

Research on the inheritance and protection of intangible cultural heritage under the perspective of metauniverse

Jian Wu

Liaoning Communication University, Shenyang 110136, China

25478597@qq.com

Abstract. Nowadays, with the rapid development of Chinese society in various fields, in this environment, new things continue to produce, leading to many traditional things have been withdrawn from the stage.

Key words: Metacom, intangible cultural heritage, inheritance and protection

1. The concept of the meta-universe is realistic and the reality is virtualization

Reality and reality virtualization is a complex and multidimensional process, which involves many aspects of technology and applications. It is a process of mutual promotion and mutual fusion. Through the integration and application of technology, the establishment of economic system and the reconstruction of social system, the concept and concept of the meta-universe can be realized and expanded in the real world. At the same time, reality virtualization also provides rich materials and scene support for the meta-universe, making the virtual world more colorful and close to the reality. These two processes jointly promote the development and evolution of the meta-universe, creating a brand new digital living space for human beings.

1.1. The concept of the meta-universe is realistic

Transforming the ideas and ideas of the metauniverse into practical applications and experiences in the real world requires the integration and application of various technologies. Meta-universe integration includes 5G, cloud computing, artificial intelligence (AI), virtual reality (VR), augmented reality (AR), mixed reality (AR), blockchain, digital currency, Internet of Things (IoT), human-computer interaction (HCI) and other existing technologies. The convergence of these technologies provides a strong technical support for the universe, enabling it to simulate and transcend the real-world experience. The application scenarios of the meta-universe are constantly expanding, from games, social networking to education, work, shopping and other fields. People can create their own identities and characters in the universe, interact in real time, and enjoy an immersive experience.

Secondly, the establishment of the economic system. The application of the blockchain technology, based on the blockchain technology, the digital assets (such as NFT) in the meta-universe are unique, verifiable and transferable, creating a new growth point and value exchange mode for the digital economy. This economic system makes transactions in the meta-universe safer, more transparent, and more efficient. In the future, the mode of capital income sharing may be adopted, so that all contributors, participants, builders and other stakeholders can realize large-scale collaboration through smart contracts and share the value realized by the universe.

Finally, the reconstruction of the social system. New social structures, economic systems, and identity mechanisms are formed in the meta-universe. Users can create content, have assets, make transactions, and build social relationships in virtual communities that are similar to but unique to real-world social activities. The meta-universe provides virtual scenes of immersive teaching and training for education, making education more three-dimensional and interactive. At the same time, the development of the meta-universe will also promote the national and social progress, and shape new people and social structures.

2.1. Reality virtualization of the meta-universe

To transform the things and scenes in the real world into the digital models and experiences in the virtual world, mainly in the following aspects.

Digital twinning technology: to generate the mirror image of the real world. Through the digital twin technology, the mirror image of the real world can be generated, and the things and scenes in the real world can be presented in the virtual world in the form of digital. This technology allows people to simulate and predict the changes and development trends of the real world in the virtual world.

Immersive experience: Expand the application of reality technology, expand the reality technology (including VR, AR, MR, etc.) to provide an immersive experience, so that users can personally feel the scene and things in the virtual world. This way of experience has blurred the boundary between the virtual world and the real world, realizing the seamless connection between online and offline.

Data-driven decision-making: the application of big data and artificial intelligence. In the meta-universe, the application of big data and artificial intelligence will make the decisions more accurate and efficient. Through the analysis and processing of massive data, it can reveal the laws and trends hidden in the data, providing strong support for decision-making.

2. The development prospect of digital exhibition hall under the cosmic horizon

In the eyes of most people, the meta-universe is still just in the concept of the game, but it is not as simple as imagined. The meta-universe can be regarded as another virtual world parallel to our real world, and people can restore many things in real life in this virtual world.

The familiar movie Ready Player One is a science fiction movie based on the concept of the meta-universe. Technology comes from imagination. In the future, Ready Player One may no longer be just a science fiction movie. Of course, the development of the meta-universe is not so simple. Its formation needs the support of many technologies, such as augmented reality (AR), virtual reality (VR), three-dimensional technology (3D), artificial intelligence (AI) and other technologies.

At the beginning of 2022, the development of Yuan Universe became a national strategy for the first time, and was written into the local "14th Five-Year" industrial plan. Many enterprises and organizations see the prospect of meta-universe, and have made innovations and reforms to change the form of interaction with customers, employees and partners, and various industries have developed great interest in meta-universe. Currently, several industries in the universe are: gaming and entertainment, social media and communication, retail and e-commerce, education and training, events and conferences, architecture and design, art and cultural experiences, health care and healing, remote work and collaboration, and more. These are just the precursor of the current industry applications of metauniverse. With the continuous development and maturity of the technology, there may be more innovations and changes, and more fields should be involved in it.

The digital exhibition hall under the meta-cosmic horizon has a broad development prospect. Under the combined role of technology-driven, application field expansion, business model innovation, policy support and market promotion, the digital pavilion will become an important carrier and platform in the fields of culture, art, education and business. In the future, with the continuous progress of technology and the continuous expansion of application scenarios, the digital pavilion will bring users a more diversified, diversified and immersive experience.

3. The inheritance and protection status of intangible cultural heritage

During the 13th Five-Year Plan period, China has added 37 new local protection regulations, and the legal and regulation system for intangible cultural heritage protection has been improved. These laws and regulations have provided a solid legal foundation for the protection of intangible cultural heritage. Culture and tourism issued a number of notices and documents, such as on the national

intangible cultural heritage representative inheritance rescue record work notice and on the sixth batch of national intangible cultural heritage representative inheritance recommended declaration work notice, comprehensive national intangible representative inheritance record work, and start a new batch of national intangible representative inheritance that work.

The central government has invested a large amount of 720 million yuan to support the recording of representative inheritors of national intangible cultural heritage, and 825.98 million yuan for the management and protection of national intangible cultural heritage. The investment of these funds promotes the inheritance and development of the intangible cultural heritage.

3.1. Directory system and identification of inheritors

China has established a four-level list system of representative items of intangible cultural heritage at national, provincial, municipal and county, and identified more than 100,000 representative items of intangible cultural heritage. This system ensures the extensive coverage and effective protection of the intangible cultural heritage. Representative inheritors at all levels have been identified, with a total number of more than 90,000 people. Inheritors are important carriers for the inheritance of intangible cultural heritage, and their recognition and support are of great significance to the inheritance of intangible cultural heritage.

3.2. Inheritance and protection methods

Digitization and technology, and the trend of digitalization and technology of non-genetic inheritance channels is becoming more and more obvious. Relying on big data technology to handle the collection, storage, even dissemination and utilization of intangible heritage information can realize the effective dissemination of intangible heritage more quickly. The development of digital collections has become a hot spot in the digital field of intangible cultural heritage. There are as many as 38 digital collection distribution platforms in China, and the number of intangible cultural heritage products sold is about 4.56 million, with a total issuance value of more than 150 million yuan.

3.3. Education and inheritance

Activities such as "Intangible Cultural Heritage on Campus" have been widely carried out around the country to train a new generation of inheritors through education and inheritance. Many places have set up related majors and courses of intangible cultural heritage programs in vocational schools, forming a curriculum system of intangible cultural heritage education.

3.4. Market marketization and industrialization

The sales of intangible cultural heritage products in e-commerce platforms and other channels are increasing day by day. For example, in 2022, the number of intangible cultural heritage stores on Taobao platform was 32,853, with an increase of 9.5%; the transaction volume of intangible cultural heritage increased by 11.6%. The consumer scale of intangible cultural heritage commodities reaches 100 million, and the post-90s and post-00s are becoming the main consumption of intangible cultural heritage commodities. These changes have promoted the marketization and industrialization process of the intangible cultural heritage.

3.5. Existing problems and challenges

Weak awareness of protection. In some places, there is the phenomenon of heavy declaration, development, protection and management, leading to insufficient protection of intangible cultural heritage; insufficient capital investment. Although the central finance and local finance have invested a lot of money in intangible cultural heritage protection, some regions and projects are still facing the shortage of funds; inheritors are aging. The talent team of representative inheritors is older, and the training of the new generation of inheritors faces challenges.

The inheritance and protection of intangible cultural heritage in China has achieved remarkable results in the construction of policies and regulations, directory system and inheritor identification, and inheritance and protection methods, but it still faces some problems and challenges. In the future, it is necessary to continue to strengthen the construction of laws and regulations, increase financial input, strengthen education and inheritance, promote marketization and industrialization, and strengthen international cooperation and exchanges, so as to promote the inheritance and development of intangible cultural heritage.

4. The construction mode of intangible cultural heritage

The digital construction mode of intangible cultural heritage is a diversified and constantly developing field, which combines digital technology, cultural communication and heritage protection. It covers digital records, communication, re-creation, scene construction, platform services, and international cooperation. These models jointly promote the protection, inheritance and innovative development of intangible cultural heritage.

4.1. Digital records and database construction

Intangible cultural heritage archives + database, by strengthening the collection and integration of basic data resources of intangible cultural heritage projects, introduces professional teams to carry out high-quality digital processing, so as to realize the three-dimensional record and comprehensive sharing of intangible cultural heritage. This includes the true, accurate and complete preservation of static data such as inheriting population history, video, audio, and related research results, and the transformation of digital resources, and the establishment of a comprehensive and shareable intangible cultural heritage database. For example, in the Xi'an City Wall Cultural Relics Protection Project, a large number of monitoring points and monitoring probes have been set up to grasp the safety situation of the city wall in real time, and a digital platform has been established to promote the information management of scenic spots and the convenience of tourists.

4.2. Digital communication and all-media applications

Intangible cultural Heritage IP + all-media, deeply explore the connotation and essence of intangible cultural heritage, innovate and use diversified and fashionable expressions, create various forms of intangible cultural heritage IP, and develop high-quality intangible cultural heritage media products through all-media new technologies, such as special documentaries, broadcast rooms, short videos, so as to improve the communication effect of intangible cultural heritage. For example, the "—— Tencent Immersive Digital Experience Exhibition" jointly held by the Palace Museum and Tencent, VR, AR and other technologies, the museum is "moved" to remote and remote locations, to realize the wide spread of culture.

4.3. Digital reinvention and technological upgrading

Intangible cultural heritage re-creation + technology upgrading, strengthen the cultivation of compound talents and the research and development of key technologies, explore effective ways to reduce the cost of cultural digitization, and promote the quality and upgrading of intangible cultural heritage products with technological innovation. At the same time, non-genetic inheritors are encouraged to master advanced digital technology means to improve the production efficiency and quality of intangible cultural heritage products. For example, Xi 'an City Wall and "Tencent Cloud" jointly launched the "Chang' an IN" digital collection platform, releasing a number of digital collections, so that citizens and tourists can also understand the history of the ancient city through the digital collections during the epidemic period.

4.4. Digital scene construction and the integration of culture and tourism

Intangible cultural heritage experience + scene construction, according to the characteristics of different categories of intangible cultural heritage, to promote the integrated development of cultural tourism. Combine online communication and interaction with offline immersive experience, cultivate the intangible cultural heritage immersive experience base, and create tourism products such as intangible cultural heritage research and intangible cultural heritage performing arts. For example: the digital twin platform project of Longmen Grottoes reproduces the cave landscape through digital twin technology, so that tourists can freely choose the observation perspective, appreciate the cultural relics in close range, and improve the tour experience.

4.5. Digital platform and cloud services

Intangible cultural heritage positive energy + cloud platform, expand the function of "cloud platform" for civilization practice in the new era, carry online publicity, promotion and service application of intangible cultural heritage, and expand the social visibility and coverage of intangible cultural heritage. At the same time, encourage intangible cultural heritage workshops, intangible cultural heritage workshops and civilized practice positions to jointly carry out activities such as intangible cultural heritage into campus and community to transfer positive energy of intangible cultural heritage. For example, local cultural and tourism departments build digital platforms, such as intangible cultural heritage information, such as smart tourism system and intangible cultural heritage database.

4.6. Digital international cooperation and exchange

Intangible cultural heritage communication + digital globalization, with the help of the digital globalization, broaden the publicity and promotion path of intangible cultural heritage. Through the online communication of overseas short video platform and the offline experience of international exchange activities and trade and exhibition activities, the advantages of intangible cultural heritage across writing, language and ethnic communication should be played to promote cultural exchanges between China and foreign countries.

5. Conclusions and outlook

The study of ungenetic inheritance and protection in the metacross horizon is an area full of challenges and opportunities. Through the application of meta-universe technology and the exploration and practice of innovative non-genetic inheritance mode, it can promote the living inheritance and sustainable development of intangible cultural heritage. In the future, with the continuous progress of technology and the in-depth expansion of its application, the non-cultural heritage universe will become an important platform and strong support for non-genetic inheritance protection. At the same time, we also need to pay attention to the potential risks and challenges brought by the meta-universe technology to ensure that the authenticity and integrity of the intangible cultural heritage are effectively protected.

Acknowledgements

This article is the result of "Shenyang Philosophy and Social Science Project ——" Research on the Digital Protection Path of Intangible Cultural Heritage (SYSK2024-JD-48)"

References

- [1] Dang Yuanmiao. [] Research on the digital protection mode of the Intangible Cultural Heritage in China [D]. Xi'an University of Technology, 2016.
- [2] Chen Jun. [] Research on the inheritance and protection of the Intangible Cultural Heritage of the Hezhe Nationality [J]. Heilongjiang Historical Records, 2012 (12): 28-29.

- [3] Wang Chao. "Meta-universe" out of the circle, how does the movie access to the "imagination community" [J]. China Film Market, 2021 (12): 14
- [4] Zhao Feile. Research on the design of red Culture Theme Exhibition hall under the digital background [J]. House of drama. 2020(04):115.
- [5] Liu Geping, Wang Xing, Gao Nan, et al. From Virtual Reality to the Meta-Space: A New Direction for Online Education [J]. Research on modern distance education, 2021,33 (6): 12-22.