Research on Logic and Practice of Cross-media Interactive Narrative Design of Ceramic Intangible Cultural Heritage in Jingdezhen

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ARTICLE INFO	ABSTRACT
	Jingdezhen Ceramic Intangible Cultural Heritage (i. e., the intangible cultural heritage related to the production of ceramic products and ceramic art) has various categories, rich connotations and a huge system. Firstly, the article stated the content of Jingdezhen ceramic intangible cultural heritage information and conceived the model of information digital display. Secondly, this paper discusses the purpose of cross-media narrative design of Jingdezhen ceramic intangible heritage and expounds the relationship between the design elements of narrative design, such as "narrative role, narrative props, environment and media", and discusses the design logic of cross-media interactive narrative of ceramic intangible cultural heritage from three dimensions of narrative context, narrative perspective and narrative media. Finally, the article also analyzes some practice cases of cross-media interactive narrative design of Jingdezhen ceramic intangible cultural heritage and summarizes the practice paradigm of narrative. The paper concludes that the display and dissemination of intangible cultural heritage information of Jingdezhen ceramics should not only have scientific authenticity, but also meet the narrative effect and audience experience of sensory immersion and interactive friendliness. Empathy should be established between the narrative subject and the audience to enhance people's conscious identification of the intangible cultural heritage of Jingdezhen ceramics. Thus, the creative transformation and innovative development of ceramic intangible heritage can be better realized.

INTRODUCTION

As the "millennium porcelain capital", Jingdezhen has rich ceramic intangible heritage resources and exquisite porcelain making skills. Since Jingdezhen's traditional manual porcelain making skills were included in the first batch of national intangible cultural heritage lists, relevant ceramic intangible heritage information such as inheritors, porcelain making skills and porcelain industry customs has been classified and archived and preserved. However, the rapid urbanization of Jingdezhen and the expansion of the tourism economy have caused varying degrees of destruction to the traditional porcelain industry sites and folk handicraft workshops. The traditional ceramic handicraft industry is also facing a terrible blow from mechanized and intelligent ceramic production technology, And because of the lack of successors, the traditional porcelain making technique is struggling to survive in the plight of being endangered. As an immaterial cultural heritage, traditional porcelain making skills are mainly passed down from generation to generation in the form of words and deeds, and are more likely to be lost and forgotten than the material cultural heritage. In addition, with the development of the times, some links and techniques of raw material mining and prefabrication in the traditional handmade porcelain industry are often simplified or replaced due to the change of technology or driven by commercial interests. If they cannot be better protected and inherited, they are easy to disappear from people's vision unconsciously. At present, Jingdezhen constantly strengthens the productive protection of ceramic intangible cultural heritage, and supplemented by digital technological means, effectively improves the narrative effect of the display and dissemination of ceramic intangible cultural heritage information. However, there are also phenomena that the performance nature is too strong, the commercial atmosphere is heavy, and the narrative attitude is not rigorous.

THE MAIN CONTENT OF CERAMIC INTANGIBLE CULTURAL HERITAGE INFORMATION IN JINGDEZHEN

Jingdezhen has a history of more than 2,000 years of pottery metallurgy, more than 1,000 years of official kiln history and more than 600 years of imperial kiln history. It has a profound ceramic culture, exquisite porcelain making skills, a clear historical development context, and its ceramic intangible heritage has a distinct cultural traceability. The ceramic intangible heritage of Jingdezhen involves four intangible heritage categories: traditional crafts, traditional fine arts, folk literature and folk customs. Jingdezhen's porcelain-making handicraft skill system is well-established, with a series of processes including mining, washing, shaping, refining, decomposing, molding, trimming, drawing, glazing, firing, painting, firing the kiln, selecting porcelain, and packaging[1]. Therefore, in the ceramic intangible cultural heritage, the number of traditional art projects is the largest. Just the handmade porcelain-making skills cover four aspects: the mining of ceramic raw materials, ceramic shaping, ceramic decoration, and ceramic firing. This includes not only well-known processes such as body forming, printing, drying, glazing blowing, and filling the kiln, but also rare processes such as glaze ash preparation, kaolin mining, and enamel fruit preparation[2]. The intangible cultural heritage information related to the production of traditional ceramics, such as porcelain technology, process flow, management system, character records, customs and allusions, should be collected digitally in detail, and qualitatively analyzed and classified, so as to provide more comprehensive information and data support for the later digital model construction and cross-media interactive narrative. With the rapid development of digital technology, the digital collection of intangible cultural heritage information is becoming increasingly intelligent, systematic and perfect. In addition to traditional graphic photocopying and digital shooting, acquisition technologies such as three-dimensional scanning, holographic optical scanning, motion capture and artificial intelligence algorithm are increasingly favored by the industry. The text, image, sound and other multimedia data information related to ceramic intangible cultural heritage can be perfectly collected.

At present, Jingdezhen has 68 demonstration bases for productive protection of intangible cultural heritage, including 2 national (both ceramics), 27 provincial (including 21 ceramics), 39 municipal (including 30 ceramics), and 22 intangible cultural heritage transmission, inheritance and research bases (all ceramics), including 7 provincial and 15 municipal. The huge protection and inheritance system of ceramic intangible cultural heritage makes the digital collection of intangible cultural heritage information have more urgent task needs. Jingdezhen took the lead in the digital collection of ceramic cultural heritage information. Jingdezhen Imperial Kiln Museum inaugurated the world's first ancient ceramic gene bank: Jingdezhen ancient ceramic gene bank on June 11,2021. The gene bank takes samples as the information element, and the collection of solid samples and the digital construction of virtual samples come together, forming a perfect ancient ceramic gene bank information collection system. After the digital collection, the ancient ceramic gene information is presented in the ancient ceramic gene bank management platform through the information visual design. Users can freely retrieve and consult the ceramic cultural heritage information of different historical periods and different types of utensils in the Internet cloud. Ceramic billet technology, molding technology, glaze technology, loading and firing technology, painting decoration techniques and other ceramic intangible heritage information is readily available. Once the ceramic intangible cultural heritage is constructed through digital, it can take the express train of digitalization and information, realize "have a meteoric rise", and "fly" to the intangible cultural heritage information audience quickly and conveniently with the help of the "network cloud" platform. With the comprehensive construction and continuous improvement of all kinds of ceramic cultural heritage information databases, the digital information interaction system, digital museum and cloud intangible cultural heritage performance with strong data support make the cross-media interactive narrative of ceramic intangible cultural heritage more intelligent, interactive, efficient and humanized.

THE CONCEPTION OF THE DIGITAL DISPLAY MODEL OF JINGDEZHEN CERAMIC INTANGIBLE CULTURAL HERITAGE INFORMATION

The construction of the digital model of ceramic intangible cultural heritage serves for the cross-media interactive narrative with the integration of virtual and reality. At the beginning of the construction, it is necessary to clarify the many elements that the narrative of ceramic intangible cultural heritage may involve and their intricate relations, and the constituent elements of the digital model should correspond to the structural elements in the intangible cultural heritage narrative. Firstly, the research object of ceramic intangible cultural heritage narration should not be limited to the non-material content of the four intangible cultural heritage categories such as traditional porcelain making techniques, but also involve the material content such as people, props, scenes and media. Secondly, the elements of ceramic intangible cultural heritage narration should not be isolated from each other, but should take the actor - narrative role, skill carrier - narrative props, occurrence environment - narrative scene in the intangible cultural heritage narration activities such as exhibition, dissemination and performance as a whole system to establish an organic connection among the elements. So that it can assist and cooperate with each other in the cross-border narrative of various media, and then form a perfect narrative system of ceramic intangible cultural heritage. Based on this system, a virtual simulation system model can be constructed through digital technology, covering various ceramic intangible cultural heritage categories, including perfect ceramic intangible cultural heritage information, and can truly restore the traditional ceramic production process and scene, so as to pave the way for the cross-media interactive narrative of ceramic intangible cultural heritage. In addition, the construction of the digital model also provides the possibility for realizing the information visualization of the ceramic intangible cultural heritage and the Internet cloud dissemination, enhancing the audience's cognition and recognition, and creating an immersive interactive experience.

The digital model of ceramic intangible heritage can be constructed with the help of three-dimensional software such as Unity3d, Rhino and Maya. In order to pursue the display and dissemination effect of virtual-real integration, It also relies on various unreal engines and the Artificial Intelligence Generated Content (AIGC) technology that integrates pre-training model,

multi-modal technology and generation algorithm technology. With the help of various high-tech technologies, virtual simulation software such as three-dimensional scene editor, virtual exhibition hall, stereoscopic projection software integration system, and 3D Internet platform is used to build a digital model of the creative situation display of the inheritors of Jingdezhen's ceramic intangible cultural heritage (as shown in Fig.1). And the digital model of intangible cultural heritage information display contained in Jingdezhen ceramics (as shown in Fig.2), so that the narrative of ceramic intangible cultural heritage can continue to move towards digital intelligence.
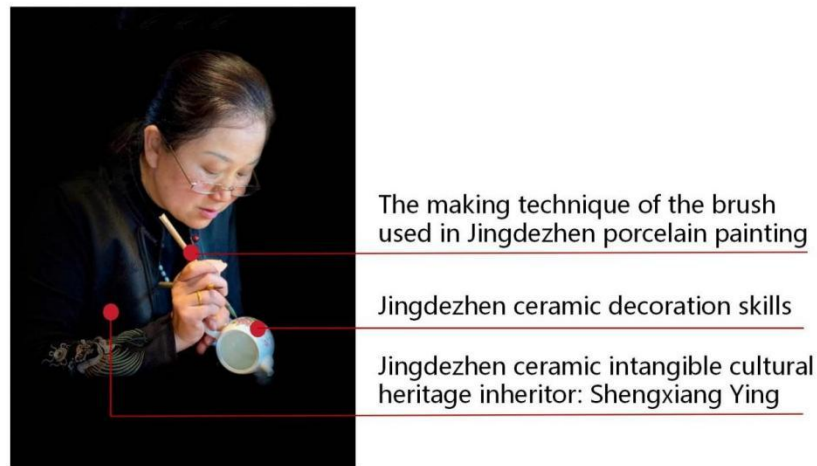

Fig.1 The digital model of the creation situation display of the inheritors of Jingdezhen ceramic intangible cultural heritage
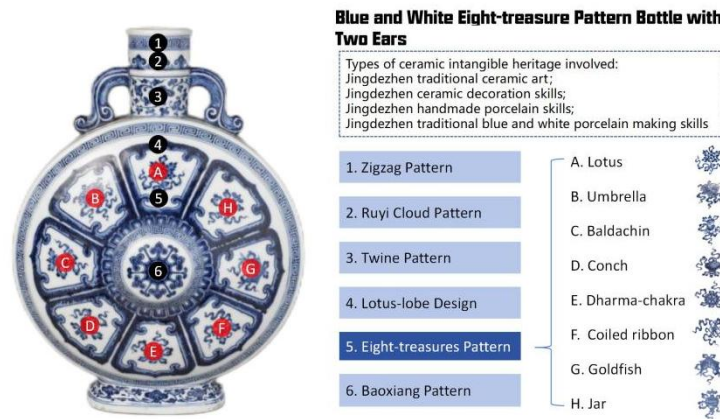

Fig.2 The digital model of intangible cultural heritage information display contained in Jingdezhen ceramics

THE REASON WHY THE DISPLAY AND DISSEMINATION OF JINGDEZHEN CERAMIC INTANGIBLE CULTURAL HERITAGE NEEDS TO ADOPT THE CROSS-MEDIA INTERACTIVE NARRATIVE METHOD

Henry Jenkins, the scholar who proposed the concept of "cross-media interactive narrative", believes that cross-media interactive narrative is a new aesthetic conception produced by media fusion, and the cross-border integration of multiple media has become an important representation of cross-media interactive narrative. Cross-media narration is not a simple addition of media platforms, nor is it different from commercial marketing means, but a cultural transformation of media integration[3]. The cross-media interactive narrative design of Jingdezhen ceramic intangible cultural heritage aims to realize the living inheritance and innovative transformation of ceramic intangible cultural heritage, and make it more dynamic and interactive, easier to be perceived and recognized by the audience, and closer to people's spiritual and cultural life.The cross-media narrative of ceramic intangible cultural heritage should be cross-media oriented towards multiple media platforms, and based on digital construction and fusion of virtual-real narrative. The design and implementation of narrative activities should not only make reasonable use of cross-border, but also pay attention to intersectionality and interaction, so as to realize cross-border interaction of information between different media, but also achieve cross-interaction of information between people and different media.

At present, the Jingdezhen ceramic intangible cultural heritage has been protected by the regional overall protection of the national ceramic cultural ecological protection area, and has also been spread and inherited in the productive protection of various bases. At the same time, the activities of ceramic intangible cultural heritage exhibition, demonstration and performance

are also concentrated and frequent in Jingdezhen Ceramic Intangible Cultural Heritage Museum, Ancient Kiln Folk Custom Exhibition Area, Mingfang Garden, Sanbao International Pottery Village and some traditional handicraft workshops. However, the existing ceramic intangible cultural heritage narratives often have unidirectional channels and monotonous forms, and the audience can only passively accept the information and cannot participate in the interaction of the ceramic intangible cultural heritage narratives. The cross-media narrative design can effectively resolve this awkward situation. For example, on the basis of the digitalization of ceramic intangible cultural heritage, with the cooperation of sound, optoelectronics and holographic projection, virtual reality technology, cloud technology and media integration technology are used to carry out cross-media narration and interpretation of ceramic intangible cultural heritage content through multiple channels and platforms of virtual and reality, online and offline. It can create a cloud network type, three-dimensional and interactive multi-sensory experience for the audience, thus breaking the limitations of traditional museum-like intangible cultural information experience in time and space.

The rational use of the cross-media narrative design method of ceramic intangible cultural heritage can well display and convey the cultural charm and practical significance of ceramic intangible cultural heritage to the audience, and then activate people's awareness of the protection and inheritance of ceramic intangible cultural heritage. At the same time, both the inheritors of intangible cultural heritage and the entire ceramic intangible cultural heritage industry should be clearly aware that the fundamental purpose of cross-media interactive narrative design is to realize the living inheritance, creative transformation and innovative application of ceramic intangible cultural heritage. High-tech means and media platforms are all tools to achieve this purpose, and the principle of moderation must be adhered to in their application. But can not hold the attitude of showmanship, or take cross-media interactive narrative as the selling point and gimmick of innovation transformation of intangible cultural heritage. In short, the most direct harm of technological expansion is the marginalization of culture and the fall of cultural values, so we must be vigilant about the spread of technism. The cross-media interactive narrative design of Jingdezhen ceramic intangible cultural heritage should maintain the correct value orientation and orientation to prevent it from deviating from the track and becoming a pure "stage show-off" or "commercial behavior".

THE RELATIONSHIP BETWEEN THE ELEMENTS OF CROSS-MEDIA INTERACTIVE NARRATIVE DESIGN OF JINGDEZHEN CERAMIC INTANGIBLE HERITAGE

Jingdezhen ceramic intangible cultural heritage has abundant resources, huge content system, complicated porcelain making skills, and perfect process system. The composition system of ceramic intangible cultural heritage is both grand and micro-level, so the narrative design of ceramic intangible cultural heritage should not only pay attention to the breadth of the overview, but also take into account the depth of the exploration.From the macro level, the structural elements of the narrative of ceramic intangible cultural heritage can be divided into non-material elements and material elements, while from the micro perspective, the two can be further differentiated into more subtle elements. Among them, the non-material elements mainly cover the four categories of intangible cultural heritage of Jingdezhen ceramics, including traditional skills, traditional art, folk literature and folk customs (as shown in Fig.3). If further subdivided, the intangible cultural heritage of traditional skills includes 14 items such as Jingdezhen handmade porcelain skills. The traditional art category refers to Jingdezhen folk kiln ceramic art, and the folk literature category refers to Jingdezhen folk story - the legend of porcelain kiln. Folk customs refer to Jingdezhen porcelain industry customs. The material elements mainly involve the behavior subject - narrative role, the craft carrier - narrative props, the occurrence environment - narrative scene and the media - narrative platform and so on (as shown in Fig.4). In the narrative activities of ceramic intangible cultural heritage, such as exhibition, dissemination and performance, the actors involve the narrative roles of intangible cultural heritage inheritors, planners, performers and audiences, among which the performers can also be virtual non-physical roles, and the reason why the audience can also be the actors of narrative activities is because they also have the need and ability to participate in the interactive narrative of intangible cultural heritage. The craft carrier includes porcelain tools used in ceramic production practice, ceramic objects used as display props and other narrative props. The occurrence environment is the original production environment of traditional ceramics restored as far as possible by referring to historical records, archaeology, customs and other materials, or the modern scene built to meet the needs of cross-media interactive narrative; As for all kinds of media, they provide a platform for the whole narrative activity.
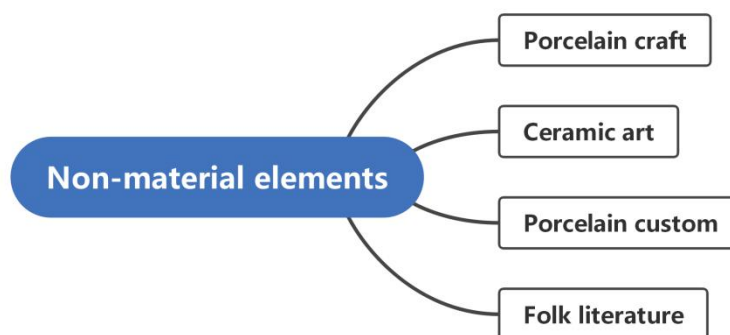

Fig.3 The composition of non-material elements in the cross-media interactive narrative of ceramic intangible cultural heritage in Jingdezhen
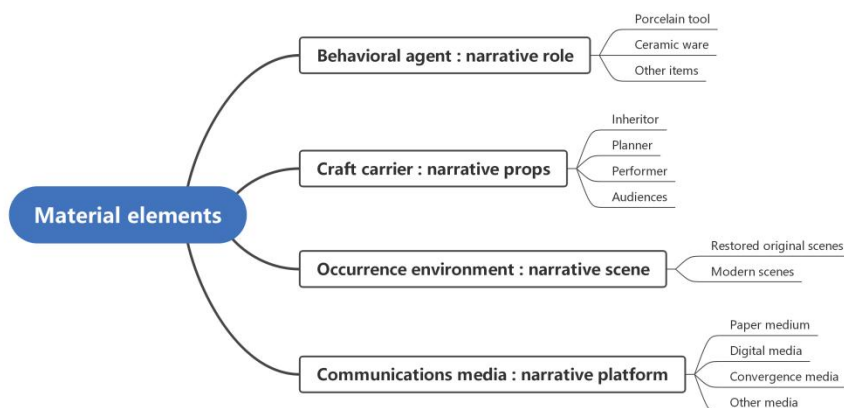
Fig.4 The composition of material elements in the cross-media interactive narrative of ceramic intangible cultural heritage in Jingdezhen

After defining the design elements of ceramic intangible cultural heritage cross-media interactive narrative, clarifying the intertwined relationship between the elements becomes the premise of implementing narrative design. Intangible cultural heritage, as a form of existence, is difficult to exist apart from the noumenon of cultural heritage. It presents the essence of living characteristics, isomorphic symbiosis with material system and interaction with human subject and objec[4], which is naturally the case with ceramic intangible cultural heritage. From a macroscopic point of view, ceramic intangible cultural heritage, as the existence form of immaterial nature, determines that it needs material elements to carry its meaning transmission, and conversely, material elements need to realize its meaning expression through non-material content. As objects, props and scenes are passive material elements, which cannot transmit meaning and carry out narrative activities spontaneously. Instead, the narrative roles as actors need to exert their subjective initiative to realize the meaning of intangible cultural heritage narration. Therefore, the non-material elements and material elements in the narrative of ceramic intangible cultural heritage form the relationship between bearing and being carried, expression and being expressed. If the relationship between them is further explored, then the main content of intangible cultural heritage narrative, such as skills, art, stories and customs, props are the tools of narrative, scenes are the place of narrative, media is the platform of narrative, and people, as the key role in the intangible cultural heritage narrative, provide a multi-dimensional perspective for narrative. In general, the narrative process in which narrative roles convey information and express meaning in narrative scenes through narrative props is the narrative process of ceramic intangible cultural heritage. When this process implements activities across multiple media platforms, the cross-media interactive narrative of ceramic intangible cultural heritage is realized.

THE LOGIC OF CROSS-MEDIA INTERACTIVE NARRATIVE DESIGN OF JINGDEZHEN CERAMIC INTANGIBLE CULTURAL HERITAGE

On the basis of ceramic intangible cultural heritage digital information collection and model construction, following the guidance of design purposes, through the digitization, visualization and interactive design of design elements, narrative activities can be realized freely across multiple media integrating virtual and real. And create a narrative effect and audience experience with scientific authenticity, sequential inference, open controllability, process traceability, sensory immersion and interactive friendliness, which is the underlying logic of the implementation of ceramic intangible cultural heritage cross-media interactive narrative design. This logic is the key to carry out narrative practice, which can be constructed from three dimensions: narrative context, narrative perspective and narrative media.

Narrative Context: Respect for Historical Facts and Moderate Sublimation

Narrative context involves not only linguistic factors, such as the types of narrative language, but also non-linguistic factors, such as narrative time, space and scene. The type of narrative language is directly related to the type of narrative media. Traditional paper media uses text and picture language, while film and television media uses graphics, images and sound language. Digital, virtual reality and fusion media technologies have continuously filled narrative media and greatly enriched narrative language. The media language of "digitalization and entity integration" and "mutual generation of virtual and reality" makes ceramic intangible cultural heritage narration not only realize flexible cross-border, but also tend to be more vivid and rich, immersive and interactive.

When the narrative language is determined, non-linguistic factors define, modify, render and sublimate the narrative content. As far as the cross-media interactive narrative of Jingdezhen ceramic intangible cultural heritage is concerned, the narrative time not only traces the historical origin, but also collides with modern civilization. Although the inheritance of intangible cultural heritage has a continuity in history, the narrative design of ceramic intangible cultural heritage can also adopt montage narrative techniques such as flashback, episodic narration and parallel space and time while seeking objectivity and science in time. In addition, the time factor of ceramic intangible cultural heritage narrative design should also pay attention to the fit with modern and contemporary context, as well as the space and scene factors. On the one hand, intangible cultural heritage belongs to history,

and narrative design should respect historical facts and strive to truly restore the origin of ceramic intangible cultural heritage activities; On the other hand, intangible cultural heritage also belongs to modern and contemporary, and narrative design should make full use of the power of science and technology to moderately render and sublimate narrative space and scenes, so as to produce better narrative effects.

Narrative Perspective: Multi-dimensional Subject and Building Empathy

We must examine the relation propositions of viewing subject and display object, cultural subject and cultural object, material and immaterial in the process of cultural relics exhibition from the perspective of relevance[5]. In the narrative activities of ceramic intangible cultural heritage, the multi-dimensional narrative subject corresponds to the multi-dimensional narrative perspective. Naturally, non-human elements of ceramic intangible cultural heritage can also act as narrative subjects through anthropomorphic techniques. For example, a virtual role model of ceramic cultural relics can be designed to make cultural relics "speak" and a narrative interpretation of how to complete the production of ceramic artifacts through traditional techniques can be made from the perspective of cultural relics. However, in more cases, the narrative design of ceramic intangible cultural heritage is developed from the human perspective. Inheritors, planners, performers and audiences can all be the actors of ceramic intangible cultural heritage narrative activities, and their positions are different from each other, forming multidimensional narrative subjects and narrative perspectives. The design of ceramic intangible cultural heritage narrative perspective has a unique logic. Different narrative perspectives have different focuses, narrative characteristics and effects, but they all pursue to establish empathy between the narrator and the audience.

Among the multi-dimensional narrative subjects, the inheritors of intangible cultural heritage are the most direct and sophisticated narrators. Intangible heritage has the characteristics of dynamic and historical, which can only be continued by inheritors from generation to generation, and the status of inheritors cannot be ignored. Inheritors have witnessed the practice of intangible cultural heritage, and the perspective of inheritors can present the most essential and alive side of ceramic intangible cultural heritage. However, some inheritors of intangible cultural heritage show both good and poor inheritance of intangible cultural heritage due to their different knowledge and cultural level and their mastery of science and technology. In addition, some inheritors of intangible culture will selectively inherit their skills and processes due to the consideration of economic, efficiency and other factors. Therefore, the perspective of the inheritor will also cause the lack of narrative elements or narrative links of the intangible cultural heritage due to the subjective factors. The planner is the overall planner, who usually has a high level of culture, art and science and technology, and can plan narrative activities from a strategic perspective. However, the narrative from the perspective of the planner lacks the inheritors' personal feelings of intangible cultural heritage and craftsman spirit. Performers are interpreters of intangible cultural heritage narration, executors of narrative planning, and sometimes incarnations of inheritors. They need both performance talent and enthusiasm, as well as the ability to understand and comprehend ceramic intangible cultural heritage. Only in this way can narratives resonate with audiences from the perspective of performers. The audience is not only the viewer of ceramic intangible cultural heritage narrative activities, but also the participant of interactive narrative. Narrative from the perspective of audience can enable audience to participate in intangible cultural heritage activities, make them more truly appreciate the essence of intangible cultural heritage, and more easily establish empathy between audience and intangible cultural heritage.

Narrative Media: Enrichment and Cross-border Integration

The richness and content development of today's narrative media are not achieved overnight. In different historical periods, all kinds of narrative media have been active in human narrative activities by virtue of their own advantages and characteristics. Whether it is the way to record things by tying ropes in primitive society, ancient hieroglyphics, or traditional texts and pictures, different narrative media always have their own characteristics and advantages, but they also show certain limitations with the development of The Times. Fortunately, new media types can always appear at the right time to fill people's narrative vocabulary. Thanks to the rapid development of emerging technologies and the rapid change of media technology, the narrative media of ceramic intangible cultural heritage shows great richness and diversity, which also provides a broad platform for cross-border interaction of intangible cultural heritage narrative. Different media build distinctive narrative platforms, such as paper media, digital media, financial media, etc. Each of which have their own advantages, help each other and cooperate with each other. The narrative design of Jingdezhen ceramic intangible cultural heritage should pay attention to the characteristics of generalized media, learn from each other on the basis of comparative analysis of the advantages and disadvantages of various available media, and constantly broaden and optimize the narrative path of intangible cultural heritage, so that the narrative content and cross-media behavior can be expressed smoothly and properly.

PRACTICE CASE AND PARADIGM OF CROSS-MEDIA INTERACTIVE NARRATIVE DESIGN OF CERAMIC INTANGIBLE CULTURAL HERITAGE IN JINGDEZHEN

The practice of Jingdezhen ceramic intangible cultural heritage cross-media interactive narrative design pursues full awareness experience and multi-dimensional interaction. The rich narrative media creates an immersive full sense experience for the audience, and the cross-border integration of multi-media builds a multi-dimensional interactive bridge between ceramic intangible cultural heritage and the audience. However, at present, there are still many unsatisfactory aspects in the narrative design practice of Jingdezhen ceramic intangible cultural heritage. Taking Jingdezhen Ceramic Intangible Cultural Heritage Museum as an example, the narrative methods of ceramic intangible cultural heritage are still mainly to simply restore historical scenes and static display the inheritance results of intangible cultural heritage. It is urgent to open the imagination space of ceramic intangible cultural heritage narration through richer narrative media and broader narrative platform. Of course, there are also excellent cases of cross-media interactive narration of Jingdezhen ceramic intangible cultural heritage, such as Mingfang

Garden's large-scale landscape performance - Jingdezhen Memory "China", which integrates digital media, sound, photoelectric and holographic projection technologies to integrate virtual and real media, and use "china" to tell the story of "China". The micro narrative plot of ceramic intangible cultural heritage is integrated with the grand narrative scene of ceramic history and culture, and the cross-media interactive narrative of Jingdezhen ceramic intangible cultural heritage is well realized. Coincidentally, the local government of Jingdezhen and Ali Mother jointly created a cutting-edge Chinese aesthetic short film "The Earth is awakened by Ceramics", and planned the "Spring Ceramic Appreciation Activity". Through the cross-media, they jointly performed a cross-media interaction narrative event of ceramic culture.

Based on the existing design practice of intangible cultural heritage in Jingdezhen, a practical paradigm of ceramic intangible cultural heritage narrative is designed based on the analysis of advantages and disadvantages, that is, different narrative subjects can form cross-media and multi-dimensional interaction with the audience according to their own narrative content and characteristics, so that the audience can experience the effect of full awareness. The realization of multi-dimensional interactive narrative needs to satisfy the interaction between different audience groups and different narrative subjects. For example, audiences can participate in the porcelain making process of intangible cultural heritage inheritors, participate in the planning of intangible cultural heritage programs, and interact with performers. In addition, ceramic cultural relics contain rich intangible cultural heritage information. Although they cannot actively narrate themselves, the digital intangible cultural heritage content generated by AIGC can more vividly realize the information interaction between intangible cultural heritage and the audience in the form of anthropomorphism. The production of the full sense experience effect requires the cross-border integration of the media layer, to create a visual, auditory, tactile and other perceptual feast for the audience with rich and vivid content and effects, and to enable them to obtain the recognition of ceramic intangible cultural heritage in memory, thinking, imagination and other cognitive levels.

CONCLUSION

Generations of ceramic craftsmen in Jingdezhen have combined the spirit of craftsmanship with their lifetime efforts to create a dazzling ceramic intangible cultural heritage in clay and kiln fire. With the genetic inheritance of civilization and the rapid progress of science and technology, the digital, intelligent, standardized and cross-media development of ceramic intangible cultural heritage is unstoppable. The symphony of humanity and technology not only gives a new connotation to the cross-media interactive narrative of ceramic intangible cultural heritage, but also contributes to the brilliant recurrence and continuity of the Porcelain Capital and the inheritance and innovation of ceramic culture. The power of digitalization continues to fill the communication media of ceramic culture, and the cross-border fusion media constantly enriches the narrative platform of ceramic intangible heritage. Jingdezhen ceramic intangible heritage is speeding up towards the living state, and constantly innovating and transforming the new value of the times. The inheritance, display and dissemination of Jingdezhen ceramic intangible cultural heritage need scientific, real, vivid and infectious narrative effects. It is necessary to create a good interactive experience for the audience, and at the same time, let the audience have a conscious recognition of Jingdezhen ceramic intangible cultural heritage. How to make the "millennium porcelain capital" continue to flourish, how to make the ceramic intangible cultural transformation and innovative development is a topic that we need to explore all the time.

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