Research on the Character Creation of Chinese 3D Commercial Animation Films

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Abstract: *In recent years, China is vigorously developing the film and television animation industry. Character design is the core of animation design in this cultural industry and the key to the animation industry chain. Chinese animation once had an important position in the history of world development. However, currently, the character design of 3D commercial animation in China is weak and lacks a style with Chinese characteristics. Therefore, this article analyzes and contrasts the classic animation works of Fang, China, and the United States, explores the weakness of domestic 3D commercial animation, and uses character modeling as the research center to study the character modeling of Chinese 3D commercial animation films. Analyze the characteristics of Chinese animation in modeling design from different aspects such as social and cultural background, market economy development, and technological progress. Summarize and explore the unique style and aesthetic value of Chinese animation design. The purpose is to explore the preservation of the traditional outstanding clan characteristics and provide a theoretical and historical basis for Chinese 3D commercial animation creation and research.*

Keywords: 3D commercial animation film; Role modeling; Research

1. Introduction

Among the many animation categories, animated films represent the most mainstream values and aesthetic needs. Among them, 3D commercial animated films occupy a vital position in animation [1]. It not only has a clear commercial purpose but also has higher requirements for character design. There are few research materials on 3D commercial animation in China, and there is no systematic theory. They compared Chinese animation images with American Disney classic animation characters, analyzing in detail the differences in character-shaping between the two countries in terms of modeling color, character-shaping, action performance, Etc. China's 3D commercial animation character design can find the future based on inheritance and reference. Road to development.

2. 3D Commercial Animation Film

2.1. 3D Commercial Animation Film

Among the many categories of animated films, 3D commercial animated films are an essential part of it.3D commercial animation films refer to art films and documentaries that use three-dimensional software or other forms of plastic art and use the modeling changes of characters and environments so that the pictures are grouped, moved, and simulated by the editing methods or rules of the film. The animated film works.3D commercial cartoons appear in the form of storytelling and focus on commercial effects. Because they can bring novel entertainment to the audience, film merchants use it as a tool for profit. 3D commercial animation has its own set of operating systems for its scripts, characters and expressions. From the grasp of the storyline, it can capture the general public's psychology of viewing movies. The character design always caters to the tastes of the public, and the expression is humorous. Harmony runs through the whole film, and the needs of the public are the meaning of the existence of 3D commercial animation films [2].

2.2. 3D commercial animation films in China and the United States

The development of Chinese animation films has experienced rugged ups and downs. It was born in a turbulent age [3]. War, politics, economics, and social conflicts have hindered its development process to a certain extent. It is also destined to be unbalanced in the development of China's 3D commercial animation film. The economic road to the marketization of China's 3D commercial animation began in the late 1990s. It was not until 1922 (Shu Zhendong Chinese Typewriter) was released that a page in the history of Chinese animation was released officially opened. However, with the changes in the social environment, the quality of Chinese animation has not been able to inherit.

In the United States, in 1995, Disney Pictures and Pixar Animation Studios jointly produced the highly successful Toy Story, which made 3D commercial animation films famous all over the world and allowed animation production companies around the world to learn to follow suit. At the same time, it established 3D commercial animation in The United States has become the type of mainstream animation. Hu Di, Buzz Lightyear, has become a childhood playmate and idol of a generation of children.

3. The role shaping of China's 3D commercial animation films

The animation character (Animation character) is equivalent to the actor in a film and is the main body performing in life in the animation. Shaping an animated image is the key to creating animated works. Successful animated characters can not only promote the plot but also create a character brand. Chinese animation character design can be roughly divided into two types, adapting characters from classic legends and drawing on foreign excellent animation characters. The former is more accepted and loved by the audience, while the latter is full of difficulties, mainly because there is no correct inheritance and innovative selective quotation.

Secondly, the character creation of Chinese animation works requires repeated revision and scrutiny before presenting on the screen. In 2019, Nezha: Birth of the Demon Child was released, bringing the classic Chinese characters back to the audience's field of vision, making the audience shine, and receiving widespread praise. Character modeling involves all aspects of the character, from lines to coloring, from facial features to body, from action performance to emotional expression. Every detail can make the audience feel the vivid and three-dimensional character is the successful character design.

3.1. The characteristics of the Chinese nation

Successful animated character design often has rich features and delicate emotions. Different characters' personalities make the characters have different functions. The characters' external appearance, clothing, and accessory design are intuitively communicated, while the internal emotions, characters, and attitudes are gradually revealed in the plot [4].

Figure 1: Nezha's character design.

In the work "Nezha: Birth of the Demon Child", Nezha's shape is different from the previous Nezha in Figure 1. The proportions of the characters are also the characteristics of ordinary children. The black eye shadows around the eyes are all embodied in Nezha. The character and emotion in the film, his essence are God, born strange, a magical tool, can change three heads, six arms, or three heads and eight arms, and has human emotions, arrogance, self-doubt, self-growth. Nezha's face design is inherently unkind, and his personality setting is also rebellious. However, because he has human emotions, he has a kind heart deep in his heart, and these personality settings follow the plot. The development is analyzed step by step. At the beginning of the film, he was discriminated against, ostracized, ridiculed, and hostile by the people of Chentangguan. Therefore, his character is withdrawn, indifferent, rebellious, stubborn, and cynical. Under the cynical appearance, Nezha is lonely and eager to agree. The emotions of Chinese

people are introverted, and the transition and realization of emotions are detailed and deep. It is also the Eastern philosophy formed over five thousand years. The role of Nezha in the film shows more of the connotation of Chinese philosophy. Identification of self.

From color, "Nezha: Birth of the Demon Child" uses bold and concise colors with bright colors. Combining the harmony of Chinese ink and neutral colors, the primary colors of the film are yellow and blue, which establishes the color tone with Chinese aesthetics. The overall color of Nezha Kong is mainly warm colors, the shawl is traditional Chinese red, and the dress is simple Hanfu. The unsealable Wukong uses a lot of warm colors with high saturation to represent the tendency to win."Nezha: Birth of the Demon Child" is also considered to be a successful character innovation, abandoning the familiar face and clothing of Nezha, integrating into the aesthetic needs of the current public, adding the proportions of foreign animation characters, and innovating unique to this film. The image of the Great Sage [5].

"Green Snake", released in 2021, another high-profile Chinese 3D commercial animation film work, also adds many traditional Chinese elements for character design. Due to the continuous improvement of the public's aesthetic level, more animation production companies have invested workforce and material resources under the sponsorship of many national funds and continue to create characters rooted in the original culture. Most of the inspiration for the character set of the movie "Green Snake" came from ancient myths, but it was not used directly, but was remade according to the style and content of the movie."Half the human heart and half the immortal, the eyebrows are empty for a thousand years" This is the inspiration for the protagonist's design in the play. The cultural heritage of the character is fully revealed in an ancient Chinese saying. In the use of colors, traditional Chinese red, ink, and wash paintings are inserted, and the expression of shapes and lines is emphasized. The style of the murals and the characters' dynamics are combined in the figure form to create a uniquely Chinese type of "fairy air" and agile surfaces.

3.2. References from foreign works-taking the US 3D commercial animation as an example

Chinese animation has gone through many detours on the road of character creation. Characters in classic Chinese works are constantly being remade, and outstanding foreign characters are constantly imitated [6]. Both China and the United States have their characteristics and models in character creation. Only by accurately creating character images can they better promote the development of the plot and play a finishing touch. The design of the characters has diversified characteristics, and each character is the most personalized expression. Although the design of the characters is ever-changing, the spirit embodied by the characters is always the same.

First of all, American classic animated characters are more in line with the current fashion elements in appearance. They are derived from life and are popular aesthetic styles. For example, in the film "Frozen", the protagonist Elsa's clothing, hairstyle, and accessories are all designed. It was a popular trend at the time, which created a typical Disney princess image. In terms of character creation, the character design of American animation usually adopts artistic reproduction to create. Secondly, according to the needs of the film, using exaggerated techniques, Disney's exaggerated techniques used in character creation have brought many entertainment effects. For example, the design of Superman in "Incredibles 2" has asymmetrical body proportions in appearance. , The top is enormous, and the bottom is small; it is an exaggerated inverted triangle effect, which brings a special entertainment effect to the audience. Finally, make matching music according to the characteristics of the character, and use music to express its action. It can be seen from this that the role shaping of American 3D commercial animation films is inseparable from the use of innovative design, artistic expression, and exaggeration. Chinese 3D commercial animation films have made efforts and innovations in imitating the design of outstanding American characters, but the audience has not recognized them. In terms of character design, each country needs to have local characteristics [7].

3.3. The stylization of Chinese animation character performance

Animated character performance is different from live-action films and television performances. It is the performance of animation creators using virtual animation images to perform actions, expressions, and sounds. The animated character performances that the audience watched on the screen are the "people" in the performance [8]—the effect of the modification. Animated character performance is complicated. The reason is that animated characters are virtual characters created by animators. Although they are based on real-life, they have been changed and innovated. Therefore, animation performances must dig deeper into the character characteristics of the characters and make the characters more bloody.

Meat has the features of humans or animals, and the combination of the two is more vivid and three-dimensional, and the public loves it. Secondly, the design of animated characters must be exaggerated, including exaggeration in movements, language, and expressions. Accurately mastering the intensity of exaggeration is also the key to shaping the character. The performance of animated characters is the re-creation of the characters and the re-cognition of the script by the animation creators based on following the objective and natural laws. "Some animations are produced by real people's performances, so that their animated characters simulate human performances." Therefore, animated characters use anthropomorphic effects to show human thinking and emotional state. Flexibility is based on objective facts—the matching of actions and personality and language expressions and emotions [9].

The early action performances of Chinese 3D commercial animation films inherited the stylized "Chinese school" of opera. The actions and movements of different characters have fixed formats and names. Most of them are extracted from life, try to stay close to daily life. The soundtrack also follows the rhythm of the character's movements with essential tunes and styles. With the development of the times, the character performances of Chinese 3D commercial animation films have not ultimately inherited the expression methods of the opera program. However, they have learned the flexible performance methods of foreign countries. However, most of the role performances of Chinese 3D commercial animation films do not understand the law of flexible performance. Flexible performance is based on a large amount of data research and field investigation, adding the subjective consciousness of the creator to make innovations and changes so that the action is closer to the original appearance of life and has a funny and humorous effect. However, Chinese 3D commercial animation does not have flexible effects in the detailed processing of character performance. For example, in the movie "Monkey King: Hero Is Back", the demon king remains unchanged from the beginning of the film at the end, and the characters have not grown and changed. The character design is not realistic enough, and there is no comic effect to attract the audience. It does not consider the objective laws of real life, blindly welcomes the content of the cooperation product, and is far-fetched.

Comparing the performances of different Chinese and foreign characters shows that Chinese stylization is slightly inferior to flexible foreign performances in terms of audiovisual effects. The strong contrast incorporated in flexible performances can attract the audience's interest and attention. At the same time, the two have similarities. , Are all non-realistic performances? Flexible performances pay attention to burlesque performances, while Chinese opera focuses on dance movements. The role performance of Chinese 3D commercial animation films needs continuous exploration and innovation. Based on the stylization of opera, humorous and funny expressions are added to make the animation image-rich and fresh.

4. Conclusions

Nowadays, 3D animation art has penetrated human entertainment life with its vigorous vitality, and the commercial industry has become a cultural symbol of the country's soft power. It is also another way for governments to transfer cultural values. As an emerging industry, the animation film industry in China now has vast room for development. 3D animated films with excellent character design are the key to the success of animated films. Whether in the early setting of the animation script or the overall production, you must be aware of the importance of character design. Only by paying attention to the aesthetic and cultural needs of the public, focusing on the design of characters, and digging out the values that belong to the Chinese spirit can we create a 3D commercial animation film that meets Chinese characteristics. Produce 3D commercial animation movies with Chinese characteristics.

We look forward to and believe that China's 3D commercial animation films will always move in the right direction, continue to bring shocking works to the public, and refresh the popularity of Chinese animation films in the world.

Acknowledgements

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