

Inheritance and Innovation of Residential Architecture in Western Sichuan from the Perspective of Regional Aesthetics

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Abstract: Western Sichuan residential architecture is a bright pearl in the history of China's architectural civilization. It fully embodies the essence of the culture and concept of the harmony between man and nature and the environment in inheriting and carrying forward the Confucian and Taoist cultural traditions of the Chinese nation. This paper studies the development process and characteristics of residential buildings in western Sichuan, and analyzes the typical elements and symbols of residential buildings in western Sichuan. Based on the inheritance and innovation of western Sichuan residential architecture from the perspective of regional aesthetics, this paper studies and analyzes the inheritance and innovation of western Sichuan residential architecture culture and concept, so as to provide reference for further research and development in this field.

Keywords: Western Sichuan folk houses; Development course; Traditional elements; Inheritance and innovation

1. Introduction

The traditional residential buildings in western Sichuan, which carry the harmonious coexistence of people and nature, are full of living customs and ways formed by regional environment, climate and humanity. The development course of folk dwellings and the development history of human life civilization go in the same direction and confirm each other. In the vast territory of China, Shu culture is one of the representative regional life cultures. Once the Tianfu culture, mainly refers to the current Chengdu as the center, including western Sichuan, northern Yunnan and southern Shaanxi. Here, we take modern history as the research dimension to investigate the historical process of western Sichuan residential architecture and the inheritance and innovative development of traditional culture and ideas in the contemporary era.

2. Research on the Development Process and Characteristics of Residential Architecture in Western Sichuan

2.1. Go back to the Qin dynasty

According to textual research, the Shu civilization originated in the upper reaches of the Yangtze river. At the same time, with the integration of the culture of Shu and the culture of different regions along the river basin, it promotes the continuous development of the civilization of Shu. Based on the mutual verification between archaeology and literature and history, we find that the roofs

of Chinese hieroglyphs are shaped like characters. In the 1990s, archeology discovered the wooden structure of Chengdu twelve bridge, whose shape (see Figure 1) exactly verified the roof of this herring-shaped structure.

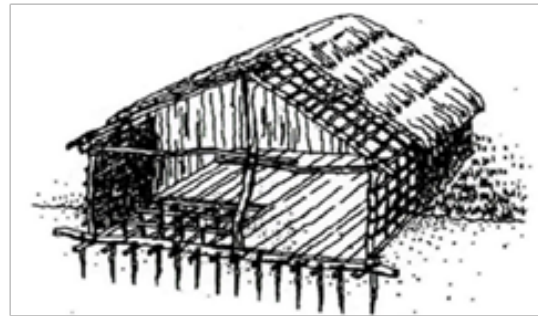


Figure 1. Architectural modeling of residential buildings in dry railing of Chengdu 12th bridge

It can also be seen from the architectural modeling diagram of residential buildings in western Sichuan that the residential buildings are built on uneven ground, and the house relies on a row of wooden columns to solve the troubles caused by uneven terrain. This kind builds according to the place, the construction way that takes advantage of the opportunity and for, it is the originality that later stilted building of west Sichuan and rudiment are in. This architectural mode is not only a turning point in the coexistence and development of the so-called human cave dwelling mode and the dry railing method in history, but also includes the wisdom of the people in

western Sichuan who used the dry railing construction method to overcome the relatively humid natural living environment in western Sichuan and create a more comfortable living condition.

2.2. Go back to the Han dynasty

During this period, the Shu civilization showed a prosperous historical development stage. That is, according to the historical records of the Qin people into the Shu historical period. With the entry of the Qin people into Shu, the mutual integration of the Qin and Shu civilizations was greatly promoted, and the Shaanxi and Gansu civilization played a great role in promoting the development of the Shu civilization, namely the western Sichuan culture. For this reason, in the Han dynasty, western Sichuan residential buildings gradually constructed the front hall and back bedroom pattern (see figure 2).



Figure 2. Residential building distribution in western Sichuan

From the layout of residential buildings in western Sichuan, we can see the design intention of functional distribution. The vestibular courtyard is separated from the backyard courtyard by pillars, and the backyard hall is located on the pedestal, highlighting the ventilation effect. At the same time, in the building structure, the main structure of the wall pillar wood, began to use tiles as an important building material of the roof.

2.3. Back to the Tang and Song dynasties

Since the Qin and Han dynasties, the development of architecture under the Shu civilization in the Tang and Song dynasties began to enter a prosperous period. That is to say, the simple and practical architectural style of the Qin and Han dynasties, after the gradual development of the Wei, and the southern and northern Jin dynasties, to the Tang and Song dynasties, the residential buildings in western Sichuan not only surpass the Qin and Han dynasties in terms of overall volume, but also become more mature and developed in terms of architectural style, decoration and texture. The residential buildings in western Sichuan in this period, on the one hand, inherit and carry forward the overall layout of the front and back yards; on the other hand, with the continuous develop-

ment of the material living standard, the overall design layout of the courtyard is more functional. The handicraft industry in the Tang and Song dynasties was more prosperous than that in the Qin and Han dynasties. In the street on both sides of the street, the upper house and the lower floor of the western Sichuan residential building quietly emerged, that is, the upper house for the residence for the business of the building layout. In the choice of building materials, the main use of real estate wood and bamboo as building materials. In the architectural structure, it still continues to overcome the complex terrain of the dry - type design structure.

2.4. Back to the Ming and Qing dynasties

According to historical records, the wars and natural disasters in the late Yuan dynasty led to major historical events and stages in which Huguang and Guangzhou filled Sichuan. With the integration of Huguang civilization, the residential buildings in western Sichuan during this period presented a multi-courtyard courtyard building pattern with more complete functions (see figure 3). The building materials were still made of wood from real estate. Multi-courtyard quadrangle courtyard, carrying the form of folk houses of blood relatives, the majestic degree of the family is in direct proportion to the size of the quadrangle courtyard. At the same time, with people's continuous pursuit of the function of residential buildings, the ground floor eaves corridor, the second floor out and the building layout of the pattern of further development.



Figure 3. Residence of west Sichuan Siheyuan



Figure 4. Huguang guild hall

At the same time, the ancient town Luodai in Chengdu has become the cultural product of the integration of different regional civilizations. To this day, there are still Hakka people living in the town and retaining its unique hakka folk culture. Jiangxi guild hall, Huguang guild hall (see figure 4) and Guangdong guild hall in the town all show different architectural cultural styles and characteristics.

3. Analysis of Typical Elements and Symbols of Residential Buildings in Western Sichuan

3.1. Typical features of structure and modeling

Firstly, the courtyard is one of the typical representatives of the structure and shape of the residential buildings in western Sichuan. Courtyard before and after the single or more into the middle of the layout of the house, about the wing position. Therefore, the width of the patio depends on the width of the main room, while the depth of the patio depends on the length of the wing. At the same time, due to the rainy and humid climate in western Sichuan, the courtyards of residential buildings in western Sichuan have the functions of ventilation, lighting and moisture resistance.

Secondly, the structure and shape of eaves corridor also belong to another characteristic of typical residential buildings in western Sichuan. Through the field investigation, we can see that in the courtyard of residential buildings in western Sichuan, the eaves corridor is located in the front of the main hall and the flower hall. There are also structures with eaves and corridors all around the building. The corridor structure and shape constructed in this way closely and organically combine the patio, open hall and other Spaces together. Its function lies in the practical value of preventing the sun and rain. At the same time, the structure and shape of the eave corridor greatly extend the outdoor space of the residential buildings in western Sichuan, providing a good place for shops to operate as well as outdoor activities such as drinking tea and playing mahjong.



Figure 5. Gabled structure



Figure 6. Internal structure, that is, the brackets and the girders

What's more, there is another typical combat-style structure in western Sichuan residential buildings (see figure 5). The pass-through gables were used to separate the internal structural space of the residential buildings in western Sichuan, and the beam lifting mode was also adopted to achieve the same function and effect (see figure 6). Under this kind of building structure and model, the front eaves are higher than the back eaves, and the hanging mountain is usually adopted. Its function is to solve the problem of roof drainage during the rainy season in western Sichuan.

3.2. The typical representative characteristics of the architectural culture and concept of folk dwellings in western Sichuan

First of all, western Sichuan is located in a complex geographical environment, so the residential buildings must adopt measures according to local conditions to create a culture and concept of harmonious coexistence with nature. The traditional concept of Fengshui in residential buildings mainly refers to the key elements that must be taken into consideration in the process of building site selection, such as astronomical, geographical and climatic conditions. At the same time, the harmony between the internal layout and the external environment of the residential buildings can be fully demonstrated through the architectural structure, courtyards and functions in the design and construction of the residential buildings in western Sichuan.

Secondly, in terms of structure and shape, western Sichuan residential buildings pay special attention to aesthetic expression. The aesthetic source of residential architecture in western Sichuan comes from the Confucian and Taoist culture of the Chinese nation. The structure and shape of the residential buildings in western Sichuan not only constitute the solidification of artistic aesthetics, but also have the culture and concept that the people in western Sichuan embody the hierarchy by the architectural structure and shape (such as plane layout, building type and building materials, etc.).

Moreover, throughout the historical development process, due to wars, natural disasters and so on, caused the occurrence of the historical process of foreign immigrants

in western Sichuan. Based on the dialectical view of history, it is believed that the integration of foreign culture and ideas with the local culture and ideas in western Sichuan has promoted the further development of western Sichuan culture and ideas. In terms of residential architecture in western Sichuan, it presents a generous and inclusive scene of harmonious coexistence of diverse cultures and concepts.

4. Inheritance and Innovation of Residential Buildings in Western Sichuan from the Perspective of Regional Aesthetics

4.1. Inheritance and innovation of structure and shape of residential buildings in western Sichuan

First, the architectural structure and shape of Jindu yuan street (see figure 7) were investigated. The architectural structure and shape of the building were mainly reflected in the following aspects: first, the spatial layout, i.e. the appropriate physical space was adopted, and the urban public relations space was organically combined with the theme landscape of the building. Second, the roof part of the building adopts the double-slope roof model of western Sichuan folk houses, adopts the traditional folk houses' structure of hanging mountains and roof overhanging eaves, and is simplified and refined to form the value characteristics of traditional and contemporary inheritance and innovation.

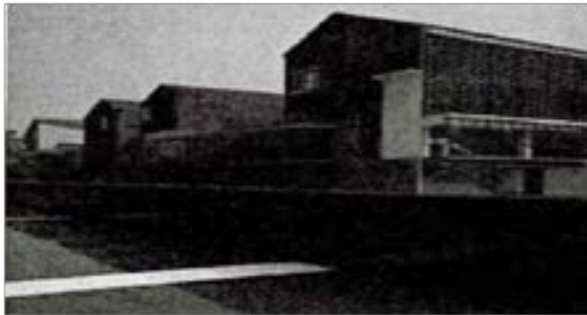


Figure 7. Roof structure and shape of Jindu courtyard street



Figure 8. Architectural structure and shape of Chengdu sky courtyard

Secondly, the architectural structure and shape of Chengdu sky courtyard were investigated (see figure 8). This building is a comprehensive functional group integrating holiday villa, office and entertainment. In terms of the overall layout of the building, it adopts the shape structure of residential buildings in western Sichuan, and organically connects various functional areas with courtyards. While separating various functional buildings, it also effectively constructs the space of transition and activity between each other. On the basis of inheriting the patio structure and modeling characteristics of western Sichuan residential buildings, the innovative structure becomes the deep landscape and pattern of multi-courtyard and multi-path courtyard.



Figure 9. Overall modeling of Lanxi court building



Figure 10. Roof overhanging eaves of Lanxi court

Furthermore, the architectural structure and shape of Lanxi courtyard are investigated (see figure 9). The building, Chengdu international intangible cultural heritage park, consists of a restaurant, an internal courtyard and a private club. As a single building, Lanxi courtyard does not follow the regular layout features of western Sichuan dwellings in terms of architectural layout, but innovatively adopts the free and asymmetrical non-regular layout of Jiangnan gardens. The roof of the building, on the basis of adopting the eaves and double-slope structure and shape of western Sichuan residential buildings (see figure 10), innovates the structure and shape with smooth lines, ups and downs and a sense of rhythm.

4.2. The inheritance and innovation of folk architecture in western Sichuan in terms of culture and concept

First, we analyze and study the structure and shape of Jindu yuan street. In the process of architectural design, the influence factors of the surrounding environment of the building are fully considered, and the innovative structure and modeling methods selected are perfectly combined with the surrounding blocks. Wandering in Jindu yuan street, it seems to have the architectural aesthetic experience of the ancient and modern western Sichuan civilization. To this end, the cultural style created by Jindu yuan street highlights the organic integration of modern and traditional, classic and fashion, which are both opposite and unified.

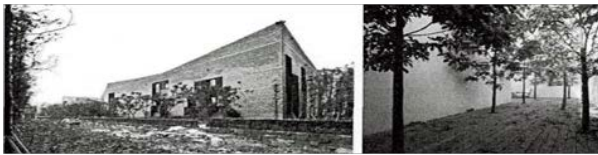


Figure 11. Sky courtyard complex in Chengdu

Secondly, from the perspective of building the external environment of Chengdu sky courtyard (see figure 11), we fully embody the culture and concept of harmonious coexistence between residential buildings and the environment in western Sichuan. The architects chose to plant trees both inside and outside the surrounding buildings to create a natural setting and to eliminate the icy feel of the buildings. At the same time, the side structure and shape of Chengdu sky courtyard present a scene of ups and downs, strewn at random. This kind of architecture structure and shape, which inherits and innovates the architectural culture and concept of folk houses in western Sichuan, embodies the aesthetic creation combining the multi-culture and concept.



Figure 12. The structure and shape of the courtyard of Lanxi pavilion complex

Moreover, the Lanxi pavilion complex (see figure 12) embodies the essence of the traditional culture and concept of the architectural characteristics of western Sichuan in its harmonious environment, courtyard layout and roof structure and shape. In terms of environmental

harmony, the Lanxi pavilion complex takes advantage of the current situation, adapts measures to local conditions and learns from the design methods of classical gardens to construct the surrounding landscape. In terms of the courtyard layout, Lanxi pavilion, in accordance with the traditional culture and concept of residential architecture in western Sichuan, creates a multi-dimensional courtyard pattern to distinguish the levels. In terms of roof structure and shape, Lanxi pavilion follows the design concept of roof structure and shape of western Sichuan residential buildings with ups and downs, and means the natural scenery of western Sichuan with continuous and linked mountains and rivers.

5. Conclusion

Western Sichuan residential buildings bear the profound connotation of western Sichuan people in creating harmonious coexistence between man and nature, living civilization and traditional Confucianism and Taoism culture. Studying the history and inheritance and development of residential architecture in western Sichuan can not only harvest the wisdom and wisdom of the ancestors in building buildings full of traditional cultural concepts according to local conditions. In addition, through the solid structure and shape of buildings, we can analyze and study the concrete expression of the social and family life culture of the ancestors in the process of harmonious coexistence with the environment. In a sense, the value of these analyses and studies may lie in their being an important part of the empirical study of the mutual verification between history and archaeology.

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