



Dynamic Protection Framework of Built Heritage under the Orientation of Style continued and Culture inherited

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Abstract. The continuation of the village's style and the inheritance of the village's culture are important guides for the current village's revitalization efforts in China, which can actively promote the cultural revitalization and prosperity of villages. This paper takes traditional villages and traditional buildings in Ji'an city as the research object, selects Zhentou Village and Meibei Village to compare their features and cultural protection status as the research content, and makes an empirical study on their dynamic protection status from four aspects: comparison of traditional village's layout style with the corresponding construction culture, comparison of traditional village's elements style with the corresponding narrate culture, comparison of traditional building's morphology style with the corresponding craft culture, and comparison of traditional building's detail style with the corresponding decoration culture. The results show that on one hand, the layout style continued, element style continued, construction culture inherited, and narrate culture inherited are all focused on the macro level, on the other hand, the morphology style continued, detail style continued, craft culture inherited, and decoration culture inherited are all focused on the micro level, they constitute the dynamic protection framework of built heritage together.

Keywords: Dynamic protection; Traditional village; Style; Culture; Spatial syntax

1 Introduction

Traditional villages are non-renewable built heritage, carrying the essence of traditional Chinese culture. Still, the heritage passes with time, so it needs to be protected efficiently. How to protect and preserve the built heritage of traditional villages has been a topic of discussion in the academic community, which covers many specific questions, such as what dimensions should be included in the protection of traditional villages, what is the correlation between the various dimensions, whether this correlation should be emphasized in the protection, what is the impact of the different methods of protection on the effectiveness of the protection of the built heritage, and what are the fundamentals of the protection, and so on. This paper sets out to answer these questions, focusing on the interpretation and study of traditional villages & buildings in terms of

protection framework of built heritage, for the promotion of village revitalization and sustainable development of the villages.

2 Methodology and Objective

2.1 Selection of Samples to Compare

Located in Jiangxi Province, China, Ji'an City has a deep historical and cultural heritage and has a large number of villages that have been selected for the Chinese Traditional Village Catalogue^[1]. Meibei Village is located in the suburb of Qingyuan District of Ji'an City, while Zhentou Village is located in the central area of Ji'an County under the jurisdiction of Ji'an City. Both of them have preserved rich heritage resources and carried out relevant protection & development works. By comparing and analyzing the similarities and differences in protection behind their differences, we can gain insight from the small and sum up how to better dynamically protect the built heritage of traditional villages under the orientation of style continued and culture inherited, and then conclude a relatively perfect dynamic protection framework.

2.2 Research Methods

a) Field investigation method: Take Meibei Village and Zhentou Village as the investigation objects, make a comprehensive investigation of the two traditional villages many times in a planned way, and conduct an on-site investigation on the protection and inheritance of traditional villages in terms of layout style, element style, morphological style, detail style, construction culture, narrate culture, craft culture and decoration culture, etc. These means that can be adopted include taking photos, videos, observing, and mapping.

b) Spatial syntax: Spatial syntax is a theory and method to explore the relationship between spatial organization and human society through a quantitative description of human settlements, including buildings, settlements, cities, and even landscapes. This method can be used to visually and quantitatively analyze the spatial form of traditional villages, express and identify people's real feelings of space, and predict people's psychological cognition of space.^[2] Generally, a spatial structure is summarized by the longest and least axes, and the degree of axis integration refers to the degree of connection between axes, which is used to identify the accessibility^[3] of each space, and the analysis of axis integration is generated by combining Depthmap software.

3 Results

3.1 Comparison of Traditional Villages' Layout Style and the Corresponding Construction Culture

From the Analysis Diagram of Spatial Syntactic Axis Integration Degree^[4] of Zhentou Village, we can see that the axis color of the east entrance square is the warmest red,

which means that its spatial accessibility is the highest, that is to say, the density of people here is the most likely and convenient. The entrance square of Meibei Village is at the southernmost tip, and its axis integration color is orange-red, which indicates its high accessibility. (Fig. 1, Fig. 2)



Fig. 1. The Analysis Diagram of Spatial Syntactic Axis Integration Degree of Zhentou Village

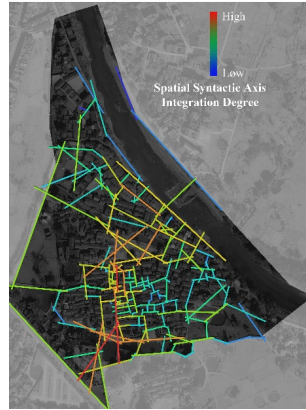


Fig. 2. The Analysis Diagram of Spatial Syntactic Axis Integration Degree of Meibei Village



Fig. 3. Zhentou Village's road network hierarchy diagram



Fig. 4. Meibei Village's road network hierarchy diagram

The principle of spatial syntactic axis integration can be used to verify and form the hierarchical relationship of the village road network, that is, objectively speaking, which road sections will be the main road space and which are the branch road space. From the road network hierarchy diagram of Zhentou Village, it can be seen that the

village takes the east entrance square as the core, forming two trunk roads to frame the whole village. One trunk road divides the village to the north, the other trunk road divides the village from the high-rise building environment of the city hotel newly built in the later period, and the rest roads are secondary branches, which are unevenly distributed throughout the village space. From the Meibei Village road network hierarchy diagram, it can be seen that the urban main roads around the village are irregular and a new branch road is built leading to the village in the north. After investigation, it is found that this branch road is a newly-built area where the aborigines moved out, forming a pattern of juxtaposition of the old and the new, which is also a good way of protection. (Fig. 3, Fig. 4)

Taking Zhentou Village as an example, there are a large number of ancestral halls in the village, which are located in the core protection area of the village. Their distribution characteristics are that the outer edge of the ring area is scattered centrifugally, while the houses are concentrated in the ancestral hall circle. Combined with the Analysis Diagram of Spatial Syntactic Axis Integration Degree of Zhentou Village and the Road Network Hierarchy Diagram, it can be seen that most ancestral halls are located on the side of the main road, which is a way to strengthen the position of ancestral halls, leaving the most obvious and convenient spatial position for ancestral halls, while the dwelling buildings are crowded and inconvenient, which belongs to a common village construction culture in Ji' an. For Meibei Village, there are both clan culture, water-transportation-business culture, and classic academy culture. The village is located on the Fushui River, and the business culture determines the formation of the old street layout along the river in the north. Wenchang Pavilion and Wanshou Palace are both commercial buildings, serving as commercial facilities; The clan culture^[5] affects the distribution of the residential community in the south of the village, and the ancestral hall is basically at the outer edge of the residential community in the south, with the best lighting, visibility and accessibility, which is same as the principle of building the ancestral hall in Zhentou Village.

3.2 Comparison of Traditional Villages' Element Style and the Corresponding Narrate Culture

The spatial environment of traditional villages includes the artificial environment and natural environment^[6], and its element style also consists of these two aspects. The elements of Zhentou Village include five ancient lanes, ancient wells, ponds, ancient trees, etc. Meibei Village is in a similar situation, but unlike Zhentou Village, its ancient lanes are coherent, long, and herringbone-shaped.

For Meibei village, on the main road between the entrance square and the folk square, several small square nodes have been combed to show the traditional farming culture, and even the whole house on one side has been used as a farming culture exhibition hall so that this road has a strong theme expression, that is, it describes the farming culture. Zhentou Village is very prominent and distinctive in clan culture, with a large number of ancestral halls. Regrettably, however, on the one hand, these ancestral halls are closed all year round in most cases, and on the other hand, there is a lack of creative design of some related landscape facilities conducive to the expression of clan

culture for the outdoor street space in Zhentou Village. As a result, the narrative ability of clan culture in villages is greatly reduced.

Although the two villages have a certain narrative presentation in ancient wells and ancient trees, such as the "Immortal boots" ancient wells in Zhentou village and the "Lianli camphor" in Meibei village, there is a historical story behind the name, which can be interesting, but it is still not enough and has not been strengthened by design. On the whole, the protection and development of narrate culture in Zhentou Village is not satisfactory, and its objective status quo has not played a role in promoting cultural tourism for the Village. However, Meibei Village has done a good job in narrate culture, which has effectively promoted the development of its cultural tourism and brought benefits.

3.3 Comparison of Traditional Buildings' Morphology Style and the Corresponding Craft Culture

Dynamic protection not only protects and utilizes the traditional village's style and culture at the macro level, but also attaches importance to the protection and utilization of the traditional building's style and culture at the micro level.

The typical morphology style of the ancestral hall's plane in Meibei Village is not fundamentally different from that in Zhentou Village. It is still dominated by three rooms, but the number of rooms on both sides is often more, in addition, the number and size of the patios in ancestral halls are more and larger. In terms of the section, the number of gable walls in Meibei Village reflects more, with exposed and unexposed structures, and the overall preservation state is better. Compared with Zhentou village, the typical morphology style of the dwelling's plane in Meibei village is not limited to the regular square of three rooms, with the boundary full of changes. However, the typical morphology style that there are three rooms, a hall in the front and a back hall in the back has not changed. In terms of the section, it is similar to that of Zhentou village, but some caisson ceilings at the entrance will break through into the form of patio lighting.

Although there are subtle differences in the morphology style of the same architecture type between the two villages, it is more related to the village scale, investment, folk customs, and many other factors. However, the traditional architectural craft culture in the same region is often in the same strain, which determines that the morphology styles of traditional buildings in each village are structurally similar. After investigation, at least two architectural craft cultures should be emphasized, namely, the big-wood craft (大木工艺) with a frame of inserted beams and the roof-water craft (屋水工艺). The frame of inserted beams is different from the frame of lifting beams or piercing buckets, which can be understood as a mixture of the two. It is a more reasonable use of wood in structural mechanics, and there is no waste of materials. One of the key features is that roof rafters are placed on purlins, while purlins are added to columns, which include landing or non-landing columns, and columns are connected with beams. Roof-water craft refers to the process or result of roof slope lofting and positioning, and the roof-water in different districts of China is different. The slope of the roof represented by the roof-water is the ratio of the vertical height difference between the two

purlins to the horizontal spacing, and the range of this ratio is between 0.35 and 0.55 locally.

3.4 Comparison of Traditional Buildings' Detail Style and the Corresponding Decoration Culture

If the morphology is the skeleton of traditional buildings, then the details are the branches and leaves of traditional buildings, which are often the most direct objects for us to observe traditional buildings, and also the places where craftsmen are ingenious.

For the traditional dwelling buildings in Ji'an, the details include the lighting hole named TianMen^[7], the caisson ceiling, the window, and the wall named BaoBi, etc. TianMen has the practical effect of lighting, meanwhile, the couplets and brick carvings on the inner side of Tianmen are also a kind of interior decoration; The caisson ceiling is also so decorative; The wood grain carving of the window is a concentrated expression of the traditional craftsman's skill level, including auspicious patterns, flower and bird patterns, etc., which are excellent decorations; BaoBi is a wooden partition wall between the front hall and the back hall in a dwelling building. On its surface, there are tablets of deities, couplets for blessing and so on, which have gone beyond the role of pure decoration but have reached the role of expressing faith.

The details of the traditional ancestral hall in Ji'an include the gate, caisson ceiling, column, column foundation, tou-kung(斗拱), window and wall, etc. There are two types of gates of the traditional ancestral halls in Zhentou Village and Meibei Village, One is the form of adding a front porch to the Pailou (牌楼), and the other is the form of setting a concave swallow mouth without a Pailou, but all of them have plaques to indicate the name of the ancestral hall. Most of the caisson ceilings are indoors, and some are on the front porch of the entrance, with hexagonal and octagonal styles. The top plate of the caisson ceiling was often painted, but it has fallen seriously and has been covered by man-made destruction. There are wooden columns and stone pillars, with circular, square and polygonal cross sections. The column foundation was made of stone, with polygonal and circular forms. Different patterns were often carved on all sides of the column foundation, but many of them have been weathered and eaten away. There are many carving styles of windows, all of which symbolize beautiful meaning.

Compared with the details of different types of buildings in Zhentou Village and Meibei Village, we can see that the preservation status of both traditional buildings is not good. Both villages have adopted the strategy of closing and not opening dwellings on a large scale, which can certainly maintain the basic state of traditional dwellings, but it can't avoid many problems caused by the building not being used. These include roof leakage and collapse without maintenance, outsiders stealing window carving, caisson ceiling rotting and falling, etc., which is not conducive to people's in-depth contact and deepening their understanding and experience of traditional buildings.

4 Discussion and Conclusion

4.1 Mechanism of the Dynamic Protection Framework at the Macro Level

The traditional villages' layout style continued, element style continued, construction culture inherited, and narrate culture inherited are all focused on the macro level. Whether the village boundary, entrance square, and road level as the embodiment of the continuation of the layout style continued, or the distribution principle of ancestral halls, dwelling buildings, and shops as the embodiment of the construction culture inherited, the two are closely linked and cannot be separated in the process of dynamic protection of traditional villages.

In terms of the traditional village's element style continued and the corresponding narrate culture inherited, it will not have a strong attraction without in-depth excavation of the cultural elements and creative expression design of the village. Under the condition of understanding that narrate culture can support the element style, the culture like red culture and farming culture of traditional villages can be skillfully distributed and expressed. Based on the construction culture inherited, the traditional village's minutiae can be appropriately updated, however, its structural system which affects the layout style will not change. The village's elements style can be considered as its minutiae, and they should be expressed with appropriate themes, that is, based on the inheritance of their narrate culture, so that the two can be presented organically, and such minutiae are more vital.

4.2 Mechanism of the Dynamic Protection Framework at the Micro Level

The traditional architecture's morphology style continued, detail style continued, craft culture inherited, and decoration culture inherited are all focused on the micro level. Whether the style continuation of the traditional buildings' plane shapes and section shapes such as ancestral halls, dwelling buildings and shops, or the culture inheritance of the traditional buildings' big-wood craft, and roof-water craft, the two are closely related, and the latter is the supporting condition of the former.

In terms of the traditional architecture's detail style continued and the corresponding decoration culture inherited, TianMen, caisson ceiling, BaoBi, window and other aspects of the dwelling buildings, and the gate, caisson ceiling, column, column foundation, window and tou-kung of the ancestral halls all need to be effectively protected. If we want to keep the morphology style of traditional architecture unchanged, including the plane form and section form, then it is necessary to be based on the culture inheritance of big-wood craft and roof-water craft, and to understand how traditional architecture is built from scratch, from foundation to roof. Based on the fundamental framework, the creation of the traditional architecture's detail style is to add bricks and tiles, to carve beams, and to paint buildings, etc., so that the whole architecture is lively and vivid. Its decorative connotation is an internal driving factor that cannot be ignored. It is a yearning and expression for generations to regard the built environment as a

beautiful human settlement that should not be erased. Under the condition of organic integration into decoration culture, the detail style is vividly reflected.

Project Source

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