

# An immersive exploration of interactive art in digital media

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**Abstract:** Since modern times, science and technology have developed rapidly all over the world. Nowadays, the development of human society has officially entered the information age. The development of art also follows the pace of the development of science and technology. In recent years, the interactive art of digital media has become popular and gradually become an important form of art development in today's world. There are certain differences between digital media interactive art and traditional art forms. In interactive art, more attention should be paid to user experience. Through the application of today's advanced science and technology, art begins to have closer contact with people and reflects its unique aesthetic value. In this study, an immersive exploration of digital media interactive art will be conducted from the perspective of a user, and the artistic characteristics and value embodiment of digital media interactive art will be studied and analyzed.

**Key words:** Digital media interactive art; Artistic characteristics; Value embodiment

## I. What is digital media interactive art

Digital media interactive art is a new form of art covering many disciplines. In the structure of digital media interactive art, there are knowledge of natural science, social science and humanities, etc. In mathematics, it deeply reflects the concept of "science, art and humanities". In general, interactive art of digital media is an informationized art form that relies on advanced electronic information technology and combines traditional interactive art with the most advanced technical means in the current era. Interactive art of digital media breaks the restriction of artistic expression form in the development process of traditional art, and provides a new possibility for the development of art.

## II. Analysis of the main characteristics of digital media interactive art

There are huge differences between digital media interactive art and traditional art forms. The appearance of these differences, to a certain extent, represents the significant progress of digital media interactive art compared with traditional art forms. Especially in terms of artistic expression techniques, digital media interactive art has a great degree of innovation compared with traditional art forms. These innovative measures make digital media interactive art show completely different artistic characteristics from traditional art forms. The main characteristics of digital media interactive art are as follows:

### 1. The specific presentation is more diversified

Compared with traditional forms of artistic expression, interactive art of digital media has more diversified forms of expression. In the process of development, interactive art of mathematical media has realized a high degree of integration with People's Daily life. The concrete expression of interactive art of digital media can be found in the mobile phones that people often use in daily life or the art works in art galleries. According to the differences in the specific expression forms of digital media interactive art, the expression forms of digital media interactive art can be divided into three categories, namely device interaction, image interaction and interface interaction. Among these three forms of expression, the form of device interaction is the earliest one, and the form of device interaction reflects a strong industrial atmosphere. The Dash 7 Ddesign art team launched the installation art work Waterfall swing in the process of creation, the main body of the installation uses a lot of mechanical devices. As for the overall appearance, the top of the steel swing is set with rows of special mechanical solenoids. The nozzle of these mechanical solenoids will spray out a curtain of water, which will fall from the top like a waterfall, forming an installation landscape that is infinitely close to a natural waterfall. Experience the interactive art of this installation deeply. When people pass under the waterfall, the water curtain does not wet their clothes. This mainly relies on sensors collecting information about turning Angle and speed and sending it to the computer. The computer then predicts the future trajectory of the swing according to the data information, and gives instructions to the device according to the prediction results, and "hollows" the water curtain in time to ensure that the viewer can pass smoothly.

The interactive image works are mainly displayed by projection or LED screen. In general, they can be divided into single-sided projection screen and multi-sided immersive projection screen. This kind of artistic expression requires strong computer technology as support to be able to be successfully realized. The rear end of the screen is connected with a network signal sensor, which will directly receive the instruction information of the audience, transmit the information to the computer system for processing, and feedback the processed information to the processor, thus promoting the switch of the screen image content. In the interactive art of digital media, this form of expression is very common. The form of interface interaction is a further sublimation of the above two forms of expression. In the form of device interaction and image interaction, various independent media are needed to let the audience obtain artistic perception. In the form of interface interaction, the influence of the media on the audience's artistic perception is eliminated to the greatest extent. In the overall experience process, the audience will not feel the existence of the information communication medium. In digital media interactive art, the most common form of interface interaction is virtual reality technology. With the development of VR technology, AR technology and

wearable devices, human-computer interaction is becoming more and more abundant and interactive experience is becoming more and more amazing. Artists design art scenes and input them into computers, while viewers gain interactive experience by operating mobile terminals or computers.

#### 2. Innovation in the form of artistic creation

In the previous point, the three forms of artistic expression discussed are very different from those used in traditional art. It can be seen that the popularity of interactive art of digital media has greatly promoted the innovation of artistic creation forms. In the creation of interactive art works of digital media, artificial intelligence technology has been widely used. Artificial intelligence technology can collect information about the development of public aesthetics and artistic styles, providing more creative inspiration sources and basis for art creators. A large amount of information about artistic creation eventually evolved into artists' bold development of creative methods, forming a variety of new artistic creation techniques and new artistic works that we can see today. At the same time, in the process of creating interactive art works of digital media, artists can determine the artistic creativity of the creation content according to the data conclusions obtained by analysis and their own experience, conduct environment analysis and interactive behavior analysis, etc., and propose effective forms of digital interactive art expression to better meet the aesthetic needs of the audience. Moreover, in the creation process of interactive digital media art works, artists are no longer the only creators. When many audiences experience interactive digital media technology, they will generate perceptual feedback on the works, and these feedback information will become an important basis and inspiration source for improving the creation of interactive digital media art works.

#### 3. To bring users a richer art experience

Digital media interactive technology is a form of artistic expression mainly to satisfy users' visual aesthetic experience, which is the same as painting and sculpture in traditional art. In traditional painting and sculpture art, people can only feel the artist's creative intention and the theme of the work through the color presentation of the work, the relationship between the body blocks and the combination of forms, etc., and viewers can not get the active artistic experience through these works. At the same time, these static works of art can not make the viewers truly understand the content and theme reflected in the works. Therefore, static art works hardly inspire the viewer's interactive enthusiasm, nor can they give feedback to the viewer's viewing activities. However, when digital interaction technology is introduced into static art, it can change the silent and passive artistic expression form of static art, and realize the interactive link in static art works through the transformation of the form of works. At present, the development of various information technology provides the possibility for realizing this point.

#### 4. Promote the popularization of artistic works

"Beer-centered" is often the most important approach to interactive realization in digital interactive art, that is, the aesthetic quality of the public needs to be taken into account. Aesthetic elements that are too obscure and difficult to understand are not suitable for interactive art works. Instead, friendly interfaces, narrative trends that resonate with the public and novel and smooth interactive processes should be replaced. Therefore, digital interactive works usually have obvious features such as entertainment, legibility, comfort and interest. Especially when digital interactive art enters the commercial field, only when product design is done from the user's point of view and committed to providing users with a wonderful experience can there be a large number of users and a strong user stickiness. If the art works can provide both the enjoyment of beauty and the pleasure of games, and finally give people education and inspiration, and trigger users to think at a deeper level, then users will reach the peak of pleasant experience, so interactive artists are striving to create interactive art works that can cover the above characteristics.

#### 5. Personalized aesthetic perception

Traditional works of art, only after the completion of the creation, will be formally open to the viewer, and when the work is completed, the content theme and aesthetic expression of the work of art have been completely fixed, can not be changed according to the user's aesthetic needs, such unchangeable content theme and aesthetic expression of the work, generally known as "style". The aesthetic perception of the viewer to the work of art is based on the finished work, because of the difference in aesthetic concept of different people, so that different viewers have a great difference in the evaluation of the same work of art. As a result, traditional works of art can only be satisfied with the aesthetic perception of some people, and such perception is very fixed, without diversified and personalized characteristics.

### III. The value presentation of interactive art works by digital media

The most important reason why digital media interactive art can break the aesthetic restrictions of traditional art forms and truly realize the personalized aesthetic perception of different viewers is that the creative process of digital media interactive art works truly reflects the concept of "interaction". In the creation process of interactive art works of digital media, the creation of works is no longer just the output of artistic works unilaterally by the artist, and the viewer accepts the single supply form of artistic works separately, but the artistic crystallization obtained by the artist and all the viewers. In the process of digital media interactive art creation, technology is just a means to help art works interact with the viewer, rather than a necessity in the process of interactive art creation. However, it cannot be denied that compared with previous interactive art works, interactive art works of digital media have a qualitative leap in their interactivity.

Let the art works truly enjoy both elegance and popular art. Traditional works of art have their own unique ways of expression in aesthetic concepts and creative techniques, although this differentiated way of expression helps artists to establish their own unique style of artistic creation. However, due to the differences in aesthetic concepts between different people, it is difficult for artists' artworks to meet

everyone's aesthetic needs. For example, in the "Western Art avant-garde movement" set off in the European painting world at the beginning of the last century, many new artistic schools emerged, all of which have their own unique aesthetic concepts and creative methods, and the content and theme of their works also have very distinct characteristics. However, the audience of these newly emerged schools of art is usually only a fixed small group of people, and most people have a strong misunderstanding of the aesthetic concept reflected in these works and the connotation and theme of the works.

## Conclusion

Compared with traditional art forms, the popularity of digital media interactive art has shortened the distance between art and the general public, making art no longer just a pavilion, so that art can truly enter People's Daily life. Through the immersive experience of different digital media interactive art works, the artistic characteristics of digital media interactive art are summarized in detail, and the value of digital media interactive art in the development of contemporary society is deeply discussed. According to the research results of this paper, the author believes that in the development process of digital media interactive art in the future, the balance between art and technology should be constantly sought, and the value of digital media interactive art works should be further enhanced in all aspects.

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