

The Digital Transformation and Development of Traditional Murals in the Contemporary Context - Taking the Kaihua Temple in Gaoping as an Example

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Received: 16 August 2022; **Accepted:** 16 October 2022; **Published:** 9 January 2023

Abstract:

With the development of science and technology, digital media has brought new opportunities and possibilities for the inheritance and reconstruction of the artistic language of ancient murals. The intervention from simple materials to multiple digital technologies is a way of transformation and development of murals in the contemporary context. As one of the precious cultural heritages in my country, murals need to be protected reasonably by means of digital technology first, and then use digital means to give them vitality and inherit the cultural connotations they carry.

Keywords:

Murals of Kaihua Temple in Gaoping, Digital Transformation, Digital Dissemination

1. Introduction

Gaoping is located in the southeast of Shanxi Province. There are towers, halls, pavilions and other types of buildings built in the five dynasties, Song, Jin, Yuan, Ming and Qing dynasties inside and outside the ancient temple. The inscriptions have been handed down to the world, which are very precious and are highly valued by the academic circles.

As one of the only surviving murals in the Song Dynasty temple in Shanxi, the murals of the Daxiong Hall of Kaihua Temple perfectly combine the classic stories of the classics and the secular people's livelihood, and vividly reflect the folk customs, production and life and technological level of the society at that time. It can be said that the murals of Kaihua Temple are just like the custom paintings of social life in the Song Dynasty. [1] It is a pity that the walls of the east wall and the north wall are in disrepair for a long time and are seriously overrun, and some characters and plots cannot be identified. How to prolong the life of mural art as much as possible, maintain its original artistic appearance and increase its artistic value, so that the historical and cultural information carried by it can be passed on truthfully and for a long time, it is an urgent task.

2. The Digital Transformation of the Murals of Gaoping Temple

2.1. The meaning and characteristics of digital transformation

At present, the murals of Gaoping Temple have various diseases, such as nails, cracks, herpes, melanin and hollow sputum, etc., and the pigment layer is prone to fall off and fade. The current protection of murals is mainly to use digital means to use emerging science and technology, such as the Internet, computer technology, video technology, etc., through multimedia installations, and at the same time with a certain degree of visual art to create works of art. Simply put, it is technology that permanently records the current information of murals in the form of computer data through artistic means, and can be reused many times.

From knotted memorabilia to modern digital information dissemination, the dissemination of traditional murals is closely related to technological progress. [2] Nowadays, the digitization of information and the development of the Internet have made the dissemination speed extremely fast, and the speed, distance, method, confidentiality, accuracy and relationship with the environment of cultural inheritance have produced great differences with the evolution of time and space. The evolution of human information transmission has evolved from form, records, characters, and printing to electronic signals, which has led to the disappearance of the cultural ecology inherited from traditional murals, and the carrier of cultural memory no longer exists. The social environment and technological progress have brought about the spatial crisis of the living environment, and the significance of digitization lies in the fact that records can be restored to a relatively high degree without being consumed by time and space, thus forming a new form of inheritance. [3] Digitization has become the main means of cultural heritage inheritance, and it is also the only way to inherit and protect heritage in the new historical situation.

Digitization breaks through the limitations of time and space, breaks the traditional way of communication of murals, and establishes a way of information transmission that is close to reality through simulacra conception. [4] The three-dimensional digital simulacrum and VR interaction also bring about the experience of visual virtual immersion—visual immersion, psychological immersion and multi-dimensional physical immersion, which provide a plastic virtual space for the digital transmission of cultural heritage. It realizes the juxtaposition of real space and virtual space in the context of time and space and cultural ecology. The mission of digitizing intangible cultural heritage is brought about by the times. It can reshape the ecology of murals in virtual space. To some extent, the content of the stories in the murals is restored in the virtual space, and people can feel the current atmosphere.

2.2. Digital restoration of Kaihua Temple in Gaoping

From 2015 to 2019, a total of more than 100 teachers, students and cooperative teams from the School of Architecture, Tsinghua University, through digital collection, fine mapping, manual measurement, combined with traditional literature research, conducted research on the Kaihua Temple complex, the main structure of the main hall, color paintings and murals. Comprehensive record analysis and research. The excavation and digital protection of the murals of Kaihua Temple provide more desirable materials for academic research.

From the existing data, I learned that the restoration work of the murals of Kaihua Temple in Gaoping used a lot of new materials and high technology. The digital

collection carried out on the spot requires scanning of every flaw, component analysis and coloring, and the use of digital technology. To the greatest extent possible, the part that cannot be viewed after being destroyed by humans is displayed, which is in line with the traditional concept of symmetrical beauty and complete beauty. The audience's aesthetic expectations for the murals have reached, even exceeded the original aesthetic formula, and entered the aesthetic pursuit of the whole being greater than the part to restore the artistic language of the murals in Kaihua Temple to the greatest extent, and also supplement the inability to express the original murals. [5]

3. The Way of Digital Communication

3.1. Digital interactive display

For the collected mural materials, we must first establish a relevant database, and use digital technology to preserve traditional murals for a long time. [6] Digital technology and virtual reality technology are the core means of digital display of Gaoping Kaihua Temple art. The digital achievements of the murals of Koping Temple are exhibited in the form of digital interaction. For example, the content of the murals is in the form of a ball screen, which displays the scenes in the temple in multiple directions. Combining digital technology with virtual reality technology, the use of virtual reality technology allows the experimenter to inquire about the relevant information about Kaihua Temple, establish interaction with it, and have an immersive feeling. So that people who come to visit can experience the charm of a virtual tour of digital murals. The virtual tour of digital murals is to use multimedia technology to make videos of the pictures of the murals of Kaihua Temple, so that tourists can play them back and watch them repeatedly. This method can not only vividly show the relevant plots in the murals and the development and historical situation of the Song Dynasty society, but also enable visitors to understand the mural culture of Kaihua Temple through photoelectric imaging technology through the integration of technology and culture. To reduce the risk of man-made destruction, to achieve the purpose of protection and inheritance.

In addition, with the support of AR technology, a QR code that matches the relevant images and materials of Kaihua Temple can be produced, and the digital murals in the exhibition hall can be scanned to obtain an introduction to the details of the exhibition that are difficult to display in depth, so that the audience can clearly see the targeted text introduction on the mobile phone screen, with animation effects to deepen the viewer's understanding. Through digital restoration, a panoramic virtual module appears, which can break the boundaries of time and space, create a wonderful scene integrating virtual and reality, [7] restore the true original appearance of the murals of Kaihua Temple in Gaoping, and convey the boring story scene to the audience more vividly and interestingly. Here, visitors can learn about the history, culture, art, natural scenery, construction of temples, and the production of murals and colored sculptures related to the murals of Kaihua Temple in Gaoping. Bring a new immersive experience.

3.2. Re-creation of traditional elements

In addition to using digital means to reproduce the murals of Kaihua Temple, the style of traditional patterns can also be used for reference. [8] When recreating traditional elements, we should start from the visual point of view, regard the overall background of mural creation as a whole, and take the most representative and most

characteristic visual elements for creation. Only in this way can the refined and designed visual elements be more unique. In addition, in the process of shaping and expressing visual elements, combine the expression of the current young audience's presentation style and way of visual elements. Use digital resources to develop and design creative derivatives, and create a series of cultural and creative products with distinct characteristics.

In addition, the existing murals can be classified and arranged according to the characteristics of different periods, regions, themes, painting styles, composition forms, etc., and the figures, costumes, headgear, utensils, decorative patterns, architecture, environment and other elements in the murals can be broken up. Separate them and organize them according to their type. The isolated elements are reproduced in 2D and 3D, and these reproduced elements can also be used directly for modern design. Incorporating traditional elements in murals into modern designs can not only give new life to ancient murals, but also inject fresh and profound blood into the design. [9]

3.3. Carry out digital service projects

Considering the particularity of the “New Coronary Pneumonia” epidemic in 2020, tourist places across the country are temporarily closed. In order to solve this difficulty, we should actively explore new Internet and mobile Internet technologies, and launch online cultural service projects such as “Yunyou Kaihua Temple”. It shows the mysterious charm of Kaihua Temple from all angles. Using digital resources, a series of online “cloud exhibition” activities have been launched, such as “Yunyou Kaihua Temple” WeChat applet, “digital murals”, “boutique tours”, “cultural and creative products” and “boutique exhibitions”. In this way, people can ‘roam’ Kaihua Temple with their fingertips at home, and update the exclusive mural stories and witty words integrating the wisdom of the ancients every day; the audience can visit every place of the temple online, travel from ancient times to the future, without Go out to appreciate the beauty and shocking power of Kaihua Temple in Gaoping. In addition, you can try to use music, games, cultural and creative products and other forms, combined with digital technology to integrate online and offline, let the ancient mural art release new vitality, make cultural relics “live”, enter people's lives, make It has become a new kinetic energy to lead the fashion of the times, build the aesthetics of the times, and satisfy a better life. [10]

4. Conclusions

The revival of contemporary mural art in temples is a reconstruction of traditional cultural experience, rather than a simple copy of tourism consumer goods. Traditional mural art contains the charm of traditional Chinese culture. With the progress of society, only by changing the narrative method of traditional murals and using digital means to integrate more thinking elements into murals will they not be annihilated in the long river of history.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

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