

The Evolution of Cultural Relics: Environmental Sculpture of Huai'an in Metaverse

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Abstract

In recent years, with the rapid development of digital technology, cultural have gradually introduced the concept of digital system. Taking the environmental sculpture of Huai'an city as an example, this paper discusses the application of the meta-cosmic digital system in the cultural relics records, and analyzes the significance of this technology for transnational exchanges and mutual learning among civilizations. Through the in-depth study of the management of Huaian environmental sculpture, this paper finds that the digital system of the universe can also realize the real-time recording, virtual display and global sharing of cultural relics, thus providing a new way and method for the protection and inheritance of cultural relics. At the same time, the use of metaso digital system can also promote the innovation and artistic exchange of urban sculpture, and promote the process of mutual learning among civilizations. Therefore, the application of metaso digital system in cultural records has great theoretical and practical significance.

Keywords: *Cultural relics record yuan universe digital system; huai'an environmental sculpture transnational exchange and mutual learning.*

Introduction

As an excellent cultural heritage of the society, cultural relics carry rich historical and cultural information, which is of great significance for people to understand history and inherit civilization. However, due to the long existence of cultural relics and the complex preservation environment, the preservation and inheritance of cultural relics have always been faced with many challenges. In recent years, with the rapid development of digital technology, the cosmic digital system has gradually introduced the field of cultural relics recording, providing new ways and methods for the protection and inheritance of cultural relics. This study using case analysis, in view of the application of digital technology in the field of sculpture art analysis, through on-the-spot investigation and questionnaire survey of Huai'an environment sculpture surrounding 100 different age, occupation, education of the field questionnaire, and analyze the results of the questionnaire, on the feasibility of digital system management of environmental sculpture and implementation plan. Completed huai'an environmental sculpture space space version 1.0. Analyzing the enlightenment of the digital system management of Huai'an city, environmental sculpture as a cultural relic is recorded and used in the metacosmic space, which can promote mutual learning of civilizations.

Literature Review

Records of cultural relics are an important means to record human history and culture. It inherits and develops human civilization through the preservation and research of cultural relics. As a new concept, the metauniverse is gradually attracting people's attention. As an important part of urban culture, urban sculpture has a close connection between cultural relics records and meta-universe. Therefore, the study of the status and role of cultural relics records in the metasuniverse is of great significance for promoting the creation of urban sculpture and art management.

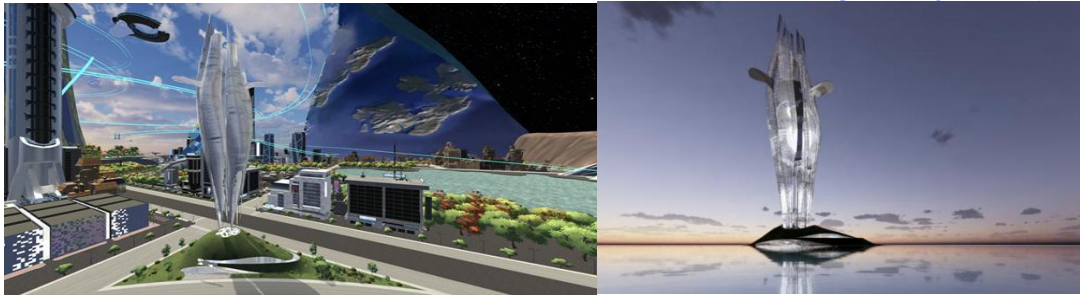
A Case of Metmetaological Sculpture

On April 28,2022, the virtual building "META ZIWU" created by Mr.Ma Yansong, a famous Chinese architect and founder of MAD Architecture firm, was officially unveiled in Baidu "bustling" world.

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(Sculpture of the Yuan Universe House Scene).

In the blueprint of "META ZIWU universe house", "architecture" gets rid of the shackles of real gravity and physical space technology, Outlines the space of imagination with surreal lines, and gives "architecture" new attributes, an object that is closely connected with human senses, behavior, emotions and spirit.

Art News, the art media with the largest circulation of "Chinese world", commented that the ultimate goal of this ZIWU space tower is to challenge the virtual architecture to both the limitations of reality and the spirit of new technology.

The Way the Meta-Universe Works

The Meta-universe digital system is an immersive and diversified digital management system that can connect individuals from all over the world anytime and anywhere. The operation mode of the metacosmic digital system includes identity management, civilized communication, network of friends and economic system. The system operates in a manner based on low latency technology, allowing users to immerse themselves in the meta-cosmic environment in real time. Through diversified functions and interactive ways, users can experience the free transformation of identity, civilized communication and integration, real-time interaction with friends and participation in economic activities.



Metaverse operation mode diagram.

Identity management: The operation of the metacosmic digital system cannot be separated from an effective identity management mechanism. With user registration and identity authentication, the system ensures that each user has an independent and identifiable identity in the metaverse. This identity management mechanism provides a better security guarantee for individuals, and also provides a convenience for the communication and interaction between individuals.

Civilization exchange: The digital system provides infinite possibilities for the exchange of civilizations among individuals around the world. Users can communicate through text, voice, and images in the virtual environment. This way of communication is not limited by geography, allowing users to interact with individuals around the world in real time, promoting communication and integration among civilizations.

Friends network: The metaverse digital system provides users with the opportunity to build a network of friends. Users can actively add or accept friend requests from other users by browsing other users' personal data and interests. This kind of friend's network can not only increase the social circle of users, but also provide users with more opportunities to communicate and interact.

Economic system: The meta-universe digital system also provides users with the opportunity to participate in economic activities. Users can obtain economic benefits by buying and selling virtual goods, and participating in virtual investment. This economic system allows users to experience real economic activity in the meta-universe and get actual economic rewards from it.

Immersive experience: The metauniverse digital system provides an immersive experience through low-latency technology. Users can experience the environment through virtual VR devices such as VR headsets and controllers. The low-latency technology ensures that users can respond to changes in the meta-universe in real time, increasing their immersion and quality of experience.

Diversified functions: The Meta-universe digital system provides a rich variety of functions, bringing a richer experience to users. Users can participate in various activities in the meta-universe, such as virtual tourism, virtual competitions, and enjoy the fun of different fields. The diversified functions enable users to choose the own experience according to their interests and needs, which increases the playability and entertainment of the system.

The Status and Role of Cultural Relics Recorded in The Meta-Universe

Cultural relics records are the foundation of the metauniverse, which records human history and culture through the preservation and inheritance of cultural relics. The meta-universe is a borderless virtual world that brings together artifacts and cultures from around the world and presents it to audiences around the world through digital technology. The role of cultural relics recorded in the universe is reflected in the following aspects: first, to protect cultural relics and preserve them through digital technology; second, to spread cultural relics so that more people can understand and appreciate cultural relics; third, it is to study cultural relics and conduct in-depth research and interpretation through digital means.

The Status and Role of Urban Sculpture in The Yuan-Universe

As a part of the urban culture, urban sculpture, combined with the digital display of the yuan-universe, can better show the history and culture of the city. Urban sculpture is the symbol and symbol of the city, which can be presented to the global audience through the yuan-universe. The status and function of urban sculpture in the universe are mainly reflected in the following aspects: first, to enrich the cultural connotation of the city and enhance the image of the city; second, to attract tourists and investment and promote the economic development of the city; and to promote the cultural quality of urban residents and cultivate their appreciation and understanding of art.

The Application of Cultural Relics Records in Urban Sculpture Creation and Art Management

Cultural relics records play an important role in the creation process of urban sculpture. By studying and referring to artifacts, artists can take inspiration from them and embody them in urban sculpture. At the same time, in the art management, cultural relics records can be used as an important reference and reference to help managers to better protect and manage urban sculptures. The goal of art management is to combine art with the society and realize the value of art through the management and operation of art.

The Importance of International Exchanges and Mutual Learning Among Civilizations to the Development of the Universe and Urban Sculpture

International exchanges and mutual learning among civilizations are essential factors for the development of the universe and urban sculpture. Through international exchanges, different countries and regions can share and exchange their respective cultural relics and cultures to promote the development of the meta-universe. Mutual learning of civilizations is a process of mutual integration and innovation between different cultures, which can bring new ideas and concepts to the creation of urban sculpture and art management.

The Research Process

The Evolution of the Cultural Relic Records

Cultural relics records refer to the various carriers of recording and preserving the information of cultural relics, including paper, oral, image and digital forms. The following is the evolution of the relics:

Ancient: the ancient cultural relics records are mainly oral and written records. These records include information on historical events, people, locations, and artifacts. In ancient times, artifacts were usually composed of oral traditions and written forms.

Medieval: The medieval relics are mainly the gospels and holy poems of Christian churches. The documents are in the custody of the Church, and are usually written in Latin.

Renaissance: During the Renaissance, the forms of cultural relics records changed again. People began to use humanist views, with an emphasis on human dignity and freedom. This thought led to changes in literary works and art forms, while also driving interest in and studying ancient artifacts.

18th century: The 18th century is mainly recorded in the collection of museums and historical archives. These archives include information on the description of the artifacts, their historical background, and geographical location.

19th century: The record form of the 19th century has changed dramatically. With the development of technology, people began to use photography and imaging techniques to record artifacts. The photographs are usually kept by museums and libraries.

20th century: The records of the 20th century are more diverse and complex. People began to use various technologies to record and preserve artifacts, including digital technology, the Internet, and virtual reality. These technologies make artifacts more accessible and appreciated by people around the globe.

In general, the forms of heritage records have evolved over time, from oral tradition and writing form to modern digital technology, which provide convenience for people to record and preserve heritage information.

The Role of Cultural Relic Records

The role of cultural relics records refers to the important significance and value of cultural relics as a historical and cultural heritage. Here are some of the cultural functions:

Historical witness: Cultural relics are an important part of the historical and cultural heritage, is the political, economic, cultural, social and other aspects of the past period of the witness, reflecting the true face of history. Through cultural records, we can understand the level of social, cultural and technological development in the past, as well as the development process of human civilization.

Cultural exchange: As a human cultural heritage, cultural relics have a unique artistic value and cultural connotation. Through cultural relics, we can understand the communication and dissemination between different cultures, promote the communication and understanding between different cultures, enhance cultural exchanges and cooperation, and promote the diversity and prosperity of world culture.

Historical research: Cultural relics record the historical events, figures and cultures of the past period, and they are important materials for historical research. Through the cultural relics records, we can understand the political, economic, cultural, social and other aspects of the past period, and provide reliable data and basis for historical research.

Inheritance culture: Cultural relics record the essence of human cultural heritage, and are an important part of the inheritance and promotion of Chinese culture. Through the cultural relics records, we can inherit and carry forward the excellent cultural traditions, carry forward the national spirit and cultural confidence, promote the Chinese culture to the world, and enhance the international influence and competitiveness of the Chinese culture.

Heritage protection: cultural relics record an important part of human cultural heritage, which is a precious cultural heritage. Through the cultural relics records, we can understand the distribution of cultural heritage, strengthen the protection and management of cultural heritage, protect the safety and integrity of human cultural heritage, and maintain the diversity of world cultural heritage.

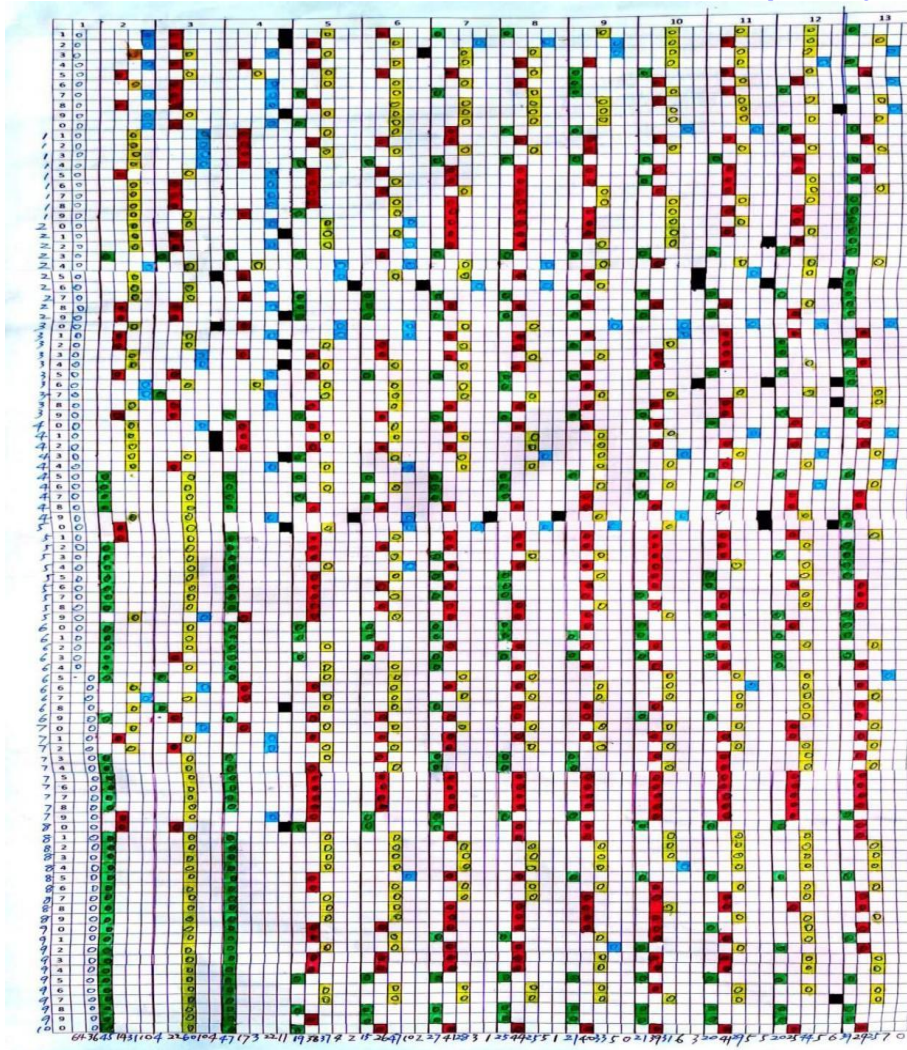
The Application of the Digital System in the Art Management of Environmental Sculpture in Huai'an City

To investigate the environmental sculpture in Huai'an city, 100 people of different ages, occupations and education background were randomly selected to adjust the questionnaire and analyze the questionnaire results.

Table 1.

Order number	question	answer
1	Your gender?	<input type="checkbox"/> men and women <input type="checkbox"/>
2	Your age?	<input type="checkbox"/> 10 years old- -19 years old <input type="checkbox"/> 20 years old- - - - -39 years old <input type="checkbox"/> 40- -59 <input type="checkbox"/> Over 60 years old
3	Is your education level?	<input type="checkbox"/> High school and below / in study <input type="checkbox"/> Junior college / reading <input type="checkbox"/> Undergraduate / in-study <input type="checkbox"/> Master / in-study <input type="checkbox"/> Dr.and above
4	Your career?	<input type="checkbox"/> student <input type="checkbox"/> teacher <input type="checkbox"/> public functionary <input type="checkbox"/> Enterprise personnel <input type="checkbox"/> other
5	Cultural dissemination strength of environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
6	Daily maintenance of the environmental sculptures	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
7	The visual effect of the environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
8	The cultural content of the environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction

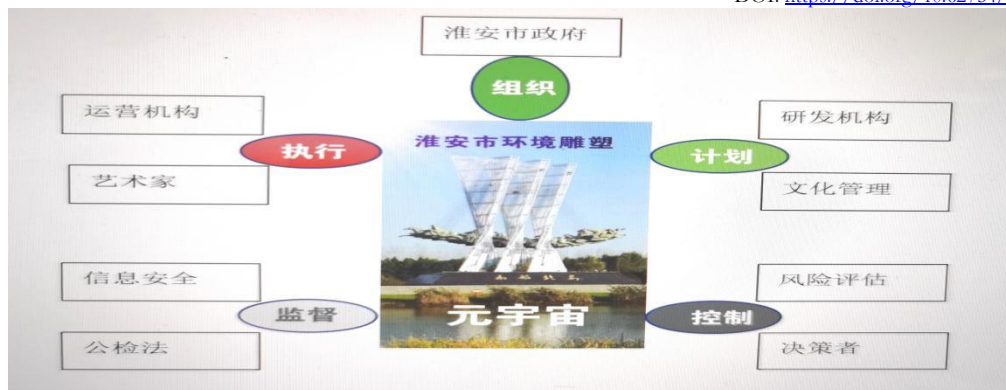
9	The material of the environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
10	Cultural transmission way of environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
11	Derivative value of environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
12	Whether you know anything about the meta-verse	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction
13	Can accept the metaverse system management of huai'an environmental sculpture	<input type="checkbox"/> 5 points indicates the highest level of satisfaction <input type="checkbox"/> A score of 4 indicates great satisfaction <input type="checkbox"/> 3 points to indicate moderate satisfaction <input type="checkbox"/> 2 indicates low level satisfaction <input type="checkbox"/> A point of 1 indicates the lowest level of satisfaction



(Questionnaire survey data of 100 people in Huai'an Environmental Sculpture).

The survey results show that the majority of people who pay attention to environmental sculpture are young people with bachelor's degree, accounting for 60% of the total questionnaire. The results of the seven questions related to the art of environmental sculpture in the questionnaire showed that the ratio of moderate satisfaction and good satisfaction was 72%, the ratio of the lowest satisfaction is 2%, and the ratio of the highest satisfaction is 21%. For the questions related to the meta-verse, 69% said they just heard or knew a little, and 20% knew it. Thirty-nine percent of people can actively accept the digital system for environmental sculpture, 29 percent will reluctantly accept it, 25 percent are in a neutral state, and no one will not accept it at all.

The application of the digital system in the art management of environmental sculpture in Huai'an city is the latest and most advanced technology in the current digital age. The system can help us to manage sculptures digitally, networked and intelligently, so as to better protect and inherit cultural heritage.



Yuanuniverse digital system management huai'an environmental sculpture implementation plan.

First, the Metacom digital system uses 3D scanning technology to digitize Huai'an sculptures and store them in the cloud so that they can be accessed and appreciated at any place and time. In addition, the system also provides virtual reality and augmented reality technology, allowing the audience to further understand and feel the charm of sculpture art.

Secondly, the yuan-universe digital system network manages the environmental sculpture works in Huai'an city. Through this system, huai'an sculpture works are uploaded to the cloud, and they will communicate and interact with other art and cultural heritage around the world. In this way, we can better protect and inherit the cultural heritage, and bring more artistic experiences and cultural exchanges to people around the world.

Finally, the digital system of Yuanuniverse intelligently manages the environmental sculpture of Huai'an. Using artificial intelligence technology, Huai'an environmental sculpture artworks are evaluated, classified and recommended, and provide the relevant cultural background and knowledge for the audience. In this way, the audience can better understand and appreciate the sculpture works, and better apply and inherit the cultural heritage in their daily life.

To sum up, the application of the metacosmic digital system in the art management of environmental sculpture in Huai'an city is the latest and most advanced technology in the current digital era. It can help us manage sculptures digitally, online and intelligently, so as to better protect and inherit cultural heritage.

Cultural Relics Records Apply Meta-Universe Digital Technology to Promote Mutual Learning of Civilizations

With the advancement of globalization, exchanges and cooperation between countries have become increasingly frequent, and exchanges and mutual learning between different cultures have also become an important issue. As an important cultural carrier, cultural relics record the development course of human society and the rich and diverse cultural connotations. And the way they are recorded is constantly innovating and evolving. As a new way of recording cultural relics, the yuan-universe digital technology has great potential to promote international exchanges and mutual learning among civilizations. According to the enlightenment of the digital system management of Huaian environmental sculpture, the possibility of applying the digital technology in cultural relics records, and its influence on international exchanges and mutual learning of civilizations are discussed.

First of all, metauniverse digital technology refers to creating a virtual space similar to the real world through technological means such as virtual reality, augmented reality and artificial intelligence. In this virtual space, people can freely interact and communicate, create and experience a variety of content. Metaverse digital technology has the following characteristics:

Immersive experience: Through virtual reality technology, people can experience a variety of scenes and activities personally.

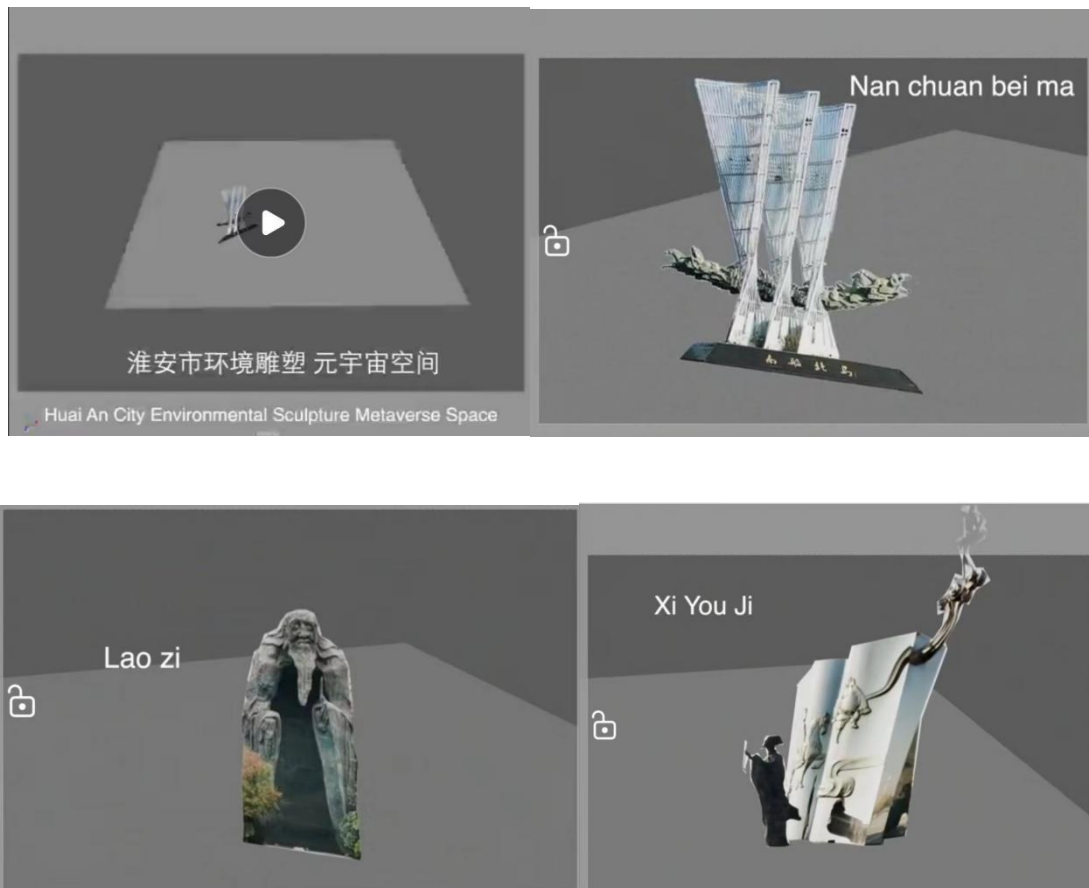
Interactivity: Metaverse digital technology supports multi-person online interaction, and people can socialize and cooperate in real time in virtual space.

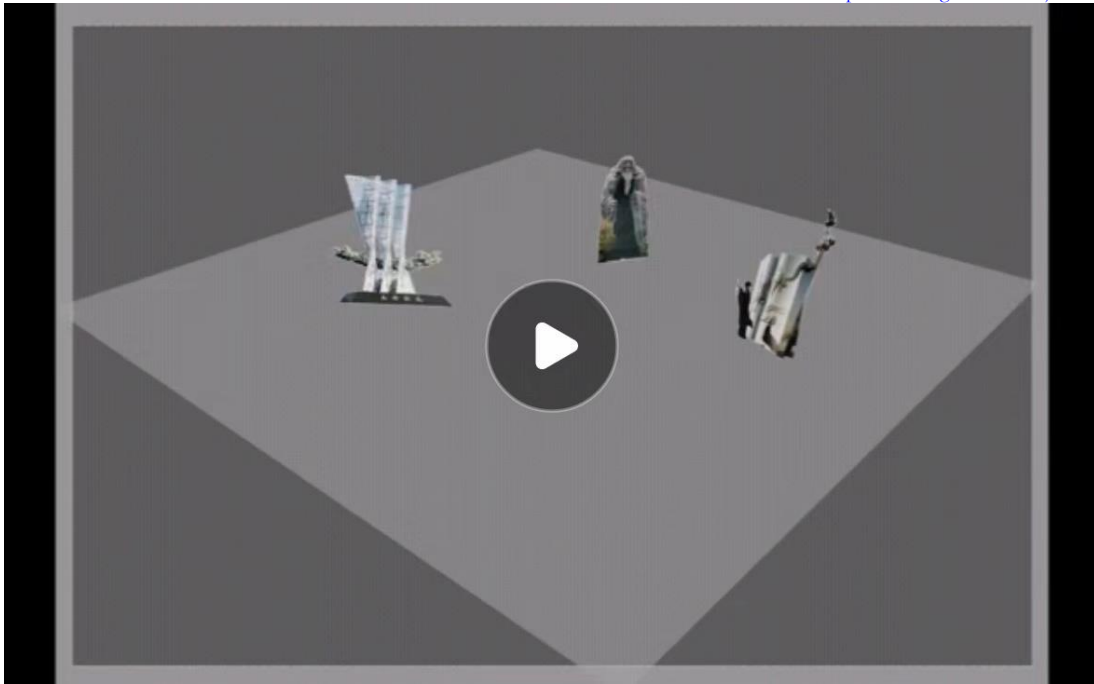
Visualization and digitization: Meta-verse digital technology can digitize objects and scenes in the real world and present them in virtual space.

Secondly, the application of metaso digital technology in cultural records is of great significance. By digitizing cultural relics and sites, cultural heritage can be better protected and inherited. Many cultural relics and sites are threatened by natural disasters, wars and man-made destruction, and digitization can allow the information of cultural relics to be permanently preserved, even if the object itself is damaged. The metacosmic digital technology can provide more possibilities for the display and research of cultural relics. Through virtual reality technology, people can watch and study cultural relics at different times and places, breaking through the limitations of time and space. This makes the value and significance of cultural relics can be recognized and understood by more people. Most importantly, the meta-universe digital technology can promote cultural exchanges and artistic mutual learning in different countries and regions. Through the virtual space, people can easily carry out cross-border and cross-cultural exchanges and cooperation, and share their own cultural and artistic achievements. This not only helps to enhance the diversity and symbiosis of culture, but also provides a new channel for the progress and development of civilization.

Results

Based on this research, the 1.0 version of environmental sculpture was preliminarily made





(Screenshot of version 1.0 of Huai'an Environmental Sculpture Space Space)

The evolution process of cultural relics records reflects the inheritance and progress of human civilization. The application of the digital system in the management of environmental sculpture in Huai'an has brought many new opportunities and challenges for cultural relics records. Be able to share information with a global audience, through comparison and communication with artifacts from other countries. In addition, the application of the meta-cosmic digital system can also promote the innovation and artistic exchange of urban sculpture, and promote the progress and development of urban civilization. Through the study of environmental sculpture in Huai'an city, we can see the important role of the cosmic digital system in the protection and inheritance of cultural relics, transnational exchanges and mutual learning among civilizations. However, with the continuous development of technology, there are still some problems and limitations in the metadigital system, which require further research and exploration. In short, the application of metaso digital system will bring new development directions and ideas for the record of cultural relics and civilization inheritance.

Conclusion

This paper introduces and analyzes the evolution process of cultural relics, analyzes the feasibility of case analysis, field investigation and questionnaire investigation of the environment of the digital system and the enlightenment of cultural relics records, and analyzes that environmental sculptures can be recorded as cultural relics in the space space, so as to promote mutual learning of civilizations.

In order to better promote the application of meta-universe digital technology in cultural records, we can make efforts from the following aspects:

- (1) Technology research and development and innovation: increase the investment in the research and development of yuan-universe digital technology, improve the availability and operability of technology, so that it can be more widely used in the field of cultural relics records.
- (2) Establish an international cooperation platform: establish a cross-border cooperation network, promote the cooperation and exchanges among cultural institutions, scientific research institutions and technology companies in different countries and regions, and jointly promote the application of meta-universe digital technology in cultural relics records.
- (3) Improve public participation: encourage the public to participate in the application of yuan-universe digital technology in cultural relics records, let the public understand and experience this new technology

through various ways, and enhance the public's awareness and attention to the protection and inheritance of cultural relics.

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