

Visualisation Design-Driven Research on Non-Heritage Dissemination and Digital Reproduction

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Abstract: This paper is entitled "Study on the Dissemination and Digital Reproduction of Non-heritage Driven by Visualization Design". Against the background of the rapid development of digital information technology in national development, the application of information visualization design in the dissemination and digital reproduction of intangible cultural heritage is discussed. Through the dissemination of digital media and the production and analysis of visualization, the dissemination and digital representation of intangible cultural heritage is promoted. The research in this paper focuses on the dissemination and digital reproduction of intangible cultural heritage, aiming to make readers pay attention to intangible culture through visualization design visual presentation and to guide the development direction for intangible heritage inheritance and development.

Keywords: Visualization Design; Intangible Culture; Digitization; The Transmission of Intangible Heritage.

1. Background and Significance of the Study

1.1. Policy Background and Current Status of Research

With the rapid and high-quality socio-economic development and people's aspirations for a better life, the State attaches increasing importance to protecting intangible cultural heritage (NH). To further strengthen the protection and inheritance of intangible cultural heritage, the "14th Five-Year Plan" for the development of culture and tourism policy was launched. The State explicitly proposes to strengthen the systematic protection of intangible cultural heritage, increase the popularity of intangible cultural heritage through digital power, promote the protection and inheritance of intangible cultural heritage, and encourage the innovation of intangible cultural heritage dissemination methods, to better meet the spiritual and cultural needs of the people.

Through the research and analysis of papers such as "Research on the Application of Knowledge Visualisation Design of Guangxi National Intangible Cultural Heritage" and "Research on the Application of Knowledge Visualisation Design of Guangxi National Intangible Cultural Heritage", it is found that significant changes have occurred in the dissemination of NHM, some NHM development is not strong in vitality, the paperless new media dissemination has become the main theme, there are difficulties in inheritance, and it has been gradually forgotten by the society, and for the niche NHM culture The relatively weak foundation of protection, the insufficiently sound workforce, and the weak support for inheritors have all contributed to the difficulties in the dissemination and development of NHM.

Therefore, in the new stage of the protection and inheritance of non-heritage, the use of digital technology and visual design means is not only an effective way to respond to the national policy and strengthen the dissemination and popularisation of non-heritage but also a key strategy to solve the current dilemma of the development of non-heritage and stimulate the new vitality of non-heritage. Through these innovative ways, we can broaden the communication

channels of non-heritage, enhance public awareness and interest in non-heritage, and promote the living inheritance and sustainable development of non-heritage culture.

1.2. Significance of the Study

This study focuses on the application of visualization design in the dissemination and digital reproduction of non-heritage and deeply analyses its significance to the inheritance of non-heritage. Through the communication medium of digital reproduction, this study not only reveals its significant advantages in broadening communication channels and enriching expression methods but also shows how these innovative means can effectively enhance the public's knowledge and understanding of NHM, thereby raising public attention and stimulating widespread interest. This not only helps the public at home and abroad to know and understand China's rich intangible cultural heritage more deeply but also promotes global awareness and respect for Chinese culture.

This study aims to make breakthroughs in three aspects: firstly, to increase the attention of the society to non-heritage through innovative communication strategies, to strengthen the awareness of the protection and inheritance of non-heritage; secondly, to explore and practice diversified non-heritage communication channels and methods, to ensure that the non-heritage culture can keep abreast of the times and better integrate with the development of the modern society; thirdly, to promote innovative development of non-heritage culture, and inject fresh blood into the ancient non-heritage culture to bring new vitality and vigor using the power of modern design concepts and technologies. Thirdly, it is to promote the innovative development of non-heritage culture and inject fresh blood into the ancient non-heritage culture with the help of modern design concepts and technology, to bring new vitality and vigor. To sum up, this study takes visualization design as a bridge to open up a new path for the dissemination and development of non-heritage and provides valuable theoretical and practical guidance.

2. Definition and Analysis of Relevant Concepts

2.1. Overview of Visualization Design

Visualization is the visualization of complex and abstract data and information. Delivering information, effectively, and accurately can help people better understand and remember information. As a technology that combines knowledge from multiple fields such as computer graphics, image processing, visual design, and information processing, it aims to transform complex and abstract data and information into graphics, images, and animations that are intuitive and easy to understand, and rich in artistic style and interactive experience. The field is heavily influenced by theorists such as Edward Tufte, who emphasized that data should be presented clearly and concisely while focusing on the aesthetic expression of the information. With the development of the Internet, visualization design shows great potential in big data processing, not only can it efficiently deliver data content, but also through personalized interactive experiences, allowing users to immerse themselves in the world of information and deepen their understanding and perception of the data.

2.2. Dissemination of non-heritages

Intangible heritage communication, i.e. the dissemination and promotion of intangible cultural heritage. Through various media and means, information on knowledge, skills, and values of intangible cultural heritage is transmitted to a wider social group, so that more groups of people can know, understand, and appreciate intangible cultural heritage. Through the dissemination of ICH, people of all ethnic groups can be made aware of the diversity of cultures, so that the world can see Chinese culture and enhance the self-confidence of our nation. It can be seen that the dissemination of non-heritage is a top priority! In the policies issued by the state, it is also easy to see that our country has been upholding a positive attitude towards non-heritage.

Intangible cultural heritage refers to the various traditional cultural expressions that have been handed down from generation to generation by the peoples and are regarded as part of their cultural heritage, as well as the objects and places associated with the traditional cultural expressions. These traditional cultural expressions include but are not limited to, traditional oral literature, fine arts, calligraphy, music, dance, theatre, opera, acrobatics, traditional skills, medicine and calendars, traditional rituals, festivals and other folklore, traditional sports, amusements, architecture, and handicrafts. [1]

2.3. The Current Situation of the Design Industry under the Empowerment of Non-heritage

In the current situation of the design industry, the in-depth fusion of the dissemination of non-heritage culture and modern digital design has become a trend that cannot be ignored, injecting new vitality and creativity into the whole industry. This fusion has not only successfully transformed traditional non-heritage elements into a design language with a sense of the times, but also given them new vitality and market value, demonstrating the unique charm and profound heritage of non-heritage culture. Taking Xue Rongrong, the mascot of the 2022 Beijing Winter Paralympics, for example,

as a model for the integration of non-heritage culture and modern design, it not only conveys the festivity and peace of the Spring Festival through the innovative use of the traditional element of lanterns but also cleverly integrates cultural symbols characteristic of Beijing such as the peace dove and the Temple of Heaven to show the profoundness of Chinese culture. The success of Xueyongrong lies not only in its exquisite and unique design but also in the fact that it serves as a bridge for cultural dissemination, effectively stimulating the global audience's interest in and love for Chinese culture and further enhancing the international influence of Chinese culture.

This phenomenon fully illustrates that in the design industry, the dissemination of non-heritage culture has become an important driving force for the innovative development of the industry. Designers have created a series of excellent works with both national characteristics and modern aesthetic trends by digging deeply into the connotation and value of non-heritage culture and combining it with modern design concepts and technologies. These works not only meet people's needs for cultural identity and aesthetic enjoyment but also bring new development opportunities and market space for the design industry.[2]

3. The Dilemma of Non-Genetic Inheritance in the Digital Age

3.1. Insufficient Communication Dynamics Driven by the Digital Divide

The effective dissemination of NRM is not possible due to the geographical, economic, social, scientific, and technological factors in which the NRM is located. As a result, many NRHs cannot be preserved, resulting in the loss of their heritage. In addition, many NRLs have not been able to undergo scientific and technological reforms for their effective dissemination, resulting in the NRLs not being able to keep pace with the development of society.

In the process of NRM dissemination, the existence of the digital divide affects the scope and effectiveness of NRM culture, thus leading to a significant lack of dissemination momentum.

Some regions or groups are unable to introduce or reasonably and effectively use the Internet and digital technology due to backward infrastructure, poor economic conditions, and lagging scientific and technological development, thus restricting the digital dissemination of non-heritage culture; even in regions with access to the Internet, there are differences in the ability of different social groups to use the Internet, which makes it impossible for non-heritage to make good use of the resources of the Internet for dissemination; the digital technology The rapid development of digital technology requires users to have certain professional skills and knowledge, so it is difficult for non-heritage bearers to make use of modern scientific and technological means to present non-heritage content innovatively and disseminate it effectively due to factors such as their age, educational background and upbringing.

The existence of the digital divide has diminished the effectiveness of the digital dissemination of NRM culture, leading to a lack of motivation for dissemination.

3.2. Imbalances in the Combination of Technology and Culture

In the process of rapid development of science and technology, the speed of new technology is too fast, and the design process is too attracted by the new technology to be able to calm down and meditate on the relationship between non-heritage culture and design creation. Separated from the cultural symbols and the connotation of culture itself, too much attention to the digital representation, in the process of the digital dissemination of non-heritage is simplified into a mere technological display, losing its culture to bring flavor and depth.

The effective combination of technology and culture is the key to realizing the effective dissemination of non-heritage culture. However, in practice, the lack of in-depth research and excavation between technology and culture has led to poor digital dissemination of NRH.

In the process of digital dissemination of non-heritage, culture should always be the dominant position. Digital technology should be used as a medium and way to disseminate culture. Instead, it should focus on highlighting the high level of technology and the lack of cultural heritage.

4. Analysis of the Value Points and Advantages of Visualisation-Driven NRL Communication

4.1. Enhancing the Speed of Dissemination of Non-heritage Culture

Vision is the main channel for human beings to acquire information. Through digital processing, visualization presents complex and difficult-to-understand non-heritage information to the audience in an intuitive, easy-to-understand, and easy-to-communicate way. The audience can participate in real-time discussions and interactions on the content of non-legacy, and experience the charm of non-legacy culture first-hand. Through the use of visualization and digital features, i.e. to enhance the efficiency of the dissemination of non-heritage culture.

At present, digital visualization technology is very mature and flexibly used in various industries, such as image processing, animation production, virtual reality, artificial intelligence, and other technologies that have been widely used in various fields. Therefore, digital visualization provides mature technical support for the visual communication of non-heritage culture.

With the rapid development of the Internet, Internet usage is becoming as indispensable to our lives as water resources. Users are becoming more and more receptive to and dependent on digital content. As young people we are even more inseparable from the Internet, we tend to get information through visual images, which provides a good user base for the visual communication of non-heritage culture.

4.2. Promoting Innovation in Non-heritage Culture

With the increasing frequency of global cultural exchanges, modern society has a growing demand for cultural diversity and innovation. As an ancient civilization with a long history of 5,000 years, China's rich non-heritage cultural resources are undoubtedly an important force in showing the charm of national culture and promoting cultural output. The intervention of digital visualization technology enables the

non-heritage culture to be presented to the world in a more vivid, intuitive, and interactive way so that the global audience can feel the profound heritage and unique charm of Chinese culture in their appreciation. In addition, our government's attention to cultural output and non-heritage protection has also reached an unprecedented high level. A series of cultural policies have been introduced to provide strong policy support and financial support for the innovation and development of non-heritage culture. These policies have not only encouraged non-heritage regions to actively carry out cultural innovation activities but also promoted the in-depth integration of non-heritage culture with modern industries, bringing new development opportunities and vitality to non-heritage regions.[3]

5. Visualisation Design Strategies for Digital Reproduction in Non-Genetic Broadcasting

5.1. Focus on Content Authenticity and In-depth Research

In the digital reproduction and dissemination of non-heritage culture, the authenticity of the content is the cornerstone. In the design process, we need to adopt a rigorous academic attitude to comprehensively excavate and interpret the deeper connotation and unique stories of non-heritage culture through a variety of methods, such as fieldwork, exhaustive documentary research, in-depth interviews, and systematic field surveys. This requires not only an in-depth understanding of non-heritage skills, rituals, and customs, but also a thorough analysis of the historical background, social functions, and cultural significance behind them. Using cutting-edge technologies such as 3D scanning, digital modeling, and virtual reality, we can accurately capture and reproduce the material form of NH culture and the dynamic process of intangible heritage, providing the audience with a near-real experience, as well as a rich and intuitive material base for academic research and cultural dissemination.

5.2. Emotional Design Strategies

Emotional resonance is a key element in the dissemination of non-heritage culture. Through the clever use of AI and Internet technologies, we can create emotional digital reproductions that allow users to feel the unique charm and deep emotions of NRM culture in an interactive experience. This includes but is not limited to, the design of compelling storylines, the creation of immersive experience environments, and the use of multimedia means such as sound, light, and shadow to enhance sensory stimulation. Through these means, an emotional bridge can be built between users and non-heritage culture, so that while enjoying the visual feast, they can also deeply appreciate the spiritual value of non-heritage culture, and thus participate more actively in the inheritance and protection of non-heritage culture.

5.3. Multi-media Communication

In the digital era, the integration and dissemination of multiple media provide a broad space for the promotion of non-heritage culture. We should make full use of social media platforms such as Weibo, WeChat, Jitter, Shutter, Video, etc., to attract the attention and participation of young audiences through the release of short videos, graphic information, live broadcasts, and other forms of interaction. At the same time,

actively explore the innovative mode of "non-heritage +", such as the combination of non-heritage and tourism, education, fashion, and other fields, to develop non-heritage themed tourism routes, non-heritage cultural courses, non-heritage fashion products, etc., to diversify the form of non-heritage culture to show the unique charm of non-heritage culture. In addition, the use of cutting-edge technologies, such as virtual reality (VR) experience projects and virtual digital human interpretation, has also provided brand-new possibilities for the dissemination of non-heritage culture, enabling the audience to immerse themselves in the glamour of non-heritage culture, and further broadening the dissemination channels and audience scope of non-heritage culture.[4]

6. Concluding Remarks

The dissemination and development of non-heritage culture cannot be separated from the innovative promotion of digital reproduction and visualization design. In the future, with the continuous progress of science and technology and the unlimited emergence of creativity, the non-heritage culture will shine even brighter in the wave of digitization, become a bridge connecting the past and the future, the

tradition and the modernity, and contribute to the unique power of the world's cultural diversity.

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