The Blend of Reality and Illusion – Analysis of the Artistic Characteristics of Stop-Motion Animation

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Abstract. Since the beginning of creation, stop-motion animation has attracted the attention of countless viewers and creators because of its unique artistic style and particular art form. The main reason is that stop-motion animation gives people a new experience of watching movies so that people are in a fictional space and time created by real objects, and the audience can feel an inevitable natural feeling. This sense of reality deviates from the reality of time and space in the film, creating a strange yet familiar feeling of being in another space parallel to the real world. The contrast between the realism of the stop-motion technique and the fantastical nature of the story adds to the unique appeal of stop-motion animation compared to the omnipotent CGI. This paper focuses on the characteristics of stop-motion animation in terms of character building, scene construction, and sound effects. From these aspects, we systematically analyze the creation of realism and illusion in stop-motion animation, trying to find out the unique features of stop-motion animation that distinguish it from other types of animation, and also to produce more sophisticated animation works.

Keywords: Stop Motion · Animation · Fiction · Real

1 Introduction

Stop-motion animation is an animation in which a model poses an action according to a specific law, and the model's action is shot frame by frame to form a sequence, which is then combined to turn into a movie. Stop-motion animation is a kind of animation closely related to the application of materials and is a unique artistic language. In the traditional animation work Tom and Jerry, people will be interested in the exaggerated behavior of the characters but also feel the boundary between the real and the unreal. The charm of stop-motion animation lies in its ability to break the boundary between the virtual and the real by using natural materials to present bizarre and fascinating fantasies on screen. The combination of the real and the unreal makes the stop-motion animation present the real world and show virtual art. The feature of stop-motion animation is to use objects from real life to construct a sense of truth in the story. Even if the world presented by the story content is illusory, the world of animation can also be regarded as

the same as the world of the audience, and the audience's viewing behavior is essentially a real experience immersed in the illusory space [1].

This combination is a metaphor for a "real yet common sense" feature, and moving pictures become more attractive under the double contrast between reality and fantasy. This paper analyzes the relevant types of animation and finds that the authenticity of stop-motion animation is because some practical materials and elements are inevitably used in its production, making people produce a more realistic sense. The illusory feeling contained in stop-motion animation, a special art form, is the most significant advantage of its artistic performance. This means that the imagination of animation can be exaggerated without boundaries. Compared with film, animation can break all kinds of shackles, jump out of real space and make bold attempts. These qualities also give animators a wide range of space to make their moves.

With the development of animation, stop-motion animation continues to innovate in the presentation of real texture, environmental atmosphere, creation techniques, and audio-visual effects. It occupies a place in animation with a unique form of expression, which also provides the soil of authenticity for the production of stop-motion animation. From the perspective of the form development of stop-motion animation, this paper makes an in-depth exploration of its illusory and realistic sense and then reveals the reason why this kind of animation can be transmitted and deeply loved by the audience to make efforts to create more excellent stop-motion animation works.

2   Realistic Presentation of Character Texture

Whether stop-motion animation looks good or not, characteristic character modeling is the critical element. The innovation of technology has brought convenience to the operation of the dual shape in the shooting. The pursuit of real texture has injected fresh vitality into the character modeling of the stop-motion animation so that the audience can capture the realism of its presentation and bring a different visual feel to the animation.

2.1   New Technologies for Character Expression

Anyone interested in the craft of stop-motion animation should know Leica Studios. Their relentless exploration of stop-motion animation has impressed people in the industry. Leica Studio combines new, i.e., 3D printing and traditional animation techniques to create a unique animation in visual and sensory terms [2].

3D Printing Technology
Laica is a well-known stop-motion animation production company, and there are constant breakthroughs and innovations in production level and technology. In 2009, Leica created a high-precision skeleton model for Coraline, which was filled with various materials to form the basic form of the character. Getting the basic doll shape and the characters' expressions right was another challenge. Lycra used a rapid prototyping device in the mid-1990s. It provided 20,000 3D-printed faces for characters and then combined various expressions with basic character models [3]. During the post-production work, the team made some changes, such as removing the strings from the puppet's eyes and masks, to

make the characters look more human and give viewers a sense of reality beyond their imagination.

Digital Post-production Techniques

A lady on the train is a 2007 NFB experimental animated film that uses the puppet stop-motion technique. Unlike other genres, the characters' eyes were synthesized from real people's eyes. During the production, the actions of the puppet characters are first recorded and practiced according to their eye tracks. Then, the eyes of the real people are synthesized into the puppet's face by the computer so that a lifelike performance can appear on the screen. The combination of the real person's eyes and the mysterious and bizarre story makes the audience irresistibly attracted and immersed in the ups and downs of the plot. As if also like the main character on the train, alone to face the unknown challenges ahead.

While retaining the traditional technology of stop-motion animation, the introduction of new technology not only improves the quality of animation but also makes the visual effect more realistic and greatly shortens the production cycle. With the development of technology, stop-motion animation in the technical production methods shows a multi-type development trend.

2.2   Comprehensive Materials and Skin Texture

The choice of materials is directly related to the effect of stop-motion animation films. Materials selection is the main part of stop-motion animation production, and each material has its own characteristics and texture, which is one of the particularities of stop-motion animation to attract the public. As early as the 20th century, in the animation film Wallace and Gromit, clay was used to make the faces and torsos of the characters. The clay is flexible enough to allow the animation to change the character's faces and body movements as the story demand. However, such a production method requires the producer to strictly control every scene's composition and the character's shape.

With the development of The Times, recent stop-motion animation rarely uses a single type of material, while the application of comprehensive elements is becoming more common. The production personnel will also choose appropriate materials according to their own needs, whose texture reflects the irreplaceability of stop-motion animation. For example, in 2005's Zombie Bride, the characters' skin was silicone. Silicone is very close to the skin, and strong, so not as hard to control the shape and contours as the mud used to be. It is easy to manage and can be processed on a large scale using molds, which is much less labor and time-consuming than making it by hand.

Material and life, life and behavior, behavior and willingness, animation artists, in accordance with this idea, give each material with a different form of life and behavior. Material is the most important way of expression in animation creation, which requires the animator to fully conceive of it and give the material fresh vitality and authenticity.

The illusory character of stop-motion animation is also based on materials and characters collide with each other to create a spark this. On this basis, a series of fantasy and dark stop-motion animations represented by Coraline, Corpse Bride, and Psychic Boy Norman came into being. In "Corpse Bride," the appearance and texture of the main character close to the real person triggered the "uncanny valley effect" invisible. The

characters in the dark background of the story show a special effect of rationalizing the story that does not conform to the usual principles, breaking the creative thinking of the conventional two-dimensional animation and appearing brilliant and full of new ideas. For Coraline, stop-motion animation has once again proved to be the perfect way to tell an imaginative adventure story. Motion pictures perfectly connect the absurd, the bizarre, and the surreal, striking a delicate balance between the unreal and the real [4].

3   Stylistic Presentation of Scene and Environment

When animating, designers not only work on the characters but also use lighting and other methods to create a fantasy world that is indistinguishable from the real thing. The setting environment plays a crucial role in creating the sense of reality in stop-motion animation. It is the specific space needed for the story's development and an essential factor in showing the plot.

The light and shadow of the scene environment restore the time flow consistent with reality, and the effect enhances the authenticity of the story world. The change of lighting brings about the color change of the environment, which fits the story's development and presents the same effect as the real-world stage play. Furthermore, the atmosphere created by the scene is complementary to the animation plot, creating a realistic environment that can be either spooky or hazy.

Due to the need for animation creation, the plot is often imaginative and fantastic. On the other hand, the production process of stop-motion animation is not in the "other space," and its recipients and viewers are still people living in reality. Through visual effects such as characters and scenes, animation effectively fills the gap between reality and fiction, creating a natural space full of artistic colors.

3.1   The Effect of Scene Lighting

There are many parallels between living action in the process of making stop-motion animation. They share the same rationale, way of shooting, action, set arrangements, etc. On this basis, the lighting technology in stop-motion animation has many similarities with the lighting in film shooting, but there are also differences.

In Wallace and Gromit, made by Aardman's studio, some scenes are lit as closely as possible to natural light. Lighting mimics natural light that slants into the room from a window on the other side, casting shadows of figures and ladders on the walls and lighting up the room as if it were real.

Take, for example, the scene of the first encounter between Victor, the protagonist, and his zombie bride in the stop-motion animation Zombie Bride. Victor breaks into the forest where the corpse bride's grave is located and accidentally proposes to her, causing her to crawl out of her grave. In this scene, the light is dominated by cold blue, reflecting a hazy light through the dense forest, casting the forest and the humans black, giving the impression of a real and eerie experience, as if watching a real stage play. Corpse Bride distinguishes the "human world" from the "underworld" in the animation with different colors and lighting effects. The bright "underworld" is in sharp contrast to the gray and cold "human world." The producers have no way to perceive what the real

"underworld" looks like, but they can use the real world as a reference to create a world that corresponds to it. With animation's unique exaggeration and imagination, the real and the unreal collide in the same stop-motion film, presenting a strange picture effect.

Stop motion animation works with "rose mansion" flexible use of different colors to indicate the passage of time, from the afternoon to the evening. In the evening, the night change one by one with the change of the light and shadow in the picture. The picture changes fast, giving a person a kind of hidden insecurity.

The changes brought by the lighting effect are mainly reflected in the expression of the passage of time and the use of color to restore the situation in line with the development of the animation plot. The success of a film is closely related to the use of animation lighting. Good scene lighting effects fully show the intention of the director and creator and fully show the development of the story plot to resonate with the public emotion. In this respect, it is entirely different from the film. Film production and lighting mix the image with reality. At the same time, stop-motion animation builds the story based on the illusory world and uses real lighting effects to restore and show the fantasy form.

3.2   The Appeal of Scene Atmosphere

Scene atmosphere is an important element in showing the world outlook for which animators constantly improve and optimize the environment atmosphere. The ubiquitous smoke in Coraline plays a vital role in shaping the whole world, so the crew specially set up a smoke studio. In the early days of production, the production team tried to create smoke from cotton as a static shot, but the results were not as good as they wanted. After numerous attempts, the production team used dry ice to create smoke. Buckets of dry ice were poured into various shapes to create smoky scenes in the movie. Moving objects are added to create a cloud of smoke, which is then used as material and combined by a computer to create an image.

The environment of Coraline also incorporates a lot of subjective colors, which are exaggerated and dramatized according to the needs of the plot, thus presenting a unique picture effect with a sense of fantasy and beauty. When the main character Caroline tries to escape, the colors in the garden begin to fade until the world is only white. This dynamic color treatment sets off the atmosphere in a progressive form and boldly presents a highly imaginative storyline. This "white space" is the ultimate contrast between fantasy and reality.

Coraline uses various techniques and realistic scenes and strives to bring every detail into full play, giving people visual enjoyment. It can be seen from the film's scene atmosphere that the film's creator has strong artistic feelings and creative intentions. From the film's creative approach, we can see that it is not limited to real space, breaking the limits of space and time, and therefore making the animation more realistic. This breakthrough attempt provides a flexible path for the creation of environmental atmosphere in today's stop-motion animation. Its creation technique is not limited to the real space and objective reality, which makes the animation more realistic and provides a flexible way for the environment atmosphere of today's stop-motion animation.

4   The Combination of Music and Painting

Sound is an essential factor in stop-motion animation that affects the effect of the picture. The perfect combination of sound and image can better express the author's emotion. The introduction of effect sound can bring similar emotional experiences to people in different spatial and temporal backgrounds, so it is widely used in stop-motion animation creation [5].

Great effect sound adds realism to the animation. Peter and the Wolf is a symphonic story by the famous Soviet writer Prokofiev. This story tells the story of a boy, Peter, in a quiet escape, encounters a hungry Wolf. After tense and exciting twists and turns, Peter finally, with his wisdom and courage to capture it alive. He and his grandfather sent the animal to the small town, only to find that the people there were cruel to the animal. Finally, Peter decided to let the animal go back to the wild. The story has a deep meaning, and the use of music is impressive.

The story of the symphony features many characters, such as Peter, Bird, duck, cat, Wolf, grandfather, and Hunter, adding authenticity to the characters through classical music. The flute player, for example, uses a sharp voice in a high register to blow a fast, frequent, whirling tune, like a bird soaring merrily through the air. The suona tone is used to imitate the duckling, and the gentle theme melody with varying tones in the middle register has a tragic color while also hinting at the tragic fate of the duck later swallowed by the big bad Wolf. In this animation, the cat is a playful character image, so the music to express it is a light, quick and lively skipping tone played by a clarinet. Furthermore, because the grandfather in the story speaks in a low voice and at a slow pace, his music uses a big pipe with rich timbre to slowly play a long narrative tone. The Big Bad Wolf is a fierce and hateful figure. He plays his music with three French horns, which gives people a dark impression of tone and volume. Finally, the wind orchestra played lively and progressive string music, which incisively showed the lively and brave character of the little boy Peter.

Different instruments play different sound effects, delicate sounds are combined with rich picture effects, and a distinct character of the horn color image is shaped, leaving a deep impression on the audience.

5   Conclusion

Stop-motion animation is a unique art form. It has a long history of development. From its initial development to its current peak, its various techniques continue developing and forming its unique artistic style and expression.

Stop-motion animation has both unreal and real characteristics, so the animation is in contradiction to achieve a balance. On the one hand, the unique nature of animation, imagination, and boast makes animation detached from reality and organized and presented in the unreal world. On the other hand, the production form of stop-motion animation makes the animation finally return to the ground, projecting the reflection of real life in the sky of the story plot.

Combining the above, this study finds that the introduction and development of 3D printing technology have led to new possibilities for character production in stop-motion

animation. Compared with the traditional even animation in the past, the innovation of technology saves unnecessary labor costs, while allowing the characters to be more vivid and flexible in front of the camera. The scene environment is more in pursuit of the realistic effect brought by stop-motion animation, which is perfectly matched with the unreal storyline. The music fits with the characters to a certain extent in enhancing the quality of the film, and gives a vivid portrayal of the characters from the details.

The producers of stop-motion animation are constantly exploring and trying to improve its production process through new technologies and means so that this "original" expression mode keeps the original characteristics and opens up a new development field. With the addition of new forms, traditional animation is full of vitality again and prosperous in the animation field.

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