

## **Analysis on the Evolution of Character Action Performance Characteristics of Chinese 2D Animation**

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### **Abstract**

**Based on the purpose of creation, this paper makes a systematic analysis and research on the core of 2D animation creation, the action performance of characters, which can be divided into four stages of development according to the different media of animation : The Birth of Chinese Animation, Artistic Animation/Animated Film, Television Animation and Network Animation. By giving examples to analyze the action performance of characters in classical animation works of each period, this paper summarizes the paradigms of action performance of characters in different stages, combs the context of their development and changes, and analyzes the reasons for them.**

### **Keywords**

**2D animation; character action performance; performance paradigm.**

### **1. Introduction**

Chinese animation has a history of nearly one hundred years since the birth of Wan Brothers' Studio Scene in 1926. With the continuous development of animation practice, the theoretical research of Chinese animation has gradually formed a complete theoretical system. Nowadays, young animation artists continue to explore through studying the history of animation, animation principles, production methods and so on, constantly improving the theoretical system of Chinese animation, and reviewing and reflecting on the achievements and problems in animation creation.

### **2. The 1920s-1940s: The Birth of Chinese Animation**

The 1920s-1940s were the embryonic period of Chinese animation. In 1921, inspired by the American animation Out of the Inkwell, Chinese art filmmakers developed the belief of "making Chinese own animations". In 1926, the first domestic animated film produced by the Wan Brothers, Studio Scene, was born. It can be called the starting point of Chinese animation, but the image data of this animation has been lost, so it is impossible to analyze the performance characteristics of the characters in the film. Comparing with Studio Scene, another classic produced by the Wan Brothers in 1941, which is the first black-and-white animation in China, called The Princess of Iron Fan, is more mature in artistic expression.

Through analysis and comparison, Snow White, the first color animated feature film in the world in 1937, had a great influence on the creation of The Princess of Iron Fan. There is still a distance between the two films in terms of production technology and color effect, but in terms of character action performance, the characters in The Princess of Iron Fan are exaggerated and deformed with elasticity, showing the characteristics of Disney's early animation performance. In addition to learning and drawing lessons from foreign excellent animations, the Wan Brothers also added their thoughts on Chinese classical literature and

imitation of real life in their performances: for example, the characters such as Monkey King, Pigsy, and King Bull are the human figures that the animals are transformed into, they are not completely anthropomorphic in action design, but retain its animal — — Monkey King sat half-squatting, jumped up and down; Pigsy abdomen, lazy greed; King Bull is lustful, suspicious, rampage — — The action performances of these characters not only conform to the character traits of the characters in the original work, but also make the performances become authentic, and also enhance the sense of humor and enrich the performance content.



Disney-style movement deformation in The Princess of Iron Fan

Compared with the rhythm of Snow White, The Princess of Iron Fan is slightly stiff in the design of the movements such as turning and walking; the preparatory movements are not enough to show the traces of the simulation performance; the control of the action rhythm is not accurate enough, and there are problems such as too fast or too slow, jitter, and frame skipping. The reason for the problem may be that the difficulty and blankness of the animation technology at that time caused the creators to lack understanding and experience in the concept and time of the frame; second, because the development of Chinese animation was influenced by the social environment at that time, its creative purpose was not only to entertain the public, but more importantly, the Wan Brothers paid attention to the propaganda role of animation and thought that "in China, we have no time to make jokes. Let the compatriots wake up..." thus creating The Princess of Iron Fan, The Chinese people are waking up, The Cartoon of the Anti-Japanese War and other "left-wing" and anti-Japanese art films that conform to the domestic situation at that time.<sup>1</sup> But these do not affect the excitement of the entire film, but let us see the juvenile and perseverance of these pioneers, The Princess of Iron Fan has become the highest-level animated feature film of Asia at the same time, and it has directly affected the development of the animation industry in Japan and Southeast Asian countries.

### 3. The Late 1950s-1970s: Art Animation / Animated Film

After the founding of New China, the role of animation and art promotion was taken seriously. In 1957, with the establishment of the Shanghai Animation Film Studio, Chinese animation experienced two development peaks during the "17-year" period and the new period. A large number of well-known art films at home and abroad, such as The Monkey King (1964), Nalakuvara's Triumph Against Dragon King (1979), were born during this period.

<sup>1</sup> Song Gu. Exploration, resplendence, Development and pluralism-A study on the Development of Chinese Animation Theory[J]. Cultural Monthly, 2013(10).

<sup>3</sup> "Seventeen years" refers to the specific historical period from the founding of the People's Republic of China in 1949 to the outbreak of the proletarian Cultural Revolution in 1966.

The Monkey King is also an animated feature film adapted by Mr. Wan Laiming from The Journey to the West, but compared to The Princess Iron Fan—the exploration of the "authenticity" of the action performance and the performance of the gimmick and the spectacle—The Monkey King has a physical and logical study of power and an artistic expression of nationalization in the action performances of the characters. First of all, in the study of force, the character action performance has the following characteristics: Firstly, the influence of the object quality on the rhythm of the character movement. For example, when Monkey King borrowed weapons from the Dragon Palace, he tried Lance, Ring Blade, Fang Tianji, and Gold Cudgel. As the quality of these four weapons continued to increase, Monkey King's actions in wielding weapons gradually went through the actions of "easy bending, disdain throwing, playing easily and effortlessly pulling out". In the process of Monkey King waving weapons, the inertia of the movement is continuously increasing, and the layers are progressively made to make the performance become authentic and meticulous. Secondly, the impact of the environment on the rhythm of the characters movement. For example, Monkey King moves in the environment of three different media in sea, land and air. Because of the difference between the force point and the resistance, the amplitude and posture of the action have their own characteristics. Monkey King uses both hands and feet in the water, and the movements are light, the span between each movement becomes very large, and it is often stepped into the sea, or spiraling upstream or sinking; if on land, although Monkey King's figure is light, the "hard landing" makes each movement elastic and flexible; if in the sky, Monkey King feels just like a fish in water, he is swaying in the clouds with exaggerated deformation of body and movement, plus the wonderful fighting, the rhythm of the action is tumultuous with the Peking Opera drums. Thirdly is the influence of the character state on the movement. For example, after Monkey King was drunk, his body lost weight and walked stumble along; Nalakuvara lost a hot wheel and limped; The Earth of God was short and fat, so he walked slowly and panting; The Goddess's seven daughter were walking gracefully with slender and slim...These performances are so real and interesting, there are observations and imitations of the real artist state by the animated original artist, as well as physical and logical research on force. More importantly, the beautification and simplification of the action design makes the performance both vivid and artistic, reflects the artistry and esthetic feeling.



The effect of character state on motion

Then there is the artistic expression of nationalization, which is adding a large number of opera performance programs to the action performances. The drama program is to refine, exaggerate and deform the language and movements in life, such as singing, reading, playing, and accompaniment, makeup, clothing...all of them form a standardized performance law, forming a series of means to shape the characters.<sup>4</sup> For example, the performance mode such as the normal state of The Monkey King shrugging his shoulders; overlook with a hand on forehead; drooping hands and make a bow with hands folded in front...they are all from the program movements of the Monkey Drama in Peking Opera. And Tota King Li Jing's posture when he told the Jade Emperor, as well as the movements of The Monkey King fight with the heavenly generals and soldiers, many of them are classical stylized performances from the

Peking Opera. These program movements in the opera provide a good model for animation creation, because it has the characteristics of specification and independence, which condenses the essence of opera art; there was also a good Peking Opera culture soil at that time, which enabled the animators to learn and learn from the opera masters in depth, it allows the animated characters to break through the limits of the live action performances of the stage and the boundaries of time and space, bringing the performances of Peking Opera into the virtual space, thus realizing the cross-media fusion of art.

#### 4. The 1980s- Early 21st Century: TV Animation

Before taking Chinese TV animation as the research object, we need to understand the concept of TV animation: It refers to animation works broadcast on TV channels. Animated movies, OVA (original disc animations), etc. broadcast on TV will not be classified as TV animations.<sup>5</sup> After Economic Reform and open up, the TV animation in the true sense will not appear until the TV is popular in China, such as Black cat Sheriff (1984), Calabash Brothers (1986), Slovenly Boy's Adventure (1987), Shuke and Beita (1989). These excellent children's animations were broadcast on TV and won wide market and praise. However, in the early 1990s, with the marketization of Chinese animation, the production and profit model of Chinese animation changed, and the production level of Chinese animation began to decline. No matter the development of the industry or the production and ratings of animations, bottlenecks were encountered. This period can be said to be the watershed of the Chinese animation industry, Chinese animation began to gradually seek a way out of the industrial production mode and the Sino-foreign joint venture model. But this did not seem to change its fate that was buried in the tide of globalization, Chinese animation had gradually lost its vitality, and it had also expressed self-doubt about the expression of Chinese traditional aesthetics. It lacked cultural self-confidence and the role of domestic animation from this period. This can be seen in the form of action performance.

In 1999, the 52-episode animated series The Journey to the West was broadcast on CCTV. Taking it as an example, the drawbacks of industrial production can be seen from its action design. First, the dramatic expression of the character is not sufficient.

4 YuJie Huang. The Research of the Combination Between Chinese Opera and Animation [D]. Shanxi Normal University, 2014.03:24.

5 Baidu.TV Animation [EB/OL]. [2019-03-10].<https://zh.moegirl.org>.

For example, the action performance of The Monkey King is always lacking in "monkey", but it is more like a "human" hero. When he walks, he stride proudly ahead; when he is in danger, he can fight off the enemy with Gold Cudgel; and the demon slayer has neither the design of martial arts movement nor the preparation of preparatory movements. Second, the character performance does not match the requirements of the drama rhythm. The character action is designed in a single way, and the performance lacks vividness and appreciation. It is often a repeated cycle of actions or partial movements, such as simple changes in mouth shape, gestures, and body posture. After that, the dialogue is promoted by a large number of character dialogues, and the action performance becomes a dynamic auxiliary element. Third, the level of production is rough—the understanding of the meaning of action performance is not enough; the lack of a large number of intermediate frames leads to rigid action; and there are still some logical errors. These problems are especially obvious when compared after the character movement of the same bridge section of The Monkey King. First of all, comparing the design of a group of martial arts movements. Both films have a section of The Monkey King Borrowing Weapons from Dragon Palace, taking the action performance of "The

Monkey King holding Fang Tianji" as an example. In The Monkey King, King's movements are coherent and smooth, and the curves are soft and beautiful, he dance with the movements of Beijing Opera, the King's ability and spirit are undoubtedly revealed, and the atmosphere is pushed to a climax. But in The Journey to the West, the King is wearing a weapon and waving a circle like juggling, the close-up to distant view of the lens erases the preparatory action, the King's action repeats a single and has obvious frame skipping, and the performance is stiff and funny. Then compare the design of a set of reaction actions. Taking the section of The Earth of God introduces the Peach Garden to The Monkey King as an example. When The Monkey King heard that "the peaches can eat to get eternal life" is a state of mind that is both surprised and happy. This performance in The Monkey King is "the King slightly tilting forward——pointing The Earth of God——to the left side——facing the camera and laughing at the sky——turning to the right after the cloud hand——stand ". This set of actions has a total of 45 frames, each frame of the changes are vivid and delicate, his wonderful performance has paved the way for the plot to "steal the peaches", and the rhythm of the action is intriguing. But in The Journey to the West performance is "the King clap his hands——bowed——the King clap his hands——the King open his mouth without any movements". In this process, although we heard The Monkey King laughing, but his hands and mouth shape did not change a little, it produced contradictions between the action performance of the character and emotional expression. The Journey to the West also has 45-frame in an action design, but it has only 3 frames of original paintings, and the average original frame repeats 11 to 15 times per frame, there are lots of middle paintings lost, so the movements of The Monkey King is hard and incredibly ridiculous.

What is the significance of such an action performance? As we all know, the action design of an animated performance consists of a stylized preparatory action, a main body action, a follow-up action of the main body action, and a buffer action.<sup>6</sup> If there is no expression of any one in the action design, it will cause confusion in the performance, so that the action does not seem to conform to the law of motion or the emotional needs of the character. However, such problems can be seen everywhere in the Chinese TV animations of this period. So what exactly changed the face of Chinese animation performance style at this stage? According to the 2017 China Animation Industry Report, the reasons may include the following: First, from 1979 to 2000, the planned economy was transformed into a market economy, pure hand-painted to digital painting, and a series of animations appeared; second, artistic feelings + low-profile plots, a big limitation; third, foreign animation entered China, Chinese animation was impacted; fourth, the foundry model promotes economic development, but it leads to talent gaps and hinders the development of the animation industry.<sup>7</sup> It can be seen from this report that China's animation industry has undergone major structural reforms during this period, and the entire animation industry is facing serious survival problems. The market environment influences the content and method of animation creation, animation creation has become animation production in China; high efficiency and high output have become an important factor for Chinese animation to occupy the domestic market, and high audience rating is its main profit method. It can be seen that the "internal and external troubles" of the Chinese animation industry are the objective reasons for the decline in the quality of works.

## **5. From the Beginning of the 21st Century to the Present: Network Animation Network animation (Original Net Anime, is translated as "original network**

animation", abbreviated as "ONA") , refers to the Internet launch or for the main distribution channels of animation works. At the beginning of the 21st century, the Internet have developments in China, on the one hand, computer-based network animation technology entered China. On the other hand, a group of colleges headed by the Beijing Film Academy

opened Animation due to the policy support, so the comprehensive development of technology and talents has provided favorable conditions for the rise of Chinese network animation.

The development of Chinese network animation is divided into three stages: Flash animation, academic short film animation and original series animation. They have their own characteristics and blend with each other in the development. In the early stage of the development of network animation in China, Flash animation was the main animation. The animations drawn with Flash software have the characteristics of small memory, fast transmission, convenient download and real-time viewing. Flash Animation adapts to the limitations of Internet "low Speed" Technology at that time. At the same time, the Flash software is simple to operate, and meets the creative needs of many animation enthusiasts. Flash animation has also spread widely,

6 MingJie Zhu. Peculiar Performance: Characteristics of Cartoon Performance [J]. Hundred Schools in Arts, 2012(08): 333.

7 Shanghai Iresearch. China Animation Industry Report [R]. Shanghai: Shanghai iresearch Market Consulting Co., Ltd., 2017.08.

becoming the mainstream carrier of non-commercial animation, but there also have uneven qualities in Flash animation.

Compared with Flash animation, the academic short film animation came into being in the Chinese animation art education. The creators are all professional students who are trained by the system animation education, and students under the guidance of professional teachers often create the short films independently or in teams. The creative methods of the "Academic" are more standardized, the artistic ideas are more mature, the forms of works are diversified and the artistic level is relatively high. Students usually select talents by participating in animation film festivals or competitions at home and abroad, and enter the field of commercial animation creation after graduation.

After the accumulation of technology, talents and the development of mobile Internet technology in the last stage, China's network animation has entered a new era; original series of animation has become the mainstream of creation, closely connected with the market and business needs. On the one hand, the original series of animation is more free and diverse in both its subject and forms of expression. According to market demand, there are many domestic original network animation adaptations of comics, novels, games, and live-action movies, and these adapted original works often have a certain market influence or called a big IP (intellectual property). For example, in recent years, the original series of animations adapted from comics include Fei Ren Zai, Beryl and Sapphire, The matchmakers and so on. Among them, The matchmakers have been serialized in the original comic book DreamWorks since 2010, and were invited to serialize in Tencent Animation Comics SHOW in 2012. As of March 2019, The matchmakers in Tencent animation network platform cumulative popularity of 14.02 billion, living in the same kind of domestic original comic Top5... It can be seen that a large IP has accumulated a relatively stable and large number of customer groups in the early stage, which can predict a good business prospect for the subsequent adaptation animation, and achieve twice the result with half the effort in the market research stage. In addition, there are some original series of animation after the animation works have gained great market influence, through the accumulation of capital, and then gradually distribute the surrounding, publications or prepare for the shooting of animated films, for example, The Legend of Luo Xiaohei produced by MTJJ Animation Studio in 2011. On the other hand, in order to maximize the interests, the network animation has developed a set of perfect

production process, which is strictly controlled from the aspects of capital, personnel, time, technology, and even picture style and adaptation mode, that in order to ensure low cost, high efficiency, high quality to complete the animation project. Then the author takes the network series animation Fei Ren Zai as an example, analyzes the influence of commercial demand on animation production and aesthetics from the perspective of role action performance.

Fei Ren Zai is one of the most popular online original animations in China in 2018. It is adapted from cartoonist Yi Wang Air's comic book of the same name. The content is mainly a hypothetical idea of the modern life of mythological characters in ancient Chinese traditional myths. This study will use the mythical characters as a sample to compare the three different stages of animation works, namely, Nalakuvara's Triumph Against Dragon King, Nalakuvara Legend and Fei Ren Zai, combining the character action performance in Chinese animation for half a century, summing up the performance paradigms and the causes of its formation.

Warner famous animator Ken Harris once advised on the design of character action performances: "The first thing to learn is to walk. Study all kinds of walking postures, because walking is almost the most difficult to draw accurately." Indeed, walking is the most basic characters-action performance, the characters such as gender, age, personality, and psychological state influence it, but it still has its basic paradigms and rules. For example, in the mythology and animation works, Nalakuvara appearance is a little boy. He is lively and active, kind and brave, and loves to fight against injustice, so he is a young hero. First of all, watch him walk at a uniform speed, In Nalakuvara's Triumph Against Dragon King and Nalakuvara Legend, they are all eight frames of a cycle of walking movements. But there is a walking cycle of 10 frames in Fei Ren Zai, which 2 of these frames stayed twice in the position where the feet touched the ground. Obviously, they all meet the standard uniform walking animation, that is, eight frames are a loop of actions, and the consistency of this kind of action performance is the character action performance paradigm.



Comparison of Nalakuvara 's Walking movements

Similar to the performance program, the character action performance paradigm is combined with physical science and visual habits after generations of animators observe life, accumulate experience, learn and imitate, sum up and refine, the basic way to form a scientific, systematic and referable character movement. With reference to the action performance paradigm, animators understand the law of character movement is the basis for ensuring the correctness and fluency of the character's movements, but the art of performance, that is, whether the action performance is true and natural, has a sense of beauty, arouses the resonance of the audience, and so on. This is not what every animator can imitate. For example, by comparing these three animations, we can see the details of Nalakuvara 's whole body in Nalakuvara 's Triumph Against Dragon King: hair, hands, clothes, ribbons are in the movement, the movement is natural and organic, soft and elastic, with the picture atmosphere and overall tone, there is an elegant and moderate beauty. The walking movement in Nalakuvara Legend is accurate and smooth, the expression is complete, and the rhythm and the feeling are also accurate. However, the Fei Ren Zai 's movement is refined, equally accurate and smooth, and

the performance is also in line with the state of the characters, but the movement is accompanied by a mechanical feeling, the body is stiff, the rhythm is uniform, and the swing amplitude of the arm is in line with the pace——there is a feeling of accuracy but no soul. Obviously, there is a clear difference between the Fei Ren Zai and Nalakuvara 's Triumph Against Dragon King in the artistic expression of action performances. There may be reasons for this: First, in order to conform to the original comics in the style of the screen, Fei Ren Zai animation production team chose Flash as the main production software to conform to the uniform and bright lines and the fixed movements in the comics, Therefore, compared with the hand-painted animation of Nalakuvara 's Triumph Against Dragon King, it lacks the elasticity of many lines and the breathing sense of rhythm. Second, Fei Ren Zai updates one episode a week on the online platform, by the end of the first season (36 episodes), it has been a year since the end of the first season (36 episodes), the animation lasts an average of 5 minutes per episode, except that the actual content at the end of the film is about 3.5 minutes... How to complete such a network series animation in a limited production time? A typical commercial animation project, the most important of which is high efficiency, low cost and high quality output, which needs to plan the production time, broadcast time, capital operation and later publicity of the whole project in the early stage of planning, and put forward the requirements for the quality and effect of the work, and these preset conditions directly determine the way the animation is made. Therefore, using painting techniques to make the animation can not only explain the content of the story, achieve the expected picture effect, but also reduce the workload and production time become the prevailing industrial state of Chinese network animation at this stage.

## 6. Summary

From the birth of Chinese animation to the prosperity of network animation, the evolution of character action performance paradigm is a portrayal of the tortuous progress of Chinese animation performance, which not only inherits and innovates the tradition, but also pursues the pace of science and technology. Different choices in different periods are an evolution of animation performing arts. On the eve of the outbreak of Chinese animation industry, animation creators should seize the opportunity to think about how to express the inner feelings of the characters on the basis of the performance paradigm, how to reproduce the reality in the Dream, and cause resonance.

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