An Analysis of Mainstream Animation Education in Japan and the United States Using Computer 3D Technology

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Abstract. As an important part of culture and entertainment, animation is also a form of artistic expression with entertainment and educational functions. The application of computer 3D technology makes the animation more vivid and expressive. This paper uses computer 3D technology to analyze the entertainment and educational functions of American and Japanese animation, as well as the educational significance of American and Japanese animation. This paper points out that computer 3D technology not only creates new cultural connotation of American and Japanese animation content, but also is one of the important factors of its educational significance.

Keywords: Education Significance, Computer 3D Technology, Animation, American and Japanese

1. Introduction

Animation is one of the important products of contemporary culture and entertainment, and it is also a manifestation of art. As a branch of culture and art, animations often have a certain educational function and significance[1]. People watch the animated films to achieve entertainment and relaxation, while at the same time they are educated and inspired invisible. A good animation should be a perfect combination of artistic, ideological, and entertaining, or potentially or explicitly include a certain degree of educational significance, reflecting the pursuit of truth, goodness, and beauty. All cultural activities in the society have a certain educational value for the participants, that is, they will have a certain influence on the physical and mental development of the participants. As a branch of culture and art, animations should certainly have some educational value. The United States and Japan can be regarded as the most successful and most developed two animation giants in today's world. In the long-term development process, especially in the context of globalization, the phenomenon in which animations of the two countries affect each other and learn from each other is very obvious. Analyzing the education of mainstream animation in the United States and Japan is of great significance for the development of animation in China.

2. The Characteristic of American-Japanese Animation Culture
2.1. American Animation Culture
After more than one hundred years of development, American animations have become self-contained and have a place in the world of animation. The United States, as one of the world’s largest immigrant countries, has interwoven each other’s cultures and created today’s American animations. The themes and ideological connotations of American animation are usually based on the taste of the majority of the audience to convey universal values that are universally applicable. American animation stories often float above the reality, shielding or deliberately escaping the contradictions and impossibilities in the real society. They always appear with the appearance of a song and dance drama and comedy in order to create a mirage like ideal world for the audience to temporarily get rid of the cruel reality and indulge in it. It should be pointed out that the choice of theme in Hollywood animation is closely related to American history and social reality.

2.2. Japanese Animation Culture
Japanese animation covers a wide range of ages, and the storyline is set very finely. In addition, the performance of many characters in Japanese animation is relatively lively, and the strong storytelling makes it extremely easy for viewers to enter themselves into the animation world. And Japanese animation often contains a lot of educational philosophy, but it does not make people feel boring. The theme of the theme is more of the color of critical realism, and it has considerable depth in revealing and reflecting on practical contradictions.

3. The Function of the American-Japanese Animated Animation
Just as the animation industry is categorized as a digital entertainment industry and it is also part of the cultural industry, cultural and entertainment functions are the most intuitive functions of animation, and people pursue animation images, toys and games mainly for entertainment purposes. At the same time, as a cultural industry, animation will affect people's values and behaviors in an imperceptible manner, so-called cultural education functions. Especially for children and youth groups, they are the main target audience of the animation industry. For children and young people who have not yet established a personal world outlook, outlook on life and values, the worldview, outlook on life and values in animation have a great impact on them. Positive animation works are very educational for teenagers and children. The cultural, entertainment, and educational functions of animation mainly affect people[1].

3.1. Entertainment Functions
Entertainment features are one of the main features of most animations. Highly entertaining animations can win audiences' love and laughter with classic shapes, exaggerated movements, humorous dialogue, and ups and downs [2]. American animation strictly abides by the concise and orthodox universal values, pursues a combination of entertainment and education, and consciously promotes universally recognized social norms and ethical norms. It is always fun and entertaining, which is ideal for the whole family to watch together, children laughed at the same time also learned about the affection and friendship, while adults relax the physical and mental work, and enjoy the warmth of the family during the fun with the children. The popularity of U.S. animation edutainment and music has reduced the threshold of children's appreciation in other countries of the world and provided it with an understanding of the protection of the world. From this we can see that the greatest range of audiences brought about by the universal value of edutainment and inclusiveness is one of the important factors for the success of American
animation. For example, in the United States, entertainment-oriented animations such as *Viking Cat* and *Cat and Mouse* are full of imagination and convey high entertainment value, especially for the imagination of children and young people.

3.2. Educational Functions
Educational functions are also one of the main features of most animations. Because education is a required course for the survival and development of human beings, it is an animation that cannot be completely avoided. The composition of educational content is very rich. From the perspective of its form of expression, there are material, symbolic, spiritual, and behavioral. The animation can be said to be a kind of symbol, through which the educational purpose of influencing people's way of thinking and behavior can be achieved. To achieve such educational purposes, it also requires animation content to have a certain educational significance. Japanese animation has deep oriental culture. Although the natural deep feeling of the Orientals made the Japanese animation less humorous, it could exert unlimited imagination in the storyline and theme setting, and it also enabled the audience to experience the thought-provoking theme. Japanese animation is generally divided into two types of themes: One type of comparison highlights unity as strength, and uses individual struggle as a clue to achieve a high collective goal. Such as *Saint Seiya*, *slam dunk*, *Naruto* and so reflects the strength of the team. The other category expresses the resistance of adults to social pressure and hopes to return to the hours they wish to do. Crayon Shin-chan and Xiao Mi in *Totoro* are examples of such topics.

![Figure 1. Computer 3D animation production](image)

4. Analysis of the Educational Significance of American-Japanese Animation

4.1. Education for Young Children.
Young children are generally unable to skillfully use spoken and written languages. In this case, animations are an auxiliary educational tool that can be used. Therefore, we have relatively valued the educational function of animations and emphasized the significance of education. Disney's animations are no stranger to us, such as *Snow White*, *Sleeping Beauty*, *Cinderella*, *Beauty* and *the Beast* are all familiar works. The animation *Snow White* is a young little princess...
who is beautiful, kind, gentle, and very friendly to her friends. Her beauty was paralyzed by her vicious stepmother and she was forced to leave the imperial palace and meet and become friends in the forest and the seven dwarves. She was unfortunately poisoned by Queen's poisonous apple, but everyone likes her love. She has the friendship of small animals in the forest, and she also has her own love. The prince's kiss has enabled her to live a happy and happy life. This animation evokes the kindness of the child's soul.

Japanese animation director Hayao Miyazaki founded his own company and produced many moving animation works, such as Spirited Away, Hill's Castle, My Neighbor Totoro, Wind Valley, Sky City and so on. When the characters in the animated works appear vividly before the eyes of people, as the development of the stories and the hero's emotional expression we seem to walk into the story. Our emotions fluctuate with the emotions of the characters, as if the characters in the animation live deep inside of heart. In these works, love is used to contact the entire story and make the audience feel as if they are on the ground[2].

4.2. Education for Adolescent

Adolescents are a group with certain basic knowledge and certain ability to think. Therefore, animations directed against them generally have strong entertainment and appreciation [4]. The stories are relatively rich in content and have a certain educational significance. Mankind advocates freedom, peace, and development. The constant advancement of human society cannot be separated from justice and courage. The animation works not only convey the human embarrassment of truth, goodness and beauty, but also reflect the prowess of heroism and justice[3]. In the American animation Crazy Animal City, the courageous and kind rabbit Bunny is deeply loved by the audience. Judy is a small role in animal society, and she is naturally small and has no sharp claws. However, she has a great dream and a kind heart, through her own efforts and her dedication to ideals, she became a police officer in the animal city. She used her sincerity and kindness to win the friendship of Fox Nick and fought side by side to save the animal city. In a social environment full of contradictions and pressures, each of us heart lives in a small Judi, she is small, but she has her own dream, and in order to realize her dream, this animation teaches teenagers to be better themselves. Each animation is actually a philosophical story, and the positive energy conveyed in the animation can infect every teenager. By watching animated films, the audience can connect themselves with the characters in the animation, and their emotions and emotions are fluctuating with the development of the story, the sense of justice or the mission of eliminating evil and promoting good infect them[4].

4.3. Education for Adults

Adults have independent thinking and discernment ability, which is not the period of passive acceptance of education. Therefore, animations should not express educational significance in obvious forms of preaching. Excellent animations for adults should have outstanding entertainment or ideological and artistic features, and their educational significance is often implied. For example, the Disney animation The Lion King has a certain potential educational significance. The film describes the lion brother Simba in the company of many friends, experienced life and death, learning and growth, love and responsibility and other tests of life, and ultimately defeated the evil forces and ascended the throne of the king of the forest. The epic grand scene and meaningful human interpretation lead people to think philosophically about the ultimate issues of reincarnation and wisdom transmission, and to experience endless life movements. The animated social education function is manifested in that it does not oppose
tradition and authority in a very true or explicit sense, or competes with mainstream ideology. Instead, it uses its unique artistic expression to reorient and reexamine today's society and culture, and to make interpretations and interpretations of post-modernism in comics and humor, and to deconstruct classics and authority in an easy and entertaining way.

Another example is the works of Japanese animation master Hayao Miyazaki's The Princess of the Ghost, Tomb of the Fireflies, Otomo's works The Most Stiny Arm, The Street of the Cannon, The Steam Boy, All of them are highly ideological and artistic, and imply a profound educational significance, which deeply concern and reflect on the state of nature and human existence, advocate the harmonious coexistence of man and nature, or oppose war and hope for peace, or express dissatisfaction and anxiety about reality. They are full of good feelings, hopes and humanistic care, which have touched countless audiences with their superb performance skills and broad humanistic spirit[5].

5. Summary
The American-Japanese animation is like a representative of the East-West culture and constitutes a spectacle of world animation. Their respective success factors are not only closely related to their country's culture and thinking habits, but are also inextricably linked to the rich educational significance of their animation. Both of the animations of the two countries have met the audience’s cultural psychology and entertainment needs to a great extent, and have also achieved their educational significance through this demand. The prevalence of Western culture directly determines that American cartoons have popular and simple features in character design, storyline, and theme arrangement, which makes the United States animation prevalence the world has understanding condition. Japanese cartoons are deeply subdued and heavy in oriental culture[6]. Although the natural deep feeling of the Orientals made Japanese animation less humorous, they could exert unlimited imagination in the setting of the story and theme. At the same time, it also allows the audience to experience thought-provoking themes of the subject, thus realizing its profound educational significance.

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