

A Brief Discussion on the Utilization of Music Acoustics in Hans Zimmer's Creating Style

-- Taking the Film *Dune* as an Example

Shurui Zhang *

College of Arts, Music, Cardiff University, Cardiff, CF10 3A, Wales, UK

* Corresponding author Email: trrrrrrracy@gmail.com

Abstract: Film is a comprehensive art form, while film music and sound design is an indispensable part of film. Hans Zimmer is one of the most talented contemporary film music composers, has won the top awards of film music for many times, his creation style and creating method of film music are also the research direction of modern film musicians. This paper will discuss the application of Hans Zimmer's musical style through the analysis of the sound material and music theme in the film *Dune*.

Keywords: *Dune*; Music Acoustics; Film Music.

1. Introduction

The film *Dune* was directed by Denis Villeneuve and scored by Hans Zimmer. Adapted from Frank Herbert's novel of the same name, the film tells the story of Paul, the heir of the *Etreidi* family, who controls a precious resource and is betrayed, and decides to accept fate's guidance and defend his family and people. The film won six Academy Awards for *Best Sound*, *Best Composition*, *Best Editing*, *Best Cinematography*, *Best Visual Effects* and *Best Art Direction*. As a science fiction commercial film, this film shows innovation in narrative structure and music creation, which is different from that of commercial films. Adhering to the philosophical ideas in the works of the author of the original book, the film perfectly integrates classical aesthetics with future science and technology in vision, and skillfully combines traditional voice with electronic music in sound, creating a new audio world for the audience.

2. Analysis of Sound Material

With the continuous development of technology, film music creation technology has been different from the previous traditional recording methods. Both the electronic composition and the rapid development of music technology burst out Hans Zimmer, who is proficient in electronic music composition technology, more creative ideas on this basis. In the creation of electronic music, the source of sound materials is extremely rich. Whether it is the use of sampling technology or electronic synthesis sound technology to obtain sound, the sound can be complex processed by the effect device, and finally generate a more vibrant sound.

3. Analysis of Theme Music

3.1. Analysis of Musical Motivation

In the music concept of Hans Zimmer, his musical characteristics have brought soul to many films. In *Dune*, his creation style presents more diversified acoustic characteristics. The sound form in the soundtrack *Dream of Arrakis* shows that he has jumped out of the traditional musical structure and changed from the traditional way to the

accompanying structure. As the story unfolds, he first uses drums and then adds other music and sounds, maintaining the rhythmic characteristics of the drums in the sound form, expressing tension and suffering through distorted atonal vocals and the timbre of the electronic synthesizer, and finally the other sounds disappear, leaving only the monophonic vocals. There is no theme in this piece, but acoustic elements are used to render the atmosphere. The theme of the score *Bene Gesserit* represents the Bene Gesserit sorority in the film, the theme of the music is mainly presented as a non-musical female whisper and the musical theme throughout the appearance and departure of the sorority. Before the whisper appears, electronic instruments are used to create a sense of emptiness in space, and then it is maintained above the whisper in the form of a single note. Until the sorority lands on the planet, the whispers add up, creating a sense of supernatural power and religion, and then Paul wakes up from the dream, the whispers disappear, the sounds like metal collisions remain, bringing mystery to what is about to happen, and when Paul finishes his meeting with the sorority, the whispers enter again, overlapping the sound material on the stereo until the sorority leaves. Sound restores the single tone of electronic instruments and creates a sense of nothingness. The theme music creates confusion and mystery in the sense of listening, and shows the supernatural power of the sorority.

4. Analysis of the Characteristics of the Orchester

Judging from the history of Hans Zimmer's score, it can be found that his orchestration style is increasingly bold and avant-garde, and his continuous innovation and attempts based on his own musical ideas can be felt in his music. Although he has always been innovative, he has never completely abandoned the traditional orchestral instruments, still using orchestral texture and acoustic drumming to drive the narrative. Although electronic instruments have many advantages, it is not practical to fully use electronic instruments, because the sound material of electronic instruments is relatively simple, and its sound quality cannot be compared with real instruments. Many of the sound colors we hear in the music of *Dune* are actually new real

instruments, and he has cooperated with an instrument maker to adopt many new instruments. In the film, the "air sound" and "wind" often appear in the film are actually played by flutes, and the players also design their own instruments according to the required sounds and learn the playing method. He also mentioned that the sound of the bagpipes used in the film was initially simulated by the guitarist with the electronic effects of the guitar, but later recorded with 30 real bagpipes, which shows that in his concept, the real instrument still has a position that the electronic instrument cannot replace. The new orchestration thinking brings more sound effects to the music of the film, breaks the traditional orchestration concept of inherent timbre mixing in the same group or cross-group timbre mixing, integrates real instruments and electronic instruments, not only expands the use of real instruments, but also shows the unique expressive advantages of electronic music. Based on the innovation of orchestration thinking, The "music sound" music of film came into being.

5. Music and Sound Analysis

The development of electronic music technology makes sound no longer a literal "sound". Both music and audio have their own content to express. With the continuous development of technology, the boundary between the two becomes smaller and smaller, because sound materials, as creative materials, are still for the purpose of music. On the contrary, any music is essentially a kind of sound, and the concept of "music acoustics" also reduces the distance between music and sound, and endows sound with "musicality" can bring new artistic styles to some styles of movies. In the film, the sound material of the "hammer" is used by Hans Zimmer as a drum in the music *Dream of Arrakis*, which appears at the beginning of the film and gradually accelerates with the introduction of the female narrator, gradually bringing the audience into the world created by the film. After the introduction of the full drum melody made by the synthesizer, Hansmer added a sound

similar to the horn to the music, which implied that the war was about to break out and revealed the danger signal.

6. Conclusion

The concept of "music acoustics" is not a new concept, and it did not first appear in the field of film art. From Impressionist composers represented by Debussy to sequentialism or electronic music and various schools of music today, "music acoustics" has shown more and more creative significance, until this concept has been continuously applied by composers in films. It has promoted the new process of film soundtrack acoustics, and people have realized that the concept of "music acoustics" can show unique sound and picture effects in movies. To sum up, in the fast-paced and fragmented contemporary world, the seemingly "lengthy" *Dune* undoubtedly brings us some thinking, breaking the usual frame of science fiction films and creating an epic temperament like "space opera". The thinking brought by the pictures and sounds is not limited to the story itself. As Hans Zimmer said, "the human voice is the only thing that will not be outdated", even though he has a huge library of sound materials, he always retains the purest thing in the sound. The "music acoustics" in the field of film music or Western music will continue to innovate, and how to keep the core things in the concept will be updated and created. Something that future composers need to think about.

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