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# **THE CONCEPT OF “LESS IS MORE” IN VISUAL DESIGN APPLIED TO SOUND DESIGN IN ANIMATION**

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A research paper submitted to the University of Dublin,  
in partial fulfilment of the requirements for the degree of  
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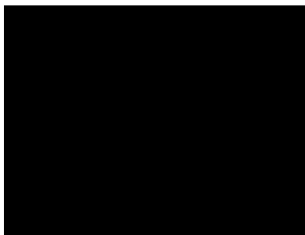
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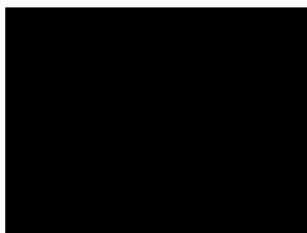
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## ABSTRACT

This paper explores the feasibility of the concept of minimalistic visual design principles - “Less is More” in sound design for animation films, to augment storytelling and cinematic experience. The idea of enhancing storytelling by improving sound design stems from the significance of sound in human perception and the effect of juxtaposing the sound and visuals coherently for an overall impact on the audience. Accordingly, the paper performs an extensive study on the “Less is More” visual design principles, sound design principles in general and in animation. Following which, two animation films from different genres – *The Polar Express* (2004), directed by Bob Zemeckis and *Coraline* (2009), directed by Henry Selick were analyzed through the combined lenses of visual and sound design principles, which enabled structuring a comparison framework of visual and sound design principles. Since effective sound design relies upon experimentation and practice, the paper is further strengthened using survey responses from five industry professionals with expertise ranging from sound designers to post-production audio specialists. The combination of the above has led to the development of novel approaches to designing sound for animation where “Less is More” approaches like simplicity, neutrality, balance, hierarchy and negative space can correspond to and be integrated with sound design practices to strengthen character development, amplify the effect of leitmotifs/archetypal sounds, create audiovisual and auditory hierarchy, and construct meaning through creative use of silence. Consequently, these approaches and techniques help to augment the storytelling. The paper also concludes that the style of sound design in films rely upon the style of storytelling. Hence, the “Less is More” principles are more feasible for the “poetic authentication” style (resembling live-action films) of animation sound design.

**Keywords:** Visual Design, Sound Design, Animation, Less is More, Simplicity, Neutrality, Hierarchy, Balance, Negative Space, Character Development, Leitmotif, Archetypal Sounds, Figure vs Ground, Proximity, Silence, Suspension, Storytelling, Cinematic Experience, Audiovisual Harmony

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## CHAPTER 1 | INTRODUCTION

### 1.1. Overview

As we exit movie theatres, our conversations and critiques often include the storyline, action scenes, emotional scenes and so on. However, we almost never think about how seamlessly the sound and ambience worked with the story. The sudden stop of a ticking clock amongst the silence of a bedroom in the middle of the night, could narrate the arrival of the evil or the antagonist. Whereas, the sound of chirping birds may narrate happiness and a new beginning. Every time a scene makes us contemplate, cry, smile, or gives goosebumps, the sound design had played a solid role in tailoring the story and evoking those emotional responses. However, because sound may not seem as “tangible” as visuals, we tend to overlook how it played a substantial role in narrating the story or enhancing our cinematic experience. According to sound designer Randy Thom, animation movies can be made more cinematic by avoiding wall-to-wall dialogues (Kiser, 2018). Animation films rely heavily on imagination, starting off with static storyboards which is then translated into visual moving images. This imaginative production can be made more cinematic and dramatic using abstract metaphoric sounds and ambience. According to Beauchamp (2013), metaphoric sounds are more effective to create a dramatic experience than literal sounds, and as many objects in animation do not exist; consequently, metaphoric sound is vital to characterization and plausibility of the object. Therefore, creative use of sound design in animation can validate and strengthen the personalities of the characters and the story, as well as guide the audience through a cinematic storytelling experience.

### 1.2. Thesis Description

The primary purpose of this research is to explore the feasibility of combining sound design and “Less is More” visual design principles, for application in sound design of animation films. This is achieved by extensive study of the “Less is More” visual design principles and sound design principles, followed by analyzing two animation films from different genres – *The Polar Express* (2004), motion-capture family-adventure film directed by Robert Zemeckis and *Coraline* (2009), a stop-motion dark fantasy-horror film directed by Henry Selick. The notion of “Less is More” - the concept that simplicity is better than excessive embellishments for human comprehension, was coined by German architect Ludwig Mies van der Rohe and is widely used in terms of visual design and aesthetics (Archisoup, n.d.). Therefore, the research seeks to explore its applicability to sound design for enhanced storytelling and cinematic experience in animation films. The paper also

discusses industry approaches about designing sound. Finally, the literature review, film analysis and current industry approaches are combined to introduce a set of novel approaches for designing sound in animation, with the goal of creating more with less.

### **1.3. Goals & Motivation**

The inevitable significance of sound on storytelling, and the scope for imagination and experimentation in animation films, enables innovative thinking and approaches for sound design in animation. Beauchamp (2013) cites an example from *Toy Story* (1995), where Andy adds voiced sound effects during playtime to enhance his experience. Therefore, he highlights that humans develop a nature in early years, where our hearing augments the story or experience being presented to us. Furthermore, as both sound and visuals are created from the ground up in animation films, there is a greater opportunity to mold the experience and sound more precisely with the director and sound designer's vision.

Since visuals and sound in films have an integrated impact on the audience, the principal goal of this paper is to analyze the feasibility of the "Less is More" principles to sound design, alongside others, including:

- Exploration of the role of sound design and "Less is More" principles to enhance storytelling and cinematic experience.
- Developing an understanding of sound design in animation films from different genres, through a critical analysis based on various developed techniques.
- Structuring a comparison framework of sound design approaches and "Less is More" theories from visual design.
- Creating novel approaches to designing sound in animation films based on "Less is More" visual design principles.

### **1.4. Key Contributions**

The principal contribution to this thesis include the idea of combining and analyzing the feasibility of using minimalistic visual design principles for sound design, which is triggered from the notion that both streams may require similar principles for human comprehension, since visuals and sound together drive the storytelling in films.

The potential contributions of this thesis include:

- A discussion of the established role of minimalistic visual design principles, and sound design techniques in general and in animations.
- Investigation of how minimalistic visual design theories can inform sound design approaches for animation.
- The presentation of a comparison framework of sound design approaches and “Less is More” theories from visual design.
- The development of a sound design analysis framework for future work, through the lens of minimalistic principles.
- Creation of novel approaches for designing sound in animation, by integrating visual design approaches with sound design principles.

## **1.5. Thesis Outline**

This research paper contains six chapters – Introduction, Background, Review of Works, Conceptual Approach & Film Analysis, Findings & Discussions, and Conclusion. The first chapter gives an overview of the thesis including description, research goals, motivations and key contributions. The second chapter provides a background of principles of “Less is More”, sound design in general and in animations. The third chapter reviews various influential works from the fields of visual and sound design. The fourth chapter presents the conceptual approach to the thesis and analyzes two animation films through the lens of the principles discussed earlier. The fifth chapter discusses the visual and sound design principles side-by-side in the context of the two films, introduces industry approaches to sound design, and integrates all findings to present novel approaches for sound design with the “Less is More” principles. Finally, the sixth chapter concludes the paper.

## CHAPTER 2 | BACKGROUND

### 2.1. Introduction

Over the years, techniques and styles of producing audiovisual media has witnessed change and evolution. This chapter presents a background and evolution of the core elements of this research paper, namely visual design, sound design and sound in animation. This chapter comprises of five sections. The first section introduces the chapter and its contents. The second section gives an overview of the origins and the use of ‘Less is More’ in visual design, while the third section presents the use of sound design principles over the years. The fourth section shows how sound design has evolved in animation, from the cartoon-style to more live-action-style animations in recent times. The last section concludes the history and evolution of visual and sound design, therefore creating a strong base for the further chapters to follow.

### 2.2. “Less is More” in Visual Design

Visual design – a rather broad term referring to a medium of visual communication, has evolved dramatically and can be traced back to 38,000 BCE in terms of cave paintings (Galvan, 2020). As language and technology developed, visual design has changed dramatically and diverged into various forms and mediums including print and digital. As visual design evolved with technology, various art movements and trends have been introduced, influencing what modern forms of visual design represent. One such enduring movements is the Bauhaus Movement that “incorporated minimalism, geometric shapes and simple typography” (Galvan, 2020, Bauhaus, para 3). Along the ideologies and styles of the Bauhaus designs, the phrase “Less is More” was adopted and popularized by the architect Ludwig Mies van der Rohe in 1947 to encourage the practice of simplicity, rationalism and minimalism in design (Archisoup, n.d.). Although minimalism and “Less is More” have its origins from architecture, the trend and ideology has panned out to all aspects of designs including graphic and web design. According to Schenker (2020), the minimalist design trend has also extended to web design, with a popularity of 2D flat designs in web user interfaces. The term “Less is More” is one of the main principles of minimalism (Ivanoff, 2014) which focuses on visual communication using only essential visual elements and therefore achieving balance and harmony, for a more aesthetically pleasing piece. Therefore, this paper will utilize the term “Less is More” in greater detail in the following chapters.

“Less is More” or minimalism have taken various forms and spanned on to multiple fields of design, however they all follow a few overarching principles. The following are the fundamental principles of minimalism: *Mastering Simplicity*, *Accepting Neutrality*, *Achieving Balance*, *Establishing Hierarchy* and *Conquering Negative Space* (Sretović, 2019).

### **2.2.1. Mastering Simplicity**

In terms of visual or graphic design, *Mastering Simplicity* refers to the use of fewer elements, and removal/replacement of any graphic element which negatively affects the readability or usability of a design product (Sretović, 2019). As stated by Steve Jobs, “Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple.” (Hooks, 2019, para 1). Therefore, the purpose is to convey the message in an efficient and aesthetically pleasing manner by avoiding clutter.

### **2.2.2. Accepting Neutrality**

The minimalist trend not only advocates the use of fewer elements, but are also cautious about the combination of colors used and unnecessary ornamentation. Minimalists use limited colors with touches of vivid color for contrast and to draw attention to certain elements with higher importance (Sretović, 2019).

### **2.2.3. Achieving Balance**

Sretović (2019) suggests that it is crucial to maintain visual harmony and balance between all graphic elements in minimalistic visual design. Balance and harmony holds the different graphic elements together, representing a united whole. Therefore, balance helps create aesthetically pleasing designs by eliciting a sense of stability and comfort (Watzman, 2002).

### **2.2.4. Establishing Hierarchy**

*Establishing hierarchy* in design acts as navigation aids for the viewer to navigate around the visual landscape. In case of digital material, “Navigation aids provide readers with highways, maps, road signs, and landmarks as they move through the online landscape.” (Watzman, 2002, p. 281). Sretović (2019) suggests that, elements like color, size, composition, and typography are crucial in assigning hierarchy and visual priorities.

### **2.2.5. Conquering Negative Space**

One of the most important and intriguing design elements is the optimal use of negative space, to balance, and emphasize or highlight other elements in the landscape (Sretović, 2019). Negative (or white space) assist in aligning with the principles mentioned above by promoting simplicity, balance, grouping or distinguishing elements, acting as navigation aid for the user, and so on.

## **2.3. Sound Design in Films**

Walter Murch suggests that sound being our first sense since before our birth, affects us in a deeper way almost more than image does (Costin, 2019), hence being a vital element in our perception and understanding. This makes the role of sound in films crucial for immersion or believing the film's narrative. Ang Lee suggests that, "movie is sight and sound" (Costin, 2019, 00:03:03), meaning that visuals and sound have a combined effect on the narrative experience of a movie. In addition, according to Ward (2015), cinema presents a narrative and emotional experience. Therefore, the complete experience from a film is achieved by its power of being narrative and affective, both of which is impacted by the sound. Gary Rydstrom also mentions that, sound is "subliminal and a purely emotional way of thinking about a movie" (Costin, 2019, 00:02:11). Hence, sound works deep into our subconscious to shape our overall experience of the film.

Sound in film consists of three elements – Voice, Sound Effects and Music. Mixing these elements in the right way comprises of the sound in film (Costin, 2019). Rydstrom broadly describes the impact on perception of a scene through interplay of the three elements as follows: the music enhances the emotion, the sound effects add a visceral punch, while turning them both down focuses on the dialogue (Costin, 2019). Therefore, the appropriate mixing and placement of the sounds, enabling everything to play harmoniously is the core of mixing sound in film (Costin, 2019), and therefore can be referred to as sound design. In this paper, we will discuss the overall impact of sound design, followed by a detailed analysis of the impact of sound effects on the narrative experience of the film.

Although sound existed for a very long time, it was since the emergence of Walter Murch and Ben Burt that film sound became more recognized and complex (Costantini, 2018). However, initially films started off as being silent, followed by addition of live orchestra and sound effects. As technology advanced, synchronized music tracks and voice was incorporated to films in the 1920s. Although the incorporation of voice intrigued audiences, the necessity of adding post-production sound effects evolved, and hence the need for sound editors to create a sound world for the film.

According to Burtt, the creation of non-existent sounds through manipulation was pioneered in *King Kong* (1933), which he phrases as the beginning of sound design (Costin, 2019). Finally, the modern era of sound design is marked by that of *Apocalypse Now* (1979), and Murch suggests that the format used in the film for mixing the sound elements is still the ground standard used by sound editors (Costin, 2019).

Costantini (2018) suggests that there are two principal approaches of sound design. The first one being that of Walter Murch's approach, which involves making the sounds itself narrative, and embedding meaning into each sonic element of the scene (Costantini, 2018). For instance, the loud sound of a train can represent danger or tension, as used in the restaurant assassination scene from *The Godfather* (1972) (Sonnenschein, 2001). The other approach suggested by Costantini (2018) is that of Ben Burtt's, which includes the creation of a sonic landscape or a sonic imagery, for instance the sound of the light saber from *Star Wars* (1977) or the sounds of *Wall-E* (2008) as he navigates around. The creation of such sonic imagery can provide a more cinematic experience, therefore giving a personality to the sonic landscape and characters. By studying articles and interviews from industry professionals, it can be noted that sound designers do not necessarily opt for one approach or the other, but uses a combination to convey the narrative and cinematic experience of the film.

Sound in film or any other media is designed for the audience, which makes it necessary to understand how the audience will perceive the sound. Therefore, Sonnenschein (2001) states that understanding our physiological and mental capacities and limitations can be the core of applying sound design principles for films. He states the different listening modes put forward by the film theorist Michel Chion, and introduces a fourth one as follows:

1. **Reduced Listening** – Awareness of sound from the surroundings without paying attention to the source.
2. **Causal Listening** – Listening to sound and gathering information about the cause or source of the sound.
3. **Semantic Listening** – Listening to sound that relates to a spoken or code language.
4. **Referential Listening** (Introduced by Sonnenschein) – Being affected by the context of the sound and its emotional and dramatic meaning.

Following human perception of sound through various listening modes, sound designers use principles and techniques to narrate the story or create a dramatic impact. Few such principles put forward by Sonnenschein include **Figure vs Ground**, **Proximity and Similarity**, and **Silence**, giving rise to Auditory Hierarchy and Balance. Other techniques such as, **Suspension**, **Subjective Character**



**Experience, Leitmotif and Archetypal Sounds** enhances the audience's dramatic experience. These principles will be compared to the principles of visual design in the later chapters.

The idea of such comparison roots from the fact that both our sight and hearing is influenced by the psychological principles of Gestalt (Sonnenschein, 2001). Gestalt principles suggest that the effect of a unified whole is not the same as the sum of its individual components. Therefore, the effects created by Proximity and Similarity may completely be different than that of its individual sound elements. The principles of Gestalt psychology have been used for further research of a listener's auditory perception. Kramer (1992) summarizes Bregman's differentiation of two processes in which the audience perceives sound: schema-driven and primitive processes. The schema-driven processes refer to the audience's perception based off their past experiences, including understanding of languages and context of sound. Therefore, this can be tied back to the referential mode of listening introduced by Sonnenschein. Whereas the primitive processes refer to the innate perceptions of sound, like the effect produced by Archetypal sounds – chirping of birds, sound of the thunder etc.

### **2.3.1. Figure vs Ground**

One of the most important principles in a film's sonic landscape is the distinction between figure (foreground) and background sounds. This distinction makes a sound pop from the rest of the soundscape, making the audience focus on that particular sound. Such distinction is achieved by the sound quality such as timbre, rather than its physical dimensions (or loudness) (Sonnenschein, 2001). While figure is used to grab attention of the audience and allow them to follow the figure through the story, the background also plays a pivotal role in immersing the audience for a comprehensive experience. Bregman's analysis of auditory perception can also be considered as a base for the idea of figure and background (Kramer, 1992). In line with the schema-driven processes of auditory perception, the voice of a person speaking a foreign language may become figure amongst a crowd of people, if you are aware of that foreign language. In addition, the meaning inferred by using the figure only can highly differ from the juxtaposition of the background and figure. According to Barbosa and Dizon (2020), "background sounds complement and define the visual settings of the scene and provide a powerful way to create a sense of immersion and contextualization" (p.85). For example, the sound of footsteps coming down the stairs may be interpreted to multiple possible situations. But, if those footsteps are accompanied by comedic or suspenseful music, it will give very contrasting dramatic experience to the audience (Michaelwiese, 2008).

### **2.3.2. Proximity and Similarity**

Multiple sounds can be perceived as a group or a united whole by their nearness in time or similarity in timbre. According to Sonnenschein (2001), the law of proximity suggests that we perceive nearby objects as a group. Therefore, several sounds playing one after the other, for example, “a human wail followed by a wolf howl becomes a single sound source” (Sonnenschein, 2001, p.31). This principle can be noted in the creation of the sounds of creatures that do not exist in real life. For instance, the sound and roar of the T-Rex was created by Gary Rydstrom, by recording and manipulation of sounds from multiple objects and creatures (including falling of redwood trees, whale blowhole, alligator, lion, baby elephant) (INDEPTH Sound Design, 2020). Another modality of grouping sounds can be defined using the law of similarity, where “similar sounds are grouped together even when separated by time” (Sonnenschein, 2001, p.82). He states an example to describe this phenomenon, as a dog barking sporadically with the same timbre would allow the audience to perceive it as the same dog.

### **2.3.3. Silence**

The use of silence (complete absence of sound or relative silence) is another important principle of sound design. According to Sonnenschein (2001), every scene has a designated track as the baseline silence, which could be the room’s tone, nighttime quietness represented by cricket sounds or a ticking clock, and so on. Rydstrom (Wright, 2008) and Sonnenschein (2001) state that silence gives rise to tension, and evokes the feeling of loneliness and anxiety. Therefore, the creative use and juxtaposition of silence with other elements can elicit a multitude of expressions. For example, in the film *All that Jazz* (1979), the protagonist was having a heart attack while writing a script (Sonnenschein, 2001). The sense of life being taken away was represented by removing all sounds but exaggerating the tapping sound of the pencil on the table. This exaggerated nature of a rather minor sound juxtaposed with silence, evoked a sense of tension and anxiety to the audience. Another creative use of silence is to introduce a split-second of silence before a gunshot or explosion to startle the audience with a sudden loud sound (Barbosa and Dizon, 2020). Hence, how silence is introduced into a scene also has an impact on the storytelling.

### **2.3.4. Suspension**

Although silence plays a crucial role in evoking tension, anxiety, loneliness or even startling the audience, it is also used to create an effect called suspension. Suspension refers to selective elimination of sound from a scene, when a sound is naturally expected by the audience

(Sonnenschein, 2001). For example, a snowstorm with no howling sound, the gradual fading of a busy traffic scene etc. This sort of elimination of sound enables the audience to increase their focus on the visuals to comprehend the odd juxtaposition of silence and visuals.

#### **2.3.5. Subjective Character Experience**

Another interesting aspect along the lines of sudden or gradual shift of sounds, is the subjective character experience. This term refers to shifting the sonic focus to what a character is feeling or hearing (Sonnenschein, 2001). This shift in focus and auditory perspective enables the audience to empathize with the character. Although used in both live-action and animations, such shift helps the audience to identify and empathize with non-human characters in animation films (Collins, 2013). For instance, this phenomenon can be found in the film *Ratatouille* (2007), with a shift of focus and auditory perspective between the protagonists Remy (the rat) and Linguini (the young man). This adds credibility and believability to the existence and reality of Remy (Collins, 2013).

#### **2.3.6. Leitmotifs**

Leitmotifs are an example of exploring Sonnenschein's fourth mode of listening – Referential listening. Leitmotifs consists of associating a musical theme or sound to a character, object, place or event, such that the audience can perceive its presence or arrival even if it is not visible in the scene (Barbosa and Dizon, 2020). Few iconic leitmotifs mentioned by Barbosa and Dizon include the theme of James Bond and Darth Vader. In this case, people can anticipate these characters via the leitmotifs, only if they are aware of the context of these musical themes.

#### **2.3.7. Archetypal Sounds**

Another technique that taps on to our referential listening are the archetypal sounds. According to Sonnenschein (2001), "archetypal sounds stir our ancestral memories bringing us to an environment through a universal emotional reaction" (p. 184). He provides examples of archetypal sounds as chirping of birds representing peace and calm, or lion's roar representing danger. Archetypal sounds can also refer to a culture or a certain period, for instance galloping horses combined with sounds of metal clashing may refer to a war from ancient times.

#### **2.3.8. Combining the Techniques**

The different techniques - **Figure vs Ground**, **Proximity and Similarity** and **Silence** composited together in meaningful and creative ways build an auditory hierarchy and balance, to enhance the

storytelling and the dramatic expression of the film. Auditory hierarchy refers to how the various sounds and tracks are focused or unfocused to command attention of the viewer, in a scene. According to Sonnenschein (2001), sound can be described in three levels, wherein the audience consciously listens and focuses on the first level, the second level supports the environment without demanding attention, and the third level creates a united and whole soundscape, therefore affecting us subconsciously. He also mentions that the first level can be referred to as the figure, while the second and third level as background. Therefore, appropriate placement and shift of focus between figure and ground sounds is essential in building an auditory hierarchy to narrate the story. The importance of auditory hierarchy and sonic focus have been stressed by sound designers like Walter Murch. According to Murch, our mind can focus only on a maximum of two sounds within a scene (Sonnenschein, 2001). Therefore, a balance must be maintained between the use of dialogue, music and sound effects, depending on the intended storytelling. Thom (2019) also states that, “great sound sequences in film are almost always dominated by one category of sound at a time”. This can be noted in the opening sequence of the film *Up* (2009), where Ellie and Carl’s relationship is portrayed beautifully by focusing only on the background music, which has been excellently juxtaposed with the visuals. Hence, simplification of the sonic layers can result in iconic sound sequences. For example, Burt mentions how during the development of Darth Vader’s sound, various components were tried to portray its evil presence, but eventually the use of a single breathing cycle with varying speed made the character’s sound iconic (Sonnenschein, 2001).

## **2.4. Sound Design in Animation Films**

Sound design in animation films is particularly interesting due to its history, evolution and the overall process of creating an animated film. Thom mentions that, “the challenging thing about the animated film is that you have to entirely invent the world” (Beauchamp, 2013, p. 72). The creation of an animation film starts with storyboarding and simple sketches, following which, creatives from various disciplines build this animated world and its characters from scratch. According to Taberham (2018), “the audio operates like an echo of the physical world in an otherwise constructed landscape” (p. 131). Therefore, the sound design plays a crucial role in defining whether the film is going to sound “cartoony”, “musical”, or “live-action-like” and so on.

Taberham (2018) describes four styles of sound design in animation throughout its evolution, namely syncretic, zip-crash, functional and poetic authentication. Besides exploration of the evolution of sound in animation, this section also discusses Foley, which is another crucial element of animation sound design.

#### **2.4.1. Syncretic Style or Mickey-Mousing**

The syncretic style of sound design involves music at its core, where sound effects are musicalized, and the characters move based on the musical score and rhythm, also known as mickey-mousing (Taberham, 2018). However, according to the history of the advent of sound design in films, animation plays a crucial role. In the early 1900s, when film producers were struggling to film visuals and record audio simultaneously, the necessity to record and synchronously add sound to the visuals during post-production had emerged. According to Disney and Iwerks (1928, as cited in Candusso, 2010), the Walt Disney animated film *Steamboat Willey* (1928) pioneered the addition of sound effect and music in post-production. In addition, the spatial aspect and placements of sound in physical space also started with Disney's animated musical film *Fantasia* (1940), where multichannel sound was used for the first time (Algar et al., 1940, as cited in Candusso, 2010).

#### **2.4.2. Zip-Crash Style**

Following the syncretic style of sound design, was the use of flamboyant and energetic sound effects usually taken from the real world in order to give a comic effect. Examples include the sound of screeching tires when a character came to a stop (Taberham, 2018). These effects can be seen in MGM or Warner Bros cartoons like Tom & Jerry, Bugs Bunny etc.

#### **2.4.3. Functional Style**

The functional style began from the late 1900s with dialogue-heavy animated television series like *The Simpsons* (1989), where the music and effects were minimized for voice to prevail the most in the auditory hierarchy (Taberham, 2018).

#### **2.4.4. Poetic Authentication**

The poetic authentication style takes into consideration the principles of sound design in section 2.3, to resemble live-action films (Taberham, 2018). This style adds realism and authenticates the visuals, by avoiding focus on a single component of the mix (between dialogue, sound effects and music), and maintaining a balance to provide a more cinematic experience. Therefore, sound design in animation has gone through multiple stages of changes, and at present has the tendency to be made to resemble that of live-action films, as also mentioned by Thom (2013).

#### **2.4.5. Foley Sounds in Animation**

Foley sounds, named after Jack Foley refers to creating sound effects using props to augment the visuals in a scene. These sound effects can range from sounds of a thunderstorm or wind, to subtle effects like footsteps on a grass (Great Big Story, 2017). The addition of such sounds by creative manipulation of props breathes life into the scene. Therefore, Foley is particularly important in animation as here the whole world including the visuals and audio needs to be created from scratch. Moreover, the use of Foley sounds in animation can be noted from the start of animation films and in each style of sound in animation. One of the examples being the zip-crash style, where the flamboyant and energetic sounds were created using Foley. Similarly, the subtle or minimalistic sounds of the wisp of passing air or subtle movements in the poetic authentication style of animation sound also reflects the use of Foley.

#### **2.5. Conclusion**

This chapter surveys the advent and evolution of the core topics of the paper – visual design, sound design in films and sound design in animation. Through the above sections, it is notable that each of these disciplines have gone through changes and the current practices or principles in use strive to enhance the audience's comprehension of the narrative being conveyed. In addition, not only is the purpose to convey the narrative, but also to narrate with an experience.

Since, animation films are specifically intriguing, where directors can get creative with the various modes of sound design, this paper will look at the films with the “poetic authentication” mode of sound design. In my opinion, “Less in More” visual design principles are more prevalent for this mode of sound design, as it purposefully neither includes flamboyant comic sound effects nor back-to-back dialogues, but tends to utilize various principles of sound design for effective storytelling and dramatic expression.

## CHAPTER 3 | REVIEW OF WORKS

### 3.1. Introduction

Works of art, be that visual or sound design, employ techniques and principles to create an impact on the audience. When these techniques and principles are implemented cohesively and creatively, the results blend as a whole to seem ubiquitous or just “natural” to the audience. This chapter illustrates the implementation of principles from chapter 2 and consequent effects on works of art from the fields of visual design, sound design and sound design in animation. The chapter comprises of five sections. The first section introduces the chapter and its contents. The second section demonstrates various noteworthy and iconic works of visual design. The third section presents prominent works in sound design that employ the techniques from chapter 2 relevant to the analysis of the thesis, while the fourth section shows techniques used in animation through various examples of work. The last section concludes the illustration of notable works of visual and sound design, therefore paving the way for a deeper analysis on the application of “Less is More” from visual design to sound design in the later chapters of the research paper.

### 3.2. Noteworthy works of minimalism in visual design

In the current age of overflowing content and information, it is key to reach right audience and retain them, when conveying a message. Therefore, visual designers strive to employ minimalistic techniques to grab the audience’s attention, retain it, convey the intended message and more importantly create a long-lasting impact. This section demonstrates minimalistic visual design in brands, logos, icons, and visualizations, and how several of these became standards for visual design in the years to come.

#### 3.2.1. Mastering Simplicity

Simplicity is a key principle in minimalism, which refers to the usage of optimal elements by removing any element which negatively affects the usability or readability. It prevents the audience from being overwhelmed in an already content-heavy world.

One such noteworthy visually designed pieces that has mastered simplicity and laid a standard with international acknowledgement, is Henry Beck’s design for the London Underground railway system.



Figure 1: Henry Beck's Map of the London Underground Railway System – Published in 1933

Henry Beck's map (Figure 1) was revolutionary and became a standard for maps of railways and metros all around the world. Figure 2 displays the first design of the London Underground railway system map, published in 1908. While the first map superimposed the railways lines and stations on the actual geographical map, Henry Beck realized that the public only needs to know how to get from one station to another, rather than the real distance between the stations. Therefore, he removed the underlying geographic map, and based his design on 3 rules – straightened lines, usage of horizontal, vertical & diagonals, and even distance between the stations (Graham-Smith, 2016).

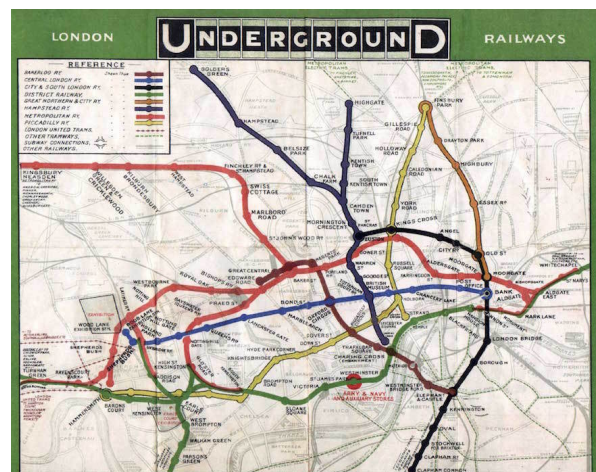


Figure 2: First Map of the London Underground Railway System – Published in 1908

Henry Beck's simplicity and elimination of elements that negatively affected the readability – that is, the actual geographical map, curved lines and actual distance between the stations, has evidently removed clutter. His design focuses on the elements required to know how to go from one station to another, which has been recognized internationally for railways and transport systems.



### 3.2.2. Accepting Neutrality

It is crucial to design a logo with a long-lasting impact, as its primary purpose is brand recognition. Therefore, the use of minimal elements or colors allow people to better remember the logo and brand. Hence, many tech companies which initially had colorful logos, have now moved on to monochromatic colors to evoke professionalism and sophistication, whereas a colorful logo may have looked childish (Think Marketing, 2012). One such instance is that of the change of the colorful Apple logo to the monochromatic logo. The colorful logo was first altered to fit the look of Apple's Bondi Blue iMac. Following that, several minor changes were made to represent the current Apple logo. Therefore, the use of reduced or monochromatic colors evidently allowed a wider usage of the logo. Hence, the current sophisticated and minimalistic logo of Apple reflects Steve Job's favorite quote by Leonardo Da Vinci, 'Simplicity is the ultimate sophistication' (Abrosimova, 2020).



Figure 3: Apple Logo 1977 - 1998



Figure 4: Apple Logo 2014 - Present

### 3.2.3. Achieving Balance

Visual balance is essential to create strong and bold statements, and to organize a multitude of content in a readable manner, by avoiding tension amongst the elements while viewing the visual piece. Balance is created through appropriate placement of elements such as font, shape, color, including text size and weight. The following movie poster of the James Bond movie *Skyfall* (2012) creates a powerful statement by utilizing a radial balance and contrast between black and white colors. From an overall viewpoint, the elements in this poster is radiating outwards from the central white tunnel opening, also termed as the radial balance (Pluralsight, 2014).

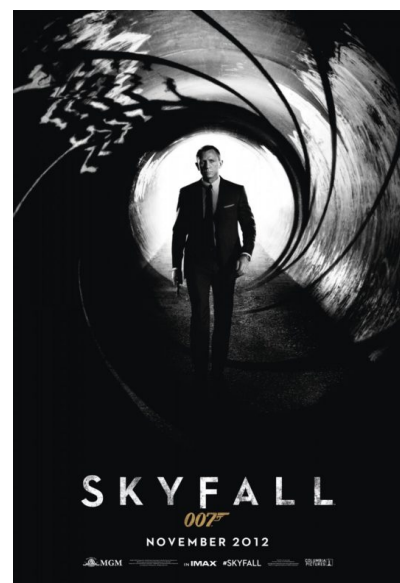


Figure 5: Skyfall (2012) Movie Poster

The placement of the objects on the top third of the poster guides our eyes to the protagonist, making him the focal point and enabling him to create a bold statement as the protagonist. Moreover, the poster has a nice balance in terms of the visual weight, which is a relative notion created using elements like color, text size or weight etc. The top-third of the poster is visually heavy with imagery, but also has a balanced use of black and white. The bottom part of the poster contains minimal text on a rather heavy color, which enhances the balance of that section. Although the text is minimal, the crucial information is organized such that all the information, including the film's title, series, and the release date can be known at a single glance. The gold text **007** (signature code for James Bond) pops out amongst the black and white poster, clearly denoting that this is a James Bond movie. In addition, the letters of the title **Skyfall** have been spaced out to ease it into the audience's eyes. Hence, the movie poster conveys a bold and unified message alongside the crucial information in a very minimalistic manner.

### 3.2.4. Establishing Hierarchy

Hierarchy can be established by appropriate placement of elements, and the use of scale or contrasting colors to focus on a certain element more than the other, and to guide the audience's eyes as intended (Kingston, 2020). For example, a text with larger size or weight may be deemed more important than others.

Figure 6 is a page from the *Feltron 2007 Annual Report*, where Nicholas Felton translates data from his day-to-day activities into meaningful and intriguing visualizations, and is a great example of the application of visual hierarchy. Felton uses a blend of color, scale and pull-outs to create the visual hierarchy. For instance, the primary information is in a larger font size compared to the secondary and tertiary information. In addition, the use of color and contrast guides our eyes to important sections, such as those using heavier black text. Moreover, the pie chart also catches the audience's attention by covering a large section of the visual landscape. Lastly, the use of pull-outs, "No Country For Old Men" and "Things Dey Happen" grabs our attention and makes the audience want to know more about it. Hence, the use of visual hierarchy helps us navigate around a visual piece.

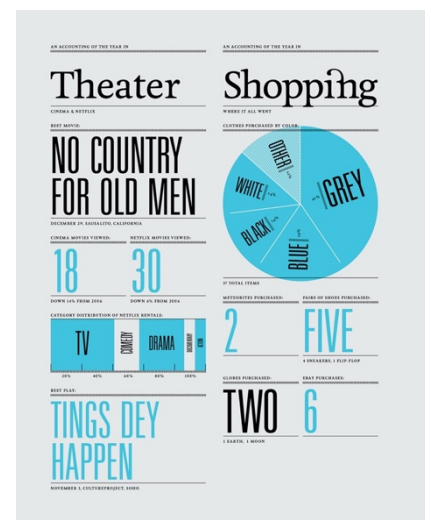


Figure 6: *Feltron 2007 Annual Report*

### 3.2.5. Conquering Negative Space

Negative or white space calls for simplicity which can result into some of the most iconic designs. The right amount of negative space can help emphasize on the focal element, and give a greater meaning as a unified piece. One of the most iconic and successful use of negative space was the 1960's Volkswagen Beetle advertisement.

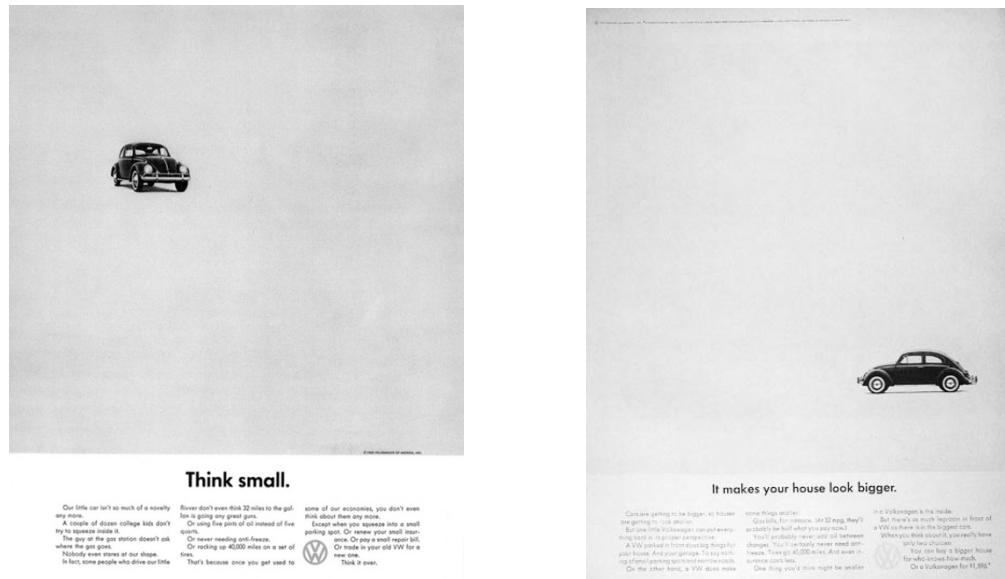


Figure 7: Volkswagen Beetle 1960 Advertisement Campaign

These advertisements were created to convince the American consumers to purchase a small car made in Nazi Germany, at a time when Americans were used to purchase large and heavy cars, by highlighting the benefits of owning a small car (Hall, 2014). Therefore, the vast negative space with a small car in it leads the audience's attention to the car itself, with the benefits mentioned in small text at the bottom of the page. The implementation of negative space for simplicity and minimalism led on to make it revolutionary and iconic.

### 3.3. Prominent works in sound design

Since before sound design had become its own extensive field with the onset of revolutionary works by Walter Murch and Ben Burtt, sound was influential on how the audience perceived a film. This is evident from the popularity of the first talkie feature *The Jazz Singer* (1927), where the ability for Al Jolson to speak in the film was revolutionary to the audience (Costin, 2019). Therefore, film sound not only reflects real sounds corresponding to the visuals, but communicates further information to

an audience by enhancing the onscreen visuals (Candusso, 2010). To create this medium of communication, various principles are used to augment visuals, steer the audience's focus, or communicate additional content outside of what is visually present on-screen. This section illustrates how such principles relevant to this paper have been used throughout films.

### **3.3.1. Figure vs Ground**

The balance and shift between the foreground (figure) and background (ground) sounds can evoke dramatic expressions. The famous restaurant scene of *The Godfather* (1972) uses the sound of the train to resemble the tensed neurons in Michael's head who is about to pull the trigger (Metaflix, 2020). The scene starts off with the train's sound as background and the conversation in foreign language as the foreground. Gradually the two sounds shift, where the screeching train sound becomes the figure and the speech becomes the ground, therefore intensifying the anxiousness in Michael's head.

### **3.3.2. Proximity**

The use of multiple sounds together or followed by each other creates the perception of a single source of sound. This technique has been used in films, especially to create characters that do not exist, and their personality. For instance, the sound of the grasshoppers in *A Bug's Life* (1998), while they attack the ant colony at timecode 00:10:36 follows this technique. The sound of the movement of the grasshoppers were created by layering or placing sounds of a dragonfly, cracked crabs, plastic straws and fingernails on a blackboard in proximity (INDEPTH Sound Design, 2020). With the dragonfly's sounds as the base, other sounds intensified the unpleasant nature of the grasshoppers. However, the cohesive layering and placements of sounds in proximity prevents the audience from distinguishing the individual sounds, and rather perceiving a single source – the grasshoppers.

### **3.3.3. Silence**

Tension and anxiety are a couple of the multitude of dramatic expressions, evoked with the creative use of silence. In *Munich* (2005), the assassination scene of a Palestinian man Mahmoud Hamshari (timecode 00:52:33) is an exemplary use of silence, by Ben Burt. The assassins intended to detonate a bomb in the man's house, after his daughter and wife left the house. The scene reaches the climax when they realized that the daughter had come back to the house, leading them to abort the mission. This moment of climax and tension where one of the members of the assassination

team runs to stop the detonator was intensified by a sudden silence that elicits a feeling of the situation closing in on the audience.

#### **3.3.4. Suspension**

The use of silence in the scene mentioned above from *Munich* (2005) not only gives rise to tension and anxiety, but also creates the effect of suspension. The scene of the assassination, had a baseline sound of traffic and street noise. But as soon the scene reaches the climax, the traffic and street noise as well as their apparent sound of running had been removed for the audience to focus on the visuals to find out whether they will be able to stop the bomb from detonating or not.

#### **3.3.5. Leitmotifs**

The piece of sound or music attached to a character or an event, termed as Leitmotif can be noted in many films, with a few becoming iconic and recognizable outside of the films as well. For instance, the musical note of *Jaws* (1975) signaling the arrival of the shark is recognizable by many, even outside of the film. However, since this taps on to our referential mode of listening, the note may not mean anything to someone who hasn't watched the film or is unaware about the note. Moreover, in another scene of the film when two children were faking the presence of a shark using a false fin, the Leitmotif was not used, hinting to the audience that there was no actual shark (The Musicologist, 2020)

### **3.4. Significant works of sound design in animation films**

Sound design in animation is interesting and insightful due to the dependency of animation films on sound to induce realism in a rather manufactured landscape. In animation films, both the visuals and sound is constructed creatively to enhance the authenticity of the scene and promote character development, especially for non-human or unreal characters (Beauchamp, 2013). Furthermore, sound design in animation has evolved throughout the years, beginning with a "cartoony" and musical style to a live-action style, at present. (Taberham, 2018). This section demonstrates the use of different styles of sound design in animation.

#### **3.4.1. Syncretic Style or Mickey-Mousing**

The syncretic style or mickey-mousing was the earliest forms of sound design in animation, with musicalized sound effects. For instance, a character crashing on the wall was represented by the

sound of a drum. In the short film *Ye Olden Days* (1933) from the Mickey Mouse film series, at timecode 00:05:00 when Mickey Mouse is saving Minnie Mouse from the tower using a series of knotted clothes, their movements are synchronized with the whistling music. Additionally, at timecode 00:06:44 the character clashes are synchronized with drum or bell sounds.

### **3.4.2. Zip-Crash Style**

Following mickey-mousing, was the emergence of zip-crash style, consisting of highly stylized, pretentious and energetic sound effects rather than musicalized ones. In the Warner Bros. Bugs Bunny cartoon - *Falling Hare* (1943), when Bugs Bunny prepares to hit the object using the mallet at timecode 00:02:55, he suddenly stops with the sound of a screeching car, as if a car at high-speed was put on a hard-brake. The pretentious sound of the screeching car conveys that Bugs Bunny is putting a “hard-brake” to his action, therefore making use of real-life sounds.

### **3.4.3. Functional Style**

The functional style of sound design for animation was a big change from the musicalized mickey-mousing or flamboyant zip-crash style, down to a more back-to-back dialogue heavy style, replicating TV series. This includes Hannah-Barbera’s *The Yogi Bear Show* (1961), *The Simpsons* (1989) etc. These series have had dialogue at the top of the hierarchy in the audio mix, followed by sound effects and background music (Taberham, 2018). However, the amount and style of music or sound effects used in these shows depended on the target audience. Since, *The Yogi Bear Show* is targeted towards children, it had more background music or stylized sounds than compared to *The Simpsons*, which is not necessarily created for children.

### **3.4.4. Poetic Authentication**

Poetic Authentication is the most recent style of sound design used in modern animation films, giving a cinematic experience to the audience. This style consists of fine details, including reverberation to authenticate the space and localization to create more real and dramatic expressions. In *Frankenweenie* (2012), as the teacher Mr. Rzykruski places the chalk back on the holder at timecode 00:05:35, we can hear its sound even though it is outside our visual frame. Following that, as Mr. Rzykruski explains the effects of lightning, we can hear the crack of his bones with his hand movement. Therefore, this style highlights fine details of the space, with additional sounds to emphasize the situation dramatically.

### **3.4.5. Foley**

Foley is crucial for animation, where both sound and visuals are constantly being created from scratch. The creation of different sounds using props allow sound designers to control and mold the sound in creative ways. For example, at timecode 00:08:40 of the film *Wall-E* (2008), the sound of the wind was created using pulling a heavy object covered with fabric on a carpet, whereas the sound of the rocket blazing off at timecode 00:16:20 was created using the rumbling sound of a prop called the thunder sheet (Shawn Potokar, 2017).

### **3.5. Conclusion**

This chapter explores how the various principles of visual design and sound design (in general and animation) has been used in exemplary works. It also illustrates the effect or the impression elicited using these principles, to give a cohesive experience to the audience.

## CHAPTER 4 | CONCEPTUAL APPROACH AND FILM ANALYSIS

### 4.1. Introduction

With the vast compendium of sound design principles that have evolved throughout the years, films now have many precedents to take inspiration from and use these principles for effective storytelling. But with the multitude of practices it is crucial to use the principles creatively and cohesively such as to not overwhelm the audience. Hence, this paper studies the various sound design principles and explores the practicality of the incorporation of the ideas of “Less is More”, which is prevalent in visual design practices. The methodology used for the exploration is as follows:

1. Literature review of sound design principles and practices of “Less is More” in visual design.
2. Applying the discussed principles on two animated feature films from different genres to understand the feasibility of using “Less is More” for sound design in a wider range of films.

The chapter comprises of four sections. The first section introduces the chapter and its contents. The second & third section analyzes the applicability of the sound design and “Less is More” principles on the family-adventure animation film *The Polar Express* (2004) and fantasy-horror animation film *Coraline* (2009) respectively. Both the sections begin with a description and synopsis of the respective films. The last section concludes the evaluation of the two films, eliciting further discussion about the feasibility of “Less is More” visual design principles to animation sound design.

### 4.2. Analysis of *The Polar Express* (2004)

#### 4.2.1. *The Polar Express* - The Film

*The Polar Express* (2004) is a family-adventure animation film directed by Robert Zemeckis, and the first feature film made entirely using the technology of motion capture. The soundscape of the film was designed by Randy Thom and music composed by Alan Silvestri.

The film narrates the story of a boy – doubtful about the existence of Santa Claus, but embarks on a journey to the North Pole on a magical train during Christmas Eve. On his journey, he discovers about himself and learns about the significance of faith, bravery and friendship.



#### **4.2.2. Mastering Simplicity in Introducing the Train**

Mastering simplicity is one of the principles of “Less is More” visual design principles, and can prove to be very useful in film sound by creative use of sound design principles like figure vs ground and proximity. Since, the train itself was a major part of the film, the creators intended to give life and develop a character for the train. The scene introducing the train, starting at timecode 00:05:40, masters simplicity in its sound sequence by an interesting play of figure vs ground and proximity, thereby evoking the train’s grandeur and significance. According to Thom (AudioTechnology, n.d.), Bob Zemeckis’ confidence in storytelling enabled gradual and coherent insertion of sounds, rather than incorporating various sounds at once. In this scene, the ambient room sound (background) is disrupted with the faint rattle of the hub cap (figure). Soon after, the hanging plane starts rattling (figure), and the rattle of the hub cap shifts to the background. Eventually, all the rattling noise collectively becomes the background and the radiator starts whistling (figure), thereby introducing the train. In other words, the gradual introduction of rattling and ringing noises in the boy’s bedroom helps tell the story and build up the climax for the train’s arrival.

In addition, once the train arrives and stops, there is a series of cracking, warping, and singing sounds, as if a hot sheet of metal has been cooled down by the street covered in ice (AudioTechnology, n.d.). This series of sounds added in proximity, helps create the train’s character and gives life to it. This evokes an impactful storytelling rather than firing all the sounds at once. Finally, a rhythm has been integrated to the train’s character, however in a simplistic manner and without any background musical note. Instead, while the boy examines the majestic train, a rhythmic cooling sound of the train acts as the background sound for the scene.

#### **4.2.3. Accepting Neutrality by Minimizing Sound Elements**

At times, “Less is More” promotes neutrality in the visual landscape to ease comprehension for the audience, or to put focus on a certain element. Sound design can follow similar principles to create a good sound sequence. In scenes where the visuals are doing the heavy-lifting for the storytelling, the overall impression works better by minimizing the sound elements and avoiding any unnecessary auditory ornamentation. The 2-minute long scene starting at timecode 00:18:50, of the boy losing the little girl’s ticket, followed by the ticket’s fascinating journey back to the train is an instance where the sound sequence is stripped off any music and dialogue, down to only the sound effects. This scene absorbs the audience to focus on the ticket’s journey visually with respective sound effects to make the scene alive, thereby reflecting Thom’s comment about great sound sequences being dominated by a single category of sound, as mentioned in section 2.3.8.

In addition, minimization of sound elements can be followed or combined with leitmotifs to add a punch, for the audience to hear the familiar sound out of nowhere. For instance, a musical note from the main title track is repeated in scenes where the boys “belief” is being stirred. One such example is when he asks Hobo about the truth of the train at timecode 00:27:05. The leitmotif is triggered in the scene, with a faint ambient wind background and whispering dialogue of Hobo.

#### **4.2.4. Achieving Auditory Balance & Harmony**

The way balance creates harmony in visual design, similarly balance in film sound can give rise to an audiovisual harmony or create harmony within the sound sequence. The audiovisual harmony can be seen in the example of the ticket’s journey from 4.2.3, where a coherent and seamless juxtaposition of sound and images was applied.

On the other hand, balance within a sound sequence can be achieved by distributing the categories of sound (dialogue, music and sound effects) creatively to give the sense of a unified whole. On the scene at timecode 00:51:40, where the train compartment gets separated from the rest of the train, we can note the dominance of two categories of sound – dialogue and sound effects. However, during a 15-second long section (at timecode 00:52:15) of this sequence when Hobo appears on the train, the dominance shifts to music and dialogue. Therefore, in this entire 90-second long sequence (starting from timecode 00:51:40), there is a combination of music, sound effects and dialogue, distributed in a balanced manner with only two categories of sound at a time.

#### **4.2.5. Establishing Hierarchy to Improve Navigation**

Hierarchy in sounds, be that between music, sound effects and dialogue, or simply between two dialogues enable the audience to navigate through the story. For instance, at timecode 01:18:10, after Santa’s sleigh takes off, the music and cheers of the elves are toned down to focus on the dialogues between Billy and the boy. Although we can still see the elves cheering in the background, the sound of their cheer becomes considerably lower to direct the audience’s focus at the conversation. As discussed in section 2.3.8 that figure vs ground techniques lead to auditory hierarchy, this instance can also be considered as a shift of figure vs ground.

#### **4.2.6. Conquering Negative Space using Silence**

Like negative space is crucial in visual design, similarly silence is also important in sound design. Both the terms can be used to describe sections where the piece is void of any visual or sound elements

respectively, or used as a relative term. Although there are multiple examples of the use of silence in the film, an interesting instance is at timecode 01:11:30, when the boy picks up the bell. Here, the deafening silence also creates suspension, where we cannot hear the cheering elves in the background at all. In this scene, the audience is inside the boy's head who is experiencing this deafening anxiety as he is not able to listen to the ringing of the bell, although his friends can. The use of silence and suspension in this example enables the audience to empathize with the little boy.

### **4.3. Analysis of *Coraline* (2009)**

#### **4.3.1. *Coraline* - The Film**

*Coraline* (2009) is a stop-motion fantasy-horror animation film directed by Henri Selick. The soundscape of the film was designed by Randy Thom and music composed by Bruno Coulais.

The film narrates the story of a little girl who is frustrated by circumstances at her home, including her parents. She discovers a parallel world which is an idealized and enticing version of her home and parents. However, the parallel world has horrifying secrets and ill-intentions, built to trap children like herself. She strives to get out of this trap and understands that her actual home is better than the idealized fantasy.

#### **4.3.2. Mastering Simplicity in the Character of the House**

Simplicity not only enhances visual design, but simple and sparing use of sound elements can also augment a sound sequence. According to Thom (2013), the sparing use of sound while *Coraline* explores the house, made the scenes more eerie and mysterious rather than adding wood creaks or groans. Therefore, the retention of ambient silence as the background and a simplistic soundscape has performed better at narrating the story, or in this case creating the character of the house. The film also uses simplicity to distinguish the house in the real world versus that of the parallel world. For instance, the difference in the character of the two houses can be noted with the removal of the background music at timecode 01:01:30, once *Coraline* tumbles into the house in the real world.

#### **4.3.3. Accepting Neutrality by Minimizing Sound Elements**

The "Less is More" principle of accepting neutrality by minimizing elements can enhance both visual and sound design. *Coraline* (2009) implements minimization of sound elements, when the audience needs to focus on the visuals. At timecode 00:56:45, when *Coraline* is walking back into the house

with an intention to find a way to get out of this trap, all music or unnecessary auditory elements are removed and only the minimal sound effects are kept. Creating a scene with such neutrality helps building up the tension before the release, by immersing the audience and avoiding any auditory distractions. The tension is released with the onset of the eerie music and the appearance of the “other mother”.

In addition, the “other mother’s” humming voice is used as a leitmotif which pops out in scenes of ambient silence or minimalistic sound, for instance, at timecode 00:33:35. The use of sounds that trigger our referential mode of listening, amongst a neutral sound sequence enables the audience to recollect the sound and its associated meaning.

#### **4.3.4. Achieving Auditory Balance & Harmony**

Achieving balance in the visual landscape enhances aesthetics and comprehension, while balance in sound design creates harmony and eases comprehension. The first scene from 4.3.3 creates an audiovisual harmony by juxtaposition of minimal sound elements and corresponding images. Moreover, the film also achieves an auditory balance throughout, by mostly employing two categories of sounds at once, for instance, music and sound effects or music and dialogue. The film being from the fantasy genre uses rich sounds to stir up the audience’s imagination and add life to the characters and things in the film. According to Murch, the audience can focus on two sounds at a time, and more than that will make the scene noisy (Sonnenschein, 2001). Hence, this practice of employing two sound categories is seen throughout the film, especially in the scenes with the “other mother” (e.g. timecode 00:19:20), which in turn are the dark and fantasized sections from the film.

#### **4.3.5. Establishing Hierarchy with Change in Perspective**

The way hierarchy in visual design help navigating the landscape, establishing hierarchy in the sound sequence also enables navigation through the story. At timecode 00:05:10, there is a coherent play of hierarchy with the movement of the frame and a hierarchy between dialogue and sound effects, all of which enhances the storytelling. The camera zooms out from Coraline and moves up to the hill. Consequently, her voice becomes reverberant but lower in volume as we move up the hill, making it sound like her voice is echoing down in the valley. In addition, as the audience is now in the perspective of the new character on the bicycle – Wyborne, the character is introduced dramatically by turning up the sound effects and startling Coraline.

#### **4.3.6. Conquering Negative Space using Silence**

The negative space equivalent in sound or silence has been used in a multitude of places, and especially in the scenes at the home from the real world. The void of sound or sparing use of sound for this home enhances the mysterious gloominess of the house. It also helps the audience comprehend the shift from the real world to the parallel world and vice-versa. One such instance is that at timecode 00:21:40, as Coraline comes back to the real world with the onset of the new day.

#### **4.4. Conclusion**

This chapter analyzes examples from two animation films and explores the applicability of the “Less is More” visual design principles to the film sound. For each “Less is More” principle, the chapter examines how a variety of sound design principles can correspond to the respective “Less is More” principle. This extensive analysis on two different genres of animation films will enable further discussions about the effects of “Less is More” in film storytelling and potentially help create novel approaches to enhancing sound design in films.

## CHAPTER 5 | FINDINGS AND DISCUSSIONS

### 5.1. Introduction

The analysis and exploration of the use of minimalistic principles on full-length animation feature films is beneficial in understanding the feasibility of “Less is More” visual design principles in sound design. Leading from the practical exploration of the principles, this chapter develops a comparison framework of the principles of visual and sound design, discusses industry approaches and finally develops new approaches to animation sound design. The chapter comprises of six sections. The first section introduces the chapter and its contents. The second section discusses the overall impression from the analysis of the two films. The third section presents the comparison framework of the visual and sound design principles. The next section discusses the industry approaches to sound design, gathered using a survey questionnaire to professionals in the field. The fifth section combines the information gathered to present and structure a set of novel approaches to sound design in animation. Finally, the last section concludes the discussions that lead us to the novel approaches.

### 5.2. Overall Impression for Sound Design in Animation

The exploration of the two animation films illustrates several examples of the use of “Less is More” principles in the films, and materializes an overall impression for sound design in animation films. A critical look at the films with respect to the visual and sound design principles indicate that, although *The Polar Express* uses these principles in almost all the scenes, *Coraline* has a few instances which goes against these minimalistic principles. These instances include Mr. Bobinsky’s circus (timecode 00:38:20) and Miss Spink & Miss Forcible’s show (timecode 00:47:15) in the parallel world, which utilizes a more mickey-mousing style of sound design. This use of contrasting sound design styles in a single film distinguishes between the two worlds. Most importantly, this finding strengthens the idea that the minimalistic principles are feasible for the “poetic authentication” style of animation sound design, as well as the fact that sound design is governed by the style of storytelling.

### 5.3. Comparison Framework of Visual and Sound Design Principles for Animation

Following the critical exploration of the films and discussion about their overall impression, it is crucial to have a deeper look at how visual and sound design principles can be used interchangeably or by complementing each other, using the following table:

Table 1: Comparison Framework of “Less is More” & Sound Design Principles

| Visual Design Principles | Sound Design Principles   | Discussion   |
|--------------------------|---|--|
| Mastering Simplicity     | <ul style="list-style-type: none"> <li>▪ Figure vs Ground</li> <li>▪ Proximity</li> </ul> | <p>The topic of simplicity kicks in when there is an opportunity of layering multiple sounds by creative use of figure vs ground, or when the perception of a single sound source is created by placement of multiple sounds using the principles of proximity.</p> <p>The instances of simplicity in both the films pertain to development of characters – the train in case of <i>The Polar Express</i>, and the house or real world in case of <i>Coraline</i>. Therefore, adhering to attaining simplicity helps in development of a strong character, be that for a place, thing or a live character.</p> <p>The way simplicity is recommended in visual design to enhance readability, simplicity in scenes leading to a character development enables the audience to steadily absorb and get immersed in the story, thereby creating a long-lasting mark about the character in the audience’s mind.</p> |

| Visual Design Principles | Sound Design Principles  | Discussion   |
|--------------------------|--|--|
| Accepting Neutrality     | <ul style="list-style-type: none"> <li>▪ Minimizing sonic elements</li> <li>▪ Leitmotifs and Archetypal sounds</li> </ul>    | <p>In a sound sequence or scene, it is essential to understand how and when to minimize elements or categories of sound, thereby allowing the minimalistic sound to seamlessly juxtapose with the visuals for an impactful storytelling. Such instances are notable in scenes of the lost ticket's journey in <i>The Polar Express</i> and Coraline's quest to get out of the trap in <i>Coraline</i>.</p> <p>In addition to minimization of elements, visual designers add splashes of vivid contrasting colors from time to time, to increase focus on certain elements. Similarly, using sounds that trigger our referential mode of listening, like leitmotifs/archetypal sounds enables the audience to focus on the sound and subconsciously recollect the meaning associated with it.</p> |
| Achieving Balance        | <ul style="list-style-type: none"> <li>▪ Audiovisual harmony</li> <li>▪ Creative distribution of sound categories</li> </ul> | <p>While visual design gains balance by creative placement of elements in the visual frame, balance in sound design help the audience remain focused and avoid distraction.</p> <p>In sound design, balance is gained by attaining audiovisual harmony through minimizing sonic elements where visuals are doing the heavy-lifting for the storytelling &amp; vice-versa.</p> <p>Another form of balance in sound design is attained by creative distribution of sound categories and limiting the focus to two categories of sound in a scene.</p>  |



| Visual Design Principles  | Sound Design Principles   | Discussion   |
|---------------------------|---|--|
| Establishing Hierarchy    | <ul style="list-style-type: none"> <li>▪ Auditory hierarchy</li> </ul>            | <p>As hierarchy in visual design help viewers navigate the landscape depending on the font size, weight, color etc., establishing auditory hierarchy in a scene helps through the navigation as well. For instance, lowering the volume with a camera zoom-out represents the audience moving away from the character, or shifting sonic focus from one character to another, enabling the audience to navigate through the story.</p>   |
| Conquering Negative Space | <ul style="list-style-type: none"> <li>▪ Silence</li> <li>▪ Suspension</li> </ul> | <p>In visual design, negative spaces (void of design elements) enhance simplicity, attain balance, improve readability etc., with only few instances where negative space represents a meaning (e.g. Volkswagen ad in 3.2.5. However, silence (void of sound elements) attains balance/harmony and represents emotions like tension and anxiety.</p> <p>Another interesting technique that arises from silence in sound design is the effect of suspension, thereby increasing the audiences' visual focus on the scene.</p> |

#### 5.4. Industry approaches for sound design for animation

Following an in-depth analysis and comparison of the applications of visual and sound design principles on animation films, industry approaches to sound design was sought through a survey to professionals in the field. This section summarizes the insights and information pertaining to current industry approaches.

#### **5.4.1. Participants**

The participants of this study comprised of five subject professionals with a wide range of experience, including Sound Designers, Media Composer, Re-Recording Mixers and Post-Production Audio Specialist. With a complete suite of experience in industry sound production, a holistic overview of established approaches to sound design was achieved.

#### **5.4.2. The Questionnaire<sup>1</sup>**

The questionnaire<sup>1</sup> consisted of a combination of 5-point likert scale (Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree) questions and open-ended questions. According to Nemoto and Beglar (2014), data from likert-scale questions can be combined with qualitative analysis through open-ended questions. This combination of quantitative and qualitative analysis strengthens our understanding, especially with potentially opinion-based responses. Hence, the questionnaire was designed such that the likert-scale questions act as means of quantitative analysis (example, 3 out of 4 participants agree, etc.), which is then combined with responses from open-ended questions for a comprehensive understanding.

#### **5.4.3. Industry Insights and Approaches<sup>2</sup>**

According to the industry professionals, sound plays a crucial role in narrating the storyline by capturing the audience's attention as well as augmenting their imagination and emotions. Sound doesn't necessarily have a greater weight to underscore narrative than visuals, deducing that sound and visuals together create an impact. According to sound designer & mixer Robin Sherry Wood, sound coupled with images can support or go against the images, and subsequently create a new meaning. In addition, sound designer & media composer Francisco Rios mentions that the audio needs to have clear coherence with the script and visuals, with an attention to the quality of the sounds used rather than quantity. Hence, the idea of applicability of "Less is More" is reinforced, that is, more can be gained out of creative, coherent and balanced use of elements. Moreover, according to post-production audio specialist Killian Fitzgerald, by engaging the audience's imagination and emotions, they can be led on to any narrative.

Majority of the professionals also shed light on the difference in approaching sound design for animation vs live-action. Although the goal to enhance the storytelling remains the same, the approach differs from the type of film and storytelling. They have also stressed on possibility of a

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<sup>1</sup> See Appendix A for the questionnaire

<sup>2</sup> See Appendix B for the complete transcript of the responses to the questionnaire

greater freedom in designing sound for animation since everything including the sound and visuals are imagined. Sound designer & re-recording mixer Nikki Moss says that designing sound for animation films may seem to start off like a radio show. That is because, the foremost visuals are static storyboards, or even simply the script before storyboarding.

Diving deeper into individual elements, most professionals also affirm to the analogy of silence to negative spaces, and the processes of achieving auditory hierarchy to that of visual hierarchy. They believe that a multitude of effects can be created by using silence, hence silence triggers a “Less is More” effect by creating more meaning through mere use of relative or absolute silence. In addition, the meaningful use of silence is a work of art, and thereby requires experience and experimentation to create the desired effect.

Furthermore, according to Francisco Rios, the process of achieving auditory hierarchy is similar to that of achieving hierarchy in the visual landscape. The way visual designers experiment and move elements around the canvas to achieve hierarchy and balance, sound designers also experiment with volume, panning, layering, placement of the sound in the surround field and so on.

Moreover, the dependence of sound on the style of storytelling is underlined as sound designer & mixer Tom Morris mentions that it is necessary to find moments of tension and release for the horror genre. During these key moments, sound of different textures and dynamics can accentuate the scene by adding color and imagination.

Finally, to conclude with an interesting point by Tom Morris, that the best works in sound design could go unnoticed due to their seamless integration with the visuals, or could create a punch in emotions. Therefore, confirming the stance that, sound enhances the storytelling either by being unnoticeable and ubiquitous, or by driving an impact.

## **5.5. Novel Approaches to Creating More with Less in Animation Sound Design**

Through the review of principles of “Less is more” and sound design, analysis of films, and industry insights, the impact of augmenting storytelling in animation through sound design is evident. Since, all sounds in animation are created from scratch, there is a greater freedom for experimentation, imagination and creativity. However, during this process of experimentation and creation, it is necessary to be mindful to not force a sound or create distractions. In case of the latter, it is crucial to remove elements causing distractions or hindering the storytelling, thereby working with the remaining elements to create more with less. Therefore, extrapolating from the comparisons made

in section 5.3 between sound and “Less is More” visual design principles, this paper introduces a novel approach to designing sound for animation films, based on the principles of “less is more”.

*Table 2: Novel Approaches to Designing Sound with “Less is More” Principles*

| Approach   | Discussion   |
|--|--|
| Maintain simplicity for strong character development                         | In animation, as characters are being developed from the ground up, it is crucial to authenticate the characters, so that the audience can empathize with them. Moreover, as character development requires layering of sounds, or placement in proximity, it is necessary to introduce the character in a seamless and simplistic manner for maximum impact, and to avoid overwhelming the audience. This has been proven, in case of the train in <i>The Polar Express</i> , the house/real world in <i>Coraline</i> , as well as in Burt’s remark about Darth Vader (as mentioned in 2.3.8) |
| Use Leitmotifs/Archetypal sounds to create vivid splashes amongst neutrality | Leitmotifs and archetypal sounds trigger our referential mode of listening and can be impactful, thereby deserving to be presented without clashes or distractions. Therefore, using leitmotifs or archetypal sounds to create vivid splashes amongst neutrality allows the audience to get immersed deeper by recollecting its associated memory, and becomes a segue to get out of the neutrality.   |
| Reduce sonic elements in visual-heavy scenes to sustain audiovisual harmony  | Although this paper is about how to effectively use sonic elements for better storytelling, it is recommended to reduce the elements in scenes where the visuals do most of the heavy-lifting in storytelling, for a better audiovisual harmony. As stated by post-production audio specialist Killian Fitzgerald, the sound mix needs to feel blended with the images.  |
| Create auditory hierarchy to navigate a scene                                | The audience experiences a film from a certain perspective, mostly a third-person perspective or from that of a certain character. Hence, appropriate and dynamic placement and intensity of sounds is   |

| Approach   | Discussion  |
|--|---|
|  | necessary for the audience to concurrently navigate through the visual and sonic landscape. In addition, the industry professionals also use an approach of removing certain frequencies from a sound source to allow accentuation of other frequencies, therefore enabling better navigation of the scene. |
| Utilize the abundant power of silence for creative or emotional impact | Silence holds an abundance of power to create emotional impact when used in conjunction with other elements. As stated by industry professional Nikki Moss, “silence is a rhythm too” <sup>3</sup> . Hence, it is worthwhile to experiment the integration of silence with other elements & proper timing.  |

## 5.6. Conclusion

This chapter reflects the overall and in-depth findings through the exploration of sound & visual design principles, and the analysis of the two animation films. The overall analysis infers that sound design relies on the style of storytelling and can have a combination of multiple styles, for instance, poetic authentication and mickey-mousing. However, the analysis also found that the principles of “Less is More” is more applicable to the poetic authentication style of sound design in animation. In addition, this chapter explores and cites examples about how “Less is More” principles can be used for sound design, with insights from industry professionals. To conclude, the chapter presents a few novel approaches to designing sound for animation in order to augment the storytelling.

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<sup>3</sup> See Appendix B Pg. 52

## CHAPTER 6 | CONCLUSION

### 6.1. Introduction

This chapter concludes the research paper and comprises of six sections. The first section gives an overview of the chapter, and the second section summarizes the thesis. The third section provides a reflection of the work and potential improvements. The fourth section puts forth the contributions that this paper made to the field of sound design. The fifth section discusses about potential future work. The final section concludes the chapter and thus the research paper.

### 6.2. Summary of Thesis

Sound is an integral part of shaping our cinematic experience in films. Being the first sense that develops even before our birth, our hearing impacts our emotions and subconscious, and enables us to recollect associated memories, hence impacting our perception of film scenes. Ward (2015) suggests that, sound guides our visual attention and perception to give us a synesthetic experience. Hence, sound in film is pivotal to provide us a wholesome experience, which is both narrative and affective. Therefore, the highly-evolved field of sound design has further possibilities of enhancement to augment the storytelling of a film, especially in animation. This is because, animation films invent a whole new world, with a greater freedom of imagination and creativity to mold the experience as desired.

This research paper conducts a study and review on sound design and the “Less is More” principles from visual design. Following the study, the paper analyzes two animation films from different genres through the lens of “Less is More” principles and inspects the potential feasibility of its applications to sound design. The paper also presents industry approaches on designing sound through a survey from professionals. Following the film analysis, survey results, and discussion about the use of “Less is More” on sound design, the paper concludes by creating a novel approach on designing sound for animation, which caters to creating more with less. The paper also concludes that these principles are more feasible in the “poetic authentication” style of sound design in animation.

### 6.3. Reflection

The paper successfully demonstrates that minimalistic visual design principles like “Less is More” is applicable to sound design for animation, especially through the synthesis of novel approaches that

combined sound design and “Less is More” principles. These novel approaches can be effective in the industry, as they were not derived in isolation to the field of sound, but derived from how humans comprehend elements in the visual landscape. Since sound and visuals have a combined effect on the audience, it is crucial to have an integrated outlook when enhancing sound or visual design approaches. However, since sound design relies upon the style of storytelling, “Less is More” may not be plausible on all styles. But, this paper verifies its feasibility for the “poetic authentication” style of sound design in animation films.

However, the research paper could be further improved by interviewing additional sound designers, especially those from the field of animation sound design. Furthermore, animation films from additional genres could be analyzed to get a more comprehensive understanding on the feasibility of the study based on a wider range of genres.

#### **6.4. Contributions**

This paper has discussed the established principles of minimalistic visual design and sound design through examples of work from the past and recent times. Following the discussion, the paper investigates how minimalist visual design theories can inform sound design approaches by analyzing two award-winning animation films from different through a combined lens of visual and sound design approaches. The investigation has led on to structuring a comparison framework of sound design approaches and “Less is More” theories from visual design. Hence, the thorough film analysis and comparison framework with examples, presents a framework that can be used for future work in sound design analysis through the lens of minimalistic principles. Finally, the paper contributes to the field of sound design by developing novel approaches to enhance the cinematic experience in animation films, by creative integration of minimalism to animation sound design, based off visual design principles - “Less is More”, including simplicity, neutrality, balance, hierarchy and negative spaces. These principles when applied to animation sound design can strengthen character development, amplify the effect of Leitmotifs/Archetypal sounds, sustain audiovisual hierarchy, create auditory hierarchy and construct meaning through creative use of silence. Therefore, the paper has successfully combined the comprehensive study of sound design and visual design “Less is More” principles, valuable input from industry professionals, and critical analysis of films, to create novel approaches with an integrated outlook.

## **6.5. Future Work**

Although the paper extends its analysis on films from two different genres, it only serves to verify the feasibility of “Less is More” principles in a wider variety of animation films. However, the study could be extended by analyzing additional genres in a deeper manner to establish the effectiveness of the concluded novel approaches on individual genres of animation.

Furthermore, due to the limitations of the paper, the concluded approaches are a subset of many techniques in animation sound design. Therefore, future work could broaden the subset and apply minimalistic principles to other sound design techniques.

## **6.6. Conclusion**

This paper demonstrates the feasibility of enhancing sound design approaches by integrating “Less is More” visual design principles, to augment the storytelling and enhance cinematic experience. Backed by extensive literature review, film analysis and industry opinions, the novel approaches concluded in the paper are based off minimalistic visual design principles of “Less is More”, and will prove to be informative for future industry practices. Further work on this study will include analysis of additional genres, as well as the efficiency of each approach on individual genres.

Therefore, in conclusion, the comparison framework between sound design and “Less is More” visual design principles, as well as the novel approaches put forth on this paper can be directly utilized by industry professionals in their practices or used as a foundation for further enhanced techniques, leading to greater cinematic experiences.



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## APPENDIX A

### Survey Questionnaire

#### Likert-Scale Questions (Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree)

1. Do you think sound design plays a crucial role in narrating the story of a film?
2. Sound in film has a greater weight to underscore narrative than visuals.
3. Sound designers use the same process when approaching the sound design of a live-action film versus an animation film.
4. Sound design for animated films always constitute a rhythm or a musical undertone, irrespective of the genre (horror, adventure, family fantasy etc.)
5. Negative space in visual design, is the space around and between the subject of an image that is left empty. Do you think that “the use of silence” in sound design can be compared to negative spaces in visual design?
6. Hierarchy in visual design allows the viewer to navigate their eyes in order to understand the message being conveyed through the visual piece. Can auditory hierarchy such as mixing and spatial placement of dialogue, sound effects and background sound enable viewers to better understand the storyline?

#### Open-Ended Questions

1. What necessary principles or features of sound design is crucial in your opinion to support the storyline in a film?
2. In your opinion, how would you approach the sound design for a horror animated film (For instance, Coraline (2009) or Monster House (2006)). Are there any specific sound design principles that are widely used to immerse a viewer in the horror space?
3. How do you make use of “silence” when designing the sonic landscape? Do you actively spend time on purposely placing silence to create suspension, establish surprise and direct the viewer’s attention for visuals?

4. As visual designers, we play around with various visual elements by moving them around the canvas in order to achieve balance and visual hierarchy. Since sound is intangible, what is your process of achieving balance and hierarchy in sound design?
5. What would you do differently to design sound for an animated film versus a live-action film?
6. According to Costantini (2018), there are two approaches to sound design. Walter Murch's approach - making the sounds as narrative as possible, the use of metaphors through sound etc., and Ben Burtt's approach - the creation of a sonic landscape or a sonic imagery. Is there a certain preference or inclination towards either approach based on the genre, and why?
7. How do you approach introducing leitmotifs to your sound design?
8. What factors do you take into consideration when changing perspective of sound from one character to another?

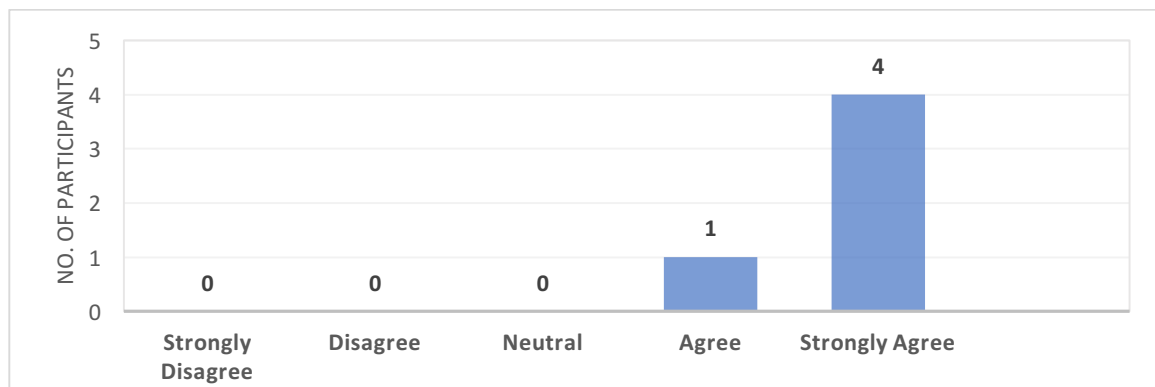


## APPENDIX B

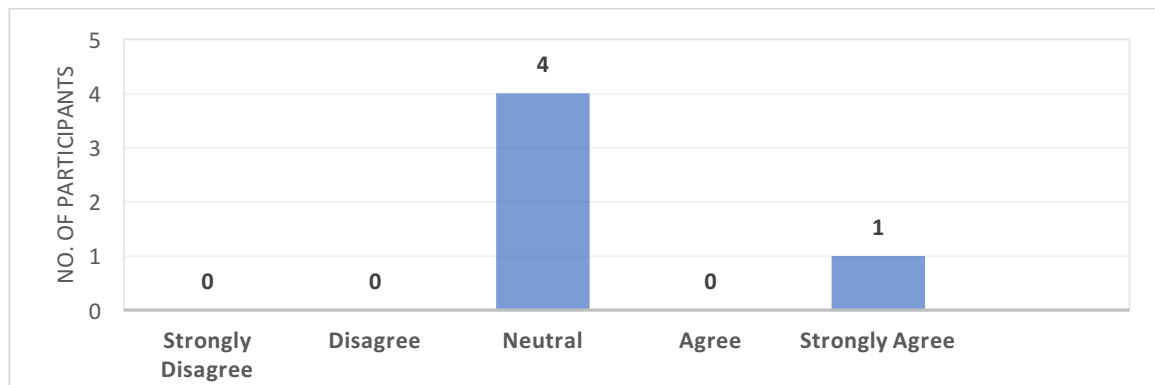
### Transcript of Survey Questionnaire Responses

#### Likert-Scale Questions (Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree)

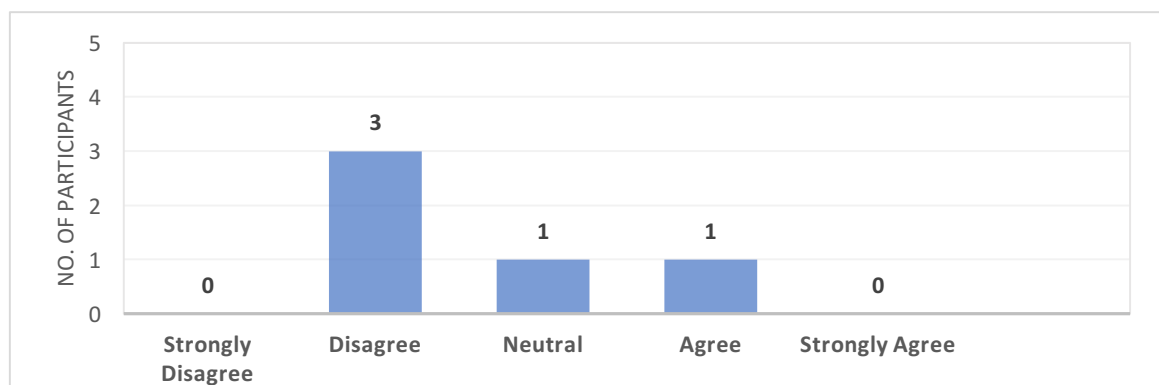
1. Do you think sound design plays a crucial role in narrating the story of a film?



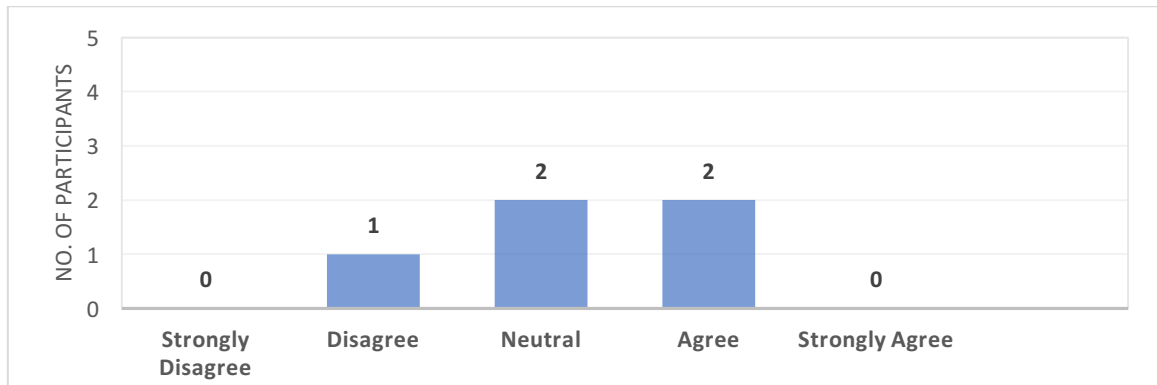
2. Sound in film has a greater weight to underscore narrative than visuals.



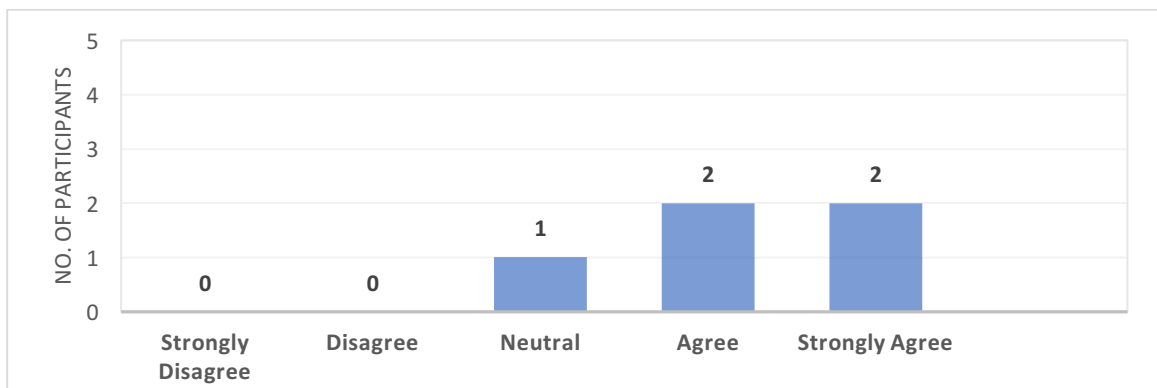
3. Sound designers use the same process when approaching the sound design of a live-action film versus an animation film.



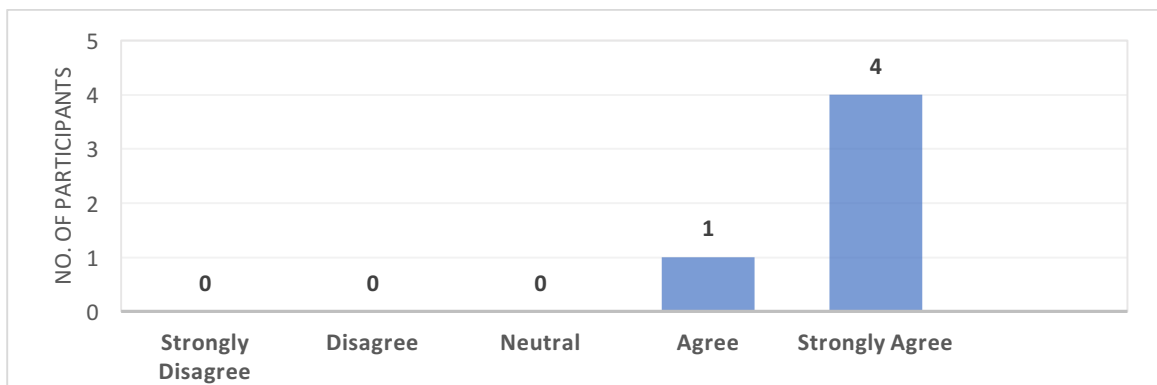
4. Sound design for animated films always constitute a rhythm or a musical undertone, irrespective of the genre (horror, adventure, family fantasy etc.)



5. Negative space in visual design, is the space around and between the subject of an image that is left empty. Do you think that “the use of silence” in sound design can be compared to negative spaces in visual design?



6. Hierarchy in visual design allows the viewer to navigate their eyes in order to understand the message being conveyed through the visual piece. Can auditory hierarchy such as mixing and spatial placement of dialogue, sound effects and background sound enable viewers to better understand the storyline?



## Open-Ended Questions

1. **Question:** What necessary principles or features of sound design is crucial in your opinion to support the storyline in a film?

**Francisco Rios (Sound Designer & Media Composer):** Clear coherence with: script, the director's vision and, of course, the visuals. Quality rather than quantity on the chosen elements; keeping in mind that quality is defined by the vision and final goal. Also, the use of creative tools to reach such goals.

**Killian Fitzgerald (Post-production Audio Specialist):** The sound design needs to engage the imagination and emotions of the listener to capture attention and trust. With these two things the viewer can be led down any path.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Detailed Ambient Sound, Clarity and proper balance of Production Audio

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** 'Dialogue is king' is generally the first principle for supporting the storyline. However, outside of that everything is on the table. It is important to understand how much sound will effect the perception of what is happening on screen - it can suggest things that do not exist in the image, it creates the world outside the image, it communicates the physical qualities of what is on the screen, and can fundamentally change the rhythm and tone of the image, it can bring us into the mind of a character. It is important to have a good understanding of these concepts to use sound to support the image (or to go against it....depending on the filmmakers vision)

**Tom Morris (Sound Designer & Mixer):** I would say it's crucial to use audio to enhance the viewing experience as much as possible by any means. Often this means supporting the action and dialog onscreen in a subtle, supporting role, anything to enhance the immersion. And sometimes it means really becoming the focal point of the scene. It's important to note that film is a collaborative process and to always be seeking the advice and input of the editor and director.

2. **Question:** In your opinion, how would you approach the sound design for a horror animated film (For instance, Coraline (2009) or Monster House (2006)). Are there any specific sound design principles that are widely used to immerse a viewer in the horror space?

**Francisco Rios (Sound Designer & Media Composer):** There are common places that most of the time have to be part of the story in order to fit an invisible cultural agreement with the audience, like in most of the arts (music is a clear example).

Some of these common places would be: the pre-defined sounds of monsters, eerie ambiences, silence before a big scary hit and if applicable, a "cake in the face" type of joke in sound (a fart, muddy sounds under a slap, a big fall with epic sonic mess off screen, etc.). There has to be a clear line to follow dictated by the industry, target, audience age and sometimes nationality. Having said that, there's always some room for exploration; perhaps using unexpected sounds to create unexpected SFX, voice processing and, use of low frequencies to take advantage of the Sub-woofers in Cinemas, quirky sonic elements accompanying quirky characters on screen, etc. Also, even if these 2 great examples fall into the horror category, they don't go fully into the psychological horror used in tougher live-action films so, the line is clearly defined by the visuals and script.

**Killian Fitzgerald (Post-production Audio Specialist):** Learn what the director wants. Listen and talk thoroughly with the director. Learn what they want and make any personal suggestions as easy to dismiss as to accept. At the end of the day the director is in charge. They must leave with a happy warm feeling about how good their experience was with you. That's the single most important thing.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Subversion of the banal

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** Unfortunately I haven't seen those films or have extensive knowledge of animation. But for horror I would focus a lot on the ambient spaces of the scenes. This allows the designer to very subtly evoke a space and create a mood or tension without the audience really being aware of it.

**Tom Morris (Sound Designer & Mixer):** I think particularly in horror, the music and sound design are very closely linked. I think it's important to watch the film while listening to the score to understand the composer and director's intentions. Aside from filling in the space with ambience and footsteps etc. I look for key moments where the sound design can help a scene. Where would they would like the tension and release to occur? Then you can use sound design to accentuate these moments. Whether it be with diegetic sound effects or synthesized sounds and samples, the goal is the same. Ideally you'd like to add color and imagination to the scenes, while following the director's vision. It's important to play around with different textures and dynamics

for each moment. Sometimes even when something sounds good, if it's not in keeping with the director's vision then ultimately it may not be right for the scene.

3. **Question:** How do you make use of “silence” when designing the sonic landscape? Do you actively spend time on purposely placing silence to create suspension, establish surprise and direct the viewer’s attention for visuals?

**Francisco Rios (Sound Designer & Media Composer):** Silence is an amazing tool, although we could argue there's no such thing as silence, it could be seen as a mixture of frequencies we can't translate and absence of elements. Personally, learning how to use silence has come with experience and experimentation.

Silence for some directors/clients might mean using only room tones or ambience and remove the rest of the elements, which really means there is no silence but a clean sonic space, it does then translate to using "silence" in a way since the average listener won't notice such room tones. Very few times I've been in the position of muting every element and leave no sound whatsoever in a scene; I think I could count such times, but when it happens, it means that the weight is carried by the actors or the scene itself and the elements before and after are as important as the silence itself, they work together to create such impact.

**Killian Fitzgerald (Post-production Audio Specialist):** With silence. Generally. Less is more.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Silence is a rhythm too, and dependent on the narrative pace

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** Absolute silence can most certainly be used as an effect (think of a character being knocked out and all sound cuts out to bring us into their subjective experience). However, the ambient spaces mentioned above generally create the silences of a film. And these can be as subtle as the sound of an empty room (as we know, absolute silence doesn't exist in the real world) which will often be used to not draw attention unless it is desired. Other audio cues can then bring a focus to sounds that carry the narrative.

**Tom Morris (Sound Designer & Mixer):** When determining how to use silence in sound design, I take into consideration the pace of the edit, as well as the visuals on screen (landscape, time of day etc).

Often the director has made it clear when silence can effectively be used, simply by removing dialogue from a scene or having it in an isolated setting. I will often let the edit guide my decision making, unless I feel a scene is too aurally busy, or I spot an opportunity for tension and release

using silence and dynamics. It's important to explore these options, even if they don't make the final cut.

4. **Question:** As visual designers, we play around with various visual elements by moving them around the canvas in order to achieve balance and visual hierarchy. Since sound is intangible, what is your process of achieving balance and hierarchy in sound design?

**Francisco Rios (Sound Designer & Media Composer):** It's pretty similar to what visual designers might do to achieve hierarchy. It's a mixture between volume, panning, depth (achieved with reverb and delay mainly), layering and placement in the surround field if the mix is wider than the usual stereo setup, such as 5.1, binaural, or even wider with Dolby Atmos (360° sound image). Although the placement of elements around the surround perspective should be treated as "treats/candy" or "slices of cake", if you have them 24/7 they stop being treats and start becoming unwanted or regular/unnoticeable elements.

Removing frequencies out of certain elements to allow others to shine is also a very powerful tool we use on a daily basis. It's also important to remember that most of the time, dialogue is king and the audience tends to feel uncomfortable if this is not respected, a clear recent example of this would be Tenet by Christopher Nolan or some films by David Fincher, where that part has been pushed but it's normally not well received by the average consumer.

**Killian Fitzgerald (Post-production Audio Specialist):** Sound is extremely tangible. Perhaps not in the traditional sense. To build desired effect. One must layer upon layer sounds and music. Voice and sound effects blended together to seem like they have always been attached to the picture. Generally speaking People only really notice bad sound unless they are looking. Out for good sound.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Sound bestows veracity, it is the medium through which suspension of disbelief on the part of the viewer is unlocked

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** Volume is possibly the most important element in achieving both balance and hierarchy, along with their placement within the frequency spectrum and understanding how to carve space for sounds that happen at the same time. However, time is not fixed for sound in the way it is for the image so shifting elements temporally can also help to create balance.

**Tom Morris (Sound Designer & Mixer):** I think balance in sound design is something that comes from experience and using your ears every day. It's important to design within the context of the

film, sometimes dialog and music are going to be center stage and you know that you are playing a support role at that time. Often your best work will go unnoticed because it's seamlessly placed into the scene. However it's also important to know when sound design has to step up and help drive home a certain emotion, tone or impact. Personally I tend to over design at first, and then in collaboration with the director I can keep going or pare it back to suit the scene.

5. **Question:** What would you do differently to design sound for an animated film versus a live-action film?

**Francisco Rios (Sound Designer & Media Composer):** Depending on the type of animated and live-action films but the approach will very much depend on what we see on screen. If it's an animated film but with a clear intention of approaching reality would be a similar approach to creating sounds for a live-action film and vice versa; if it's a live-action project with a clear intention of mocking up reality, the similarities with animated projects for kids would increase. If it's animation for kids, the sonic elements tend to fall into the exaggeration of reality and quirkiness realm so, the selection/recording of sounds and the use of creative tools (plugins) would change a lot.

If the project is an independent live-action short film with a strong narrative, the use of realistic recordings (Foley and ambiences) with little to no post treatment would play an important roll.

**Killian Fitzgerald (Post-production Audio Specialist):** Employ a lot more of the right people.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** It's a very different process (it starts as a radio show for me) but has the exact same goal in mind

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** More planning, more experimentation.

**Tom Morris (Sound Designer & Mixer):** It depends on each particular film and their tone. In animation you really are starting with a blank slate, which gives you a lot of freedom to create detailed ambiences and imaginative sound effects. On the other side because there is no noisy production audio, you have to be somewhat particular about what sounds you use and how you edit them to make sure they aren't distracting. With live-action film there's already a base for you to work with, and you have to be careful to integrate your sound design with the existing production audio.

6. **Question:** According to Costantini (2018), there are two approaches to sound design. Walter Murch's approach - making the sounds as narrative as possible, the use of metaphors through

sound etc., and Ben Burtt's approach - the creation of a sonic landscape or a sonic imagery. Is there a certain preference or inclination towards either approach based on the genre, and why?

**Francisco Rios (Sound Designer & Media Composer):** That is a clever way to define certain approaches to sound, although in my very personal opinion, sound design is all about exploration; yes, there are clear defined lines to follow but the room for creativity also leads to interesting paths during the actual work. It's easy to define an approach from the outside but when it comes to the practical part but I believe there are, thankfully, more than 2 ways to do things.

Nowadays, there are plenty of projects out there that are mixing the representation of the real world with the freedom of post-production, and that is creating an interesting approach to sound design. Projects like The Boys, Life, Death+Robots, Planet earth, Soul, Black Mirror, Rick & Morty, etc are pushing the boundaries of reality vs enhancement in a beautiful way, which is really interesting.

The inclination towards certain approach, in many cases, is defined by the references, cultural surroundings and final goal; it all depends on the project, script and director's vision.

**Killian Fitzgerald (Post-production Audio Specialist):** Not on my part. Generally it's pretty obvious what the production requires. The nuances can be where the film stands out or not.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Never, every single project has its own requirements and needs, to resort to 'genre' is to flirt with cliché

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** This is almost the distinction I would draw between animation and live action, or between drama and more fantastical genres. Not exclusively, but Murch's approach could be said to be more grounded in the 'real', whereas Burtt's is more in creating new kinds of worlds through sound.

**Tom Morris (Sound Designer & Mixer):** I would say rather than the genre, it depends on the tone and pace of the scene. Science fiction tends to have rich, complex sound design that reflects the technological advancements of the future. But there's also scope within these films for sparse, reflective scenes where more subtle narrative sound design can be implemented. Whereas a dialogue driven, slow burning drama may have more slow paced scenes, it's also important to be fully immersed in that world/landscape.

7. **Question:** How do you approach introducing leitmotifs to your sound design?



**Francisco Rios (Sound Designer & Media Composer):** Great question. They normally are deeply connected with the script if we're talking about specific situations, and sometimes interconnected with the score, either by working together or by allowing each other to have sonic room for such leitmotifs, so there should be communication between the people working on the sonic part of the project (music, sound design, mixing).

I normally choose a very defined sound that matches what we see or what I'm trying to say, the easiest example to represent this would be audiologos, they are the kings of leitmotifs and creating one ticks all the boxes involved in constructing a leitmotif.

Sometimes in animation, a character, a character's action or a common place are great excuses for creating leitmotifs.

**Killian Fitzgerald (Post-production Audio Specialist):** -

**Nikki Moss (Sound Designer & Re-Recording Mixer):** It is entirely dependent on each individual project

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** I don't generally. I'd leave that to the score

**Tom Morris (Sound Designer & Mixer):** It's a tricky thing to use properly, without feeling forced. I tend to approach it in a subtle way, having certain characters associated with different textures/tones rather than an outright leitmotif.

8. **Question:** What factors do you take into consideration when changing perspective of sound from one character to another?

**Francisco Rios (Sound Designer & Media Composer):** The character's background and personal story, if the character normally appears in a recurrent space, if it's necessary, the transition between the before and after moments, and the director's approval of course.

**Killian Fitzgerald (Post-production Audio Specialist):** Camera distance. Physical position of characters for any reverb changes etc.

**Nikki Moss (Sound Designer & Re-Recording Mixer):** Clarity and narrative necessity combined with it's dramatic effect

**Robin Sherry Wood (Sound Recordist, Designer & Mixer):** Whether the sounds should be subjective or objective, what the scene means to each character, where they are in relation to each other/the camera perspective

**Tom Morris (Sound Designer & Mixer):** I hope I'm understanding the question correctly but I'd usually take into consideration their emotions, the point at which it takes place in the story and the energy of the scene. Anything that guides the audience into the scene and helps with immersion.