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ENG 103-30
Spring 2020

Intro: You know that feeling you get when watching a horror movie? The one when you know the monster is about to jump out? Your heart's racing, pounding, you glance away from the screen, maybe hoping to miss it. The music swells, you glance back up just for a moment and BOO! You jump from the shock, your adrenaline rushing as you become immersed in the story again.

Background:

- Purpose: research and investigate the effect music and sound effects have on horror films, specifically, the natural phenomena known as infrasound
- Just outside our range of hearing at 20 Hz, infrasound may not be audible, but can still cause physical reactions such as anxiety, uneasiness, and extreme sorrow (Morrow, 2017).
- Created a horror video-comic that heavily relies on musical cues and the incorporation of infrasound to build up parts of the story told
- In the case of horror films, the usage of infrasound combined with musical scores contributes to viewers' unease & naturally puts them more on edge as they begin to anticipate what's next.
- Few horror films have confirmed using infrasound, however, both the 2007 film *Paranormal Activity* & 2002 French psychological-horror film *Irréversible* utilize infrasonic sound to create chilling sound effects.
- *This project explores creative ways to incorporate musical cues & infrasound to illustrate the vital role this phenomenon has on the effectiveness of horror films.*

Research:

- With technology, humans have been able to identify infrasound wavelengths from natural phenomena & man-made sounds. Infrasound wavelengths are known to "permeate the atmosphere and offer us insights into natural and human-made events on a global scale" (Bedard, 2000).
 - Natural: volcanoes, earthquakes, and avalanches, storms, seasonal winds
 - Possible explanation as to why pets are often alarmed of storms before they arrive
 - Animals are sensitive to infrasound - Elephants escape 2014 tsunami in Thailand

- Elephants are amongst the few known animals able to hear infrasound
 - Man-made: rocket launches & city sounds, audible from across the country
- Natural sounds are often used in horror films to create deep rumblings or high pitched squeals that contribute to a scene's uneasiness.
- Since infrasound is naturally harder to detect, it creates "a feeling of unease in an audience member, especially because these sounds can often make one feel as though they are experiencing something paranormal" (Seyler, 2019).
 - Research suggests infrasound may be present at supposedly haunted sites and causes strange sensations that are often attributed to paranormal activity
 - Researcher Vic Tandy was working in an allegedly haunted library and saw a grey blob
 - After the unnerving experience, he discovered a fan in the library producing an infrasonic frequency resonating very closely to the rate of the human eyeball (measured 18.98Hz vs 18Hz)
- Infrasound is often recognizable as "extreme bass waves or vibrations" (Morrow, 2017)
- Can also be used in conjunction with sound effects and musical compositions in order to enhance the fear factor
- horror film music "has its own trope or leitmotif – the tritone or diabolus in musica ("the devil in music") otherwise known as the Devil's tritone (Lerner, 2010) and can be heard in Beetlejuice, Hocus Pocus (1993), and The 'Burbs (1989)" (Martin, 2019).
- Many musical works have been purposefully designed to sound dark/negative
 - Creates negative perception, helping to put the audience in an unsettling scenario.
 - Music has done this for centuries and is most notable in classical arrangements such as *Danse Macabre* and *In the Hall of the Mountain King*
- Importance of effectively using a combination of sound effects, musical elements (dissonant/dark music), and infrasound to enhance horror films and create more impactful scenes

Methodology:

- The methodology of my project began with research, then writing the story, conceptualizing the artwork, formatting layout withing the video-editing software,

identifying sound effects and music to be used, and finally rendering the completed video.

- The comic itself is in black and white and incorporates a comical story with elements of horror
- By combining a unique format for my visual story with effective audio elements, I was able to successfully create an entertaining comic that incorporates elements of horror, comedy, and suspense.

Conclusion:

- Using infrasound in a non-traditional way helped me gain a better understanding of its application and potential.
- I was able to apply my artistic creativity in drawing out a comic, however, by turning the comic into a video, I was now able to enhance my story with sound effects, musical crescendos, and infrasound.
- I hope that by informing my audience of what infrasound is and the importance of sound effects, they are more aware of these sounds and musical cues - not just in horror films, but in all suspense films.