

Sound Design Evolution in the Lord of the Rings Film Series

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Abstract

This study examines the evolution of sound design in the film adaptations of The Lord of the Rings (LOTR) and The Hobbit, focusing on the auditory characteristics of Gandalf's magic. Through content analysis of representative sound clips and practical recreation using digital audio workstations, the study highlights key differences in frequency range, amplitude, and sound design techniques between the two film series using FL Studio 24, a Digital Audio Workstation (DAW). The findings reveal a shift from synthesized layering in LOTR to foley-driven approaches in The Hobbit, reflecting the advancements in audio production technologies. LOTR's sound design features deep, resonant low-end tones and precise dynamics, creating an immersive and intense auditory experience that complements the film's epic scale and darker themes. In contrast, The Hobbit employs a brighter, more whimsical palette with fewer synthesized elements, reinforcing the narrative's adventurous and intimate nature. The case study involving the recreation of Gandalf's magic sound effect emphasizes the importance of professional-grade sound libraries, meticulous layering, and advanced processing techniques for achieving rich and dynamic cinematic soundscapes. The trajectory of sound design in these films illustrates the interplay between artistic choices, technological advancements, and

evolving industry trends, ultimately shaping audience perceptions and emotional engagement with the narrative.

Keywords: Sound Design, the Lord of the Rings, the Hobbit, Gandalf's Magic, Foley-Driven, Sound Effects (SFX).

Introduction

The Lord of the Rings film trilogy (2001 – 2003) is known for its visually rich storytelling; however, the evolution of its sound design, particularly its distinctive sound effects—the musical sounding chime of the One Ring and the cast/wave sound that accompany Gandalf's spell casting—have rarely been explored. Therefore, this paper documents the sound effects from the original trilogy into the later Hobbit films (2012–2014) and explores how the requirements of the narrative and sound technologies have affected the sound effects behind Gandalf's magic over time.

The potential impact of contemporary audio-production technologies on these changes was explored. By addressing the research aims, this research contributes to film sound studies by gathering a single character's SFX across two interrelated trilogies and contributing a case for understanding how the intertwined symptoms of narrative and technological change have been responsible for innovation in sound design.

Research Aims

- This study examines how the sonic qualities of Gandalf's magic SFX evolved between The Fellowship of the Ring (2001) and The Return of the King (2003).
- Compare the evolution of Gandalf's magic SFX effects between the Lord of the Rings trilogy and The Hobbit series (2012–2014).
- Comparison of the sound design of the One Ring between the first and last films in the Lord of the Rings trilogy.

Problem Questions

- Has the sound design of the series evolved overtime in Gandalf's magic SFX effects between the Lord of the Rings trilogy and The Hobbit series (2012–2014)?
- How do advancements in technology and processes affect the evolution of sound design?
- Do differences in sound design contribute to the films' creative direction?

Previous Studies

The intersection of sound and emotion in film scores has been a subject of growing interest in recent years, particularly in the context of fantasy films. Many studies have explored this relationship, focusing on different aspects of sound production and its emotional impact in The Lord of the Rings trilogy. The following studies explores the auditory perception of body movements and emotional responses, and sound-color correspondence. The sounds can convey information about material properties, movement speed, and body size, with auditory stimuli influencing perception of motion and emotional valence. Additionally, the psychological connections between sound features and visual properties these studies contribute to the understanding of cross-modal perception and its potential applications in various fields.

Stanton, T.R. & Spence, C. (2019) in their research project considered the relationships between auditory signals, the perception of body movements, and emotional responses. For example, sounds of footsteps may be evaluated in terms of how they relate to perceived material properties and the perceived details of movement speed and body size. Research focused only on sensory integration is plumbing the depths of how distinct signals may integrate, but little is known about the dynamic and concurrent interactions that may be prioritized by different types

of sounds. There is still little comprehension of how different auditory qualities may distinctively manipulate bodily perception while the stimuli are changing. The authors utilized the identification of the perception of different footstep sounds and auditory cues to manipulate the perception of motion characteristics. The results showed that auditory stimuli shifted the perception of motion and emotional valence. These may have applications in wide-ranging areas, including virtual reality, neuroscience, and training settings in performance, which may leverage auditory stimuli that affect motor skills and improve the user experience.

Another research paper investigated the sound and color cross-modal correspondence, Sun, X. et al. (2018). This study examined the psychological connection between the sound features of pitch, tempo, and sharpness and the visual properties of hue, brightness, and saturation in a non-synesthete population. However, the majority of existing literature investigates synesthetic populations, leaving a gap in our understanding of cross-modal perception in the general population. The study utilized two experiments: (1) a sound-to-color matching task, which included 52 participants, and (2) a reaction-time-based discrimination task, which measured speed and accuracy to determine how much faster they responded to congruent visual pairings. The results of both experiments provided evidence to support the idea that non-synesthetes exhibit reliable cross-modal associations, which result in more efficient cognitive processing.

In a thesis on the emotional impact of sound in media and films, Pua (2013) considered the audio strategies employed by directors Ingmar Bergman and Andrei Tarkovsky to articulate the grounding of existential crises and spiritual tensions in sound and silence. This study utilized qualitative soundscape analysis of seven films, considering the relationship between sonic events and visual narratives. The results revealed that Bergman and Tarkovsky deploy sound in their films to not only accentuate a visual theme but also to suggest independently some internal conflict,

existential dread, and spiritual uncertainty, ultimately adding to the cinematic lexicon (the visual and auditory language).

Nummenmaa, L. (2021) explored how horror films accomplish neurobiological and psychological principles associated with fear and how they are able to maximize fear through sound design and narrative structure. It is established that horror engages fear mechanisms, but there are gaps in the literature regarding cognitive processes and details of audio features responsible for engaging fear. This study utilized a multi-thematic framework of analysis, as it draws from five domains: simulation mechanisms, vicarious affective experiences, biological principles of fear, audience enjoyment, and emotional variability. Content analysis incorporated the psychological and biological literature. The results showed that horror films that were most successful in sound design contained sudden dynamic changes, unpredictable sounds, and congruent audio cues depending on the emotion. Horror creates safe yet psychologically intense emotional responses in participants with real-life danger by crossing the core construction of reality through effective sound design.

Bliek, F.S. (2018) investigated the ways in which sound producing techniques, specifically spatial recording and orchestration, can contribute to the emotional and narrative meaning in *The Lord of the Rings* trilogy. There is a gap in the literature regarding how sound recording venues and decisions made during sound production influence emotional storytelling in film scores. The methodology used two models: Camilleri's model of sonic space and Audissino's model of narrative function to analyze the selection of the trilogy. The findings show that the idea of "compositionally motivated" spatial space illuminates the close alignment between hearing design and film pacing. The study argues that some of the directional effects afforded in the studio elongate some character themes, resulting in a deepening emotional mechanism.

Research Methodologies

This study employs content analysis and case study to address the phenomena. Content analysis is a versatile method frequently used in qualitative research to systematically examine the textual data. Content analysis is implemented in three distinct approaches: conventional, directed, and summative, followed by interpreting the context in which these words appear (Hsieh & Shannon, 2005). Qualitative content analysis emphasizes thematic structure interpretation, where patterns and themes within the data are explored in an emergent and interactive manner (Neuendorf, 2018). The advantage of employing qualitative content analysis in case study research is its ability to accommodate complex data interpretations, leading to richer insights (Kohlbacher, 2006). This method supports diverse applications, ranging from nursing and mental health studies to business ethics, thereby offering adaptability across various research domains (Kohlbacher 2006; Crowe et al. 2015). Content analysis, particularly when coupled with thematic analysis and case studies, enables researchers to extract substantive insights, furthering their understanding of complex phenomena across varied areas of interest.

The content analysis aimed to systematically examine six representative sound clips (three from *The Hobbit* and three from *The Lord of the Rings* (LOTR) to identify key differences in auditory characteristics and how these choices shape the narrative atmosphere and audience perception. We analyzed 30 minutes of clips featuring various shots of Gandalf casting magic, categorizing the different sound effects before focusing on a specific type that we term “Barrier Magic” based on its visual representation. By listening to these clips, we noted surface-level elements that contributed to the overall sound effect, particularly differences in quality, tonal richness, and emotional impact. Further analysis was conducted in FL Studio using Ozone 11 to isolate frequencies and assess variations between installments, defining each layer in relation to frequency distribution, amplitude variation, and sound

design techniques. This research also incorporated insights from interviews detailing the development of sound design in *LOTR*, offering further context on how advancements in synthesis and layering refined the auditory experience.

Research Method One Results

The findings revealed that, when comparing Gandalf's Barrier Magic sound signature in *The Hobbit* and *The Lord of the Rings (LOTR)* in Figures 1.1, 1.2, and 1.3, there appears to be a clear difference in the frequency range. In the *Hobbit*, the sound design has a smaller section of frequency and predominantly low and mid-range frequencies, giving it an overall contained and less spatial sound body, illustrative of the film's declaratively lighter, adventure-based feel. The focus on Foley-based sound elements suggests an intent to keep the sound organic and tactile while remaining consistent with the realistic treatment of sound evident throughout the film.

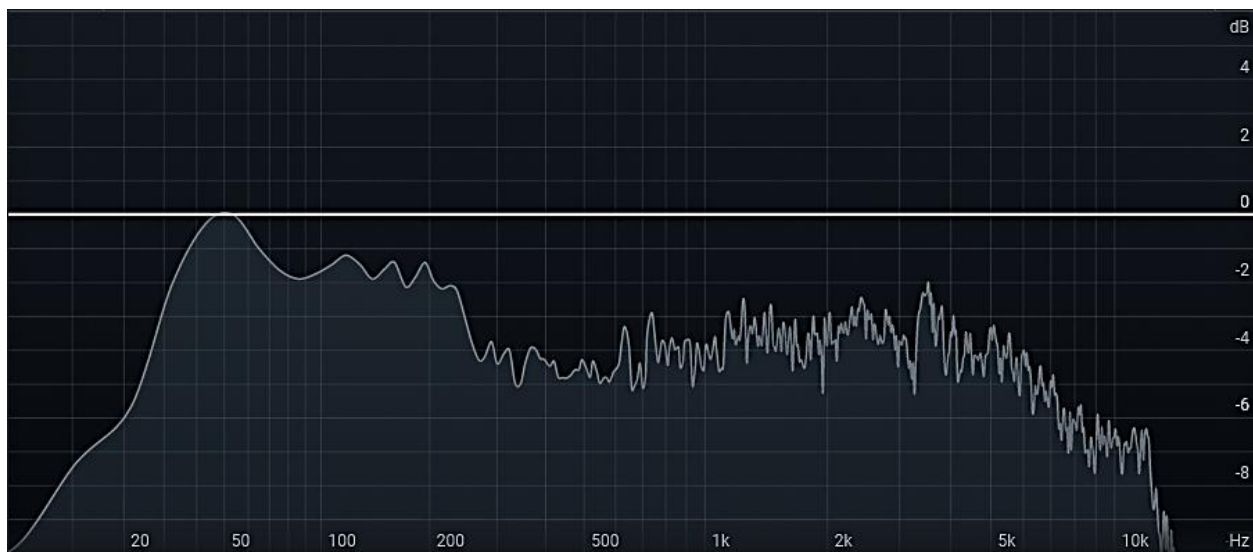


Figure (1.1): LOTR Clip 1 EQ Visualization

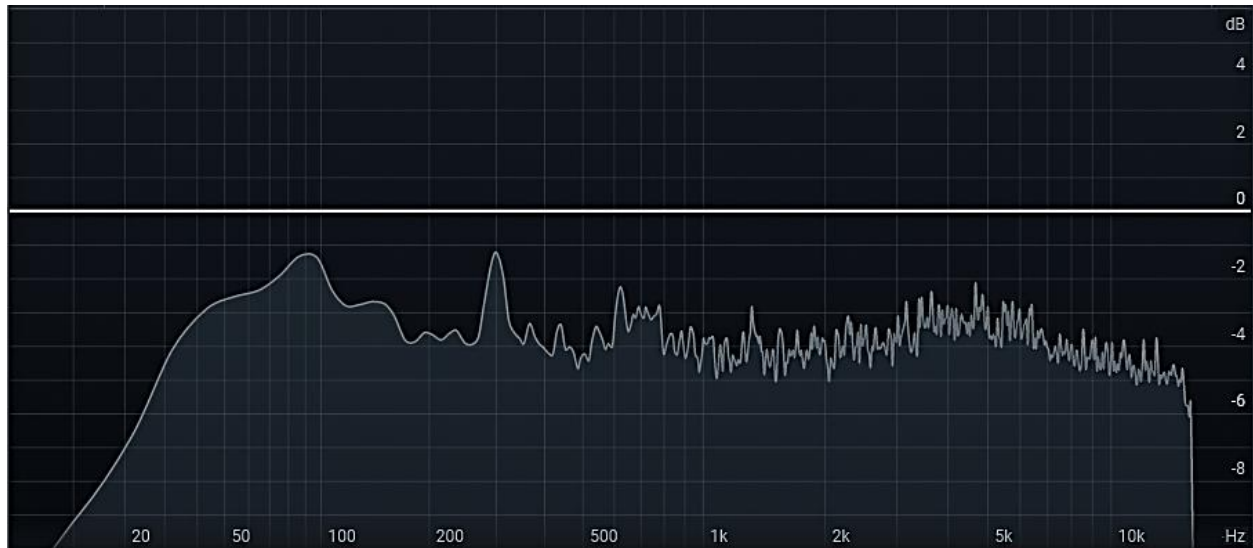


Figure (1.2): LOTR Clip 2 EQ Visualization

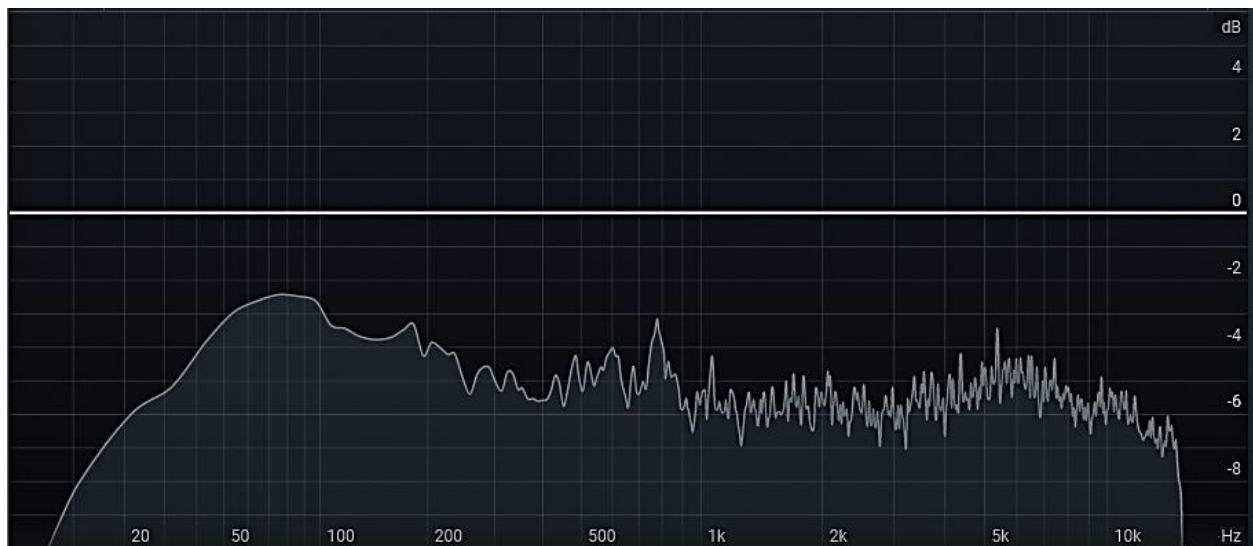


Figure (1.3): LOTR Clip 3 EQ Visualization

Figures 1.4, 1.5, and 1.6, however, show that LOTR contained larger amounts of frequency, with significantly more low frequency presence. The frequencies were

ordered not only were larger with amplitude, with those done using foley-based sound; therefore, all things being equal, uncomplicated.

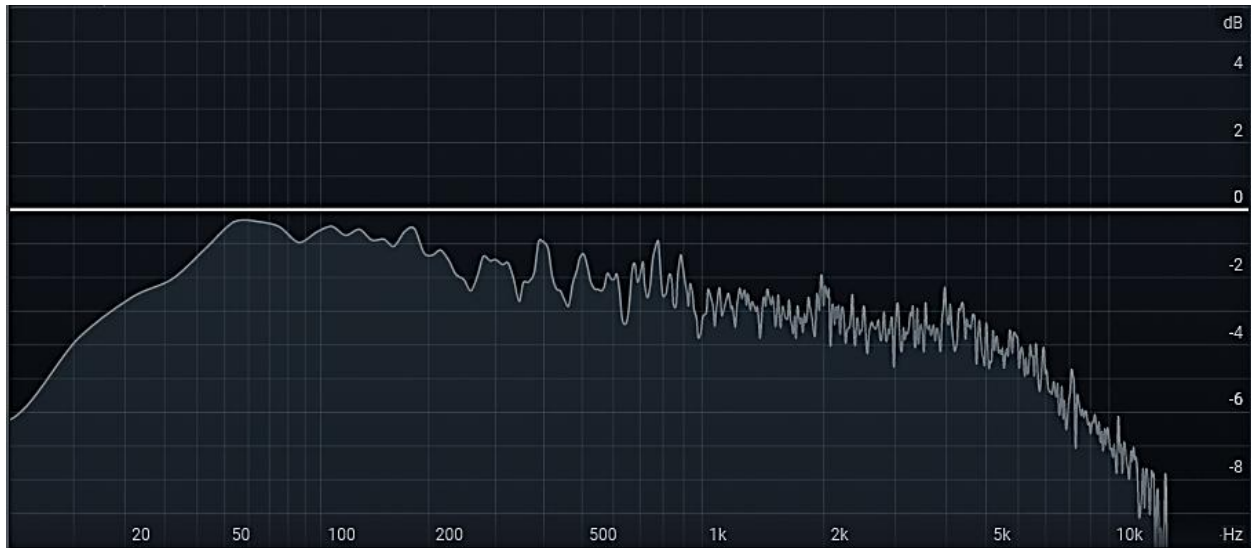


Figure (1.4): The Hobbit Clip 1 EQ Visualization

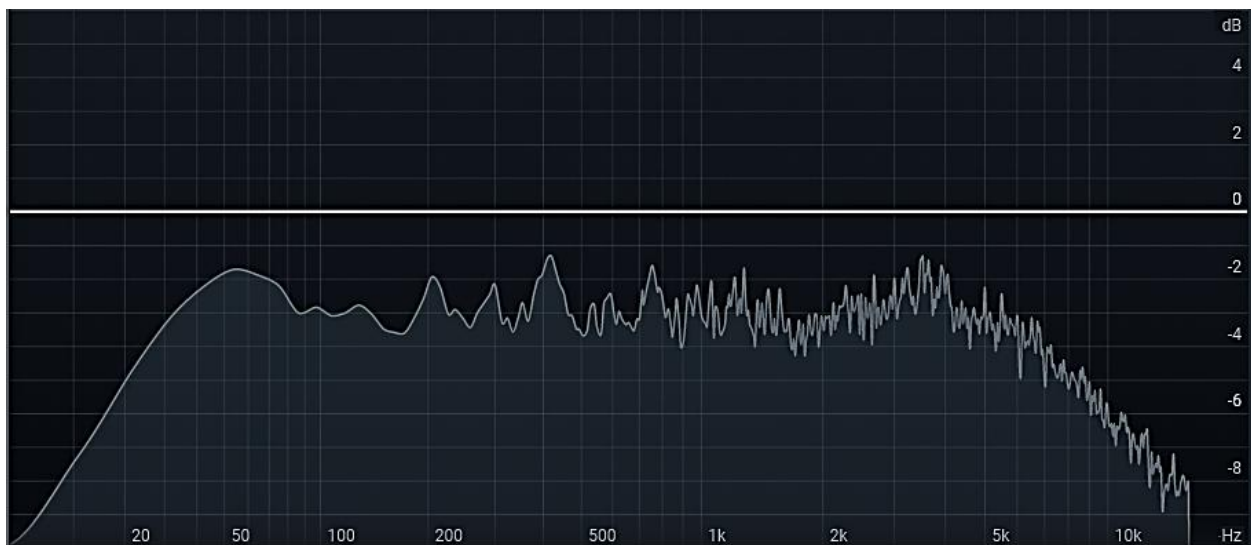


Figure (1.5): LOTR Clip 2 EQ Visualization

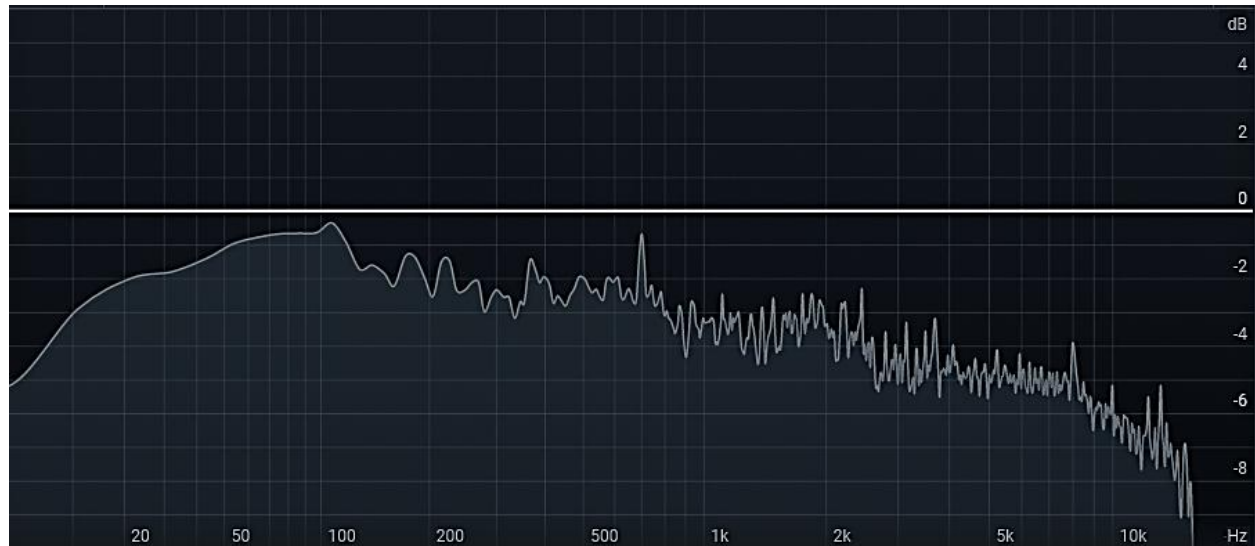


Figure (1.6): The Hobbit Clip 3 EQ Visualization

While clearly transitioning from a Foley-based approach to a synthesized sound layer approach between *The Hobbit* and *LOTR* suggests different methodologies within sound design, the rethinking of transformative, transitory, and tonal subtleties in *LOTR* results from the increased precision afforded to sound designers and sound composers working with a synthesizer. In *LOTR*, the construction of textures like Gandalf's magic is much more magical, mystical, or other-worldly. Moreover, the volitional construction of magic in *LOTR* underscores any tonal shifts and situational findings about the gravitas of the trilogy's larger themes of elemental force and destiny.

Together, these findings highlight the ways in which sound design can transform audiences' engagement with the wonderful and fantastical aspects of stories told in moving pictures and sound. By adjusting frequency range, amplitude and sourced sound (foley sounds vs, synthesized sound) helps to create spaces that signal to power, scale, dimension and realism when depicting Gandalf's Barrier Magic.

Figure 1.7 shows the method with which the decibel differences were measured,

using the master volume gauge of FL Studio taking in only the low frequencies of effects.



Figure (1.7): Volume Meter

The second method utilized in this study involved a case study approach, which is a widely recognized methodology for qualitative research. This approach is particularly effective for gaining an in-depth understanding of complex phenomena in their natural contexts (Priya, 2020). Utilizing case study methodology allows researchers to explore the subject matter in depth, offering richer insights that are often unattainable through more traditional empirical research methods (Simon et al., 1996). The adaptability of this method continues to contribute significantly to advancements across diverse disciplines (Harrison et al., 2021).

The second method utilized in this research is a case study to better understand the construction of the sound design of Gandalf's magic. We opted for a practical recreation method using FL Studio 24, a Digital Audio Workstation (DAW). We analyzed three of the highest quality clips sourced from YouTube, plotted them into FL Studio, and systematically isolated frequencies to reconstruct each layer to the best of our ability. Using Ozone 11 EQ, an equalizer VST, we examined the composition of the frequency range, amplitude, and textural elements. This recreation process allowed for a comparative analysis of The Lord of the Rings (LOTR) and The Hobbit, highlighting the shift in production methodology from synthesized layering in LOTR to foley-driven approaches in The Hobbit.

Research Method Two Results

The Findings revealed that several notable discrepancies emerged between the recreated effect and the original cinematic sound. Figure 2.1 presents a visual representation of our recreation, constructed using minimal stock sound effects in FL Studio 24. One of the most significant differences observed was the lack of richness in bass frequencies. While the original LOTR sound design features deep, resonant low-end tones that add weight and intensity to the magical effects, our recreation lacked the same depth and fullness, resulting in a less immersive auditory experience. This contrast suggests that professional-grade sound libraries equipped with meticulously recorded and processed bass samples play a crucial role in establishing the sonic foundation of cinematic soundscapes.

In addition, the dynamics of the recreated sound, in both the sound dynamic range (volume) and stereo panning, were clearly less sophisticated than those of LOTR. In the original movie, the automation of volume shifts and stereo placements was precise and had variations, creating a multidimensional, dynamic, and evolving sound. In our recreation, we used stock sound files, and the result was not the same; the lack of a layered dynamic range resulted in a flatter sound that was not engaging.

These findings reinforce the need to focus on the depth of layering using EQ (equalization) techniques when constructing elements from sound design for cinema. We explained to our students that, in the professional world of sound design, you would compose multiple layers, each sculpted with care, mixing them into a coherent reading of texture, enabling sound to feel less constrained, flat, and dimensionless.

The findings of this study also imply how technology has changed the way sound designers create sound. If we look at the centuries-old professional sound processing types of effects created for the LOTR, such as granular synthesis, convolution reverb, and multi-band compression, all those complex sound processing enable a seeking clarity, presence, involvement, and expressiveness of magical effects. In our recreation, we had the same stock sound sources, but the stock sounds are never going to be the same as action movie monster sound libraries and advanced processing chain technology in a constructed sound design. Conversely, these findings articulate how VST technology provides sound designers with endless creative possibilities and ways to devise highly detailed cinematic sound effects that provide enhanced narration for the film's impact.



Figure (2.1): Recreation in FL Studio 24 using stock sounds

Discussion

The contrasting audio design in *The Lord of the Rings* (LOTR) and *The Hobbit* illustrates different creative intentions and signifies a trajectory in the sound design of films based in Middle-earth. Although these films are similar, the sound design possibilities make experiences different based on technology, directors, and industry trends. The lower frequencies and expansive granular textures in LOTR provide greater weight and more intensity for storytelling. LOTR may be understood to contextualize an immersive, even mythical, experience, engaging with themes about fate, battle, horror, cosmic power, and struggle. With layered soundscapes and multifaceted textures, LOTR produced thunderous battle sequences, ethereal magical effects, and created its world vast and daunting. Every co-design choice in the trilogy was directed towards creating epic scale, complementing visual epics, and reinforcing darker, serious tones.

By contrast, *The Hobbit* adopts a brighter, more whimsical and adventurous palette. *The Hobbit* employs fewer synthesized risers and thunder sounds which indicate a conscious writing strategy to avoid the heaviness of LOTR. It was thematic and visual choices with a bright cinematographic intention, a whimsical narrative structure, and a protagonist journey that included the exploration of herself, and not the destruction of civilizations – that drove the sound design of *The Hobbit* into a lighter, playful accessibility. It's still an epic journey but is accentuated and defined with foley-based, physical world effects. There are none of the expansive synth textures layered in *THE HOBBIT*. Instead they are grounded in the foley to reinforce an intimacy and wonder, and less foreboding gravity.

The trajectory of sound design in these films is indicative of general movement toward different approaches to filmmaking making while we define artistic and narrative choices. In LOTR, sound designers were reliant on foley construction active, physical to create realism listening moments for the audience. Sound

designers needed to think of their sounds as physical realities to create the immersive aspects of the movie. But sound today easily accessed technology, like advances with VST and audio design libraries, are easily relied on, allow filmmakers more control audio experiences and more articulation of realistic textures willing to create quality sound interfaces. Furthermore, they are utilizing synthesized elements as the rehearsed audio design, which provide cleaner, clear, polished experience built fit within modern cinema designs.

The trajectory of sound design when approaching Middle-earth, discusses both the artistic implications of shifts within the industry and the technological evolution of production methods. For instance, the heavier layers of textures, may be understood in the need for large scale and visceral imagery with LOTR. In the Hobbit, the lower frequencies are utilized to meet a constructed feel that is less contained, and more stylized than LOTR. Fewer foley-physical sounds, and expansive textures are also implicit of changing narrative priorities as the films differs Adams and Tolkien or other adaptations may include. Understanding these choices of sound design also helps us appreciate the forms of sound and understanding its relationship to agency and how it operates to create a unique collaboration that shapes audience perception and affect, while still acknowledging new creative and technological paradigms.

Conclusion

The design of sound is not simply an aural enhancement to visual storytelling, it is one of the most potent means to influence the audience's perception, induce emotions and develop the world in which the film takes place. The comparison of sound design in The Lord of the Rings and The Hobbit shows how altering the frequencies, layering sounds and technological advancements can contribute to a film's impression.

The clear finding indicates the greater low-frequency presence in LOTR was not merely a view of the technical constraints, but a concern in developing a feeling of

grounded, age and significance. The Hobbit's synthesized textures' minimalist design reflects its imaginative charm, and connects to the spirit of journey and personal adventure format. Leading up to the progression of style and frequency towards synthesized sounds across both films speaks to a larger trend in cinematic sound: utilizing a profession smartly, as digital advancements create clarity in audio stimulation as well as possibilities for presenting audio in creative ways.

In both films, the discovery leaves personal impressions on the audiences while influencing emotional responses for immersive narratives through design choices. As motion picture technology advances, we can only predict that audio graphic relationships with artistic entitlement will be pushed within more technological-based characteristics to blend ideas of traditional work which is held very dearly with new age sound experiences that they create the viewer with.

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