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Sound Design in Video Games / Creating Sound for *Hearthstone*

Sound design is quite a remarkable thing. Because of sound design, we experience media the way we do. In film many of those sounds are not actually in real time but rather recorded and mixed to mimic the sound that audiences perceive on screen. Those horse gallop sounds could very much be coconuts or rocks being slapped on sand and dirt in such a way that it sounds just like the real thing. In films that feature this type of sounds, such as *Crouching Tiger, Hidden Dragon*, that was the technique used to replicate and mimic the sound of the horse gallops. In a video game almost every little option and interaction has sound. Whether it be a menu sound or the virtual soundscape, there are sound effects for everything. Games and film would feel much emptier without these sound effects.

Background:

The origin of this sound effect practice is what is known as Foley. Foley, named after the man who pioneered the technique, Jack Foley, is a sound effect technique where a sound is created or performed for a movie or show (Cortez). An artist makes the sound post-production via mimicking the real sound in time with the picture to enhance the watcher's experience. An artist typically will try to mimic the sounds of what was captured in picture using objects or other tools performed live. Foley artists have a large collection of random items and tools of different textures to achieve this. These tools can consist of, but are not limited to woods, metals,

cardboard, rocks, shoes, plants, vegetables, etc. Depending on the way the items, tools or textures are used by the artist, Foley can really enhance the viewer's experience while watching the film or show.

Film Sound Design:

Different film genres call for certain sound textures to truly enhance the experience. This is especially true in the case for horror films, where carefully executed foley is crucial. Leslie Bloome, a Foley artist from Alchemy Post Sound Studio, was responsible for the sound design of the film *The Invisible Man*. In the film, the main antagonist is, as the name suggests, invisible. Bloome was tasked with making sounds for him that are distinct enough to make the viewers uneasy, but vague enough to not know what they are. He decided to take bed sheets and wave them around to make a gust-like sound and layered them with the sound of chimes. With a little mixing and editing he made it so that the presence of the Invisible Man is distinguished by the sound of bassy gusts and distant chimes. To make the sound of the creaking floorboards Bloome set up an uneven platform of old wood. To get that eerie creaking sound he would step softly on the wood till it creaks (Insider, "How Sound Is Used to Create Suspense in Horror Movies | Movies Insider").

The sounds of animals across all genres is another important task given to Foley artists. Marko Castanzo, a veteran Foley artist of c5 sound, Inc. is well known for the sounds he makes for animals. While mimicking the sounds of animals himself is one technique, it's much more effective producing the sounds in other ways. For example in the movie *Ice Age*, one of the protagonists, Manny, is a mammoth. Castanzo had to make footstep sounds that could match the sheer size of this mammal. He elected to use a wooden log wrapped in leather and slammed the

wood on the ground at different angles and over different textures. Depending on the environment in the movie, textures would consist of leaves, dirt and artificial sand layered with the slam of the log (Insider, “How Animal Sounds Are Made for Movies and TV | Movies Insider”)

Game Sound Design:

The relationship between soundtrack and sound effects is one that is almost symbiotic. One influences the other and vice versa. *Little Nightmares* published by Tarsier Studios is a great example of a soundtrack which has a purely symbiotic relationship with its sound design. *Little Nightmares* is a horror/thriller adventure game where the player plays as a little girl in a yellow raincoat trying to escape “The Maw,” which is a huge freight ship. Upon escaping “The Maw” the player will be faced with many horrors and surreal encounters. Tarsier’s sound designer, Tobias Lilja, goes over this relationship:

I deliberately wanted them to constantly bleed into each other by using sounds from the environment as “musical” elements, such as fog horns or seagulls...Some ambiences also take on an almost “musical” quality, like a loud hum from a ventilation shaft with a distinct tone...The fact that I was working with both sound effects and music for the game helped a lot in making it possible to integrate the two. (Hughes)

Little Nightmares’s soundtrack for the most part is ambience, but the sound and soundtrack having this kind of relationship makes the sound experience of this game very fluid.

Hyper Light Drifter has another interesting relationship between the music and sound. The soundtrack was composed by Rich Vreeland, AKA Disasterpeace, and the sound designer

was Akash Thakkar. The game's musical style blends almost perfectly with the sound design. In a GDC presentation, Vreeland and Thakkar discuss the conception of "their style" as they call it. Interestingly enough, they never really spoke in advance of doing any musical sound design, but rather it happened naturally as the soundscape of the world began to form. Vreeland and Thakkar both wanted the sound to be gritty, "bitcrushy" and ambient, and they both achieved this in their own way. Thakkar wanted the enemies the player encounters and the environment to feel organic yet electronic. So the majority of the sounds for enemies including the final boss are Thakkar making those sounds himself first via screaming into the microphone and then editing it afterward. This created a very unique sound that blended well with Vreeland's musical style. Thakkar also wanted the soundscape to feel organic as well, so for a couple areas in particular he used a low, rumbly drone like sound to make the air feel denser and thicker. This sound was created via sampling the sound of his own blood and heartbeat via a stethoscope and then edited afterwards again to match the style they established. The sounds that were not organic, the weapons and items, were created more electronically and with a lot of layering, a classic sound design technique where one sound is layered with multiple other sounds. Vreeland composed pieces and ambience with the style they established in mind (Vreeland and Thakkar). The song heard in the introduction of the game, titled "Vignette: Visions," showcases all of this. The song melodically speaking is slow and evocative without any real tempo or tonal center with the sound design being applied like effects to the track.

Heartrift:

Heartrift is the game that I was tasked with working on for its sound design. The main developer of the game is my good friend, Bria (Bri) Linza. *Heartrift* is a big work in progress

and has been in the works for a long time. When I met Bri she was already working on the game in its earliest forms. I began assisting her in the sound design of *Heartrift* after helping her with a couple other things in the game. It was 2021, however, when I formally asked Bri if I could be her official sound designer, to which she agreed. She and I have been collaborating on *Heartrift* on a more professional basis since then.

I learned a lot after working on *Heartrift*. For an adventure it has some pretty surreal moments, so I kept that in mind going into the project. Bri asked if I could create her sounds either through sampling or editing existing sounds with specific textures. I would ask her to use descriptive words for her vision of the sound rather than technical words. At least for me, if she can describe to me how she envisions the sound I can produce that sound for her. In particular she asked if some of the sounds could have a “water-like” quality to them. For example, she needed sounds for a bubble ability the player would have: sounds for the bubble moving and the bubbles floating. She used the Kirby games as a reference for those float sounds. I would call Bri over Discord and stream the Ableton session so she could hear exactly what I was doing. So I mixed and edited the sound of an object being dropped into water into what is now the sound of the bubbles. I essentially used a low-cut filter and a high-cut filter to isolate the frequencies I wanted, and used an auto-filter with light reverb to achieve this sound. Since the player can rise, fall and dash using this bubble ability, the pitch of the sound would be different depending on the movement.

In another instance she asked me to use book samples for a separate menu featuring a card mechanic. The cards needed a scrolling sound, a selection sound and a de-selection sound. I sampled and edited the sound of pages turning and layered them together to create those sounds. There wasn't too much mixing required for these sounds besides EQ. The cards, if anything

required a bit of layering, four layers in fact. Another really big task was creating the menu sounds. This includes, similar to the card mechanic, a scrolling sound, a selection sound and a de-selection sound. I decided to use the sound of bubbles being produced underwater as a place to start for these sounds. Bri said she wanted the menu sounds to feel swooshy, light and a little synthy. I noticed right away the bubbles were bass heavy, but the texture was what I needed for this menu. So I did a massive low-cut, utilized an auto-filter to soften it and added light saturation. I made multiple versions of the bubbles and layered them till eventually I created the menu sounds. Ironically enough, the sound of the menu was initially supposed to be the sound of the bubble mechanic mentioned previously.

All of this is to say that there's a lot that goes into sound design. Properly executed sound design can make or break the experience of a film or game. While not always at the forefront of most projects, that does not take away the importance of sound design. Sound itself is an art, which is why foley artists devote time to perfecting it. I've always dabbled in sound design prior to *Heartrift*. Through actually working on the game officially and seeing the sounds I worked hard to create come to life in the game, there's a sense of completion and satisfaction seeing it.

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Appendix: Interview with Bri Transcription

1. What was your vision for the sound design for *Heartrift*? How has that evolved over time?
 - a. Originally sound design was an afterthought, but I knew that I wanted something that felt hopeful and fit the tone of the music (which ranges from ambient to melodic). As time passed and I spent more time refining sound assets, I started to lean into a mix between soft and retro sounds with an emphasis on creating atmosphere. As the scope of the game increased, the demand for better quality sounds did too, which leads into using the current vision of using modern sounds mixed with a retro feel. At this point in production, I would not be able to do this by myself and am incredibly thankful for Izzy!
2. What were your inspirations for the sound design for *Heartrift*? What stood out to you in those games that inspired you?
 - a. I have a lot of nostalgia for games like *Kingdom Hearts*, *Pokemon*, *Kirby*, and other classic Nintendo games. Modern inspirations include other indie games like *Hyper Light Drifter*, *Yume Nikki*, *Undertale*, and especially *OneShot*. What stood out the most was the way the sounds and music captivated me and helped create a world to explore. Not just to play the game, to actually be in the world and the environments. Without that audio, those worlds would feel disconnected from me.
3. Do the same inspirations apply to the soundtrack?
 - a. Absolutely. Music means a lot to me emotionally with building worlds, which is why I've put in so much effort into making an immersive soundtrack that fits with the world and story.

4. Did the soundtrack influence the sound design or did the sound design influence the soundtrack?
 - a. Towards the beginning of the project, Izzy and I have discussed what sort of "feel" we want the sounds to give off, and so far the biggest thing that's influenced the sounds is iterating on them and trying things out. Sometimes a sound doesn't work (like a character text sound) because it clashes with the music -- hence the soundtrack influencing the sound design. Other times, I find myself changing the soundtrack instruments to soundfonts or more retro sounds to fit better with the sound design. The process requires flexibility between the two, in the process of getting them to work together.

5. A little extra, do you plan on having the soundtrack be available for download separately? Sort of how *Hyper Light Drifter* and *Omori* have their soundtracks available as separate downloads
 - a. Yes! I plan to have this on Bandcamp as a "demo version" of the soundtrack (most likely under my alias Briakitten).