Research on Color Design in Interactive Animation Design Software

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Abstract. As an Internet product, interactive animation is a member of the animation family with particularity. However, as an expression form of animation, it generally conforms to the basic characteristics of animation. As a dynamic way of visual expression, color plays a very important role. This article mainly studies and analyzes the importance of color design in interactive animation design software and its practical application. It is hoped that the reading of this paper can provide some help and inspiration to researchers in the field of interactive animation design and contribute to the development of China's interactive animation design industry.

Keywords: Interactive Animation, Color Design, Research, Animation Design Software

1. Introduction
Interactive animation is the product of the highly developed Internet technology. As a new form of animation, interactive animation is more controllable, that is, it can trigger the progress of animation by clicking, dragging and other behaviors so as to interact with the viewers of animation. Interactive animation is a special and novel form of animation while color can directly stimulate people's vision. Therefore, it plays a very important role in interactive animation. The contrast of color before and after contrast can also achieve the purpose of change to a certain extent, reflecting the interactive feature and increasing the appeal.

2. Significance of color design to interactive animation design

2.1. Enhance visual effects
Color design can improve the visual effect. The earliest films and animations were all black and white and the reproduction of many scenes had to rely on the imagination of the audience with poor visual effect and experience. With the development of the times and the progress of related technology, color animation has become a very common form of expression in our life. Whether it is to simulate and restore the real-life scene, \textsuperscript{10}or to render the atmosphere, to highlight something is inseparable from the design of color. With the use of reasonable color contrast, designers can bring the viewer strong visual impact, reach the purpose of attracting attention. Moreover, collocation of some soft colors also can alleviate visual fatigue while collocation of some special colors can let a person shine at the
moment. Accordingly, different designs of colors and collocation have various effects.

2.2. Play dynamic effect
A change of color often can promote animation dynamic effect. Generally speaking, a dynamic animation effect has been achieved, mainly with the use of lines, shapes and color changes. The change of the color saturation and the change of the color itself can play a huge role in animation dynamic effects.

2.3. Convey emotional content
Research shows that colour has strong psychological hint effect. For example, red lets a person excited, yellow lets a person flat and, blue lets a person calm, black lets a person depressive and so on. Different color collocation can bring different visual experience while good color design can improve the visual effect. Therefore, for interactive animation, different color design and collocation can often render different atmosphere and convey different emotional content. Taking the interactive animation advertisement of product promotion as an example, while drawing attention with red, it can also make people more excited and generate the impulse to buy; The posters of silent and mourning are mostly black and gray, which makes people feel depressed and sad, as shown in figure 1 below:

![Figure 1. The significance of color design](image)

2.4. Rich connotation
Colorific design and reasonable collocation, to some extent, can also enrich the connotation of interactive animation. The collocation way with black and white strengthened design feeling while various colors can show how children feel. The combination of red and yellow often reminds people of the five-star red flag while the green and camouflage colors remind people of the bloody sergeant. These connotations can be directly transmitted to viewers through colors, which can convey more information in the limited space of interactive animation.

3. Practical application of color design in interactive animation design

3.1. Color design and audience emotion
As mentioned above, color has an important impact on people's emotions and has a strong psychological implication. Therefore, reasonable color design in interactive animation design can affect the audience's emotions. Interactive animation itself is to enhance the audience's sense of participation and experience through interaction, so as to enhance attention. Through color design, it can grasp the feelings of the audience, guide and hint the audience, and expand the actual use effect of interactive animation, among which the choice of cool color system and warm color system is the most obvious.

3.2. Influence of color system on interactive animation design

In the actual interactive animation design application, the common color systems we have are red system, yellow system, green system, orange system, purple system, black system and so on. Different color systems also have a huge gap in conveying emotions and expressing connotations, which will also have a significant impact on the effect of the whole interactive animation, as shown in figure 2 below

![Figure 2. Affect the interactive animation effects](image)

Red department is the most representative of warm color, with solemn and festive feature, enthusiastic connotation and feeling. Therefore, red is a very good choice for both festivals and promotions. We should emphasize the dark red color, because dark red often represents the color of blood flowing out, so it has a certain sense of bloody violence and is often used in some more dark and scary style interactive animation design.

In China, yellow is a kind of color used by the royal family. It has been inherited for thousands of years and has been inherent with a sense of noble gas in our mind. Today, when there is no restriction on the use of yellow, yellow is often applied in the display and sale animation of jewelry, jewelry and precious metals. It's sure that the combination of yellow and black is a common color matching for warning signs. Therefore, yellow is also used in some interactive animations with warning meanings.

Purple department is relatively rare in life that is a kind of color representing mystery. It is really common in interactive advertisement animation of the promotion of brands and makeups of contemporary female.

Green represents life, vitality, nature and health. Therefore, it is quite common in interactive animations of health care products, environmental protection publicity, flowers, wood industry and other aspects.

Orange department can let a person associate with rich and numerous fruits commonly, so a lot of food industries like to use orange department to undertake collocation. Psychology studies show that orange department still has the effect that stimulates appetite.

Black is relatively complex and one of the most difficult colors for designers to master. Black can represent contracted already as well as advanced. It still can represent additionally dark night, terror and death, giving a person with chilly, sadness, hopeless for a mood. Therefore, for designers,
reasonable use of black can improve the texture and sense of design of the picture. However, unreasonable use will cause psychological and physical discomfort of the audience. Therefore, black has become a watershed and touchstone for designers.

3.3. Influence of color purity and lightness on interactive animation design
The colour with higher purity and lightness can draw more attention. Reasonable design of the lightness of color and purity can play an attractive and prominent role. However, what designers need to pay attention to is when lightness and purity is too high, it may have the feeling of a usurper, letting the overall picture difficult to distinguish the primary and secondary. As a visual product, matching with high lightness and high purity color may also show a harsh feeling on the physiology.

4. Conclusion
In a word, interactive animation, as a new expression form of animation, has great similarities with most visual arts, such as painting and film, especially in the use of color. The color design in interactive animation design software can always affect people's psychological, physical, emotional, hot, and active animal design.

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