Animation Character Design of Guangxi Paleontology—Take the Lijiangocerus Speciosus as an Example

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Abstract

With the deepening of scientific research, the popularization of science has gradually become an important content of scientific and technological innovation in China. In this paper, Guangxi paleontology as a carrier, the use of animation thinking to recreate paleontology, promote the popularization and dissemination of popular science culture, provide role modeling reference and material library for Guangxi popular science animation content, and lay the foundation of IP image design for the further development of Guangxi paleontology culture.

Keywords

Paleontology; Guangxi; Animation; Character design; beautiful Lijiang deer

Research Significance

With the deepening of the research on archaeology, natural science and biological science, more and more secrets of paleontology are presented to the world. The popularization of Paleontology and natural science has been paid more and more attention. In June 2016, President XI mentioned at the "three sessions of science and technology" that "scientific and technological innovation and popularization are two wings of realizing innovation and development, and science popularization should be placed as important as scientific and technological innovation. Without the general improvement of the scientific quality of the whole people, it will be difficult to establish a large high-quality innovation army and realize the rapid transformation of scientific and technological achievements. " This is of great significance for promoting the development of science popularization in China at a new historical starting point.

Science popularization is an activity to introduce natural science and social science knowledge to the public in a simple and easy to understand way. How to make the public understand Guangxi paleontological natural science through effective, easy to understand and interesting animation character images has become the main goal of this paper.

Taking Guangxi paleontology as the carrier, in order to promote Chinese characteristics and promote scientific popularization as the goal, the author uses animation means to design Guangxi paleontology in animation and personification. The purpose is to use animation language to spread popular science culture of Guangxi paleontology, so that more people can understand Guangxi Paleontology and natural science, so as to revere nature, love life, protect animals and protect environment. At the same time, through personification and animation, paleontology can have more affinity, and shorten the distance between natural science, paleontology and human.

The use of animation and personification of Guangxi paleontology modeling provides visual design ideas for the dissemination of Guangxi paleontology popular science culture, provides role modeling reference and material library for Guangxi popular science animation content products, and lays the IP image foundation for further development of Guangxi paleontology popular science culture, so as to create a popular science culture image with Guangxi characteristics and enrich the dissemination of Guangxi popular science culture Visual system.

Personification Modeling Creativity

Science popularization is a scientific and rigorous topic, and the role of animation has the characteristics of personification and exaggeration. How to combine the two organically is the primary problem to be solved.

As the role of animation science popularization, we should have the following characteristics: first, we should have certain scientific basis, design according to the relevant knowledge of geography, biology, anatomy, archaeology, design, and so on. At the same time, we should take the real archaeological data as reference, such as fossil data, literature data, etc. Secondly, it has visibility and communicability. The application of future products is based on the relevant design, which is easy to spread and identify. Finally, it should have some pseudo human nature and exaggeration.

The characteristic of animation role is to endow anything with life and animals with human emotion. The role of science popularization should not only have scientific basis, but also have modern aesthetic and exaggerated personification elements. Through the real and virtual characteristics, increase affinity, attract audience, attract children, open the door of science popularization world, and further understand the mystery of science popularization.

Character Modeling Design

In this paper, animation popular science characters are designed based on the Lijiangocerus speciosus excavated in zhenpiyan, Guilin. The reason for choosing Lijiang ocerus According to the papers "*Fauna of Zengpiyan Site, Guilin, Guangxi*", written by Li Youheng and Han defen, Institute of Paleovertebrate and Paleoanthropology, Chinese Academy of Sciences, we can know that Lijiangocerus speciosus is a special extinct and extinct animal. From the angle of the excavated horns, it belongs to a new type of deer, which is different from other parts of the world other deer species. Therefore, the Lijiangocerus speciosus is very typical and unique to Guangxi. At the same time, the name of the Lijiangocerus speciosus also has the characteristics of Guangxi. Lijiang River is located in Guilin, Guangxi, and the water of Lijiang River is famous in the world, which is conducive to the further spread in the later period. Finally, deer is a very gentle and lovely role, its own characteristics are also very easy for animation design, the effect of anthropomorphic design is relatively popular with the public.

According to the relevant literature review, the Lijiangocerus speciosus has the following characteristics: no eyebrow fork on the horns, the top is divided into two forks, the fork is flat. The main section is round. The horns are twisted in a narrow "s" shape. The shape of the lower premolar is simple and original. It is a medium-sized deer.

The antlers without forked eyebrows in Zengpiyan were examined by the workers in Luyuan, Beijing Zoo. They all thought that the antlers were not caused by disability or dysplasia, but should be normal antlers.



Figure 1 The horns of Lijiang deer
(Photo source: "Fauna of Zengpiyan Site in Guilin, Guangxi")

It can be concluded that the size and uniqueness of Lijiangocerus lie in its horn characteristics. Therefore, in the role design, we can retain the unique characteristics of the Lijiangocerus speciosus in the horns, and exaggerate and personify appropriately in other places.

Character Building

The important characteristics that distinguish human beings from animals are that they have rich emotions, can walk upright, and can communicate. Therefore, giving the Lijiangocerus speciosus emotion is the primary task of animation modeling design. Emotion can be reflected by different personality characteristics. Animation, personification of Lijiangocerus should also have its own characteristics, in order to have more affinity and vitality. Different age will affect a person's personality, different gender will also produce different personality differences. Animation Lijiangocerus creation is to better popularize science and culture, so affinity, sense of justice, erudite knowledge are its main characteristics. In order to be more expressive and dramatic. Here, the Lijiangocerus speciosus is divided into male and female, and designed separately. Women are gentle, lively, lovely and naughty, while men are mature, steady, calm and knowledgeable. The relationship between men and women is father daughter relationship. The age of female Lijiangocerus is set at 5 years old. She is full of curiosity about the whole world. She always asks her father 100000 reasons. Lijiangocerus grandfather is about 50 years old mature and steady teacher, patiently answers any questions of little Lijiangocerus.

(1) Archives of Young Lijiang Deer

Young Lijiang Deer, a little girl, is set to be 5 years old, and her personality is set as sunny, lively and mischievous. Like to open big eyes to ask grandfather why, the things around are full of curiosity. There's a lovely mantra, "why is that?". Usually, she always holds the intelligent magnifying glass that her grandfather gave her when she was 3 years old, and can discover any tiny things in the world. The purpose of my grandfather's gift to the little girl is to hope that the little Lijiangocerus can learn to observe the world and discover more secrets of the world. The little Lijiangocerus also liked this gift very much.

(2) Archives of Middle-aged and Elderly Lijiang Deer

Male, aged 50 years old, with mature, steady, calm and erudite personality. My hobby is to explore the mysteries of the world. I like to take my granddaughter to find fossils and see museums all over the world. There's a learned mantra, "I'll tell you.". Usually, he always has a notebook and pen around him. When he finds or thinks of something new, he will immediately record it and study it carefully when he comes home.

Research on Different Modeling Proportion

According to the general proportion theory of anthropomorphic characters, we can know that the proportion of character modeling can be divided into the Q scale of 1:1 2 head body, 1:2 3 head body, 1:3 head body. This project attempts to design animation paleontology modeling, so it adopts the Q version proportion which is more easily accepted by the public and has obvious animation characteristics, as the proportion of Lijiang deer. In addition to the 1:1, 1:2, 1:3, 1:4 ratio mentioned above, there is also a Q version ratio based on golden section ratio. The author will use the ratio mentioned above for comparative design, and finally choose the best design scheme.

The design process is in the CSP software to draw a sketch, and then draw a line, using the grid to control the scale relationship, the final effect is as follows.



Figure 2 Comparison of Modeling Scale of Young Lijiang Deer

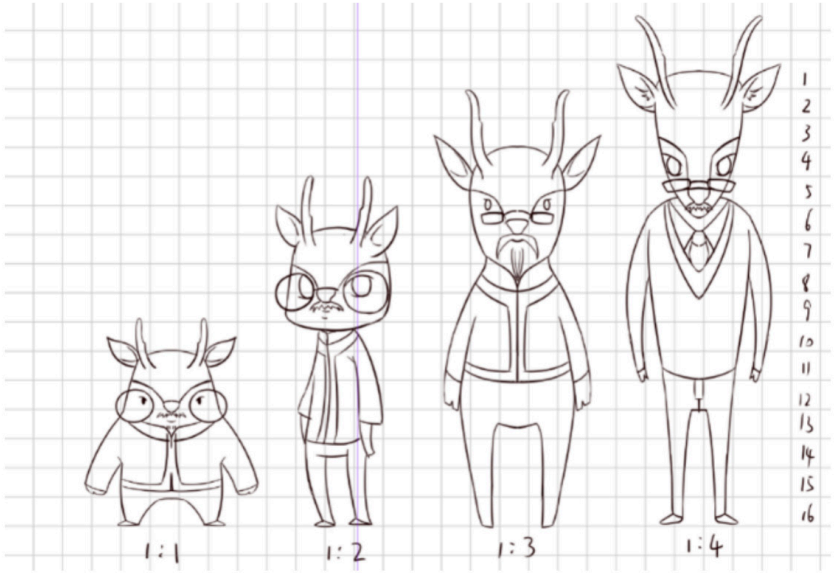


Figure 3 Comparison of Modeling Scale of Elder Lijiang Deer

According to the expected role setting and the ethnic characteristics of Guangxi, this paper uses the proportion theory of Q version to carry out the above design. Through comparison, it can be found that 1:1 is more suitable for the small Lijiangocerus, and it is easy to reuse later. For example, it can be used to make mascots, dolls and other peripheral products. The ratio of 1:3 is more suitable for Lijiangocerus grandfather. The beards and glasses of the characters can reflect their erudite characteristics. At the same time, the ratio of 1:3 is more suitable for adults, and it is more suitable to match with the little Lijiangocerus. Therefore, it was decided to adopt the modeling proportion of the second little Lijiangocerus and the third one. With the modeling proportion, the next step is to add some details on the clothing of Lijiangocerus in combination with the national characteristics of Guangxi.

Research on Different Modeling Clothing and Color Matching

Guangxi is a multi-ethnic area with 12 ethnic groups, among which Yao and Zhuang have the largest population. Therefore, from the perspective of clothing, Guangxi clothing has very rich national characteristics. The costumes of each ethnic group are quite different, even in different areas of the same ethnic group. All of these provide reference materials for Guangxi paleontology animation clothing. As Guangxi is a minority autonomous region with Zhuang as the main body, this paper will take Zhuang costumes as the clothing characteristics of beautiful Lijiangocerus animation modeling.

Through the investigation of the museum and the relevant literature of Zhuang's clothing, the following conclusions are drawn: the men's clothing of Zhuang Nationality in Qing Dynasty was basically customized after the change, which was generally the right Lapel lapel or the pair front jacket with large trousers waist and wide crotch and wide tube trousers, and the clothes and trousers were rarely decorated. Tie a belt or a turban, or wrap it with a cloth belt or a cloth towel.

Zhuang women's wear is usually the top of the right lapel or open chest pair of rolling appendix lace top, and the bottom wear wide file wide leg tube rolling appendage trousers or pleated skirt, long skirt, short skirt, plus apron, all kinds of turbans, the main styles are jacket under pants, jacket skirt, jacket under pants, skirt type. The reference pictures are shown as follows:



Figure 4 Photos of Guangxi National Museum



Figure 5 Girls in Wuming Zhuang Nationality Costumes



Figure 6 Photos of Guangxi National Museum

To sum up, the author through screening, thinking and summed up suitable for the Lijiangocerus speciosus animation character design of clothing elements, small Lijiangocerus will wear right lapel, big lapel, short sleeves, lace, skirt, more playful and lively and lovely personality characteristics. Grandfather Lijiangocerus adopts open top, long sleeves, lace and trousers, which shows his mature and steady personality.

In terms of color matching, due to the lively and lovely character of the little Lijiangocerus, and the age is 5 years old, in order to be more easily accepted by younger audiences, the color matching is more suitable for some bright and beautiful colors, such as warm color series, which gives people warm and lively characteristics. Therefore, the main color of little Lijiang deer's clothes is rose red. At the same time, in order to reflect the characteristics of ethnic minorities, some lace with ethnic characteristics is added to the clothing. The cold color of the pattern forms a sharp contrast with the main color of the dress, which highlights the playfulness, enthusiasm, youth and vitality of the little Lijiangocerus. Moreover, in order to make the role more delicate, it also added some headwear with

national characteristics.

On the contrary, the cool tone gives people a sense of calm and calm, while the calm personality of grandfather Lijiangocerus is in line with the cool color of blue. Therefore, the clothing color of grandfather Lijiangocerus is sky blue, and the lace is decorated with Dark Navy Blue. It further reflects the mature, calm and calm personality characteristics of Lijiangocerus grandfather. Clothing and color matching are as follows:



Figure 7 Clothing and Color Matching

Character Expression Design

Animation characters only have modeling, no rich expression, is single and lifeless. In order to make the characters more vivid and have emotions like human beings, it is necessary to inject some stories and expressions with their own characteristics into the characters.

When human beings face different things, they will produce different emotions. These emotions will be presented through human facial muscles, and finally form the expression that people see. Therefore, the fundamental factor that triggers the expression is to find the right thing or plot for the character.

Here we can create some small stories according to the characteristics of Lijiangocerus, so as to design more real and rich expression. For example: the grandfather of Lijiangocerus took the little Lijiangocerus to visit the museum. The happy and excited expression when hearing the news. When the little Lijiangocerus saw all kinds of cultural relics in the exhibition hall, he was very excited. A look of doubt when you see something you don't understand. The expression of sudden realization when grandfather gave an answer. When I heard that some animals had been extinct, I

couldn't see the sad and depressed expression after that. In this way, we can not only make the little Lijiangocerus more vivid, but also make the characters more real.

The following is a sketch of the expression design of the little Lijiangocerus:



Figure 8 Sketch of Expression Design of Young Lijiang Deer

Summary

The animation design of Lijiangocerus speciosus is one of the many ancient creatures in Guangxi. In the rich natural science, paleontology and geological science of Guangxi, there are many resources waiting for us to develop and carry forward. The earth is mysterious, and nature is great. Human beings need to constantly discover, revere and protect the environment on which we live, so as to achieve sustainable development. Every industry has the responsibility and obligation to contribute to natural science, popular science culture and human understanding of nature. By means of animation, the author reshapes life for the extinct Guangxi paleontology, so that more people can understand that there was such a lovely and living creature in the world. Its disappearance is the loss of nature and human beings. At the same time, we should cherish the endangered animals and creatures more. Don't wait to lose, to learn to protect.

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