The Analysis of Two-Dimensional Animation Lens and its Teaching Value

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Abstract. As for animation, the design of sub lens have significant effect to the work’s complete style, it also relate to the rhythm and fluency of the whole work, and the expression of the theme and connotation. This paper is divided into three main parts: the first part briefly introduces the concept and importance of lens separation in animation design; The second part summarizes some basic knowledge of lens separation and its practical application and effect. And the third part is the domestic parts of the 2-d animation "Big Fish & Begonia" especially for the case, and combined with the content of the second part, further analyzes the differences in the animation works.

The Concept and Importance of Lens Separation in Animation Design

The lens separation have essential effect to the creation of animation. It highlights the theme of animation via picture presentation, which needs creator aims at the theme of animation, intension and the central theme repeatedly revise, color and polish. some extent, it’s also a kind of form of general art, which contains a collection of different art fields, such as drama, music, paintings, designs of customs and arena and so on.

Lens separation is also called shooting playscript with stage directions. As a kind of medium to realize the conversion between the words and the stereoscopic image, it tries to convey the work’s core thoughts and creation intention correctly, and to a certain extent, it becomes the supplement and extension of the script. As for two-dimensional animation, the design of sub lens have crucial adjective to the style of the film, the narration of the story and the performance of the characters, as well as the design of the light and shadow and the scheduling of the lens. Frankly speaking, sub lens support performance of the clear pictures, which also bring more convenient for production group at the meantime. Sub lens are the 2d animation’s pre-production script, which are the pre-setting work of vital importance and also the fundamental basis for post production. They are the key factors which decide each part of the animation production process’s basic implement scheme could be implemented successfully. Therefore, creators need to handle the primary and secondary relations in the 2d animation in the lens design

Basic Common Knowledge in Lens Separation

The basic knowledge of lenses consists of the following four points:

Scene

Scenery is involved in any film, and in animation, it serves as an important factor in the plot and theme, which determines the relationship between people and things on screen. The change of scene can effectively reflect the rhythm of the story, and bring different psychological feelings to the audience with the change of perspective from time to time, from time to time, close to time, from time to time, and from time to time. From a large perspective, the scenery can be simply summarized into five categories, from near to far, which can be divided into close-up, close-up, mid-view, panoramic view and perspective, which can also be subdivided into large panorama and large close-up.

Generally speaking, the way to define all kinds of scene is take the proportion of characters in the picture as reference, sub lens in 2d animation are also like this. For example, when the person in the picture are very little or couldn’t see him, usually use the vision or panorama to express the
place where the whole story happened and special story background. And at the same time to achieve the role of setting off atmosphere, A panoramic view usually focuses the attention to the person’s body, While Panorama usually focuses on the entire body of the characters when shooting, medium shots are mostly half-length. Both of these perspectives are closer to the conventional perspective of people in daily life, and they are more stable and balanced in the process of application, so that the development trend of the plot can be clearly explained. Close-shots and close-ups refer to zooming in on people's chest or shoulders, in which close-ups are usually close to the head of the person. In this way it can focus the audiences' view and attention on the details of the character and the subtle part of the expression to achieve an emphasis on the instant reaction of the character and the effect of the momentary emotion. If you want to show a more specific part or expression of a person's face in more detail, you need to use extreme close-up lens. The usage rate of this lens is not very high, but it can give the audiences a stronger emotional impact, and it is easier to impress people.

**Length**

There are two factors that decide the length of the lens. On the one hand, it’s limited the contents and spatial form, and the different perception such as strangeness, familiarity, as well as the main factor that influences the length of the lens. On the other hand, the length of the lens is also related to the sense of rhythm between the lens paragraphs and the whole lens, for instance, soothing, sad and quiet scenes are more used in long lens, however, violence, Instant memory, breakdown, adventure, excitement scenes are more likely to use short lens to perform.

In fact, there are no strict and unified standard, it’s just used for plot, long and short lens generally take the specific story plot and emotional expression as the reference direction to consider what lens layout could add the film’s appeal and visual effect. In addition, length of the lens are also related to the story’s structure, the form of the film, the width of the scene, the proportion that the lens take, and the relationship between the subject and space and so on. The relationship between the subject and space and so on.

**Connection Ways**

In the 2d-animation works, every single lens separation has its special implication and meaning, but weather these sub lens could be established still decide on whether they could follow the overall line and connect fluently. Thus, the way the lens is assembled becomes very important. At present, there are mainly two types of 2d animation lens combination: explicit, implicit, translated, cut, etc., which can be divided into two categories by integration: skillfulness combination and non-skillfulness combination. Skillfulness mainly refers to the use of certain optical techniques, such as concealment and transformation, in editing and assembling. On the contrary, it is a non-skillful combination, such as cutting techniques.

**Lens’ Form of Motion**

In most of the two-dimensional animated sub-cameras, the frames of cameras are often static. In order for the plot needed or to highlight the character's body language and body performance, sometimes the cartoon director will use the technical means of moving shots to show it. From the point of view of the lens, one of them is to stand in the habitual perspective of people in daily life, which is the most common ways of drawing and shooting. It has a stronger sense of presence and affinity. The other is to photograph or draw from the perspective of the subject of the simulation screen so that the viewer can watch from the point of view movement in the first person perspective. This way is easier to bring about the viewer's own sense of participation and psychological induction.

In fact, the movement form of the lens is the complement and modification of the scene. It moves through different directions and perspectives, and achieves the effect of viewing from the perspective of movement on the screen. At the same time, it forms a complementary relationship with the stationary lens, which is a necessary means of showing rhythm and dynamics of the plot more vividly.
Analyze with Examples

The following passage takes the domestic 2-d animation "Big Fish&Begonia" for example, further analysis of this animation's lens.

"Big Fish&Begonia", which is released in China in 2016 is based on Zhuang zi's "how to get away with murder", which narrated the girl "Chun" who controlled the growth of begonias so as to revive the rescuer from the human world, the story of the struggle against fate. This film use classical texts, with the mysterious and dreamy scene design and beautiful and moving picture temperament has been widely praised. As a new breakthrough in Chinese 2d-animation, whose rigorous and unique lens design still has certain research significance.

The Lens Design and Film’s Overall Style in "Big Fish & Begonia"

As a guide sample in the process of animation production, lens separation plays an important role both before and after the animation production. It can mostly show a animation work’s plot design and creative style. As a work who has 120 minutes, 2-d animation "Big Fish&Begonia" has numerous total lens, its sub lens also has respective characteristic. From the point of view of the work’s total design, “Big Fish&Begonia"as a animation who has mysterious color and dreamy style, the protagonist is a brave and kind-hearted girl. Obviously, from the beginning of the split mirror design style has laid such a general tone. Its artistic style, which is full of fantasy characteristics, and its smooth, fresh, simple and exquisite painting language all create a beautiful, romantic, classical and modern atmosphere for the whole film.

The Characteristic Points Mirror in "Big Fish & Begonia"

Lenses separation has actual meaning to the visual guide. Therefore, the all elements in the work all need to be embodied in the shooting draft via image mode.

Characters on the design of pile, “Big Fish & Begonia" have classical means and the image of contemporary feeling, at the same time “Chun" has short modern shoulder-length hair, dressed in Chinese style are red jacket with a black Chinese shallow mouth cloth shoes, skirts and black with white feathers and a red cloak is more classic breath.

In the animation film, flexible and expressive lens separation design always gives the whole film the special color and style. At the meantime, it gives the audience more great vision experience, watching feeling and more abundant imaginary space to arise the audience to the works thought resonance. “Big Fish & Begonia" used a lot of natural scenery, which came from reality; it was more only beautiful compared to reality, even with a touch of hyperbole. Such as the vast blue sea, boundless mountains and rivers, the picture presents a deep sense of space, plus a large number of mysterious and illusory scenes, giving people a sense of virtual and real staggered.

The lenses separation design in "Big Fish & Begonia" shows strong narrative ability, it has story plot is , this kind of narrative method is connected with the multiple transformations of the lens, profound characters and mysterious changes in scenery , presenting audience very tense vision feelings.

The lenses separation design in " Big Fish & Begonia" still has a prominent trait that a lot of elements are integrated into Fujian Tu lou, which has intense western style, numerous Chinese traditional cultural symbols and code name are also included, which has deep meaning.

Living Examples Analyze in "Big Fish & Begonia"

In the scene before and after the movie 19'30", the protagonist “Chun” returns from the world and comes to the edge of the cliff to play the flute alone with a feeling of loss. The lens first use the technique of the vision head-up, the lens will be near the line of sight into far in the mountainous, these seemingly endless mountains in the sea of clouds, its color is cool, layer upon layer gradient, there is quite a classical Chinese poems or landscape painting artistic conception, the protagonist of razor equanimity into the line of sight to the cliff bridge, blowing the hero dies legacy of the flute, voice slightly sad. These lens created a kind of lonely and sorrow atmosphere through color and spatial expression. At the meantime, in the evening breeze, the toon sits at the edge of the mountain with its knees bent, its messy hair raised in the wind and its eyebrows slightly wrinkled. Audience could feel the sad and regret within characters. Suddenly, the lens changed into overlooking perspective, introduction of eye was a dense jungle in this big panorama, wondering and
environment in contrast to the small, behind the huge stone lions at the edge of the cliff shows a mysterious breath. After the stone lion started speaking, the lens used overhead perspective pulled closer to the “Chun” in the conversation, which in order to reveal when talking about the flute, “Chun’s heart to old friend’s inspire. Then, lens changed into overlooking perspective aimed at the fire in the stone lion’s eyes. At this time gave people some fear and implied helplessness in her fate.

In this group of lens, there existed the switches between long lens and the short lens, also much conversion in different kinds of perspectives. Especially constantly switching look down and look up perspective, the use of long lens meets the close shot’s principle, and from looking down to look up the character image transformation, gives person a kind of more intuitive psychological feelings, the heart of disappointed when people face the fate of regret and longing. Large panoramic sea of clouds in the far away, as if people can't see the other end of the sea, which highlighted the characteristics of the environment. When “chum” was playing the flute, the lens were given priority to straight forward, this is a very objective lens design, as if in view of the audience watching” Chun” walking to the bridge pile into the top of the mountain, time in such distant gentle flute was in stark contrast with the steep environment. Along with the transformation and change of the lens, there were also a few natural sounds in the extreme static scene, which highlighted the cool color of this "static".

**Teaching Value**

Animation’s sub lens are depend on the play to accomplish the visual design, lens separation displays in the animation’s whole production which is the very important preliminary basis , it puts the whole plot idea into actual expression and performance, gives the great working convenience, and use the flexible lens representation, applies many methods to construct the work ‘s total style and the overall image presented on the screen . Therefore, lens separation in animation , as the supplement to the play and the scene, It’s not the graphics and translation of text content, but on the basis of text script to re-create the audio-visual language.Since the establishment and development of the animated mirror teaching system at ordinary colleges and universities have just started, teachers need to flexibly use the animation video language to make the split lens design course more systematic and practical to constantly accumulate teaching experience and improve the teaching method.

**References**