

Digital Development of the Cultural Resources of the Ancient Villages in Jiangxi Province

Ting Yang

Nanchang Institute of Technology College of Humanities and Arts, Nanchang, Jiangxi, 330029, China

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Abstract: Jiangxi has a lot of ancient villages with large scale, long history, developed culture and profound family name. In these villages, there are a lot of heritage of ancient village falling water culture, including ancient architecture, ancient water conservancy facilities, water landscape, various spiritual and cultural products related to water, water customs, etc., which carry the rich Jiangxi culture. The construction of villages is inseparable from the development of water resources. Therefore, the study of ancient village culture, digital multi-dimensional display and inheritance of Jiangxi ancient village culture itself is another important way to inherit Jiangxi culture.

1. Introduction

On december 12, 2013, general secretary xi jinping delivered an important speech at the central urbanization work conference. He proposed to adhere to the new urbanization concept with people as the core, emphasizing the need to “integrate the city into nature, let the residents see the mountains and see see the water, remember to live in homesickness. “ therefore, the study of the multi-dimensional perspective of ancient villages has attracted the attention of scholars at home and abroad.

Jiangxi, referred to as Jiangxi, has a large number of ancient villages with a large history, a long history, a developed culture and a profound family name. These two villages preserve a surprising number of ancient cultural heritages, including ancient buildings, ancient water conservancy facilities, water landscapes, the products of various spiritual cultures related to water, water customs, etc., carry their rich Jiangxi culture. There are three main types of ancient villages in Jiangxi: the gan school, the hui school, and the hakka tulou. It is a native culture of Jiangxi and has a long history. Village construction is inseparable from the development of water resources. Therefore, studying the ancient village water culture and digital water culture resources is another important way to inherit the ancient village water culture.

2. Main Contents of Water Culture in Ancient Villages in Jiangxi

In 1986, mr. Pang pu, a well-known scholar in china, proposed the three-level theory of cultural structure, which was widely adopted by the academic community. His theory divides the whole culture into the outer layer, the middle layer of the mind and the body, and the core (see picture). Based on this result, we should divide the ancient village water cultural resources into physical water cultural resources and behavioral water culture. Resources, spiritual water cultural resources.

As its name implies, the physical water cultural resources are very intuitive water cultural resources carried by specific materials. It reveals the wisdom and ingenuity of the working people in the ancient villages of Jiangxi, embeds people's thoughts, and produces a splendid culture like the stars in the sky. These cultures are the wealth of civilization and the wealth of social development. It includes water forms of ancient villages, water projects of ancient villages, water tools of ancient villages, water environment of ancient villages, and so on. For example, the ancient and charming Yantai Ancient Village, located at the northern end of Fuliang County, Jingde Town, Jiangxi, is about 80 kilometers away from Fuliang County. The ancient village of Yantai is located in a valley. The valley runs from west to east, the valley is to the east, and the valley is to the west. A stream

passes through the village and is called Yanxi. Yan Xi runs from north to south, flows to the foot of the mountain and then folds to the west.

Ancient villages' water engineering cultural resources embody the knowledge, wisdom and creativity of people in different eras. According to their design purpose or service object, the ancient village's water engineering can be divided into: preventing flood disasters, serving agricultural production, and treating sewage and rainwater. Flood control irrigation and drainage projects; ancient village and ancient bridge wharf projects to improve and create shipping conditions; well water supply projects for domestic water use. For example, in the flood prevention and drainage project of Liukeng Ancient Village in Fuzhou, Jiangxi, the ancient villagers according to the flow of Wujiang water from south to west, tailored to local conditions, artificially dug a Long Lake in the southwest of the village and connected it to the Wujiang River system to make the entire Liukeng Village A place surrounded by mountains and water. What's more worth mentioning is that the various roadways arranged in a horizontal and vertical arrangement in the ancient village of Liukeng are all made of cobblestones "on the ground". One side is dug deep to make it a sewer, and the domestic water and rainwater are naturally collected. Longhu in the southwest of the village flows into the lower reaches of the Wujiang River, and all the drainage and sewage links are naturally smooth. The village houses in Liukeng Ancient Village are all built with drainage systems such as patios and ditches, natural drainage and scientific planning. The main seven vertical lanes in the ancient village are directly facing the Wujiang river bank, and echo the seven pier. The heavy rainy days are not only good for draining the standing water in the roadway, but also more convenient for drawing the wind into the village, forming air convection and maintaining fresh air. Long Lake water and Wujiang water around the village are inexhaustible. Once a fire occurs, a large amount of water can be taken to fight the fire.

The spiritual water cultural resource of ancient villages in Jiangxi is the cultural concept and ideology of water formed by people in ancient villages in water resources activities. It is the most core, softest and most exciting soul structure layer in water culture. The spiritual accumulation formed during water-related activities is the source of water culture. Lao Tzu said, "Water, good for all things without dispute, ... so it is more than Tao." It not only contains dedication, but also reflects selflessness. It is also the core value of the ancient village water spirit. The formation of the ancient villages resembled the mountains and the water. Because of the water, the villages had life, and therefore added vitality and beauty. The villages were full of vitality; the development of the ancient villages relied on water, agricultural irrigation, aquatic resources, and water trade All have promoted the improvement of the economy and social progress of the ancient villages; the living water in the ancient villages has greatly enhanced the clothing, food, shelter, and living security of the villagers in each ancient village. Therefore, the villagers of the ancient villages respect water and love it, and to this day, we better advocate the protection of water and pay attention to the ecological protection of water resources.

Literature and art as a spiritual water cultural resource are also inseparable from the expression of social life. Landscape has become an eternal theme in Jiangxi literature and art creation. Many literary and artistic works related to the ancient villages in Jiangxi show that water is closely related to all aspects of the social life of the ancient villages. For example, in the Jiangxi Literary and Art Garden, poems and words describing the beauty of the ancient villages of Jiangxi, such as the beautiful flowers and flowers blooming in the hundreds of gardens of Jiangxi literature. The role of water in the creation of Jiangxi poetry is mainly reflected in two aspects: one is mainly based on scenes, using different forms of water as the theme of the poetry, focusing on the beautiful gesture of water, and integrating the author's thoughts and emotions into the scenery; One is mainly to write emotions. With the help of water's situation and form, the water rises and expresses the author's exquisite or magnificent emotions and aspirations. It can also be called water poetry.

People's various behaviors, including wading activities, are always carried out in a certain cultural environment. People's various behaviors have created, enriched and developed the water culture. The behavioral water cultural resources of ancient villages are very rich, including the cultural connotation of drinking, water management, and water management in the villagers of

ancient villages.

The water management culture of ancient villages in Jiangxi is a cultural perspective to examine, understand and further explain the objects of water management, including the cultural implication of rivers and buildings. Wang Anshi, a well-known thinker, politician, writer, and reformer in the Northern Song Dynasty. He is a native of Fuzhou, Linchuan (now Fuzhou, Jiangxi), and was called by Lenin “Wang Anshi, a reformer in the 11th century in China. It is a shining example of water governance. Qingli Seven years (1047), Wang Anshi was appointed to Zhixian County, She County, Mingzhou. In He County for three years, he went to the field to investigate, worked hard, waded mountains, and dived in. He carefully understood the agricultural production and the geographical conditions of mountains and rivers in She County, repaired reservoirs, and constructed drainage channels. Going deeper into the village and inspecting the water management situation in Shishi Township has greatly changed the appearance of water conservancy construction in Yi County and made great progress in agricultural production. The so-called “serving as an official and benefiting one side” is the behavioral water culture of Jiangxi people.

The ancient villages in Fuliang County, Jiangxi Province are rich in water resources. The Changjiang River is the mainstream of more than 50 large and small rivers, which not only provide high-quality drinking water and agricultural irrigation water for Fuliang villagers, but also provide high-quality fish breeding in Fuliang. In the vast waters, the management of fishery resources has also become a part of water resources management. In the early days of the founding of the People's Republic of China, there were more than 140 professional fishermen and 40 sideline fishermen in Fuliang County. In 1953, there were more than 500 foreign fishermen, more than the local fishermen in Fuliang County. Controversy was often caused by the competition for river courses. In 1954 and 1956, the Fisheries Bureau of the Jiangxi Provincial Department of Commerce, the Jingdezhen Commercial Bureau, and the Fisheries Division of Shangrao Special Administrative Department co-chaired a fishing workshop discussion and formulated related agreements: Jingdezhen City and Fuliang County fishermen can fish through the river; waves Fishermen in the 4th, 5th and 6th districts of Yang County can fish in Changjiang below Shigu Beach; gourd nets in Leping Zhongdian fishery in Shijiamenguan Shijiamenkou; Leping transfer fishermen (row 51) Scattered fishing from the gate of Zhuang Shijia to the Yaoling River in Fugang. The agreement on water management in this ancient village played a very important role under the conditions at that time, reducing the friction among the township folks and relaxing the tension between fishermen everywhere.

3. Digital Development of Water Cultural Resources in Ancient Villages in Jiangxi

In recent years, the digital collection of various cultural resources at home and abroad has become more and more commonly used. Complete sets of collection equipment and systems, and endless collection methods, and the most common and most commonly used is static planar digital technology. It uses the close-range photogrammetry method to take pictures, scan, and digitally archive the cultural resources in various forms, such as static planes.

Of course, the static plane digital technology can also be applied to the digital collection and development of the ancient village water cultural resources in Jiangxi. For the ancient village water culture, the plaques printed in the halls, halls, landscape poems, ancient books, family tree, calligraphy, painting, paper cutting the collection of non-renewable two-dimensional planar resources such as prints and topography, and formally gave new vitality to the water culture. It is designed and developed as part of the digital museum of the ancient village water culture.

There are many such research and development products in China, such as the static planar cultural resource digital system designed by China Measurement New Map (Beijing) Remote Sensing Technology Co., Ltd. This system uses a standardized grid and precision guide system, and uses a circular continuous spectrum lamp and The polarizers are corrected by software, which effectively reduces the geometric and color distortion rates. In fact, there are many such systems, each with its own merits, we can apply it to the digitization, mapping and mapping, archival, art reproduction, etc. of the works of the Water Culture Museum, Water Culture Art Museum and Water

Culture Library. Extend to scanning reproduction of 3D artwork. The image is stored and verified by the optical disc. Finally, the image is submitted to the warehouse, which can be stored by network equipment or server, and a suitable digital database is established to facilitate resource retrieval and reuse. Therefore, this link is also very important.

It is undeniable that many of the cultural resources of the ancient villages in Jiangxi are non-renewable cultural resources, which are digitally developed through a static flat cultural resource digital system. This way is the inheritance of the water cultural resources of the ancient villages. These water cultural digital resources carry the regional historical symbols and cultural genes.

3D digitization technologies include: 3D information acquisition, 3D modeling, and texture binding. At present, the most suitable equipment is three-dimensional laser scanning, which can quickly obtain three-dimensional geometric data of objects. Using it, it can directly obtain the water landscape, water engineering, water tools, water kiosks, water wells, Fengshui buildings related to water culture, Brick, wood, sculpture and other 3D data information and model reconstruction. At the same time, related buildings, sculptures, utensils, water engineering facilities, etc. of the ancient village water culture can also be combined with structured light acquisition technology to obtain its three-dimensional spatial geometric data. At the same time, the surface of the water cultural physical heritage can be obtained simultaneously. Texture. In addition, the digitization of 3D cultural relics based on 3D scanning technology uses 3D laser scanning technology and structured light as the main data acquisition methods. Based on multi-source spatial information processing technology and texture mapping, it provides true 3D, true size, Real texture digital model, applying 3D laser scanning technology to Fengshui buildings, water pavilions, water wells and sculptures of Jiangxi ancient village water cultural heritage, can not only enrich the database resources of ancient village culture, but also build digital museums of water culture in various places Display and dissemination, and use the form of image, sound, video, text to carry the cultural dissemination through digital media on the Internet and streaming media, or develop into relevant courseware, MOOC or digital courses in the student group Widely spread.

If each character in many intangible cultural heritages such as village customs, customs and folk stories about water culture is regarded as an agent in the virtual scene, then based on the construction and restoration of the historical scene, the Agent model is used to represent the virtual All characters in the environment and key event descriptions based on narrative presentation techniques can achieve the interactivity of the plot of things.

We can take the story of Wu Sanbao Qiuyu in the ancient village of Chengmen, the capital of Xinzheng Township as an example, to realize the realization of the folklore display technology of the ancient village's water culture.

(1) Story content

Most of the people in the ancient village of Fuliang, Jiangxi believe in Confucianism and Buddhism, worship ancestors, and believe in ghosts and gods. They also believe in Fengshui. Fengshui culture is also part of the ancient village's water culture. Praying for rain is a reflection of the worship of water in the ancient villages of that time. During the Daoguang reign of the Qing Dynasty, the ancient village of Chengmen, the capital of Xinzheng Township was dry and rain-free, the fields were cracked, the crops withered, and the flames were hot. Seeing that there would be no harvest, the villagers were very anxious. The patriarch hurriedly convened the parties to discuss countermeasures, and decided to send more than a dozen people including Wu Sanbao from the village to Caocun Longchi to ask for rain to rescue the crops. Before the departure, the villagers practiced for the strong men, and brought them to Longchi to pray for rain. When they were ready to return, they fell into the gongs. Wu Sanbao jumped into Longchi to find the gongs, but met the dragon gods at the bottom of the pond. And promised not to disclose the secrets of Longchi. On the way back to the village after the success of Qiuyu, due to the begging of the villagers who could not bear the rain together, they told the story of the heroic sacrifice after the secret of Longchi.

The model data and action data of the Torque platform and the water culture material library are based on the open source 3D game engine technology. It uses the narrative in the restoration of the

virtual system of the city gates of the ancient city of Xinzheng Town in the Qing Dynasty and the ancient village of Cao Cun and Longchi. Sexual performance technology displays the entire story of Qiuyu, constructing characters and scenes in the story.

First, we developed a role agent model about the folk customs and stories of the ancient village water culture based on the AIPlayer data block according to the needs of the role and the scene, and designed the action modules such as message receiving and sending. The message sending module contains the receiving object and the message content. The receiving module consists of the message content. When it detects the message, it passes the message content to the data attribute table, and then organizes the perception data for planning, loads the action from the action database, synthesizes the action sequence, and executes it. Before Wu Sanbao's rain-seeking team was ready to go on the expedition, they fasted for three days, prayed every day, and set up a dojo on the river beach. The villagers went to the west temple of the village to expose the statues of the emperor Jade Emperor, the Four Dragons and the West Wind to the dojo, and they were very strong. The villagers placed five large porcelain tanks filled with water on the four corners of the dojo and the center, representing the five directions of east, south, west, north, and middle. The Taoist priests invited by the village sat in the field and waved wooden swords. , Pray to God for manna. The Taoist sword dance uses the existing Jiangxi Fuliang ancient village water culture in the action library to find the rain dance sword action data, and binds these action sequences (DSQ format) to the character model to drive the character model. According to the different degree of the sword dance, the sword dance movements are marked. For example, marking the sword dance priest raising his leg is the climax. When the ritual has reached this stage, a message is sent to the villagers who are watching. The news is that the villagers beat the gongs, drums and firecrackers. The conditions for the beginning of the behavior were that the villagers were in a state of sacrifices and incense lamps. After receiving the message, plan the preset behavior, message content, self identity and other data, and update the original data; according to the personality of the character, different behavior intentions are generated, such as Wu Sanbao's introverted applause, which is more liberal. Children raise their hands, etc. The elders in the village, such as the patriarch, nodded their heads; determined the sequence of actions to be performed such as applauding, raising their hands, nodded their heads, etc. The expressions such as applauding, raising their hands, and nodding belong to the body Part of the movement, the sub-behavior corresponds to an action library stored in an action sequence, presented in a dynamic manner. The system then returns to the dancing scene and reproduces the story as preset.

The user can choose according to the prompt information on the interactive interface presented in the form of a menu and actively participate in the story. The specific implementation method is as follows: after detecting the user's interactive input, the system obtains the input information and makes a secondary condition judgment on the information. First determine whether it is the same input twice in a row; second, determine whether the input command information is located in the data table of the executable command at this interaction point. If the result is true, the system responds to this command. For example, if the user selects a resident role to participate in the interactive event of Longchi Qiuyu sacrificial event, the user selects the corresponding role model according to the menu prompts on the interface, which is Wu Sanbao, Taoist, or Longchi Fairy. According to the user's selection, the system loads the corresponding character model data and its attribute information from the model library and attribute library, and displays it in a suitable position in the virtual environment. When the user sends a request to “participate in Longchi for rain”, the action sequence in the action library is mapped to the villager's model. In order to enhance the fidelity of the scene performance, when the character approaches the scene, there will be some obstacles on the walking path, such as houses, characters, ponds, etc. By setting collision nodes for objects and conducting collision tests, the Agent model can autonomously plan paths. The Taoist sword dance ritual ceremony ended and the next event was carried out to light the villagers with statues and sacrifices, a Taoist practice sword dance, and a scene of begging rain by the gongs and drums and firecrackers.

There are many links and scenes throughout the story, such as villagers carrying statues and

offering lanterns, Taoist practices dancing swords, and scenes of gongs and drums, firecrackers crying at the dragon's pond, and gongs falling. The magnificent scene of Longchi Wu Sanbao jumping in Longchi, and the scene where Wu Sanbao went to the bottom of the pond to meet the gods of Longchi. The secret of Longchi was a scene of lightning and thunder, heavy rain and sacrifice. Finally, after the drought was lifted, the villagers in the ancient village paid tribute to Wu Sanbao for rain in honor of his statue and buried him. We can use this story as an example to realize the realization process of the folk story display technology about Wu Sanbao seeking rain.

4. Significance of Digital Development of Water Resources in Ancient Villages

Jiangxi's ancient villages are densely packed with rivers and streams, with developed water systems and rich water cultural resources. Water nurtured villages, and water nurtured the people. In ancient times, villages were promoted from closed to open and from rural society to civilized society. The conditions for tapping the connotation of water culture and accelerating the development and utilization of water culture resources are becoming increasingly mature. How to give play to advantages and speed up the development and utilization of water cultural resources is both a theoretical issue and a practical issue.

In the early stage of the digital development of water resources in the ancient villages of Jiangxi, a breakthrough point should be sought based on the development of its tourism resources. Some of the better-developed ancient villages of tourism resources have very rich design of living water cultural activities. Such tourism projects often have educational functions. Tea culture is part of water culture. 2017 China's first Wuyuan Huangju Tea Culture Festival and the fourth The Xiaoqi Huangju Cultural Festival opened in Wuyuan Jiangwan, Jiangxi. During the cultural festival, the Huangcha Culture Forum, Juju Forum, and Huangju Picking Contest were held to enrich the activities of the Huangju Tea Culture and Industry. Although it is a tourism resource from the project, it is also a community education resource, reflecting the inner spiritual pursuit of local villagers. Likeng Ancient Village in Wuyuan, Jiangxi Province carried out activities with the theme of students' ancient village sketches and ancient village photography festivals. It started with education and the exploration and dissemination of ancient village water culture, and cultivated a win-win relationship model that interacts with tourism resource development.

Education and culture have a natural relationship. Education is the basic means of cultural inheritance. The purpose and result of education is to create people, develop people, create people that are "adults", and develop people that are "achievements." Therefore, educational activities are a kind of Cultural activity is an activity of intellectual capacity in the spiritual field.

The masses are the main body protecting ancient villages. It is necessary to impart knowledge of ancient village culture that is both scientific and easy to understand, so that they can overcome their "contempt" mentality about ancient village culture and cherish the precious wealth left by their ancestors.

Each region should develop a digital school-based curriculum for the ancient village water culture and regional digital courses to suit the local conditions, tell the story of the village, villagers, and village history, so that the ancient village water culture in Jiangxi can be better passed down. The development of curriculum content should follow the principle of equalizing the value of science popularization and the values of emotional attitudes. The curriculum carrier is not limited to e-books, digital periodicals, online education publications, online maps, digital music, etc. The curriculum content is not limited to traditional literature, traditional architecture, Traditional skills. For example, the Jiangxi ancient village water culture electronic school-based course in Jingdezhen area can focus on ceramics skills, tell the history of the Jingdezhen Kiln Factory, the process of making porcelain through animation, micro-film, video, e-books and other forms, and organize students in manual classes Experience simple ceramic making for yourself. In the teaching process of electronic school-based courses, students' professional needs and interests should be taken into account, and various courses should be offered, such as architecture courses (water and Hui architecture, water and Jiang architecture, etc.), and physical education courses (traditional competitions). Dragon boat), technical courses (ceramics, tea art, etc.), humanities and arts courses

(song and dance, literature, etc.).

Standing on different ways to develop the cultural resources of the ancient villages in Jiangxi, people will see different ancient villages' water culture and architecture, study the spatial layout relationship of the village's water architecture, water landscape and feng shui culture, and based on historical facts Digital development reveals the ancient villages' production methods based on mountains and rivers, digital art products on the main line of production relationship change, village social water culture at different historical stages, and a digital multidimensional perspective to demonstrate and inherit the ancient village water culture in Jiangxi.

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