful not to fall into any rhythmic

patterns as I did so. I then used a random group generator on the twelve

notes in order to generate three-note chords, which I then used to create a

sort of modulating "melody," played on a digital guitar. The result is a

piece that employs non-functional harmonies and a lack of rhythm in

order to disorient the viewers. Both tracks were layered with a series of

distortions, including chorusing effects, thick reverberation, and shifting

EQ. The sound design that I chose for clip XVI was the sound with Foley

from clip III, but various changes were made in the name of distortion.

These included several of the same manipulations that I performed on the

score (chorusing, reverberation, EQ changes), plus time shifts (both

anticipations and delays), echoes, and removal of some sounds. The

ultimate effect was dissociation; with this piece, I was very interested to

see how the audience might interpret something that shouldn't hold

meaning to them given the conventions of Hollywood film scoring and

sound design. This was very similar to the effect that I was intending in

clip XVII, with the exception that in the latter clip, I traded increased

film sound obscurity for increased musical obscurity.

For clip XVII, I used the same musical information as I had in clip XVI, but I changed the instrumentation and removed the effects. For this clip, both the single-tone random progression and the three-note modulating "melody" were played on flute synths. The decision to use both winds-based synthesizers for this clip was made in order to further obfuscate the parts, and create more of a series of layered drone than a piece with distinct melodic sections. However, the sound design for this clip was simpler than it had been in the previous one; I simply moved the whole set of film sounds forward, creating the effect of the sounds anticipating their corresponding visual action. This was done in order to create a sense of tension to accompany the already-disorienting cue.

Clip XV implements a selected song as its score. The song in question is called "Oh Lately It's So Quiet," by the band OK Go. I chose this song because I felt that the upbeat tempo would be a nice transition between the "comedic" score block and the randomly composed one. Additionally, the song fit the visual rhythm of the clip fairly closely. Lyrically, the song expressed themes of loneliness and silence, which I thought were appropriate both in terms of the visual content of the scene, as well as the significance of the project itself. I chose the placement of

this piece in order to break up the most abstract of the sound design clips (which I will discuss shortly) and the most abstract of the scored clips.

Finally, there were the six dedicated sound design clips (clips I, II, III, VIII, XI, and XIV). These were interspersed throughout the cycle, so as to create barriers and transitions between the blocks of composition. The first of these, clips I-III, were clumped together in order to begin introducing the audience to the sounds they could be expected to hear. Clip I contains the raw sound from the original footage, clip II contains the same sound, but mixed at appropriate levels for distance and room sound uniformity, and clip III contains the same sound as clip II, but with some additional Foley sounds, including the sound of the subject putting his sandals on, the sound of the radio playing while he brushes his teeth, and the sound of the coffee maker. These were the clips intended to ground the audience in the clip, and to familiarize them with the basic set of sounds that I would be working with.

Clips VIII, XI, and XIV are the clips that play very explicitly with the idea of the disruption of sound design conventions. They are also meant to engage directly with Chion's three types of listening.[52] Their placement is designed both to introduce the upcoming mode of listening,

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[52] Chion, *Audio-Vision: Sound on Screen.*

as well as to break up the composition blocks, so as to create a more gradual progression through the ideas, rather than throwing the audience from one emotional intention into the next.

In the first of these clips (clip VIII), I simply employ a time shift in order to create a sense of anticipation between the audio and the image (the audio playing before the image did). This clip was meant to engage with the concept of causal listening; the fact that an out-of-sync sound preceded the image would force the audience to consider the source of the sound and interpret it without the assistance of the visual. In this way, I hoped to make the audience aware of the process of listening as it was happening – I wanted to force consciousness upon them, in the hopes that it would linger throughout the subsequent pieces.

Clip XI further engages in Chion's types of listening by addressing the second one: semantic listening, or the type of listening in which the listener is listening to the audio as part of an understood language or code. In clip XI, I played a track of digitally manipulated sound. The manipulations that I performed (including various EQ changes, added reverb and chorusing, echoes, and frequency attenuations) resulted in a set of sounds that did not match the distance of visual context of the actions they corresponded to. My hope with this clip was to play with not

only the language that the audience had learned by watching the previous clips, but also the understood language that Hollywood has created for sound design. Additionally, the hope was that the disruption of the audience's understood language or code for sound design would reinforce the idea of listening consciously.

Finally, there was clip XIV. In clip XIV, I played only the track of mismatched sounds (used previously in clip XIII). The mismatched sounds without the additional emotional stimulus of a whimsical score was meant to result in a sense of discomfort, and a final re-assertion of my desire for the audience to listen consciously. What's more, it was meant to disrupt both casual and semantic listening, while engaging directly with the third type of listening: reduced listening, or the type of listening where the sound is perceived as an independent entity, rather than as dependent on the visual element. Because the sounds don't match the actions on the screen, even by a measurable displacement, causal listening isn't possible; the sounds reveal nothing about their apparent source. For the same reason, the audience wouldn't be able to interpret them as part of the language of acceptable sounds; again, they correspond in no way to any conceivable version of the sound that should accompany the action on screen. Finally, the fact that the sounds don't correspond to

either the understood language of sound design or to the on-screen image would force the audience to consider them as an independent entity, which is the principle behind what Chion calls 'reduced listening.'

Ultimately, the success of this project relies heavily on audience responses; the hope behind my idea was that I could understand how the use or disruption of modern film sound conventions would affect a contemporary audience. For that reason, optional response ballots were included in the program for the installation, and a vast majority of the audience chose to respond. My interpretation and analysis of the ballots I received will be discussed in the final chapter.

Results and Responses

A key component of my thesis is audience response; my intentions only matter so far as the techniques that I employed were noticeable and/or effective. Therefore, at the installation of my project, audience members were handed programs that contained removable response charts (see Appendix A). On the chart, there was a row for each of the seventeen clips used in the installation, as well as columns that asked the questions "What was the tone/mood you perceived?" and "What did you notice that was distinctive about the sound design/score?" Additionally, there was a third column labeled "Other thoughts or responses?"

Before I get into specifics, I'll start by saying that I was very pleased with the responses; between fifteen and twenty responses were submitted, and most of them were very much in line with the impact I had been aiming for. The discrepancy between the responses of those who stayed for a long time and those who stayed for only a few clips was fairly predictable, in that the responses of the people who left early were less thorough and involved; they stuck to a few words, rather than full sentences, and seemed less interested in responding. They also demonstrated less verbal comparison between the clips that they had

watched. Slightly less than a third of the responders fell into this demographic. What was interesting was that, other than the lack in comparative language that I just mentioned, the emotional responses that were recorded were very similar to those of the audience members who stayed for the full cycle.

For the sake of this discussion, I will discuss reactions chronologically, according to the progression of the seventeen clips.

For the first three clips, the changes in sound design were fairly subtle, but most audience members seemed to notice the differences. The audience reacted most positively to the second and third, stating that the noises in the first, which had only raw audio, were "too loud" or "jarring." In the following sequences, in which the sounds were edited for distance, room sound, and the added Foley, the audience seemed more comfortable with the piece, and began to comment more on the visuals, particularly the behavior of the subject.

The second block (the "domestic"/"commercial" block, clips IV and V) followed the trend of easing the listener into the experience of watching the film. Viewers described it as "peaceful" and "routine." One stated that it "feels like a beginning, open to possibility." One even commented that it "seemed like a commercial or trailer," which is where

much of my influence for this piece came from. The focus that the audience placed on the action of the character – which amounted to varied responses about the nature of his actions – was more or less what I was hoping to achieve with this piece. One discrepancy I noticed was that in a few of the responses that didn't use words indicating tranquility or momentum, the audience members expressed varying opinions about whether they found the pieces to be "happy" or "sad," which I found interesting; I wasn't going for a particular emotional identifier, although many people seemed to be searching for one. Additionally, in the responses (for all of the pieces, not just these two), there are various points at which emotions are written down in the first column with a question mark beside them, particularly in the last two pieces. I will discuss this further shortly.

The next block (the "melancholy" one, clips VI and VII) yielded responses that varied between "lonely" and "pensive." In clip VI, wherein the piece was played over the sound from clip II, the audience paid more attention to the subject's emotions, although tended to report less intense levels of sadness. In clip VII, where the film sound was removed entirely, leaving only the score, it was noted that the piece seemed "more deep" and "even sadder." It was interesting to me to see

that, without the sound of the film in this particular clip, the emotional weight of the piece seemed intensified, and the audience seemed to fall even deeper into that melancholy.

The next was clip VIII, wherein the film sound track was moved forwards in the clip, so as to create a sense of anticipation; there was no scored accompaniment. In this segment, one audience member responded that it made him or her "focus on the actual sounds in the scene." Many others didn't respond to this piece at all, other than to call it "dissociative," or some similar word. The anticipation, where it was commented upon, seemed to cause audiences to consider the real source of the sound. This pertains directly to the discussion in the last chapter of Chion's three modes of listening; in particular, the idea of "causal listening." [53] It was noted in one response that the sound was "like a fortune teller." Because the audience was still able to make the association between the sound and the visual, even though the sound anticipated the action, they spent the duration of this clip still trying to rely on causal listening. This idea that the audience was listening in order to try and understand what was coming next seemed minimally disruptive to their experience, if it was at all. At the very most, it made them think

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[53] Chion, *Audio-Vision: Sound on Screen*.

more consciously about the correspondence between the image and the sounds. This conscious listening was something that I wanted to achieve with this piece in particular. The understanding of the progression of action was not significantly disturbed.

The next block of clips was the "thriller" block (clips IX and X). Over the course of these two clips, the shift in audience's understanding and reaction is very clear on the response sheets: during clip IX, a sense of tension was built, which audiences perceived as "ominous" or "threatening." One responder even asked, "do we know something he doesn't?" By clip X, the audience was more effectively concerned for the safety of the subject. Many responded that they expected "a monster/murderer to jump out and attack him," or for "him to smile and reveal fangs;" the sense of suspense was fully realized as the instrumentation and tempo built over the course of the two clips. Additionally, the heightened EQ, added Foley sounds coming from an unseen source, and increased reverberation and echo effects on many of the sound effects in clip X were noticed, and added to the sense of urgency that many responders expressed feeling by the time this block had run its course.

In clip number XI, I placed strange effects and EQ on the sound, without having an accompanying score. This was another segment that did not receive responses from everyone. However, those who did respond called it "trippy" and "hyperreal," intimating that there was a sense of disconnect between their own understanding of film and reality. This was very much in line with my goal for this piece, which (as I stated in the last chapter) was to disrupt the audience's semantic listening process – another of Chion's three types of listening. The effects that I placed on the sounds were successful in that they interrupted the audience's ability to understand sound as a language or code. Because of the responses, one can see process that the audience went through in order to learn the language of this project's sound design over the course of the last ten clips. This made it even more interesting to watch that knowledge successfully subverted in this once clip, engendering both discomfort and – once again – conscious listening in the audience.

Next were the upbeat, or "comedic" cues, numbers XII and XIII. Clip XII – the one wherein I mismatched the sounds and minimized the instrumentation – was the one of the two that people found to be funnier. Or, at least, it was the one that they labeled as "funny" in their responses. This, I believe, was a result of the upbeat score in combination with the

surprise of hearing sounds that had nothing to do with the visuals

presented as though they did. The second one (clip XIII) was more often

labeled as "energetic," "hopeful," and "cheerful" – one responder said

that it "felt like he was starting a journey." My favorite response came

from the audience member who observed, "The milk spilling is given a

whimsical touch." I found it of particular note that the increased

instrumentation without the intentionally humorous use of the soundtrack

translated more as optimistic than funny. When I was scoring this clip

initially, I had found this one to be more humorous: a shot of something

running down a sink is accompanied by a falling *glissando*; the action is

ornamented with trills on flutes and bells; etc. I had intended for this one

to be more musically comical, so it was interesting to see how much of a

part the mismatched sounds played in the audience's perception of

humor.

Clip XIV contained only the mismatched audio. As I mentioned in

the last chapter, this was the one where I was attempting to involve or

disrupt all three of Chion's types of listening. Most responders left these

responses blank, or responded very minimally – the sense I got was that it

was "cool," but "strange" and "uncomfortable." Optimistically, I would

like to believe that this means I was successful in my attempts to

illuminate Chion's three kinds of listening. The sounds yielded no

information about the apparent source so causal listening was disrupted.

The sounds broke both the code that I had spent the previous thirteen

clips establishing, and so semantic listening was disrupted. And finally,

the listener was left with no choice but to listen to the sounds as an entity

independent of the on-screen image, effectively bringing reduced

listening to the forefront of the audience's consciousness.

Clip XV, incorporating the song by OK Go, was an immediate step

back from clip XIV, and as such, it provoked responses that were –

perhaps reactively – unenthused. One person even described it as

"boring." Many people compared it to cliché scenes from movies they

have seen: the "start of a rom com," or a "life is good montage." I got the

sense from the responses that – particularly in the context of this

installation as a whole – this piece seemed almost like a palette cleanser:

familiar among the new material I presented. This was particularly good

for the piece as a whole, because the last two clips, segments XVI and

XVII, were meant to be especially unfamiliar.

The responses to these final segments – which comprised the

randomly composed score and the distorted audio – were more or less

what I expected and wanted: people were unnerved by their inability to

derive a single, solid emotional understanding from the musical information they were presented with. As mentioned above, several responders wrote in words such as "anxious," "sorrowful," and "calm" with question marks next to them, indicating an inability to pinpoint the exact emotion. Additionally, the sound was never synced. This was the piece that came up most in discussion after the installation had concluded – people expressed discomfort with the material in these last two clips. Some of the language that the responders used included "strange," "intense," "ethereal," "dreamlike," "uneasy," "disconcerting," "awkward," "on edge," and more than one person used the word "eerie." It was fascinating to watch the way audiences responded to a soundtrack that ignored the languages of both conventional film scoring and sound design – without the code that Hollywood has put in place, audiences aren't sure how to respond to the visuals. In this way, one can see how crucial sound is to the audience's understanding of the on-screen action, to the point where their eyes and fifteen previous viewings of the same clip simply aren't enough to mitigate the discomfort.

Ultimately, for those who decided to stay for the full cycle (or at least close to it), the project had the desired effect of causing the audience to consciously consider the sonic material they were presented with. The

combination of the repetition of the visual element, and the constant

shifting of the auditory one – as well as the distortion of the auditory

conventions with which the audience would have been familiar – resulted

in an setting in which the audience was left deliberately contemplating

the way they hear and interpret film sound and music.

A Brief Conclusion

The nature of film and film sound is to be constantly adaptive. As the available technologies for designing, manipulating, and composing sound change and develop, the techniques involved in the art will change too. A true understanding of the modern conventions of film sound only exists through the active observation and consumption thereof.

Film sound holds a narrative and emotional weight that is often taken for granted by the general movie-watching population, despite the fact that it often provides the crucial information in a scene. A composer's place in the field of film music involves conscious thought about a medium that is most often subconsciously consumed. It is his or her responsibility to navigate the boundaries between conscious understanding and subconscious direction, to understand the potential impact of subtle changes, and to open the ears of the audience to sonic information that is both distinct and inextricable from the film itself.

The most significant understanding that I gained from this project as a composer was that the audience was able to consciously recognize and grasp onto narrative implications and emotional significance that changed from minute to minute, on the basis of changing sound alone.

Works Cited

Brownrigg, Mark. *Film Music and Film Genre.* Thesis. University of

      Stirling, 2003. Print.

Cameron, Sean. "Hans Zimmer & James Newton Howard: The Dark

      Knight Review." Rev. of *The Dark Knight: Original Motion*

      Picture Soundtrack. BBC Music. 2008. Web. 10 Apr. 2016.

      <http://www.bbc.co.uk/music/reviews/r83n>.

Chion, Michel. *Audio-Vision: Sound on Screen*. New York, NY:

      Columbia University Press, 1994. Print.

Clair, René. "The Art of Sound." *Film Sound: Theory and Practice*. Ed.

      Elisabeth Weis and John Belton. New York, NY: Columbia

      University Press, 1985. Print.

Cooke, Mervyn. *A History of Film Music*. New York, NY: Cambridge

      University Press, 2008. Print.

"Creating the Music and Sound Effects of Forbidden Planet."

      SoundWorks Collection. Colemanfilm Media Group LLC, 14 Mar.

      2013. Web. 11 Feb. 2016.

      <http://soundworkscollection.com/news/creating-the-music-and-

      sound-effects-of-forbidden-planet>.

Donnelly, K.J. "*Saw* Heard: Musical Sound Design in Contemporary

    Cinema." *Film Theory and Contemporary Hollywood Movies*.

    New York, NY: Routledge, 2009. 103-23. Print.

Engber, Daniel. "The Sounds of Violence." *Slate*. The Slate Group, 24

    Feb. 2012. Web. 4 Dec. 2015.

    <http://www.slate.com/articles/arts/culturebox/2012/02/drive_the_

    sound_editing_in_the_elevator_stomping_scene.html>.

Engber, Daniel. "The Reel Sounds of Violence." Interview by Brooke

    Gladstone. Podcast. *On The Media*. WNYC, 2 Mar. 2012. Web. 15

    Dec. 2015. <http://www.wnyc.org/story/190158-reel-sounds-

    violence/>.

Giacchino, Micahel. *Married Life*. Walt Disney Records. 2009. MP3.

Holman, Tomlinson. *Surround Sound: Up and Running*. Burlington, MA:

    Focal, 2008. Print.

Kalinak, Kathryn. *Film Music: A Very Short Introduction*. New York,

    NY: Oxford University Press, 2010. Print.

Kalinak, Kathryn. *Sound: Dialogue, Music, and Effects*. New Brunswick,

    NJ: Rutgers University Press, 2015. Print.

Kulash, Damian, Jr. *Oh Lately It's So Quiet*. OK Go. Tore Johansson,

    2006. MP3.

Kulezic-Wilson, Danijela. *The Musicality of Narrative Film*.

    Basingstoke, UK: Palgrave Macmillan, 2015. Print.

Murch, Walter. "Walter Murch." *Transom*. Atlantic Public Media, 1 Apr.

    2005. Web. 4 Feb. 2016. <http://transom.org/2005/walter-murch/>.

Pollack, Howard. *Aaron Copland: The Life and Work of an Uncommon*

    Man. New York, NY: Henry Holt, 1999. Print.

Reay, Pauline. *Music in Film: Soundtracks and Synergy*. London, UK:

    Wallflower, 2004. Print.

Ricard, David. "Cartoon Composing: Scoring an Animated Series."

    Sound on Sound. SOS Publications Group, Jan. 2009. Web. 5 Apr.

    2016.

    <https://www.soundonsound.com/sos/jan09/articles/supernormalsc

    oring.htm>.

Rothbart, Peter. *The Synergy of Film and Music: Sight and Sound in Five*

    Hollywood Films. Lanham, MD: Scarecrow, 2013. Print.

Slobin, Mark. *Global Soundtracks: Worlds of Film Music*. Middletown,

    CT: Wesleyan University Press. 2008. Print.

Sweet, Michael. *Writing Interactive Music for Video Games: A*

    Composer's Guide. Upper Saddle River, NJ: Pearson Education,

    2015. Print.

Temperley, David, and Daphne Tan. "Emotional Connotations of

Diatonic Modes." *Music Perception: An Interdisciplinary Journal*

30.3 (2013): 237-57. Web. 2 Apr. 2016.

<http://davidtemperley.com/wp-

content/uploads/2015/11/temperley-tan.pdf>.

Thom, Randy. "Designing A Movie for Sound." (1999). *FilmSound.org*.

Web. 8 Dec. 2015.

<http://filmsound.org/articles/designing_for_sound.htm>.

Toyofuku, Laurel. "Film Music Genre Theory and the Hybridity of Hans

Zimmer." VMS Capstone, Duke University. Web. 3 Apr. 2016.

<http://people.duke.edu/~lt66/Scrolling%20paper%202/>.

Whittington, William. *Sound Design & Science Fiction.* Austin, TX:

University of Texas, 2007. Print.

Wierzbicki, James. *Louis and Bebe Barron's Forbidden Planet: A Film

Score Guide*. Lanham, MD: Scarecrow, 2005. Print.

Selected Bibliography

Aaronson, Ian David. *DV Filmmaking: From Start to Finish*. Vol. 1.

    Sebastopol, CA: O'Reilly Media, 2006. Print.

Burtt, Ben. "The Sound Design of Forbidden Planet." *Synthtopia*.

    YouTube, 29 Oct. 2011. Web. 12 Mar. 2016.

    <http://www.synthtopia.com/content/2011/10/19/the-sound-

    design-of-forbidden-planet-by-ben-burtt/>.

Chion, Michel. *Film: A Sound Art*. New York, NY: Columbia University

    Press, 2009. Print.

Collins, Karen. "The Sound of Music, or the Music of Sound?"

    Designing Sound. Filmsound Daily, 4 Mar. 2013. Web. 24 Feb.

    2016. <http://designingsound.org/2013/03/the-sound-of-music-or-

    the-music-of-sound/>.

Collins, Nick, Margaret Schedel, and Scott Wilson. *Electronic Music*.

    New York, NY: Cambridge University Press, 2013. Print.

Dayal, Geeta. "Ben Burtt on Star Wars, Forbidden Planet and the Sound

    of Sci-Fi." *Wired.com*. Conde Nast Digital, 25 May 2012. Web. 8

    Feb. 2016. <http://www.wired.com/2012/05/ben-burtt-sci-fi-

    sound-effects/>.

Fischoff, Stuart. "The Evolution of Music in Film and its Psychological

    Impact on Audiences." (2005): 1-28. California State University,

    Los Angeles. Web. 5 Apr. 2016.

Hadland, Nick. "More Than Noise: The Integrated Soundtrack of *Noise*."

    Screen Sound n.1. (2010): 35-46. Web. 4 Mar. 2016.

Hickman, Roger. *Reel Music: Exploring 100 Years of Film Music*. New

    York, NY: W.W. Norton, 2005. Print.

Kassabian, Anahid. *Hearing Film: Tracking Identifications in*

    Contemporary Hollywood Film Music. New York, NY: Routledge,

    2002. Print.

Scaruffi, Piero. "Film Music." *A History of Popular Music Before Rock*

    Music. Omniware House, 2007. Print.

Sider, Larry, Jerry Sider, and Diane Freeman, eds. *Soundscape: The*

    School of Sound Lectures, 1998-2001. London, UK: Wallflower,

    2003. Print.

Weis, Elisabeth, and John Belton, eds. *Film Sound: Theory and Practice.*

    New York, NY: Columbia University Press, 1985. Print.