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The Soundscape Evolution and Polyphonic Revolution

Introduction

What is science fiction? In order to understand the field in all of its nuances, it is important to understand what we are dealing with. From the mind of the experts, science fiction was defined as “the literature of ‘what if’” by the late American sci-fi author Stanley G. Weinbaum. Weinbaum’s definition gives us a brief glimpse into the encompassing range that science fiction has. Another noted science fiction author, American Isaac Asimov, defined sci-fi more specifically as “...that branch of literature which deals with the reaction of human beings to changes in science and technology”. Armed with these two definitions, we can begin to explore the many ways in which science fiction explores the edges and frontiers of human development.

As with many advances and revolutions, the public reaction can be divided between those that are for the change and those that are against it. This division can create anxieties and fear for the future. Authors and science fiction creators must be aware of this as they attempt to create a story that both entertains the audience and attracts their attention. One strategy for effective world building is by fusing the concepts of cognitive estrangement, which provides the “other-worldly” aspect of sci-fi, with themes fundamental to our experience of human life, such as ideas, feelings, and events including love, coming-of-age events, and compassion. In order to effectively drop an audience into these worlds, creators are again presented with a crossroads, where they can either use info-dumping, whereby orienting information is placed in its entirety at a specific moment in time, or by creating an adaptive landscape, whereby novums and new

sci-fi concepts are gradually introduced by context clues or by the characters interactions with the novums.

In this manifesto, I will use a psychoanalytic approach to understand the creator's perspective when it comes to building a sci-fi world and a cognitive theory approach to understand the consumer's interactions with the work, all in order to get at the core of the functions and impacts of science fiction. I will begin with an brief analysis of written and visual works, as they represent the majority of early science fiction works, before transitioning to the main focus of this manifesto in the revolution of science fiction music and sounds. Finally, I will end on a discussion of the course of science fiction development and a glimpse into the future of science fiction works.

The Written & Visual Works

Before diving into the auditory landscape of science fiction music and sounds, let's first look at how written works can engage audiences. Stories can take a variety of approaches to get an audience to feel like they are in the story or that they know the characters. A story like "I Kill Myself" (1973) by Polish author Julian Kawalec uses a stream-of-consciousness point of view to get the reader to understand the motivations of the protagonist, who is faced with taking the ultimate sacrifice of dealing with a huge nuclear bomb. In Hanmura Ryō's "Cardboard Box" (1975), the reader finds out nearly midway through the narrative that the protagonist is actually a cardboard box, giving every sentence before it a completely new meaning. Other stories like Gérard Klein's "Party Line" (1969) use unique dialogue structures, like side-by-side conversation, to make the reader feel that they are hearing both sides of the conversation at the same time.

These narrative structures are not in themselves science fictional but they are different and thus help the readers to prepare for the unexpected.

On the visual side of things, stories like Arkady Strugatsky's "Wanderers and Travelers" (1966) and Ilya Varshavsky's "Perpetual Motion" (1967) make use of caricatures in order to give the reader a sense of the scene and a peek into the vision of the authors. Going further down this end of the spectrum, sci-fi comics like Magera Gordon's "Peopleology" (2016) tilt the balance to the visual side of things, having the text serve only as a supplement to the drawings, serving a crucial but different part of the story compared to text-only works. Finally, making the full transition to visual works, sci-fi movies and short films rely on visuals and sound completely, with a minor to negligible role for text apart from when the director needs to highlight a key tool or novum through the use of written language. In films like Giacomo Simini's *The City in the Sky*, the sci-fi elements of potions that can be delivered via intake tubes behind the neck, advanced cyborgs with incredible learning capabilities that still have very stuttered motor movement, clones for harvesting organs, and myths about cities in the sky are all presented largely through visual means. But as you move to a heavier bias towards visual depiction in the form of images, the need to engage the audience's other senses becomes more important. In the next sections, I will discuss sound and music as they can serve to complement a sci-fi visual and as they can serve as stand-alone sci-fi experience.

Sci-fi sounds in auxiliary roles

The use of sounds to complement images, both moving and still, can serve many diverse roles. In an interview with Grammy award-winning composer James Horner, Horner described

his role in the production of any movie, but particularly that of sci-fi films, is to strike a perfect balance between a movie score that is at both times “...different and alien yet at the same time to have a very warm quality and an organic quality”, that it had to be “...foreign yet not avant-garde and not art film; it needed to support melodic writing so I [Horner] could write thematically”. At its essence, Horner’s job was to “...make sure at every turn of the film, it’s something the audience can feel with their heart... at all times I’m keeping track, constantly, of what the heart is supposed to be feeling” (<https://www.latimes.com/entertainment/herocomplex/la-et-hc-james-horner-searches-for-the-sound-of-pandora-story.html>). When music and sound is auxiliary in a sci-film visual work, it must be new and captivating, without drawing all attention away from the visual at hand.

Taking a look at some examples, we can turn to the origins and public draw to the laser noises of the guns in the Star Wars universe, which originated from the striking of a wire on radio towers (<https://www.inverse.com/entertainment/star-wars-day-podcast-laser-blasts>). This sound was conceived by chance and reimaged by creative minds to create one of the most recognizable sounds in the modern age. Likewise, the musical accompaniment in “Aeriform”, a fashion show from 2017, was from a music group called Between Music, which performs their songs underwater using custom-made instruments. The music was performed live and it served to set the scene and to provide an aura that the audience wouldn’t experience at a typical fashion show. It highlighted the inspirations for the clothing on display and it activated the brains of the audience members, allowing each person to engage with the show uniquely. Finally, we can think of movie scores, such as that of the movies *Avatar* (2009) and *Interstellar* (2014). In *Avatar*, the challenge was to make a sound that was rhythmic and pleasing so the audience would enjoy but

also unique and new so that the audience felt that they were learning about the culture of the indigenous blue people of the movie. This was achieved by taking inspiration from natural yet unconventional sounds, such as that produced by indigenous people from far and wide across Earth. The important thing was that the sounds were new sounding, which often just meant that the general public did not such instruments and sounds existed (<https://ethnomusicologyreview.ucla.edu/journal/volume/17/piece/583>). With samples of each sound available, the work on creating melodies and harmonic pieces was suddenly the easy part. In the case of *Interstellar*, the director and composer decided to focus mostly on the use of a church organ. When asked about the reasoning, the creative duo in charge of creating the movie responded that the church organ had an intrinsic sound that felt mystical. Religion itself looks up to the cosmos and calls to the metaphysical, so it made sense that an astronaut and space movie use that organ to achieve the same (https://www.youtube.com/watch?v=L_8t2VlwK4w&t=188s). Through this series of explorations, we can see that music and sound play an important role in world-building and setting the audience into a scene. Without music or sound to help guide the reader through the emotional trajectory of the story, many visual works would feel far more mundane or estranged.

Sci-fi themes in stand-alone music

Finally, we've reached sci-fi music as stand-alone pieces of art. This category might be the most difficult to define, as individuals must identify what kind of music or musical elements deem a song or sound to be considered "sci-fi". Much experimental music can fall into this category, as well as electronic music, but the lyrics can often tell a different tale, or vice versa (the lyrics are

other-worldly but the musical structure may be pretty normal otherwise). Nonetheless, new forms of music and ways of creating these sounds have exploded in number in the last half century. To start, innovations in recording technology have allowed creators a large number of untapped sources for sci-fi sounds, some of which include space sounds from the atmosphere of planets recorded by NASA (<https://soundcloud.com/nasa/sets/spookyspacesounds>), digitized sound from muscle movement biosensors (Xth sense, mentioned in Saiber, 2013), and even music produced from electrical impulses of the brain, literally sound coming from the mind (https://www.vice.com/en_us/article/4xqv53/10-pieces-of-music-created-by-brainwaves).

Creators have also reinvented different forms to present their works, with some musicians putting samples of sound in a create-your-own setup to have the listeners create their own original music (*Sonic Shuffle*, mentioned in Saiber, 2013), some musicians putting up their albums for stream-only so that the songs can only be listened to as a continuous work and only exist in that point and space in time (*3.15.20* by Childish Gambino), and even some that are making new music from the old by having songs loop infinitely and seamlessly by jumping between bits of the song that are similar to one another (*Infinite Jukebox*, <http://infinitejukebox.playlistmachinery.com/>). This burgeoning field of different types of new music brings along a strong and unifying message, which is that anyone and everyone should be a creator. With each of us able to tap into inspiration from our own unique lives, we can experience and produce new works at breakneck speeds and with never before seen ease.

The Wrap Up

Sound and music has come a long way. From the invention of the phonograph in 1877 by Thomas Edison, to the discovery of the Vocoder, the first voice distorting machine, in 1940, the field of music and sound has grown incredibly and exponentially. Recent innovations, like the advent of nanotechnology and portable synthesizers and the creation of Soundcloud, an open website where any producer can upload music for the world to access freely, in 2007, are making it easier and easier for people to enter the field of sci-fi through music and sound. The potential for innovation and creativity is widespread and the need to engage with science fiction is important. In the modern day, fields of study are becoming more advanced and more specialized, leading to super-specialists that are the few that understand the upper strata of knowledge in topics like robotics, AI, genetic engineering, and many other fields. As these fields become more advanced, the need to understand the cutting edge and the ethical issues that could arise from their use and possible misuse becomes very important. So, bringing this manifesto back around to the start, can we imagine a more inclusive and supportive definition for science fiction, one that would allow entry for anyone with open arms? American science fiction author Norman Spinrad did just that when he said, “science fiction is anything published as science fiction”. Science fiction is important for our present and for our future, with implications for both. We need all hands on board. So with that, best of luck with your explorations. Get to thinking, creating, and publishing. Godspeed.

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