

Study on the Strategy of Villages Reconstruction Based on Regional Features

Taking Wanxiu Village of Liangzi Lake District in Ezhou as an Example

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Abstract—Through the participation in field project, the information collation of present situation of living environment and regional characteristics in the countryside, as well as the analysis of local architecture and courtyard function of southern Hubei and its application advantages, this paper elaborates the architecture combining basics and modernity based on the rational aesthetic appearance and the multi-functional innovative reconstruction of courtyard environment, proposes to integrate the regional characteristics in the reconstruction of villages, indicates the necessity of integrating the regional characteristics, natural environment and cultural and historical environment in the reconstruction of villages, and explores the reconstruction method of village buildings and landscape based on the region and find the problems of continuity of geographical features that are easily overlooked in the process of village reconstruction. It is also found that combination of theory and practice make the village better adapt to the needs of contemporary lifestyles.

Keywords—*village reconstruction; regionality; building in Southern Hubei; landscape transformation*

I. INTRODUCTION

Nowadays, with the accelerating pace of urbanization and the rising call for ecology, people also begin to re-examine their own living environment. Compared with urban houses and their living environment, the common residence and surrounding environment of traditional villages are far behind people's demand, which requires the reconstruction of the village, and China also advocates "building a new socialist new countryside." According to the current situation of village construction, there are many problems that cannot be ignored, especially the homogeneity of villages. They often neglect the characteristics of historical traditions and cultural regions, so the local features gradually disappear in the process of reconstruction. The survey uses the methods and elements of design to integrate the regional features into

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the reconstruction of the villages based on the understanding of the characteristics of local housing materials, the functions of local buildings, the needs and adaptability of people to buildings and courtyards, reconstruct the reasonable, beautiful and practical innovative residential buildings that conform to village atmosphere with simple shape, so that the building and the courtyard can achieve unification in the multi-function and aesthetic requirements.

II. STUDY ON THE RECONSTRUCTION OF THE VILLAGE UNDER THE BACKGROUND OF REGIONAL CHARACTERISTICS

A. *The Continuation of Regional Characteristics*

Even in the same area, the appearance of different neighborhoods will be different, with their own characteristics and flavors. Abandoning its own characteristics to imitate others and going with the stream is only blind imitation with ludicrous effect. What need us to consider is how to create the regional flavor consistent with the village and the architecture and environment that is loved by villagers by using of some geographical elements in the transformation and drawing on local characteristics and essence. In the architectural design, each area has its own characteristics and styles. We can go deeply to the village to understand the geography, history and culture, local customs and religious beliefs and get inspiration from it. The design strategy needs to be studied on the problem of enhancing the regional atmosphere in the reconstruction of architecture and environment.

B. *Village Reconstruction and Upgrading*

With the development of the country and society and the improvement of living standard, in addition to meeting the basic needs of people's daily life, higher requirements on the aesthetic appearance and the improvement of the surrounding environment of the building are also put forward. In order to meet the needs of villagers, it is necessary to carry out village reconstruction. However, based on the most basic reconstruction, we need to know the characteristics, history and culture, local customs and classic

life cases of the villages and add them concretely and symbolically to the design to strengthen the characteristics of villages and enhance the connotation of the village.

C. General Situation of Wanxiu Village in Ezhou

In Wanxiu Village of Tujianao Town in Liangzi Lake District, humanity and culture gather here and the environment is beautiful, which is the provincial eco-village as well as the provincial livable village as in "Fig. 1". Wanxiu Wetland is located in Wanxiu Village of Tujianao Town with a total area of about 3000 mu. It is a natural wetland of Liangzi Lake with beautiful scenery of the lake, water intertwined, and the egrets, birds and frog living with vigor. In order to effectively protect the typical wetland ecosystems and wildlife, Provincial Forestry Department established Liangzi Lake Wetland Protection Station in Wanxiu Village in 2010, striving to create an ecological, environmental protection and sustainable natural environment that takes multi-functional ecology as the main line and provides the functions of vacations and wetland ecological science protection, exhibition development, and tourism distribution center. Under these superior natural conditions, the performance of regional characteristics of the village is poor. The author hopes to think about using some design strategies to strengthen the regional characteristics through the village reconstruction.



Fig. 1. Status map of Wanxiu village area (within the blue line).

III. EMBODIMENT OF RESPECT FOR REGIONAL CULTURAL CHARACTERISTICS IN THE DESIGN THINKING

In the reconstruction of villages, we must first stick to the humanized design principles of respecting the regional characteristics, protecting the traditional culture and respecting the production and living of local residents. We should make full use of the geographical elements, give play to its geographical advantages and protect and enrich the local cultural life to integrate local characteristics into the daily life of local villagers. Necessary architectural reconstruction should be unified with the local cultural features and harmonized with the surrounding environment by adding polish based on the original basis, without deviating from the original flavors and destroying distinctive local destruction.

A. Integration of Geographical Elements and Culture

In Wanxiu Village, there are five kinds of Wanxiu culture that can reflect the style of the village found after investigation. The first is bamboo culture. Bamboo was a very common geographical element at that time and the landscape sketch design made by bamboo can be used to reflect the local characteristics of the village. The second is fish farming culture. Villagers cast nets to catch fish, so the reconstruction of water landscape is extremely important. By utilizing the mode of combining manpower and ecology, some blocks are artificially transformed to cleanup wetlands, the height difference is used to increase the amount of oxygen exposure, the self-purification function of the ecosystem is combined to achieve the minimum ecological intervention and the maximum water quality improvement and rich lotus resources are added to assist the design of water; third is the ecological culture. The local wetlands ecological and natural scenery is magnificent, which can be retained and strengthened. There are many native maple resources and many species of birds, and the combination of the two can introduce the birds visit and cultural popular science. Last is the architectural culture of southern Hubei. The mellow and simple architectural style is precipitated with time. The building is an important component that reflects the regional characteristics of village. We can add supplementary reconstruction of courtyard landscape to realize the blend of regional elements and culture.

Therefore, the design concepts of reconstruction can be introduced based on these regional cultural elements: "Rhyme of water, house of bird, brocade of bamboo, language of maple, and the dream of lotus."

B. Design and Application of Regional Elements in the Construction and Landscape Reconstruction

1) Reflection of regional characteristics in the building: Building is not only the basic residence for people's daily life and living, but also represents the human civilization and progress. As the communication becomes more and more frequent over various places, the architectural design also mixes with all kinds of cultures, and the influence of geographical elements on the architectural design features is getting weaker and weaker. In order to continue the architectural features of various regions, the design or renovation should be based on the regionality and realize the importance of the regional traditional characteristics.

Different regions have distinctive regional characteristics and different natural environment and climate, religious beliefs, customs and culture, and native plants will affect the style and development direction of the building. In the construction design showing regional characteristics by integrating regional elements in architecture, it is not only necessary to understand and analyze the characteristics of geographical elements and analyze the differences and relations between it and buildings, but also have the detail design in various aspects such as Ping Li and integrate the regional elements into the right place, to give full play to the effectiveness of geographical elements.

Therefore, the reconstruction of architectural style should be consistent with the regional characteristics of the village, and can be integrated with the natural environment, so reconstruction of Wanxiu Village should fully reflect the Hubei style and Jing Chu characteristics; residential style should be simple and generous, with rich building facades. Geographical features can be added in the necessary components such as balconies, windowsills, and awnings, which can add luster like decoration; we need to strengthen the continuity of the local traditional folk culture, and make the use of local traditional elements conform to the natural environment; residential building color should be unanimously in the whole and unified in part, and echo with the main characteristics of the local architecture and historical architecture.

2) Reflection of regional characteristics in landscape:

The overall landscape plan of Wanxiu Village highlights the theme of "beauty". Bamboo plants, crops and herbaceous flowers are used in the vegetation planning and the use of regular pruning plants should be eradicated to create unique bamboo culture landscapes and local features. The existing vegetation should be well used and protected. The maple forest in pieces, lotus pond, and the existing old trees are representative of the era characteristics of the village, which plays a significant role in shaping the distinctive village landscape; according to the overall different functional areas of Wanxiu village, plant landscape should show a scene of a district, reflecting the seasons change and the scene combining the color and flavor of flower and fruits.

Almost every household in the village has a courtyard, and the landscape of courtyard is also an important reconstruction object. In order to let people living in indoor environment for a long time get closer to nature, the sense of space in the courtyard is very important. We can build walls with local stone, brick, and tiles and so on to divide space; planting of plants should be based mainly on local tree species according to local conditions, to create a village atmosphere with regional characteristics.

**IV. DESIGN METHOD OF VILLAGE RECONSTRUCTION
BASED ON THE REGIONAL CULTURE**

A. Village Style Mapping the Regional Characteristics

Focusing on the overall planning and design and retaining the original texture of the village, the overall planning and construction model makes the planning and construction standards and provides classified guidance in accordance with the different regions and different economic development; we can take reconstruction as the main and new construction as supplementary and make full use of existing conditions to improve public service facilities. Besides, we need to protect basic farmland planning and make reasonable and comprehensive layout on the residential buildings, public buildings, road and squares, and public green spaces.

1) The Continuation of the village texture: Divisional design of village planning is based on the continuation of

the village texture. The roads are like veins, and zones are like cells in the vein. The village has its own reasons and charm up to now, so we should not make too much change.

The entrance area can be designed into the attached to the landscape area integrating people and water as shown in "Fig. 2" based on the advantages of natural reservoirs and people's water loving nature. There are many scenic spots such as the tranquil lotus pond, bamboo gallery at the entrance, and the leisurely ancient well, creating a peaceful and laid-back rural atmosphere for people to get close to nature and feel the nature as shown in "Fig. 3".

In the maple forest recreation area and agritainment folklore district, the design of the original maple forest in the village is full of humanization when maintaining the forests. There are paths in the woods, tree houses in forest and bird-watching houses. In the autumn, walking in the crimson maple trees is romantic and poetic. The combination of human culture and garden culture achieves the integration of ecology and humanities, and that of culture and landscape.

In the central landscape area and ecological demonstration area, in the hard landscape, soft landscapes are supplemented as a skeleton. We can construct or reconstruct a public building, such as stage, so that the village crowd can gather here to create a center landscape that can bring vitality to the village as in "Fig. 4".



Fig. 2. Entrance area.



Fig. 3. Maple pathway.



Fig. 4. Stage in the village.

2) *Creation of courtyard landscape atmosphere — Wanxiu no. 1 courtyard and blueberry base:* The courtyard



Fig. 5. Wanxiu No. 1 courtyard.

3) *The establishment of landmark - bamboo gallery design and tree house:* Although the building occupies an important position in the reconstruction of the village, there should be another category that impresses people, namely the structures. Some structures, such as the stage, porch, and tree house can also play a role of turning place and attracting people's attention. These landmarks can become the symbol of the village to show the style and features of characteristic village and enhance the appeal. Wanxiu Village, for example, uses some local materials to make structures as well as the symbol of the village, which represents the little style of the village.

At the entrance, Bamboo Gallery is designed with local bamboo materials. The structures are well-structured with beautiful and graceful shape, which can attract people to stop to enjoy as in "Fig. 6". In addition, the tree-houses in the maple forest recreation area are also built with local wood, and the spiraling shape also symbolizes the renewal and development of the village as in "Fig. 7". Although these are just some simple structures, they can reflect the connotation of the village and become the symbol of the village with the unique regional style of the village.

is divided into a lot of small spaces and the natural sorghum corn fields and the vegetable fields are separated by bamboo fences. There are swing, outdoor rocking chairs, landscape walls, flower racks, dining tables, teahouse and flower shrubs in the garden. There are activity space, rest space, communication space, and food and work space in the courtyard, which is very comfortable and leisurely as shown in "Fig. 5".

In courtyard, courtyard design has not been used much in reconstruction of blueberry base. Its purpose is to provide a spacious semi-enclosed space for tourist to enjoy the scenery. The overall semi-enclosed space formed by quartzite paving and wooden fences plays a very good transition role between the building and the external environment.



Fig. 6. Bamboo gallery design.



Fig. 7. Tree house in the forest.

B. Architectural Style Continuing the Basal Culture

1) *The continuation of architectural interface — Wanxiu No. 1 courtyard:* Wanxiu No. 1 courtyard mainly makes the reconstruction of the building and the dispose of courtyard. The building mainly unifies the dominant tone of the simplest green brick wall and plaster-based white color, and adds natural and environmentally friendly materials such as wood grille and bamboo grille on surface of the building, which is rich in the amount and easy to find. It can not only reduce the cost and increase the fun of the wall, but also enhance the overall atmosphere of the village through the introduction of native elements as shown in "Fig. 8" and "Fig. 9".



Fig. 8. Facade reconstruction of buildings in Wanxiu No. 1 courtyard.



Fig. 9. Building reconstruction of Wanxiu No. 1 courtyard.

2) *Continuation of architectural charm — Kewubao No. 1 courtyard and blueberry base:* Ke Wubao No. 1 courtyard reconstruction mainly orients to providing tourists catering and accommodation to meet the catering needs of tourists. The courtyard takes building as the main object of reconstruction and overall adopts local architectural style, maintaining the original black brick wall, with rubble paving the outer eave, wooden windows and the overall design of the loess wall to construct the earthy vision feelings and mental feelings as in "Fig. 10".

Wanxiu village abounds in blueberries, and blueberry festival is held every year. Therefore, every year at this time there will be a lot of tourists come here out of admiration. In order to better promote the development of the local tourism industry, the reconstruction of blueberry base here is particularly important. The blueberry base is located in the blueberry planting area of Wanxiu Village and is set at the highest point of the blueberry area. The base provides visitors with functions of recreation, communication and catering. The reconstruction maintains its original structure as much as possible and is covered with stone and enclosed with wooden fence. The whole building presents unified white tone that serves as a reminder and sign as shown in "Fig. 11".



Fig. 10. Building construction of Kewubao No. 1 courtyard.



Fig. 11. Construction of blueberry base.

C. The Landscape Environment that Improves the Quality of the Village

1) *Fusion of cultural landscape:* In the reconstruction of villages, the preservation and participation of cultural landscapes can demonstrate the historical and cultural background of regional development and increase the vitality and interest for the space. It is also be practical and educational and easy to get into contact with people's

activities. The creative material of cultural landscape can come from local historical stories and customs, including historical relics, landscape pieces, and sculptures and so on. In the exchange with the traditional preserved space, a variety of pleasant activity space with regional characteristics can be created. The cultural landscape is like sketches of Wanxiu village are close to the theme of ecology and harmony, so we can retain or create some cultural landscape with historical and cultural brand and memories of life to make the entire village rich in visual culture. For example, the ancient well in the entrance of Wanxiu Village seems to be a representative of the times which tells about the development and changes of the villages in the faint. It becomes less and less in the modern life. So preserving it in the reconstruction design allow people to feel the village atmosphere different from the modern city as they enter the village and make it becomes a small sign of the village to continue the history of the village as shown in "Fig. 12".



Fig. 12. Ancient well at the entrance of village.

2) *Fusion of the natural environment*: Compared with urban areas, the natural scenery of the villages is superior and cannot be duplicated, which provides a good characteristic environment for the creation of village space. We can take these advantages to organically integrate the mountain, water, villages, and people through less artificial reconstruction to build an ecological atmosphere of harmonious coexistence and create very attractive village attractions.

3) *To integrate the village atmosphere*: The characteristic regional environment with historical and cultural characteristics and functional updates need to be integrated into the entire village environment, and the characteristic area cannot be separated from the general layout of the village. Various spaces can be connected with unobstructed road system to form a complete system; in the match of style, the treatment methods cannot be very different, the materials cannot be patchwork, and the color difference is too big. The features and colors of the overall regional style of the village should be unified. When the different regions bring tourists different feelings, it can

make villagers and foreign tourists get immersed into the overall unique atmosphere of the village.

The style of various reconstruction regions, buildings and affiliated landscapes and structures must match the overall atmosphere of the village.

V. CONCLUSION

Through the investigation and study of the native architecture and its courtyard landscape in southern Hubei, apart from the understanding of the characteristics of the materials and the functions, the author also have a certain degree of acknowledge of the demand and adaptability of home architecture and courtyard landscapes. Villagers have the desire to transform the living environment, so we can responds positively to the national policies and the reconstruction of villages and supports and implements them. For people living in the village, the regionality of the buildings and courtyards landscape is representative of their image. Reconstructing a reasonable, beautiful, practical and regional architecture, together with the local characteristic atmosphere and rich plant to build a courtyard that can bring people comfort can make it popular characteristic residence.

Featured dwellings and rural environment are the sign of regional culture, as well as the external performance of cultural connotation. If we blindly pursue the commercial interests and ignore the protection and continuity of regional characteristics with historical features, the village out of reconstruction will also be the same and overall style and harmonious ecological living environment of the villages will be destroyed. Nowadays, people's aesthetic requirements for the building and their living environment are getting higher and higher, and the following village reconstruction design also needs to constantly develop and innovate. However, it can be seen that we should pay attention to the preservation and application of regional characteristic culture in the reconstruction of villages, and find and improve the methods of reconstruction so as to inherit the local culture with intact local characteristics and meet the needs of modern life, reproduce and extend the contemporaneity of village style, show the spirit of traditional culture in the village and promote better development of the village.

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