Research on the Influence of Special Effect Art on the Audiences' Continuous Viewing Intention in Animation Films

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Abstract: The research on the influence of audience viewing willingness is a method to analyze audience viewing willingness from the perspective of audience, which is applicable to the analysis of audience ratings in animation, film and television industries. Based on this, this paper takes the use of special effect art as the starting point, and analyzes the relationship between the use of visual effects and sound effects and the audience's willingness to watch movies through questionnaires and in-depth interviews. The results show that there is a positive correlation between the use of special effects in animated films and the audience's willingness to watch, and it has a positive impact on the audience to increase sensory stimulation, improve aesthetic space, and generate spiritual resonance. The purpose of this paper is to explore the impact of the use of special effects in animated films on the audience. So as to explore its future rising space, in order to point out the development direction of domestic animated films for readers.

Keywords: Willingness to watch, Animation film, Special effect art, Audience

1 Introduction

Since the first trailer of the domestic animated film "The Deep Sea" was released in 2020, a large number of audiences have directly called "Amazing" in a short time, and have successively published "The Rise of Guoman" on various platforms "You must go to the cinema to support it when it is released" and other positive comments. Although the first trailer of "Deep Sea" does not involve much plot, it has already lifted the appetite of many audiences in terms of special effect technology. The "particle ink style" initiated by the production team "-- Using 3D particle special effects to express Chinese ink and wash has overcome the contradiction between the 3D technology of representational realism and the traditional freehand 2D picture, broken through the inherent problems in color shading, edge softening, particle sense, etc., and finally formed this visual feast with great visual impact. It can be seen from this that the special effects in animated films will stimulate the interest of the audience, so whether the special effects art in animated films will continue to the audience Does watching have an impact? This article takes this as a way of questionnaire and in-depth interview to study the impact of special effect art in animated films on the audience's willingness to watch continuously. And w further discusses its impact mechanism,

aiming to tap the development direction and rising space of visual effects in animated films, and find a road suitable for the development of Chinese animated films.

2 Literature Review

2.1 Animation film

Animation is a comprehensive art that integrates painting, music, photography, digital media, literature, thought, etc. The principle of its realization is the "Persistence of vision" discovered by British Peter Mark Rogate in 1824, which mainly refers to the phenomenon that the vision generated by light on the retina remains for a period of time after the light stops acting. Its specific application is film shooting and projection.

Animation film is an extension of animation, which is a large-scale film made in the form of animation. It is generally believed that animation is mainly divided into two-dimensional animation (mainly single line flat painting) and three-dimensional animation (mainly computer-generated graphics and even animation). Chinese animation has a long history. Chen Shaopeng pointed out that since the founding of the People's Republic of China, domestic animation has created the "Chinese School" and won numerous awards overseas with its strong national cultural characteristics (Chen Shaopeng, 2019). In Zhang Qizhong's opinion, as early as 1926, the era of domestic animation films was created, and animation in different times served the needs of the times at that time. From the beginning of commercial entertainment, to the patriotic propaganda of the Anti Japanese War, and then to the education and culture after that, every period was trying to explore. In addition, he pointed out that although domestic animation had fallen into a low ebb due to the torrent of animation introduction, the shackles of low education and the drawbacks of the industry's own system (Zhang Qizhong, 2017). However, at present, domestic animation films are taking a slow road to the upper body. This view coincides with Chen Shaopeng's view. Chen Shaopeng also has an optimistic attitude towards domestic animation, pointing out that with the improvement of China's own economic strength. China should re-examine and position its local culture. At present, new Chinese characteristics are being constructed, and this paper also believes that China is exploring animated films with its own characteristics. Whether it is the 2019 two-dimensional animated film "Luo Xiaohei's Battle", or the recent two years' new three-dimensional animated films "Green Snake Robbed" and "New God List: Yang Jian". All demonstrate the improvement of China's hard power. The arrival of the current epidemic will only allow domestic animated films to have a better reserve time, and will not interrupt the rising period of Chinese animated films.

2.2 Application of special effect technology in animated films

Special effects are artificially created virtual illusions. With the advent of the digital media era, based on highly developed film and television special effects technology and huge market demand, animation films began to use special effects technology. Special effects can not only

make nonexistent virtual things come true, but also help complete some difficult pictures, such as steep mountains, hot magma, and difficult shooting angles.

The development of mainstream special effect shooting techniques is generally believed to be from the early "replacement shooting method" to the cg "computer synthesis method" in the 1980s to the modern "blue screen matting technology". Hou Lin traces the development of the entire animation special effects from a historical perspective. It originated from Star Wars in 1977. It was the first film to be shot with motion control cameras. After Lucas, the investor of the film, established the world's first film special effects company, "Industrial Light and Magic". Later, the science fiction film "Jurassic World" in 1994 created a breathing, textured and muscular creature for the first time. In 2009, the film Avatar directed by James Cameron used motion capture technology and face capture technology to make the action and expression of 3D animation characters fully fit the actors. It also used terrain software and 3D model software to restore a virtual world (Hou Lin, 2016). Liu Feng introduced the animation special effects with the process of film and television production, which is divided into the creation of virtual scenes, action simulation and graphic synthesis. He pointed out that the dangerous scenes in the film and the scenes difficult to be captured by the camera can be replaced by special effects. But he also extended to mention the particle special effects system, which can achieve dynamic abstract effects such as explosion, foam, water flow, etc., making the film more realistic and visual impact (Liu Feng, 2014). This kind of special effect technology is used in the trailer of the 2020 domestic animated film Deep Sea. The mainstream software for designing special effects includes maya, houdini, c4d, ue, etc. If you want to list them in detail, you can reach dozens. In addition, each software itself is being updated iteratively, and more new software is being developed, so the learning of technology seems endless. According to the current situation, it seems important to learn new technical strength, but using existing technology to create an innovative style is the key to success! This research believes that this is also the reason why a short "Deep Sea" trailer has attracted numerous fans once it is released.

When it comes to sound effects, some studies have taken "The Demon Child of Nezha Comes to Earth" as an example, emphasizing that good dubbing is also the soul of the animation film industry. And in today's computer science and technology are so developed, the voice of electronic synthesis is also true and unreal, which is difficult for the audience to distinguish. So along this line of thinking. We usually take it for granted that the burst visual effects are all that constitute the special effects technology, but we ignore some soundtracks in the film that cannot be shown by normal shooting methods. For example, the voice of thousands of troops, the wind, the crash sound, etc. are also special effects, which make the whole film more perfect, increase the artistry of the film and reflect the saturation of the characters' emotions, and then sublimate the theme of the film. Therefore, this study temporarily divides special effects into two categories, visual effects and sound effects, both of which are the soul of animation films.

Existing studies believe that such animated film special effects will gradually crowd out the traditional film market. In other words, films have been inseparable from the support of special effects technology (Longjiang, 2010). At present, both two-dimensional animation and three-dimensional animation will be more or less integrated with special effect technology. The public can't help measuring the degree of animation production by the use of special effect technology

when watching an animation film. When watching animation on websites such as Station B, Youku and iQiyi, the comment area often laughs at movies with poor quality special effects as "fifty cents special effects" and "ppt animation". When special effects are produced that meet the expectations or even exceed expectations, there will be "every frame is the taste of gold coins", "big investment" and other bullet screens to speculate on the cost of an animation production.

In general, existing studies believe that special effects technology is an integral part of the animation film industry today, and it has great room for development. However, few studies focus on the role of special effect technology in animation films from the perspective of audience,.So this article will focus on the audience to understand the impact of such animation films' special effects on the audience, aiming to explore the future development direction of animation films from the perspective of audience.

3 Method

3.1 Research methods

On the basis of the above realities and theories, this study intends to adopt the research methods of questionnaire survey and in-depth interview, and from the perspective of the audience. It will associate animated films, special effects technology, and audience's viewing intention, and study the relationship between the use of special effects technology and audience's viewing intention.

3.2 Research assumptions:

H1: There is a positive correlation between the visual effects of animated films and the audience's willingness to continue watching.

H2: There is a positive correlation between the sound effects of animated films and the audience's willingness to continue watching.

3.3 Independent variable, dependent variable and intermediate variable

In this study, the independent variables are the type of special effects used and the amount of special effect technology used. The dependent variable is the audience's willingness to watch. The measurement of this is in the form of Likert's 5-point scoring, which respectively means that "1" has no attraction to "5" has the idea of going to the cinema. The higher the score, the more attractive the use of special effects technology is.

In this article, it is assumed that the corresponding research object is the youth group over 18 years old in the first tier and second tier cities. Under the 90% confidence interval and 4% sampling error, 221 valid questionnaires are finally recovered and data analysis is conducted.

4 Results

4.1 Data cleaning

The respondents are young people aged 18 to 35 who live in the first and second tier cities, that is, those who have a certain film reading age. The proportion of men and women is close to one in one. For the need of epidemic prevention and control policy, the author used the questionnaire star to design the questionnaire, and distributed 250 questionnaires (221 valid questionnaires) online, with an effective rate of 92%. Secondly, 9 interviewees were contacted through friends circle and QQ group (see Table 1). The interview was conducted in the form of telephone interview, WeChat text interview, one-to-one face-to-face interview, etc. The interview results were compiled into manuscript.

Table 1 Basic Information of Interviewees

Interviewee	Gender	Identity	Location
1	female	senior student	Yangzhou, Jiangsu
2	female	junior student	Nanjing, Jiangsu
3	male	special effects practitioner	Nanjing, Jiangsu
4	male	senior student	Shanghai
5	female	special effects practitioner	Shenzhen, Guangdong
6	male	special effects practitioner	Beijing
7	female	senior student	Shanghai
8	female	junior student	Suzhou, Jiangsu
9	male	special effects practitioner	Qingdao, Shandong

4.2 Sample description

271 valid questionnaires were collected, of which the 21-25 year olds accounted for the largest proportion (34.4%), and the proportion of men and women was close to one-to-one. The frequency of watching animated films was low, and 46.6% of people would go to see a film only once more than half a year.

In the post epidemic era, mobile phones (48.8%) were the way most people chose to watch movies. According to the survey on the willingness to watch movies, most people simply like watching animation movies as a kind of enjoyment. The average number of this group (3.75) is higher than the average number of "other people's Amway" (3.69) and the average number of "purposeful watching animation" (3.67).

According to the survey, people tend to think that visual effects are more important than sound effects. About 38.01% of people think that visual effects are important to an animated film, and about 18.10% of people think that visual effects are not important. About 38.91% thought that sound special effects were generally important to an animated film, and about 28.51% thought that sound special effects were unimportant. Among the effects of special effects technology on

people, most people supported the three viewpoints of "better understanding the true meaning of the film" (86.43%), "improving the artistic aesthetic ability" (80.54%), and "providing sensory stimulation" (65.16%), indicating that these three items were most closely related to people's viewing intentions.

4.3 Hypothesis analysis

This paper analyzes the correlation between visual effects and audience's willingness to watch. Pearson correlation analysis shows that the correlation coefficient is 0.541 * *, p=0.000 * *. The visual effects and audience's willingness to watch continuously show a significant positive correlation. Hypothesis 1 is valid.

This paper analyzes the correlation between sound effects and audience's willingness to watch. Pearson correlation analysis shows that the correlation coefficient is 0.625 * *, p=0.000 * *. The visual effects and audience's willingness to watch continuously show a significant positive correlation. Hypothesis 2 is valid.

In general, it is found through research that the visual effects of H1 animated films are positively correlated with the audience's continuous viewing intention. And the sound effects of H2 and animated films are positively correlated with the audience's continuous viewing intention, which indicates that the use of special effects technology will stimulate the audience's willingness to watch movies and continue to watch movies.

5 Conclusion

In combination with the background of the epidemic era, this paper first analyzes the impact of special effect technology through the relevant concepts and assumptions of social psychology. Because people spend more time alone at home, loneliness and psychological pressure increase, the virtual reality produced by special effects meets the audience's psychological needs of empathy. Secondly, the special effect technology makes the story vivid, which can achieve the effect of mood transformation after satisfying the audience's emotional experience. Finally, the creation and expression of special effect art in animation films can make the audience feel the diversity of society and the complexity of human nature, and then reflect, meeting the needs of the audience to monitor the environment.

5.1 In the post epidemic era, meet the psychological needs of the audience for empathy

According to the theory of "use and satisfaction" of communication science, audience contact with media is based on a certain demand or a certain desire. When the media can meet this specific demand, the audience will take the initiative to contact the media. This theory also has a mapping in the special effects technology.

On the one hand, the special effect technology restores the screen objects that are difficult to shoot in reality. The special effect technology integrates people's cognition, perception and

emotion into a three-dimensional space. Its composition diversity and screen flexibility break through the limitations of traditional animation films (Lin, 2022), making the screen more natural and lifelike, and better replacing the audience. On the other hand, it lowers the emotional trigger points of the audience. When the fight scenes are mixed with some explosive effects, and the emotional scenes are mixed with sentimental music at the right time, the audience, who is already emotionally adrift, becomes more susceptible to the emotions of the film.

"It seems that movies with special effect technology will stimulate the desire to see from the beginning, and will gradually forget myself when watching them, and can't help entering the play." (Interviewer 7)

The audience will find their own shadow in the film, and see their own experiences similar to those in reality in the film. To some extent, the audience has completed their own mood transformation on these characters, producing the effect of empathy. At this time, the film, as a spiritual post, contains the shadows of all kinds of people in the society. The special effect technology builds a bridge between the post and people's minds.

5.2 Realize the transformation of mood and meet the psychological needs of audience's emotional experience

The use of special effect technology in animated films not only gives the audience the opportunity to release their emotions, but also confirms their self value.

Art originates from reality. As a fictional art, film is also based on its fantasy and grandiosity, which can be accepted and understood by the general public. With the ups and downs of the plot, it will experience the joys and sorrows of the characters in the film, and begin to project its own value on the characters, replacing itself with the characters in the play. Let the public find a balance between the illusory role and the reality to achieve emotional resonance, and by substituting themselves into the role behavior, they realize the brilliance of human nature. So as to reflect on themselves and adjust their behavior and values in a timely manner.

"From a historical perspective, animation is the product of different needs in different times. It was used to promote patriotism in wartime, and it was used to praise peace, educate and disseminate information in peacetime." (Interviewer 9)

In addition, it is worth mentioning that this demand is not only the improvement of the audience's own realm, but also the need for interpersonal relationships, which belongs to the need for social interaction. People are born with a sense of congenery. The epidemic has hindered people's social activities and increased loneliness and insecurity. Originating from people's inner sense of belonging, this makes it possible that the publicity of other people's movie Amway on the social platform is much stronger than that of the movie trailer itself, because it provides topics for people, and unintentionally allows individual people to integrate into a social group, filling the emptiness and loneliness of a person's heart.

5.3 Feel the complexity of human nature and meet the psychological needs of the audience in the monitoring environment

People are born with the ability to capture information in a timely manner in order to cope with environmental changes, while maintaining sensitivity to social events.

How to express a film has always been an eternal topic in the film industry, and the progress of its expression techniques cannot be separated from the development of the times, people's needs and the development and application of new technologies. (Wan, 2021) The film is not just a kind of humanistic expression. It undertakes the mission of detecting the surrounding environment and can become an inspiration to the public. If you want to stand firm in the market and break down the psychological defense line of the audience, it is essential to keep pace with the times, follow up the social information, provide the audience with a window to watch the reality and open up new horizons.

"In the post epidemic era, domestic special effects production should be more realistic." (Interviewer 3)

"The urgent task at present should be to let the visual effects go out of the local cultural style." (Interviewer 4)

"There is no shortage of talents in the special effects industry. The top priority is to lack a good director and screenwriter." (Interviewer 9)

This can reflect the future trend of Chinese animated films under the epidemic situation. If it is subdivided, it will be very cumbersome. From a general perspective, in the leisure and entertainment industry, practitioners must map the audience's participation and preferences, motivation and practice in a broader experience, which helps to identify the unique views of different audiences on the value of watching films and predict their ways of action (Simon, 2020). Everyone has different view of the value of going to the movies. There is no doubt that COVID-19 has overturned the original strategic thinking of the industry. But he also pointed out that the way to innovation is to stand in multiple perspectives, find an eclecticism that everyone can accept, according to the taste preference of the audience, timely adjustment.

Admittedly, this study also has some limitations. First of all, there are deficiencies in the data, such as the inability to fully present the diversity of the impact of film and television special effects. Secondly, the interviewees did not know much about sound effects, which made the article focus on visual effects. Future research should increase the number of questionnaires and interviews, and further add qualitative research methods such as focus groups. In addition, it integrates the characteristics of special effects technology at home and abroad to improve the richness of the research results.

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