

Virtual and Actual Combination of Memory Reflection: Design Enabling Digital Presentation Path of Cultural Heritage Value

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Abstract. As an open way for people to share information and pass on heritage's value, based on the variety of the main background and value elements, displaying heritage value has changed from a matter of protecting space and form to a more complicated matter of building social value systems. As an open way for people to share information and pass on cultural heritage's value, based on the variety of the main background and value elements, displaying heritage value has changed from a matter of protecting space and form to a more complicated matter of building social value systems. In order to explore the diversified value of heritage and the way to display design empowerment in the digital age, this study selected the world irrigation project heritage of Sangyuanwei as an example based on the theory of cultural memory and explored four value dimensions of the heritage. It is used to associate material ontological features with subjective emotional memory and to extract the memory picture of village buildings, trade fairs, and business markets. And then, through information visualization, it puts forward the value of a virtual and real symbiosis in a digital creative design scheme. Thus, images and scenes are used to strengthen the relationship between heritage materials, characters, and historical events (activities) and to empower the regional cultural inheritance of Sangyuanwei heritage through creative design. Its purpose is to strengthen the sense of group identity and contribute ideas to solve problems for the restoration and protection of Sangyuanwei heritage.

Keywords: Sangyuanwei World Irrigation Project heritage; digital display of culture heritage value; heritage cultural memory picture; information visualization design.

1. Introduction

In the context of inheriting and carrying forward the excellent traditional Chinese culture and strengthening the systematic protection of important cultural heritage, the output of heritage value and its adaptive use have become a hot spot of academic research and practical application. At present, in the process of cultural heritage value interpretation and display, heritage value is not obvious and self-evident and needs to be illustrated and clarified in specific ways [1]. However, the current way of displaying value is still monotonous and homogeneous, and the display content and immersive experience have not been coordinated and integrated for the time being, which directly leads to the misinterpretation of the heritage value [2]. And the public's poor perception of the problems [3]. Around the core issue of "whose interpretation and what kind of display," people's perceptions of cultural heritage value have been paid more and more attention and have gradually shifted from the traditional "expert-generated content (pgc)" to the "user-generated content (ugc)" method. The method of "ugc" has gradually shifted from traditional "expert-generated content (pgc)" to "user-generated content (ugc)" thus promoting cultural inheritance and realising the sustainable development of heritage protection by enhancing the public's recognition of heritage value [4]. The heritage value that is preserved and utilised through socio-cultural and behavioural-economic screening provides another brand new theoretical perspective for cultural inheritance and development with the public cultural memory carried by [5, 6]. Meanwhile, with the prosperous development of the Internet and integrated media technology, digital technology has been widely applied to the protection and rational use of cultural heritage, in which the symbolic coding and exhibition of the tradition by images and the innovative interactive mode [7] provide a more powerful way to empower the display of heritage value. Among them, the symbolic coding and performance of tradition through images and the innovative interactive mode provide a more

scientific, intelligent, and efficient technical means to empower the display of heritage value. This process of digitally preserving, reproducing, and recreating signs and symbols at the cultural level can project public recollections and activate collective memories, thus transferring the interpretation and display of heritage value to the public and truly promoting the sharing and co-construction of heritage. This paper takes Sangyuanwei World Irrigation Heritage Site located in Xiqiao Mountain of Foshan as an example and focuses on the material and spatial characteristics of water conservancy facilities and villages as well as the cultural memory of aboriginal people under the perspective of heritage value. It establishes a four-dimensional interpretation of heritage value in terms of historical lineage, decorative motifs, commerce and trade, and homeland emotion, extracts specific scenarios for pictorial translation, and carries out information visualisation with the help of augmented reality (AR). As a result, the digital display path of heritage value is proposed from the perspective of interdisciplinary and technological integration, which provides innovative perspectives for the subsequent public perception, protection, and utilisation of heritage value and practical references for achieving consensus on heritage value and synergistic cultural inheritance.

2. Composition of the Cultural Memory Landscape

2.1 The Pictorial Character of Cultural Memory

The theory of "cultural memory" put forward by Jan Assmann at the end of the 1970s has formed a theoretical form in which "memory" is inseparable from cultural and historical research, spreading across the fields of sociology, history, and anthropology and opening up the horizons and paths of interdisciplinary and cross-cultural research. The theory of cultural memory was inspired by Maurice Halbwachs's work, and the theory of cultural memory has been influenced by Maurice Halbwachs's "collective memory" and Aby Warburg's "form of emotion," reinforcing the cultural attributes of memory and the reflection of identity [8]. Contains "collectively shared knowledge," which is considered to be the most important element in the study of culture and history. Collectively shared knowledge [8] is considered a commemorative medium for recalling the past and a narrative symbolic space for reconstruction through textual intertextuality and is characterized by the dynamism, reality, and support of space that is integrated with personal memory [9]. "Collective memory images[10] clarifies the symbolic nature that cultural memory possesses [11], embedding memory in the repetition and imitation of images and intervening in space through images that break through linear practices and establish transcendental connections between similar or heterogeneous images [12]. Images have also become a way to activate emotions, and art media, with their special mobility and output, have become a symbolic carrier for interpreting cultural memories through visual representations such as images, transforming them into "dynamic traces." [13, 14].

2.2 Spatial Scenes of Cultural Memory

Cultural memory is "rooted in the awakened space" [15], breaking through the limitations of physical space with its spiritual meaning and forming a scene of communication between the transmitter and the receiver across time and space. In the process of familiarizing oneself with the environment, this scene is the "world of objects" constructed by objective space, such as houses, villages, nature, artifacts, etc., which are projected into the human mind to build up a symbolic memory community, covering some kind of collective memory. It is not only limited to the significance of transmission in the space of interaction but also has a cultural solidity, gathering symbols that store memories, such as images, rituals, and words, and constructing a "system of symbolic meanings" with common experiences, expectations, and behaviors, which maintains the continuity of cultural significance from generation to generation and its continuous updating [16]. The combination of images and scenes establishes a spatial and temporal correlation that carries geographical and historical significance and also has the symbolic value of maintaining the

emotional value of the group, forming a figurative "place of memory" that establishes a certain common identity, and maintaining the sense of durability and stability of the group's emotions.

3. Digital Presentation of Heritage Values

3.1 Digital Image Extraction of Cultural Heritage

Cultural heritage is not only a bridge connecting people's histories but also an important source of inspiration for people's innovation and empowerment of traditional culture. By refining the content elements of cultural heritage, such as chronological features, geographical scope, morphological elements, humanistic elements, embodiment of use, etc., it has become an important medium for displaying the value of heritage and is widely used in the fields of museums, cultural halls, and art museums. The borderless characteristics of the Internet break the barriers between traditional industries so that all walks of life and museums can produce intersection and contact. Cross-border cooperation has become the new direction of the times: "museum plus," "clusters," "broken circle," "wisdom," "cultural tourism integration," "digital venues," "let the heritage live!" and other museums. In recent years, the hottest words have been reflected in the museums, which now seek breakthroughs and cooperation concepts [17]. Through the digital construction of museums, it can promote the integration of resources, safeguard the safety of cultural relics, increase the flow of visitors, improve the quality of museum management, help cultural heritage and dissemination, and improve the experience of tourists [18].

3.2 Immersive Heritage Displays that Combine Reality and Fiction

The global prevalence of digitization has brought unlimited opportunities for heritage conservation. The application of augmented reality (AR) technology in digital museums realizes the virtualization of the space with the experience, enabling the audience to browse, roam, and interact with the virtual museum through the network combined with the physical space and to deeply understand the value information of the collection[4]. AR has also been widely used in the field of cultural heritage, through three-dimensional reconstruction, mixed reality, 360° panoramic shooting technology to create a digital museum of the Palace Museum, the virtual roaming of historical towns, the Chen Clan Ancestral Museum of Folk Crafts, etc., the digital perspective of the scene display, the combination of people and the "real world" of culture, to enhance the value of the heritage through the immersive experience of people's feelings, making it possible to travel through thousands of years of cultural heritage. This has enhanced people's immersive experience of the value of heritage and revitalized the cultural heritage that has traversed thousands of years.

3.3 Establishment of A Web-based Platform for Cultural Heritage Digitization

Digital network platforms, as one of the key channels for digital presentation, have played an important role in creating official heritage knowledge channels, breaking down the barriers of time and space, and establishing new value links between tradition and modern society. The use of 5G enhances the speed of dissemination and timeliness of the information, so that the information can be disseminated with the fastest speed in the shortest possible time. Dissemination. Based on the advantages of the Internet as a communication carrier, cultural heritage can make effective use of the advantages of Internet communication and carry out Internet communication to maximise the effectiveness of communication [19].

3.4 Development of A Digital Heritage Archive Repository

In the protection of cultural heritage, the establishment of a digital heritage resource base lays a strong foundation for the audience to be familiar with the cultural and historical origin of cultural heritage in an all-round way. The digital heritage archive contains heritage images, audio-visual recordings of local life scenes, changes in local life, historical origins, and other elements of

heritage value, so as to provide a narrative explanation of the cultural origins of the traditional heritage in conjunction with modern technology and to give a modern transformation to the heritage value, which will help to promote the construction of the data collection standards, management norms, and the system of data entry and will be conducive to the planning of the cultural heritage value display system driven by digitization and to the supply of the relevant guarantees.

4. Elements of Heritage Value Presentation

4.1 Sangyuanwei Heritage Values

Foshan "Sangyuanwei" in 2020 was included in the seventh batch of the World Heritage List of irrigation projects, with a total length of 68.85 kilometers of embankment enclosure, an enclosure area of 133.75 square kilometers of ecological environment, and the transmission of traditional villages and 1,500 hectares of mulberry fields to become a water conservancy legend. According to the South China Sea County Records, Sangyuanwei in the North Song Huizong years (1101–1125) began to build the east and west dike four years later and then built Jizan cross bases, respectively, divided into the Shatou Zhongtang Wei, Longjiang River Peng Wei, Sangyuanwei, and Ganzhuji sub-Wei [20]. Ming Hongwu twenty-ninth year (1396), Jiujiang Fort people Chen Bomin led the people to block Ganzhutan inverted harbor, and with the west and north of the two rivers of the flood control earth embankment connection, Mulberry Garden siege thus closed [20]. From the Song Dynasty to the early Ming Dynasty, the Sangyuanwei area is the concentrated embodiment of the ecological wisdom of "changing the sea into a mulberry field," forming a "dike around the reservoir. - fish cultivation and cultivation; - mulberry cultivation and silkworm cultivation; - mulberry cultivation and silkworm cultivation. Mulberry cultivation and silk water transport," an artificial natural synergistic system, is a strong testimony to the development of the Lingnan region from farming and fishery production to commercial economic production. During the Kangxi period of the Qing Dynasty, intensive industries, high-yield agricultural production, and handmade production began to form, promoting the development of the commodity economy, prompting the self-sufficiency of agricultural activities to gradually transform into the purpose of exchange, and the formation of a number of large-scale marketplaces, especially in the 24th year of the Qing Dynasty Qianlong, with Guangzhou becoming the only port of entry into the country. The Nanhai of Foshan and Shunde, which are adjacent to Guangzhou, became an integral part of the international transport and trade routes. The dyke enclosure is an integral part of international transport and trade routes. The heritage enclosure is rich in cultural and natural elements such as water conservancy inscriptions, mulberry-based fishponds recycling agricultural models, Dragon King Temple or Water God Temple, ancient villages, ancient bridges, ancient trees, and other cultural and natural elements, and with the 10,000 acres of mulberry fields to breed a strong vitality for the development of regional agriculture and textile industry, which laid down a strong cultural origin for the prosperous development of Lingnan culture for the later generations.

4.2 Elements of Dyke and Village Values

4.2.1 Waterworks construction techniques

Minle Wharf is a typical representative of the construction of the Minle Wharf gate of the Sangyuanwei irrigation project in the Ming and Qing Dynasties, which was built in the late Ming Dynasty and rebuilt in the fourth year of Guangxu in the Qing Dynasty. The gate is now well preserved, and the entrance of the sinus is made of red sandstone and granite stone. Measured, the sinus is about 8 metres wide and 10 metres high, and the sinus through the ship is arched and about 3 metres wide. Arch sinus embedded in a long stone plaque, clearly engraved with "Minle Wharf" in three words, the right signed "Guangxu four years of age wuyin," and the left signed "Bakao Yunjin two fort gentry and people rebuilt." The functions of the Minle Wharf Gate include flood defence, irrigation, drainage, transport, and so on. To locally sourced gravel materials and wooden

gate combination, the formation of standing for a hundred years and the status quo is still intact construction form (Figure 1), in the flood season plays an important role in flood containment, and because of its unique construction techniques, although the gate weighs thousands of kilogrammes, it can be due to the impact of floods and manpower combined with the automatic opening and closing, highlighting the ancient people of the construction of superb skills.



(a) West side of Minle Wharf



(b) East side of Minle Wharf



(c) Lock foundation at the western side of Minle Wharf



(d) Steps on the west side of the Minle Wharf

Fig.1 Existing condition of the gate of the Minle Wharf

4.2.2 Water transport space in the river network

In the fourth year of Guangxu, a new gate configuration was built in Minle Wharf, connecting Guanshan Chung (outside of Minle Wharf) and Minle Chung (inside of Minle Wharf). In Minle Wharf, as Minle Chung runs straight through a number of fish ponds and rivers, it forms a dense water network that connects scattered households, making transport easier and faster. The function of Minle Wharf is not only a flood defense but also plays a comprehensive role in irrigation, drainage, and transportation because it is located at the hub of the waterway. As one of the important hubs of water transport during the Ming and Qing Dynasties, Minle Wharf, known as the "Silver Boat Terminal," has gradually developed into a hub for silk trading and shipping of goods, witnessing the rise and fall of the history of the silk industry in Xiqiao and highlighting the splendor of the Minle Wharf with the words "a boat of silk out, a boat of silver back." The opening of the gate met the splendor of the merchants and became the inland starting point of China's "Maritime Silk Road."

4.2.3 Spatial pattern of villages

There was no traditional village within the embankment before the construction of the Minle Wharf, but with the rise of the transport industry, the residents of the neighbouring villages gathered to form a village space. With the Minle Wharf as the core, a diversified pattern of linear village space for commerce and trade, faith-based gathering space. Due to the construction of the water transport wharf and trade, the community of Qiao Le was built with the embankment as the main street, and commercial and residential houses were laid out on both sides, forming the architectural function of the upper house and the lower market, and developing in clusters, forming the linear street space with many family names and no ancestral halls.

4.2.4 Space for commerce and industry

"There is Wharf in Minle, and the sound of weaving is heard in every house" is a description of the development of commerce and industry in Minle Wharf. With the rapid rise of the silk weaving industry in Minle, Minle Wharf's trade market was born and gradually flourished, forming the famous "Minle Market" trade and social space in the neighbourhood. This space attracted the neighbouring villagers to the transportation and, at the same time, produced a change in awareness of the small commodity economy and the integration of the traditional culture of cultivation and study, becoming the epitome of the cultural integration of the Lingnan region and the mutual equality of cultural heritage. With the limitation of the village space and the change of the functional area after the 21st century, the market was moved out to the centre of the new village, and this commercial market gradually declined, and only about 10 of them remain; the aboriginal people mostly moved out to the new village, resulting in the deterioration of the traditional commercial and residential buildings, which are no longer functional. (Figure 2)



Fig.2 Space for commercial bazaars

5. Digital Design for the Presentation of Heritage Values

Focusing on the environmental space of Minle Wharf and its surrounding villages, the cultural memory of the integration of heritage material space and regional subjective emotion is extracted from the elements of heritage value, and the image scene combining "culture- water- industry- commerce" is extracted. The image scene combining "culture- water- industry- commerce" is extracted, and the information visualisation design is carried out through digital technology to establish an exhibition path integrating physical space, virtual scene construction, and public perception and experience, with a view to enhancing the public's recognition of the value of the heritage and assisting in the protection and sustainable use of the heritage.

5.1 Translation of the Cultural Memory Picture of Heritage

Minle Wharf and the village have a hundred years of history, but except for the gate of Minle Wharf, which retains its original architectural style, the market buildings and their functions have been deserted, so it is urgent to extract typical images and living scenes from the value elements through relevant historical records and the collective memory of the aborigines. Aboriginal people create concrete images of the existing environment through their memories of production and life, linking memories with identity, evoking the group's self-consciousness, preserving the group's cultural memory, and thus creating emotional resonance, thus establishing an effective connection between the currentization of the "memory image" and the past experience [21]. Through community interviews and literature reviews, the village space, trade market, water transport, and textile industry in Minle Wharf present a rich and varied cultural memory picture of the symbiosis between material, social relations, and home emotions, which serves as the basis for digital creative design.

5.2 Transformation of Heritage Cultural Memory Mapping Design

Focusing on the typical material forms and scenes in the picture of cultural memory, the visual information is extracted from the Minle Wharf Transportation Terminal, the market buildings, the natural landscape of Xiqiao Mountain, and the Gambiered Canton Gauze textile industry, etc., and the image form is endowed with the regeneration of spatial place imagery to form the visualisation design image, and the augmented reality technology is adopted to form the symbiosis of virtual and reality in the digital display design scheme.

As the largest market in the Xiqiao area with the strongest market atmosphere, the Minle Market combines the typical wok house of Lingnan residential houses and its decorative art features, extracts the multi-functional selling scenes of restaurants, textiles, daily necessities, and foodstuffs, takes on the atmosphere of festive fairs, integrates the lanterns, spring couplets, and other folk symbols, and carries out the spatial restoration of the Minle Wharf and the commercial market to present the scenic scene of the heritage area where the boats weave in and out and the commerce is thriving. The creative design for the spatial restoration of the Minle Wharf and the commercial market shows the prosperous scene of cruise ships and commerce in the heritage area. (Figure 3)

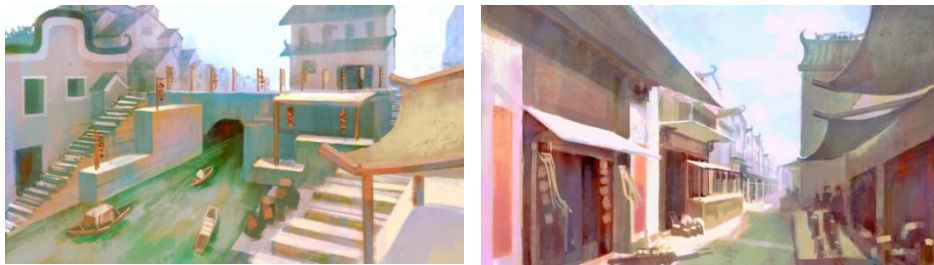


Fig.3 Spatial Rehabilitation Design for the Minle Wharf and Commercial Market

Based on the above information visualisation image, the digital display of heritage value uses Maya, Blender, and other software to carry out scene modelling and animation to carry out model restoration of the Minle Wharf and commercial market space. (Figure 4) The design will change the sea into mulberry fields, loaded cargo ships out to sea, busy wharves and other scenes animation, combined with Unity AR Vuforia, the establishment of remote three-dimensional stereoscopic, multi-angle grand scenes and specific nodes, including: selecting the image characteristics of reeling machines, showing the goods from rough silk thread to the production of fine silk fabrics; selecting the scene of the ship transported through the gate sliding to the far side, showing the "Maritime Silk Road." The image of ships sliding through the locks to show the function of the starting point of the "Maritime Silk Road" was selected and digitised into an atlas. (Figure 5) When the public visits the heritage site, they can scan the icons in the atlas to experience the cultural memory that has been passed down from generation to generation and appreciate the diversified heritage values beyond the material entities, realising the AR-guided visiting experience.



Fig.4 Spatial restoration of the Minle Wharf



Fig.5 AR digital display album of the introduction of cultural elements

6. Application Practices for Digital Presentation of Heritage Values

6.1 Physical Transformation of Heritage Values

Cultural heritage is not merely a material feature inherent to a historical stage but has become a historical and contemporary feature. The value of cultural phenomena is not limited to the perception of a particular group but rather highlights the plurality of subjects, in particular the integrated memory-sharing and living nature of the indigenous peoples of heritage sites. Compared with the physical representations of heritage materiality, such as form and design, material and substance, use and function, tradition, technology, location, and setting, which can generate concrete recognition and impression, the intangible human spirit and emotion are implied in the subjective level of society, human emotion, and the identity of different social groups, which are limited to the limitations of space and time. The differences in cultural backgrounds are difficult to recognize and understand. As in the case of the disappeared trade and water transport activities of the Sangyuanwei Heritage, they play an important role in exploring the origins of local industrial development, social relations, and regional cultural characteristics, but they only exist in the specific memories of some groups and are difficult to be interpreted visually through the existing material remains. Therefore, cultural memory, with its unique image and scene attributes, has become a container and carrier for recording the value of non-written accounts such as historical lineage, production and life experience, and home emotions, etc. Digital media, however, transforms this collective and symbolic picture into visual information by means of image presentation, establishes a path for linking and embedding the past with modern times, and presents a consistent symbolic spirit of electronic and physical attachment to historical information. The digital media transforms this collective and symbolic picture into visual information by means of video presentation, establishing the path of linking and embedding the past and the modern, presenting the spirit of symbolism of electronic and physical attachment of historical information.

6.2 A Shared Heritage of Diverse Cultures

The elements of heritage value carry collective nostalgia and cultural nostalgia through cultural memory, and the typical and iconic picture supports the link between the specific emotions of the aboriginal people and the material entity. This value interpretation transcends the existing evaluation system and places the heritage value in temporal and spatial juxtaposition, establishing opportunities for dialogue with descendants and ancestors so as to facilitate the cultural value of the heritage in the contemporary changes of the original context and to obtain continuous echo and feedback. Using digital media, the heritage value of the Sangyuanwei World Irrigation Project is

activated through the spatial and temporal scenes activated by the perceptual mapping of people's memories, image performances, and information interactions, bridging the fragmentation of memories caused by the absence of real-world material and social behaviours, and reconstructing and creating a perceivable spiritual world. Some heritage cultural tourism project nodes, like the ones led by Minle Wharf, need to show the cultural value right away through environmental scenario reproduction. This is especially important as modern cultural tourism interactions grow in a planned way. Digital creative displays with a sense of immersion, interactivity, multi-sensory, and conceptualization establish a strong emotional bond with the cultural heritage, guide the public to deeply appreciate the spiritual civilization value of the heritage, strengthen the feeling of culture and the exploration of life, and reach cognitive resonance among multiple groups in the process of obtaining the emotional gift of the essence of life, so as to promote the sharing and inheritance of culture.

7. Conclusion

Nowadays, the shift towards the "publicization" of the interpretation and presentation of cultural heritage values has prompted the industry to constantly think about and explore multiple paths for the presentation of values, with a view to creating a more inclusive, open, and collaborative perception and sharing of values. When the material remains of heritage and the social behaviours that have taken place cannot be effectively connected in contemporary times, the awakening of the public's cultural memory is conducive to the diversified interpretation of heritage values, as the public's cultural memory can be mined from the dimensions of both images and scenarios to create a cognitive landscape that can be visually recognised. At the same time, "the transformation of media technology implies the democratisation of information and historical materials, which profoundly affects the way history is produced, interpreted, and disseminated" [22]. The artistic creativity and technical application of digital media provide rich information visualisation solutions for the display of heritage values, forming a feasible path that connects the past, is based on the present, and focuses on the future, which is conducive to cultural transmission. This paper takes Minle Wharf and its surrounding villages of the World Irrigation Engineering Heritage of Sangyuanwei as the research object and systematically sorts out the cultural memories implied by the heritage value through field surveys and residents' interviews. On the one hand, it breaks through the limitations of the heritage value that focuses on the display of the extant materialised information only, as well as the fragmentation of the memory of the emotional and spiritual values embedded in the non-written records, and combines the characteristics of the heritage ontology with the production and living experience of the aboriginal people. On the other hand, from the level of social environment in which the heritage is located, the public's spiritual-emotional value of the local textile, trade, transport, and other historical origins of the inter-reflectivity can be explored, thus evoking emotional resonance in the display of the heritage value and strengthening the public's understanding of the value of the heritage as a whole, so as to inspire and enhance the public's awareness, understanding, and appreciation of the heritage. To inspire and enhance the public's awareness, understanding, and appreciation of heritage. The information visualisation of heritage values in the form of cultural memory pictures, through symbolic and collective images and interactions, establishes a digital display pathway, providing the public with a connecting link between history and reality, tradition and future, and revealing the spirit and emotion of Lingnan in the longer term. On this basis, important strategies for the development and sustainable revitalization of such heritage cultural tourism projects can be further proposed as part of the heritage conservation industry chain to promote sustainable cultural inheritance and development.

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References

- [1] Peng Zhaorong et al. Pen Talk: Interpretation and Presentation - Era Construction and Expression of Multiple Values of Cultural Heritage. *Cultural Heritage*, 2023(03):4-28.
- [2] Jing Wang, Chengzhao Wu. Research progress on the measurement method of perceived authenticity of heritage tourism[J]. *Modern Urban Research*, 2014, 29(2):110-114.
- [3] Cui Qingming, He Linsan, Xu Honggang. A study on the core-edge structure of heritage tourism motivation--taking Lijiang as an example[J]. *Journal of Tourism*, 2016, 31(10):84-93.
- [4] ZHANG Jianwei, GAO Jun, WANG Xiongzi, et al. Value, conservation, utilisation of heritage and discussion around the main issues - a pen talk on the first joint workshop on heritage tourism[J]. *China Cultural Heritage*, 2020(1):45-56.
- [5] Williams S, Lew A A. *Tourism geography: critical under-standings of place, space and experience* [M]. London: Routledge, 2014.
- [6] Liu Yang. Reflections on the inheritance of Manchu intangible cultural heritage under the perspective of cultural memory theory, *Heilongjiang Ethnic Series*, 2022(06): 117.
- [7] Jan Assmann. *Cultural Memory* . Translated by Jin Shoufu and Huang Xiaochen, Beijing: Commercial Press, 2015:51.
- [8] Maurice Halbwachs. *On Collective Memory* [M]. Translated by Bi Ran and Guo Jinhua. Shanghai: Shanghai People's Publishing House. 2002: 38.
- [9] Hubner E. Was sind kulturelle Gedächtnisräume - Erinnern, Raum und das kulturelle Gedächtnis nach Aleida und Jan Assmann [J]. *Geographica Helvetica*, 2023, 78(1): 143-155.
- [10] Giorgio Agamben. *Abbey-Warburg and the "Science of the Unknown"*[M]. Translated by Wang Li-Qiu, Yan He-Lai, et al. Guilin: Li Jiang Press, 2014.
- [11] KANG Cheng. Symbolism and Cultural Memory[J]. *Foreign Literature*, 2008(01):54-61.
- [12] Jan Assmann. *Religion and Cultural Memory* [M]. Translated by Huang Yaping. Beijing: Commercial Press, 2018.
- [13] Rigney A. Plenitude, scarcity and the circulation of cultural memory [J]. *Journal of European studies*, 2005, 35(1): 011-028.
- [14] *Memory Spaces - Forms and Changes in Cultural Memory* (Translated by Pan Lu, 2016).
- [15] Jan Assmann. *Cultural Memory - Text, Memory and Political Identity in Early High Culture* [M]. Translated by Jin Shoufu and Yang Xiaochen. Beijing: Peking University Press, 2015: 31.
- [16] Jan Assmann. *Cultural Memory - Text, Memory and Political Identity in Early High Culture* [M]. Translated by Jin Shoufu and Yang Xiaochen. Beijing: Peking University Press, 2015: 16, 6.
- [17] Wang Xiaoming. The development path of cluster operation of science museums under the perspective of cross-border integration[J]. *Science Education and Museum*, 2021, 7(6):474-480.
- [18] Zhao Xu: "Small and medium-sized museums of digital museum construction research - Zibo City Museum as an example", "Heritage Identification and Appreciation" 2021, No. 2.
- [19] Ren Tingyan, Li Tao. Research on digital protection and inheritance of intangible cultural heritage aquatic horse tail embroidery[J]. *Cultural Industry*, 2023, (10), 142-144.
- [20] Nanhai Local History Compilation Committee, ed. *Nanhai xianzhi* [M]. Zhonghua shuju bureau. 2000.01.
- [21] Jan Assmann. *Cultural Memory - Text, Memory and Political Identity in Early High Culture* [M]. Jin Shoufu, Yang Xiaochen. Beijing: Peking University Press, 2015: 32.
- [22] Li Na. *Introduction to the study of public history* [M]. Beijing: Peking University Press, 2019: 90.