Research on animation modeling from the perspective of traditional elements and digital fusion

Wang Guixia

Jiangsu Electronic Information Vocational College, Huai'an, Jiangsu, China

Keywords: Animation modeling; Traditional elements; Digital fusion

Abstract: Modern animation design based on traditional modeling and digital integration is produced under the background of the development of computer application technology. Its formation is the representation of traditional cultural forms, the pursuit of visual effects of film and television animation, and the expression of the rapid innovation of software technology. After more than ten years of digital image changes, animation modeling with traditional expressive significance has been widely used in film and television, advertising and games. Focusing on the expression forms of modern digital animation, this paper expounds the expressiveness and importance of traditional elements in animation modeling in the current information age, and explores the application methods of traditional elements by means of digital expression in modern animation modeling design.

1. Introduction

Animation can not only express people's thoughts, but also a more effective tool in communication. Although its design intention is only for people to appreciate, it can show an intuitive visual art to the audience through the design of characters, using image language and abstract meaning, so as to promote the communication between the audience and animation. Digital animation design plays a vital role in the development of China's economy and culture. China's traditional culture has a long history and has a long history of more than 5000 years. It is a glorious existence in the history of world art and has various cultural forms. Therefore, integrating traditional cultural elements into animation design can promote the diversity of animation forms, roles and contents, and bring more profound experience to the audience[1].

2. The significance of traditional elements in modern animation

In the traditional animation art creation, the meaning of modeling language is consciously emphasized and conceived with logical thinking. Modeling and color, as the constituent elements of visual language, can express rich content and complex emotions. With this conscious emphasis and logical thinking, people have a habit of naturally inducing visual language from life. Among the traditional modeling forms we understand and agree with, historical and national occupy two main parts. They are the carrier of cultural spirit and the source of artistic style. Traditional modeling elements mainly express cultural symbols and pattern styles. Such modeling elements have representational "characteristics", and the types can be single or diversified. For example, the well-known traditional modes of clothing, food, housing and transportation, such as lifestyle, folk clothing and architectural style, have rich content, various forms and broad themes, which can better stimulate inspiration for animation creation. Modern animation design takes creativity as the core, and traditional modeling elements are the basis of creativity. When creating Chinese and foreign classic animation, the author is vigorously promoting his own nation or learning from the cultural traditions of other nations. If modern animation modeling is not based on rich cultural heritage, it will weaken the visual art effect of watching and reduce the audience's emotional appeal to the depth of animation film and television. Therefore, it is very important to reflect the national traditional language in animation design. As the form and content of traditional animation three-dimensional modeling, it is not only the representative of localization, but also the reproduction of

people's thought for a long time. It is an idea model formed by the accumulation of cultural life[2].

However, if we copy the traditional style in the process of animation creation, it can not adapt to the development environment of contemporary animation and the audience's viewing demands. Therefore, we need to adjust and change on the basis of inheriting the tradition. Through simplification, addition, deconstruction and reorganization, the original modeling language can be re created, and the design techniques of modern digital form can be summarized and interpreted to create modern animation works based on tradition. Break the restrictions of culture, national boundaries and language, so that more people can accept and appreciate it. Let animation design have both regional characteristics and international vision, better disseminate knowledge content, let more people understand our excellent traditional cultural content, get rid of the limitations of single form and content, and eliminate the obstacles in cultural thinking. Traditional modeling elements have their own distinctive characteristics and stable forms of expression, such as unique ideas, profound spiritual connotation and aesthetic concepts, which have come down in one continuous line from ancient times to now. Although the times have changed, the traditional form still needs to be inherited and developed, which is an inexhaustible source of inspiration for animation creation Spring. Some scholars believe that the so-called "internationalization" can not be selected and judged completely according to the values of European and American countries, but should be based on their own local culture, excavate the spiritual connotation and reshape the image of contemporary art in order to better present cultural values. In recent years, we have created idiom stories and animation of filial piety and virtue etiquette. The story content is single and the character modeling is simple. While emphasizing the national cultural characteristics, we ignore the cultural differences, and often fall into the quagmire of rigidity. In the process of adhering to the expression of traditional language, creators should seek the balance point of cultural commonness, establish the concept of inclusiveness, accommodate differences, carry forward traditional culture, introduce cultural factors, and strive to make these seemingly different cultural elements "live in harmony" and produce far-reaching animation creation.

3. The embodiment of traditional elements in the field of modern animation

Traditional style is a part of traditional culture. It has rich national spirit and represents the outstanding ideas and values of the country. For example, our landscape painting, drama, paper-cut technology, woodblock New Year pictures, national costumes and residential buildings are the source forms of traditional plastic arts. These art forms carry forward excellent national culture and bring people rich spiritual life. We have many excellent animations from Chinese traditional historical classic stories, myths and fairy tales, in which the animation modeling and environment fully show China's traditional culture.

Some excellent foreign animation works came into being based on the performance of traditional ideology. For example, the American cartoon Kung Fu Panda series is a typical representative work. It uses many traditional Chinese elements to depict poetic landscape architecture and character environment. Cornices and arches, red walls and green tiles show the grandeur of Chinese palaces and the garden landscape of small jasper. Personification of animals to create the image of Wulin experts; Drawing on the landscape of Lijiang in China, the ancient tombs depict beautiful scenes. Kung Fu Panda 2 combines the connotation of Chinese traditional culture with the contemporary social environment. It not only has the image space created by tradition, but also makes the audience have a refreshing visual effect. In the plot, it reflects the various difficulties faced by "people", explores the past and future of "people", reflects on the disasters brought by science and technology with the performance of Chinese traditional Taoist thought. From time to time, the film also expresses the content of the story through the rich expression dialogue of the characters, such as the kung fu master narrating the scene of "Silence" and expressing the connotation of "Silence" through philosophical principles. Ingenious use of traditional cultural concepts and storylines, through the facial language of animated characters, the philosophy is told incisively and vividly, the narrative is perfectly combined with the scene, and there is no condescending preaching, which truly becomes the perfect combination of tradition and modernity.

Figure 1 Kung Fu Panda Chinese elements

4. Application of digital technology in animation design

Digital image is an object image created by two-dimensional or three-dimensional software based on computer operation. In the process of making modern animation, the use of digitization has become the main means. Through character modeling, action capture, scene setting, music synthesis and dialogue dubbing, we can better break through the single planar visual environment of traditional animation production and become a three-dimensional performance with symbiosis of time and space. The dissemination and promotion of digital technology can accelerate people's mastery and use, improve the production speed of animation modeling, enhance the richness of visual effects, and bring people effects that can not be expressed in two-dimensional space. In the development and integration of computer software, the design of three-dimensional modeling image, digital playback and transmission, it can fully realize the digitization of mobile Internet and realize the perfect combination of reality and virtual. Compared with the traditional animation hand-painted modeling performance, the digital modeling of computer image is more realistic, more three-dimensional, more interactive with people, and more communication space. From the first three-dimensional digital animation modeling to today, it has experienced many changes. Whether for the modeling of scene model, material texture, action expression and other aspects in animation, the application of computer digital technology has entered the mature period from the preliminary stage, and the three-dimensional digital modeling can completely achieve the effect of confusing the false with the real. China's digital application began gradually in the 1990s. Most creators are based on the combination of art and computer. Their process is to imitate and learn the evolution and development process of Western Digital. Since the traditional hand-painted and plane animation creation has been transformed into computer three-dimensional software animation, the practitioners are exploring. Most colleges and universities only teach computer software operation and basic painting courses, and do not really combine art, technology, social background and cultural tradition, so the relevant knowledge is scarce, It is difficult to produce excellent animation works. However, with the rapid development of computer graphics and image technology, two-dimensional digital animation gradually turns to three-dimensional digital animation. The application and promotion of digital technology greatly promote the development of animation industry and make the animation design and production speed faster and faster. The technical development of three-dimensional software can be real in the field and time and space. Through graphic transformation, image generation, role-playing and action capture, it can build a more accurate and realistic virtual world, promote the perfect combination of art and technology, highlight the uniqueness of digital plastic art, make use of digital forms and bring infinite imagination.

Table 1 main application modes of 3D technology

digital technique	mode
3D digital animation technology	Graphics conversion
	Image generation
	cosplay
	Motion capture

5. Animation under the integration of traditional elements and digitization

Modeling design in traditional animation creation, modeling features emphasize that the story background is the foundation, the logical thinking is the main line, and the character modeling and environmental color are the constituent elements of visual language to express rich picture content and complex emotion. The traditional modeling language is through the combination of comprehensive expression methods, such as lines and color blocks, to become a comprehensive performance picture. After the digital production and application, the material design has become the main composition mode. It mainly uses two-dimensional or three-dimensional software in the computer to set the scene picture, shape the character background and render the plot environment according to the story content, and then synthesize it through digital technology to finally form a complete animation work. In specific artistic practice, digital animation modeling design obviously needs to break through the traditional definition, break through the conventional methods and realize new creation. However, traditional modeling elements are still the basis of creative design and the key to the development of animation. Traditional elements not only bring the source of inspiration for animation modeling, but also reflect the more profound historicity and sociality, which makes animation production more profound. In the process of creation, the author can introduce and excavate traditional elements, realize new ideas of animation creation and expand the width and breadth through the combination with modern digital technology. For example, Hayao Miyazaki's animation not only has traditional hand-painted creation and lens performance, but also uses computer digital technology to create, depicting beautiful rural pictures such as blue sky with large white clouds, golden sunshine and green paddy fields, causing the audience to miss and yearn for the pastoral scenery. It also shows the miserable side through the black smoke and the ground poured with magma, which leads the viewer to the yearning for peace and the opposition to war. The modeling and setting of these characters are rooted in traditional ideas. They are not only the speculative creative expression of cultural consciousness, but also the artistic presentation of the national and regional characteristics of the works.

6. Conclusion

Based on the characteristics of national traditional culture, the use of digital technology to integrate traditional elements into modern animation design is the inheritance and development of history. This creative form can arouse the resonance of the audience in thought, stimulate memory and produce emotional interaction. Through computer digital information technology, the traditional graphic style can be transformed into three-dimensional animation. Modern animation modeling designed with traditional elements is an important way to express the traditional language with modern technology in combination with historical characteristics and current needs. Only in this way can better animation works be displayed in front of the publicFigure1 utilizes a combination of unmanned aerial[3].

References

[1] Zhao Rui. Application of traditional cultural elements in digital 3D animation design. [J] Art review, 2021 (24): 152-153

[2] Jiang Weigang. Application of traditional cultural elements in digital 3D animation design. [J] Papermaking equipment and materials, 2020,49 (04): 102-103

[3] Hu Ke. Exploration and practice of the integration of traditional cultural elements and digital Creativity -- Taking the digital media work Guangdong sense as an example. [J] Chinese art, 2020 (03): 122-125