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Project 2 - Final Draft

**Exploration**

*A Look into the Relationship Between Electronic Music and Science Fiction*

In the early to mid 20th century, the science fiction genre was starting to explode and gain notoriety in the psyche of pop culture. The evolutionary jump from literature to film provided viewers with a whole new look at the world and technology, and a look into future technologies and worlds that were completely alien to the public. At the same time, revolutionary work was being done in the field of music. Musical theorists and inventors were looking at new ways to write, develop, and play music. Suddenly, musical instruments and technologies were quickly progressing, and the music was able to compliment the science fiction films both thematically and idealistically. The technological progression and innovation seen in these science fiction films were starting to come to life in the real world, most notably, in the music that accompanied these films. How did electronic music begin, and how did it make its way into the science fiction genre? These are questions that will be analyzed and discussed to show not only the importance that electronic music had on early breakthrough science fiction films, but how the genre of science fiction itself has lead to an exploration and technological development into how people write, create, and think about electronic music.

First, take a look at the early development of electronic music. In 1924, Russian inventor Leon Theremin created the first electronic instrument that bore his name, called the theremin. Using radio wave antennas and a couple of separate knobs to control frequency and pitch, Theremin was able to use his hand movement to create sounds. The sound would change relative to the position of his hand around the magnetic field of the antenna (Bahn). This was a breakthrough because it was the first time that technology merged with music. From then on, researchers and developers began prototyping and creating different machines to perform different musical tasks. As a result, people’s thoughts toward music began to change. These changes in thinking can be best conveyed through composer, musical theorist and experimentalist Joseph Schillinger when he says, “The growth of musical art in any age is determined by the technological progress which parallels it.” (Schillinger 27) By 1951, engineers Harry Olson and Herbert Belar continued on the same path and created the first programmable synthesizer prototype called the RCS Mark II. Suddenly, machines like this Mark II could now “write, perform, and record original music within one device.” (Lavdadio 306)

While these amazing breakthroughs were going on in the field of sound technology, other amazing breakthroughs were happening in the film and television business. In particular, the first science fiction film that gained massive success was Metropolis. When the film was released in 1927, it was praised for its cutting edge special effects and compelling story. At this time, however, films were generally presented as silent films, and if the films did have any sound to it, pre-recorded musical scores performed by a tradition orchestra usually accompanied it. (Stone) As the science fiction genre started to become more and more prevalent in the 1940’s and 1950’s, films directors were looking for new and different ways to incorporate synthetic sounds into their science fiction films. At the same time, composers and musical theorists saw the sci-fi genre as a golden opportunity to experiment with these new instruments and create soundscapes that no one had ever heard before. Films like “Forbidden Planet” and “The Day the Earth Stood Still” (which will be discussed in detail later on) explored subjects such as space travel, extra-terrestrial life, and invading robots. All of these subjects were so new and fresh to the public at the time, it needed non human soundscapes that people could not recognize or relate to in order to match the contents of the films.

One specific film that was important in the eventual merging of science fiction film and electronic music was “The Day the Earth Stood Still.” Released in 1951, it was the first film to incorporate electronic music into its soundtrack. Composer Bernard Hermann was heavily dependent on the Theremin to create much of the soundtrack to this film. Hermann used the theremin to function both as a sound effect and as a musical piece. The soundscapes of the theremin provided ethereal, otherworldly sounds to match the space aliens and flying saucers that were the film. It also contained the first cinematic use of an electronic violin. (Bahn) It is also important to state that while this film contained breakthrough elements of electronic music, it also contained a lot of tradition orchestral music, and the combination of the two worked really well for the film.

Another important benchmark film in the science fiction genre was “Forbidden Planet” which was released in 1956. What’s particularly interesting about this film is that it is the first to use an entirely exclusive electronic score. This means that all music and sound effects were performed by a machine and featured no real instruments. Composers Louis and Bebe Barron wrote, performed, and recorded the entire musical score on a series of electrical circuits, tone generators, and oscillators that they built themselves. (Stone) As a result, the entirely machine made score was able to captivate film audiences around the world. The score was also able to convey the otherworldly and alien nature of the settings and characters that were present within the film.

One thing to note is that while both of the aforementioned films played important roles in allowing composers and engineers to experiment, it is also equally important to see the influence that electronic music has had on the genre as a whole. When people think of aliens, UFO’s, or robots/cyborgs, people often think of the sounds that they heard in films and immediately associate the sounds it. The haunting electronic soundscapes and effects have shaped humanity’s perception of what they believe these alien beings to sound like, when in actuality, no one has ever experienced these things in real life. Herein lies the power and influence of electronic music on science fiction films and its viewers.

Science fiction has also had a huge influence on the use and implementation of electronic instruments in popular music. While this topic alone can be talked about in an entirely separate essay, there are a few important examples of science fiction themes and concepts influencing artists to create critically acclaimed and beloved albums. One example of is Pink Floyd’s “Dark Side of the Moon.” The band released this album in 1972 and paved the way for rock musicians to start to experiment with synthetic sounds in their music. Pink Floyd’s “Dark Side of the Moon” was a conceptual album that incorporated the concepts of outer space and space-time. As a result, by incorporating these concepts into their lyrics, they lent themselves to the possibility of using unique effects and soundscapes that would further enhance the themes and concepts of the album. The band used everything from tape loop machines, tone generators, and synthesizers to provide a listening experience for their listeners. (Harper “Science Fiction”)

Another famous rock musician who was heavily influenced by science fiction around the same time was David Bowie. The persona that Bowie embodied through his critically acclaimed album “The Rise and Fall of Ziggy Stardust” was heavily inspired by concepts and themes throughout science fiction. In his assessment of Bowie’s album, author and researcher Graeme Harper explains that Bowie “explored topics within the broader theories of science fiction, exploited an androgynous image, anticipating contemporary issue of transgressive gender and cyborgs.” (Harper “Science Fiction”)

The growth and evolution of science fiction and electronic music go hand in hand. Both fields have done a lot to influence each other and to push the boundaries of their respective fields. Electronic musicians help to create the settings and characters in many of the early benchmark films of the sci-fi genre through the use of theremin to show the aliens emanating from out of their UFO’s, or the all-electronic scores created merely by synthesizers to create a setting of another world. Science fiction film gave the musical experimentalists a chance to finally explore their new technological creations and push the limits of music and sound technology. In addition, it is important to not only understand how electronic music has influenced the science fiction genre, but how the ideals, themes, and concepts within the sci-fi genre has had an impact on the exploration, evolution, and use of electronic instruments in popular music.