

Digital Inheritance and Protection of Shandong Intangible Cultural Heritage—Taking Taishan Shadow Puppetry as an Example

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Abstract: *As the holy land of ancient Qilu culture, Shandong, has a long history, profound cultural deposits, and rich and colorful intangible cultural heritage. Taishan shadow play is the representative of Shandong shadow play and enjoys the reputation of "living fossil of Taishan culture". In recent years, with the rapid development of economy, the change of people's lifestyle and the invasion of foreign cultures, Taishan shadow play, like most intangible cultural heritage, faces the dilemma of compressed living space, limited inheritance and protection. With the development of science and technology, digital technology has been widely used, and the use of digitalization to enable Taishan Shadow play has become a new development direction. Based on the three aspects of communication digitalization, form digitalization and experience digitalization, the digital inheritance and protection path of intangible cultural heritage has been constructed in an all-round and three-dimensional way from the government, enterprises, scholars and the public, so as to promote the cross-border combination of intangible cultural heritage and network communication. To realize the purpose of digital inheritance and development of Shandong intangible cultural heritage.*

Keywords: *Intangible cultural heritage, Digitization, Taishan shadow play, Inheritance and protection*

1. Introduction

Since the 18th National Congress of the Party, the General Secretary proposed to inherit the excellent traditional Chinese culture and promote its creative transformation and innovative development, and the General Secretary's repeated investigations and investigations of intangible cultural heritage projects reflected the Central Committee's great importance to the inheritance and development of intangible cultural heritage. There is no doubt that the protection and development of intangible cultural heritage has aroused widespread concern in society.

Shandong, as the holy land of ancient Qilu culture, has a long history, profound cultural deposits, and rich and colorful intangible cultural heritage. Taishan shadow play is the representative of Shandong shadow play and enjoys the reputation of "living fossil of Taishan culture". In recent years, with the rapid development of economy, the change of people's lifestyle and the invasion of foreign cultures, Taishan shadow play, like most intangible cultural heritage, faces the dilemma of compressed living space, limited inheritance and protection.

With the rapid development of digital technology, the digitalization of intangible cultural heritage has received worldwide attention. How to use digitalization to enable the development of intangible cultural heritage and activate the new charm of traditional culture has become an important topic of current research, and an important task to promote the improvement of the province's intangible cultural heritage protection and inheritance system.

In 1992, UNESCO launched the "Memory of the World Project", which started the digitization of the world's intangible cultural heritage. With the rapid development of digital technology, intangible cultural heritage digitalization has gained worldwide attention. The United States, France, Japan and other countries have launched open database construction projects for cultural institutions' collection resources, and provided opportunities for digital access, digital experience and digital participation to the public through online videos, games, education, interactive platforms or projects.

The protection and inheritance of intangible cultural heritage in China has experienced a practical course from recording, preservation and display to "seeing people, seeing things and seeing life". At the

beginning, scholars focused on the concept interpretation and technical research of intangible cultural heritage digitization. Huang Yonglin and Tan Guoxin put forward a discussion on the digitization of intangible cultural heritage, comprehensively and prospectively emphasizing the role of digital technology in the transformation, reproduction and innovative utilization of intangible cultural heritage.^[1] With the development of smartphones and mobile Internet, the innovation of new media technology and ecological changes have made scholars begin to pay attention to the dissemination of intangible cultural heritage, such as the analysis of the form of online dissemination of intangible cultural heritage^[2], the new media communication platform^[3], and the analysis of the relationship between mobile Internet and digital dissemination of intangible cultural heritage^[4]. At this stage, scholars keep up with the trend of The Times and study intangible cultural heritage digitalization mainly from the perspectives of cultural industry, "Internet +", digital humanities, cultural and tourism integration, IP transformation, etc.^[5]

In 2022, the state issued a cultural digitization strategy, proposing to build a national cultural big data system by 2035. At a time when digitalization has become a national strategy, discussing the protection and inheritance of intangible cultural heritage from the perspective of digitalization and constructing a digital scene of intangible cultural heritage will help strengthen the vitality and influence of intangible cultural heritage in contemporary times, enhance the cultural identity of the people, and have important theoretical significance for helping the panorama presentation of intangible cultural heritage and building a cultural power.

Shandong is a major province of intangible cultural heritage. This study takes Taishan shadow play as an example to explore its digital protection and development path, and combines modern network media communication technology to realize the cross-border combination of Taishan shadow play and network communication, which has practical significance for expanding the dissemination scope and channels of Taishan shadow play, and turns the protection of Taishan shadow play from theory to practice. It provides practical support for Shandong intangible cultural heritage protection and cultural innovation, and has certain practical significance.

2. The development status of Taishan shadow play

Taishan shadow play originated in Taishan District, Tai 'an City, Shandong Province, China, with a long history and rich cultural traditions. According to historical records, the origin of Taishan shadow play can be traced back to the Song Dynasty, after years of development and evolution, Taishan shadow play has gradually formed a unique artistic style. Taishan shadow play was originally called "picking the shadow", because the old artists had no means of transportation, and they carried the burden with a flat pole. The front pick is the drama box, which is loaded with shadow puppets and curtains, and the back pick is the quilt plate. Hence the name "Picking shadows". Taishan shadow play known as "nothing idle", a person continuous performance, with singing, with accompaniment. This is also the difference between Taishan shadow play and other places. Taishan shadow puppetry is based on paper cutting, which can cut out various figures and form a stereoscopic projection on a white screen by shining lights. The art of paper-cutting requires great skill and rich experience, and each character needs to be carefully designed and made. Taishan shadow puppetry is accompanied by specific musical accompaniment, including drums, board, piano, etc. The musical melody is graceful and melodious, and is closely integrated with the plot, which can enhance the audience's perception and understanding of the plot. As a form of projection performance, the performance of Taishan Shadow puppetry requires actors to express precise and delicate movements in a limited space, and actors need to master the transformation of characters' images and the transmission of emotions, so that the audience can truly feel the emotional changes of the characters.

Taishan shadow puppetry is usually performed on a dark stage, where paper-cut figures are projected on a white screen with lights shining on it. The actors stand behind the screen and manipulate the figures. The characters are represented by means of hand and voice. The Taishan shadow play repertoire is rich and diverse, including historical stories, myths and legends, and folk tales, among which the common plays are The Legend of the White Snake, Meng Jiangnv Crying at the Great Wall, Journey to the West, etc. Each play has a unique storyline and theme, showing the rich and colorful content of traditional Chinese culture.

In 2007, Taishan shadow play was named the first batch of "National intangible Cultural heritage" by the Ministry of Culture, and in 2011, it was listed as "world-class intangible cultural heritage" by UNESCO, highly praised by Premier Wen Jiabao and Mr. Li Changchun, known as the "living fossil" of Taishan culture. Taishan shadow play is an important part of Taishan culture, and has held special

performances for national, provincial and municipal leaders and important guests at home and abroad for many times. In 2012, Mr. Fan Zhengan, the inheritor of Taishan shadow play, won the highest award awarded to inheritors by the Ministry of Culture, the "Legacy Award". As a treasure of the Chinese nation, Taishan shadow play is becoming more and more popular in the process of going to the world. Since 2010, Taishan shadow puppets have been to more than 20 countries such as the United States, Australia, Germany, France and Egypt for cultural exchanges.

3. The living situation of Taishan shadow play

With the diversification of modern entertainment, many young people tend to pursue novel and fashionable forms of entertainment, and their interest in traditional shadow play is gradually decreasing. On the other hand, the production and performance of traditional shadow play requires a long time of training, while the competitive pressure and fast-paced lifestyle of modern society make the young generation less interested and patient in learning and practicing the art of shadow play. Entertainers are an important carrier for the inheritance and development of Taishan Shadow play. As the sixth generation inheritor of Taishan Shadow play, Mr. Fan Zhengan initiated and founded the Taishan Shadow Play Art Research Institute in 2009. At present, it is mainly passed on by family and trained by students. At home, Fan Weiguo learned the art of shadow play from his father, Mr. Fan Zhengan, and has now become the seventh generation inheritor of Taishan Shadow Play. Fan Weiguo has turned Taishan Shadow Play to industrialization to further explore the market, and has successively opened the Dongping Light and Water Edge Theater, Jinan Tuquan Theater, Beijing Shadow Play Fan Theater and other interpretation terminals to extend the development of tentacles and enhance the inheritance influence of Taishan shadow play. In the training of shadow play students, Mr. Fan Zhengan opened a class in 2015. At present, more than 1,000 students have learned Taishan shadow play art. Due to the long training time of shadow play, there is an imbalance between early investment and later return, so few people insist on studying shadow play art. This leads to Taishan shadow play into performing arts, creative design, marketing and other talent shortage. The living space of Taishan shadow puppets is compressed and they lose their right to speak in society. In the aspect of inheritance, Taishan shadow puppetry is faced with the dilemma of no successor, and finding new ways of inheritance and development is an urgent problem to be solved.

4. Digital inheritance and development measures of Taishan shadow play

4.1 Digital dissemination of Taishan Shadow play

Taishan shadow play wants to innovate and develop, and its digital communication is the key, including film and television variety, animation games, digital collections and other ways. With the rapid development of digital imaging technology and the rise of new media platforms, film and television variety shows incorporating intangible cultural heritage elements or with intangible cultural heritage as the theme usher in a creative peak. In 2022, Taishan shadow puppets appeared in the "Vientiane China" column produced by China's Internet news, interpreting the family's dream of cultural inheritance. Secondly, we can make animation games about Mount Tai shadow play, and carry out IP development around Mount Tai Shadow play project. Mount Tai Shadow Play can refer to the development situation of the Forbidden City. First, we can use new media technology to animate traditional plays and launch animation works about Mount Tai shadow play, and take advantage of the continuous development of national cartoon boom in recent years to publicize Mount Tai shadow play on a broader platform. Different from physical products, digital collections use blockchain technology to generate unique digital certificates corresponding to specific works and artworks, and realize authentic and trusted digital distribution, purchase, collection and use on the basis of protecting their digital copyright. In 2023, Taishan Scenic Area first promoted the digital collection and released four virtual cultural goods, including four representative stone carved landscapes such as "Five sacred Mountains alone", "Wind and Moon Boundless", "Ruyi" and "Tiger Charm", which were praised by everyone. Therefore, Taishan shadow puppets can be referenced and digital collections can be used to gain wider public awareness and participation.

4.2 Taishan shadow play form digitalization

The form digitization of Taishan shadow play includes intangible cultural heritage database, intangible cultural heritage digital museum and intangible cultural heritage digital education. Intangible cultural heritage database is the cornerstone of intangible cultural heritage digital protection. Establish

Taishan shadow play database, and strengthen standardization and standardization construction, and truly realize database information sharing. Digital museum is the derivative of database and an important carrier of intangible cultural heritage digitalization. The establishment of digital museum can make the display of shadow puppets more vivid and narrative more vivid by means of graphic photography and holographic projection. Non-genetic inheritors can record courses related to Taishan shadow puppetry and popularize education on the Internet platform. At the same time, you can also open a personal self-media account, display your personal works, explain the knowledge of Taishan shadow play, and narrow the distance between Taishan shadow play and the public.

In addition, Taishan shadow play should also consider the design of related cultural and creative products. Cultural and creative products take Taishan shadow play art as the starting point, in-depth analysis and research of shadow play to dig out a variety of visual elements. These elements include character image, scene background, action posture, color composition, etc. These elements can be used as material and inspiration for cultural and creative product design. In the design process, these elements are usually deconstructed and reorganized to apply them to different design expression styles, thus creating a modern, artistic and abstract visual image. In this process, it is necessary to fully consider the aesthetic orientation and cultural background of consumers, ensure the cultural connotation, and make the product more in line with the preferences and needs of contemporary consumers, so as to achieve a design product with cultural inheritance, innovative design, artistic performance and commercial feasibility. At present, most forms of Taishan shadow play cultural publicity materials are relatively traditional, including shadow play character bookmarks made with small shadow play figures, shadow play picture frames with various shadow play figures as images, and various small souvenirs, etc. There are a large number of them, but most of them are not attractive and lack of innovation. The use of these products is also relatively simple. Compared with the form of shadow play, the participation is not large, and most buyers are tourists passing by, which is difficult to arouse the consumption interest of most people. Therefore, it is necessary to develop high-quality and more abundant cultural and creative products to fill the shortage of Taishan shadow play cultural and creative products, so as to better develop Taishan shadow play.

4.3 Taishan shadow play experience digital

Digital dissemination and experience of intangible cultural heritage is an important index to test the development of intangible cultural heritage digital innovation. Only by integrating into People's Daily life can intangible cultural heritage truly realize living inheritance. In the age of digital survival, non-genetic broadcast and experience scenes represented by new media platforms, cloud festivals, cloud performing arts, and digital cultural travel have become an important part of people's digital cultural life. New media platforms provide rich, diversified and free communication channels for intangible cultural heritage, and domestic mainstream short video platforms such as Douyin and Kuaishou have opened up special areas related to Taishan shadow play. Non-genetic inheritors, institutions and enthusiasts connect with each other through online interaction, and then reach emotional resonance, so that intangible cultural heritage breaks through the original geographical and ethnic restrictions, and inherits and develops in a way of communication and co-creation in the digital scene. At present, digital technologies such as AR/VR and holographic display are widely used in intangible cultural heritage exhibitions, such as intangible cultural heritage VR roaming and intangible cultural heritage immersive digital art exhibition. In the all-media era with the continuous maturity of information and communication technology, cloud performance has become an inevitable trend. Cloud performance breaks through the simple mode of online handling of offline performances, and is committed to creating new performances by using digital technology

Scenes. Therefore, Taishan shadow play can take the way of cloud performance to attract more audiences to watch. Intangible cultural heritage digital tourism often takes specific intangible cultural heritage projects as the content source, sets cultural scenes with software and hardware facilities that people can perceive, and launches relevant digital products and services to create immersive interactive experience scenes. Taishan shadow play can be combined with other related cultural elements of Taishan to set up immersive smart tourism to attract tourists.

5. Taishan shadow play digital inheritance and protection path guarantee

The digital inheritance and protection of Taishan shadow play takes protection, inheritance and innovation practice as the main content, and inheritors, governments, enterprises, academia and the

public as the multiple subjects. The group of inheritors of Taishan shadow play needs to be further expanded, popularize Taishan shadow play and promote and teach the skills. Relevant government departments should introduce a series of policies to protect and support the digital development of Taishan shadow play. The enterprise is to develop more relevant technologies to support the digitalization of Taishan shadow play.

Among them, inheritors play a crucial role in intangible cultural heritage. They are not only inheritors and guardians of intangible cultural heritage, but also innovators and developers of intangible cultural heritage. Traditional shadow play repertoire creation, technical performance, stage design, music inheritance and other elements need professional talents. Taishan shadow play should formulate specific training plans and training plans to train professional talents to meet its own development needs. Therefore, the following mechanisms can be adopted to ensure the development of its talent team: First, government support. In order to change the current situation of the brain drain of shadow play, Taishan Shadow Play can consider including relevant talents into the job list of public institutions under the leadership of the local government, and introduce more young people to engage in the cultural work of Taishan shadow play through regular examinations and merit-based admission programs. The second is college education, taking the school as a platform, including Taishan shadow play as a local course in Tai 'an into the elective courses of colleges and universities, hiring Taishan shadow play professionals to enter the classroom to spread the connotation of shadow play art and culture for college students, and building Taishan shadow play practice base for college students. In addition, we can let Taishan shadow play enter universities, set up Taishan shadow play campus art association, hold innovative design competition with the theme of Taishan shadow play, let more university students participate in the cultural flow of shadow play activities, stimulate their desire to inherit and learn, and meet the talent needs for the inheritance and development of Taishan shadow play through talent training. Strengthen cooperation with Taishan shadow play community, encourage community residents to participate in the inheritance work, organize community activities, exhibitions and performances, improve residents' awareness of and interest in Taishan shadow play, and stimulate the masses' love for traditional culture and protection consciousness. Only when relevant departments make sufficient safeguards, can a suitable path be constructed for the digital inheritance and development of Taishan shadow play.

6. Conclusion and prospect

Taishan shadow play occupies a very important position in Taishan culture and has important value. The connotation of Taishan culture is extensive and profound, which is reflected in the art. Because it comes from the folk, then it is active in the folk, and eventually it will be realized in the folk, with strong local characteristics of Taishan folk, Taishan legends and stories in the form of shadow play to the audience, and get the enthusiasm of the vast audience, is the perfect embodiment of truth, kindness and beauty, the language is real, simple and vivid, so that the audience can easily understand, but also has literary value, is the carrier of Taishan culture. We need to better inherit and protect this intangible cultural heritage, and digital technology is a more popular way and means at present.

In today's digital age, intangible cultural heritage is no longer limited to traditional paper-based communication and word-of-mouth transmission, and rich and vivid video and immersive media provide it with more communication opportunities. At the same time, the digital dissemination of intangible cultural heritage is a diversified and complex system. Under the premise of following the authenticity and vitality of intangible cultural heritage, exploring the digital inheritance and protection of intangible cultural heritage from the three dimensions of communication digitization, form digitization and experience digitization is conducive to carrying forward China's excellent traditional culture, meeting people's increasingly urgent spiritual needs for a better life, promoting social harmonious development, and enhancing China's cultural soft power and cultural self-confidence. Promote cultural exchanges and mutual learning among Chinese civilizations.

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