



Research on the Protection Strategy of Ancient Buildings in Qingmuchuan Ancient Town of Hanzhong Based on the Concept of Authenticity Protection

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Abstract

Objective: The residential buildings in Qingmuchuan ancient town have universality and particularity in the special regional environment of southern Shaanxi. The research on the characteristics and protection strategies of the residential buildings in Qingmuchuan ancient town has high research value and significance for the protection of the ancient buildings in the ancient town. **Methods:** Through architectural field research and related literature combing and analysis, the spatial pattern of streets and lanes, architectural characteristics of residential buildings and the protection status of ancient residential buildings in Qingmuchuan ancient town were analyzed, and the protection strategy of residential buildings in the ancient town was proposed based on the concept of authenticity protection. **Conclusion:** Based on the study of the spatial pattern, basic form, spatial structure, and the characteristics and value of decorative art of ancient residential buildings in Qingmuchuan, the protection strategy is proposed from the aspects of street texture, material form of residential buildings and historical and cultural connections according to local conditions. **Significance:** To provide reference for academic research and policy practice of residential architecture protection in ancient towns.

Subject Areas

Architecture, History

Keywords

Qingmuchuan Ancient Town, Residential Buildings, Authenticity Protection, Street Space, Historical and Cultural Context

1. Introduction

The ancient town is rich in material and intangible culture, and it is the material carrier and ancient witness of the national culture brand in the long history of the Chinese nation [1]. Under the current background of rapid urbanization and the development of tourism economy in ancient towns, the image and environmental landscape of many ancient towns are increasingly haggard and cheerful. Due to the lack of protection and management, and the lack of efficiency and methods of capital use, some residential buildings in ancient towns have been damaged to some extent, and some characteristic cultures are missing [2]. In the past, the academic research on Qingmuchuan Village mostly focused on the material form of its residential buildings, and rarely gave an overall consideration to its protection strategies. Qingmuchuan town is a famous ancient town in Cang-Qiang Yi corridor which has high visibility. This article is based on the original true protection concept, through investigation and relevant literature of the architecture field research [3], combined with Aoki since the Sichuan earthquake of ancient local government policies and related planning text analysis about the present situation of the protection of its ancient buildings. In view of the existing problems in the protection and development of ancient buildings in ancient towns, the paper puts forward targeted strategies and suggestions according to local conditions, in order to provide reference for related academic research and planning practice in the future.

2. The Concept and Connotation of the Concept of Authenticity Protection

2.1. The Concept of Authenticity Preservation

Authenticity is also translated as original [4], authenticity, and reliability. The primary emphasis is on the original. Original meaning not copied or imitated. For a work of art, heritage building or historic site [5]. Authenticity can be understood as the authenticity of information that determines the significance of cultural heritage. Authenticity is one of the important principles of urban heritage protection, the core of which lies in the real historical information of urban heritage.

2.2. The Development of the Conservation Concept of Authenticity in the Field of Ancient Architecture Protection

Italian Camilo Poeti pioneered the way to restore the authenticity of architectural heritage. He advocated the principle of recognizability of restored parts and emphasized that restored and added parts should be distinguished from traditional textures. Since then, the original true restoration theory gradually attracted attention by people, and along with the social progress and people awareness: perfecting the Venice charter in 1964 for the first time put forward the original true protection concept and the scope of architectural heritage protection from monomer building to expand to the whole historical location, establish the position

of the original true protection, make it become the consensus of urban heritage protection; on the basis of defining the concept of historical district, the Nairobi Proposal in 1976 pointed out that the overall image, cultural life and landscape of historical sites were more valuable for conservation, which expanded the cultural scope of original conservation [6]. In 1977, the Charter of Machu Picchu pointed out that the protection of natural landscape, cultural environment and cultural characteristics should be strengthened in the protection of historical heritage, adding the connotation and extension of the original protection. In 1987, Washington Charter proposed that the preservation of historic towns should pay attention to the integrity of town style. We should deal with the relationship between natural and artificial environment. It highlights the overall coordination of authenticity protection.

With the further development of theories, the application scope of authenticity protection is not limited to individual buildings [7], but pays more attention to the protection of the whole lot and area: The content of protection has expanded from pure material protection to the overall style, and the reproduction of humanistic spirit has changed from “doing nothing” protection to planning and respecting history protection with full consideration of the historical background and humanistic needs [8]. Original true protection is not only blindly pursue the designated area of “doing nothing” protection way, but also expressing the culture contemporary [9], make the culture and spirit as the material form of various periods tradition continue.

3. General Situation and Spatial Pattern Analysis of Historical Streets and Alleys in Qingmuchuan Ancient Town

3.1. Geographical Location and Historical Evolution of Qingmuchuan Ancient Town

Qingmuchuan Town is located in the northwest corner of Ningqiang County, Hanzhong, at the junction of Shaanxi, Gansu and Sichuan provinces (**Figure 1**), with Qingchuan County of Sichuan province to the west and Wudu County and Kang County of Gansu Province to the north. It is the westernmost township in Hanzhong. The ancient town of Qingmuchuan is adjacent to Jinniu Ancient Road in the north and Sichuan in the south. It has been one of the channels for entering Sichuan since ancient times. The ancient town of Qingmuchuan arose during the Reign of Emperor Orthodox in Ming Dynasty. A large number of displaced people built straw houses along the river to form a village, which was originally called Caochangba. Later, it changed its name several times, and was successively called Huilongchang and Yongningli. In the Reign of Guangxu, the villagers took a local big green tree as a symbol, and took Hechuan as the name, and changed its name to Aomukchuan, which is still in use today. The most prosperous period of the ancient Town of Qingmuchuan was the Period of the Republic of China. According to statistics, more than 4000 people from 13 provinces settled here at that time. Due to the special social and historical conditions

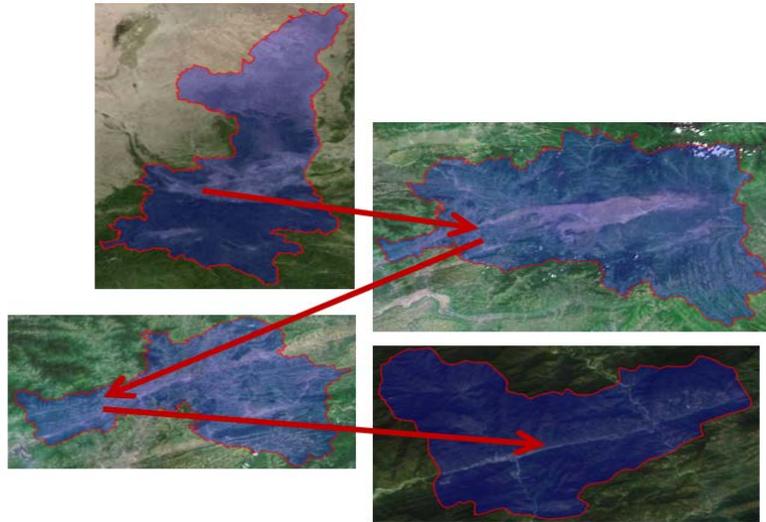


Figure 1. Location map of Qingmochuan ancient town.

at that time, the ancient town of Qingmochuan became a famous trade and distribution center in the local area because of its special location at the junction of Shaanxi, Gansu and Sichuan provinces. After the founding of the People's Republic of China, the local ancient buildings were well preserved and partially utilized (**Figure 2**). The 512 Wenchuan earthquake led to the cracking and collapse of some ridges and walls of Wei's house, the most well-preserved ancient building group in the town (**Figure 3**). Huilongchang, an 800-meter-long street built during the Chenghua period of the Ming Dynasty, was also damaged, and many old houses collapsed. Since July 2008, Ningqiang County has carried out overall planning for the ancient town of Qingmochuan. Now the maintenance is over, and the overall style of the town remains as before. Through a series of tourism development measures, the tourism of the ancient town of Qingmochuan has developed rapidly and become a well-known historical and cultural town in China.

3.2. Analysis on Spatial Pattern of Qingmochuan Ancient Town

1) Spatial pattern of “two mountains and one river, old and new depend on each other”

The town is located in a flat dam in the mountain, with a river running through the center and winding streets along the river. The west side of the river is narrow, close to the foot of the mountain. The east side of the river is relatively open, but it gradually rises from the middle to both sides. The old street is built on the east of the river, along the twists and turns of the river, with an S-shaped layout from south to north, facing the water in the west and the mountain in the east. In recent years, a new street has been built in west of the river and gradually become the new center of the ancient town. In addition, the local government has carried out the protection planning of famous historical and cultural towns, and the ancient town has evolved into today's spatial pattern of “two mountains within one river, old and new interdependent” (**Figure 4**).



Figure 2. Aerial view of Qingmuchuan ancient town.



Figure 3. Residential buildings in Qingmuchuan ancient town after Wenchuan earthquake damage.



Figure 4. Functional zoning of Qingmochuan ancient town.

2) Spatial structure of “One road, one street, one bridge”

The north end of the old street is connected with the main road through the wind and rain bridge, and the south is directly connected with the main road. “Yi Jie” refers to the old street, from the north to the south of the old street around the mountain. In terms of terrain, the S-shaped layout along the river is

nearly 600 m from north to south. There is no fork street. The buildings on both sides of the street are two-story facades, and the courtyard form of the front shop and the back house. “Yiqiao” refers to the wind and rain bridge located in the middle of Laojie. It is one of the channels connecting Laojie and the west bank of Jinxi River. Now it has become the main means of communication between Laojie and Xinjie, as well as the gateway to Laojie.

3) The spatial division of ancient buildings in ancient towns

Due to historical reasons and location relations, the unified street space of the old street is generally divided into the lower street, middle street and upper street (Figure 5). Aokigawa arose from the lower street and connected with external traffic from the high street, while the real economic and political center was concentrated in the middle street.

4. Analysis on the Characteristics and Protection Status of Ancient Buildings in Qingmuchuan Ancient Town Based on Architectural Research

4.1. The Basic Shape and Space Structure of Ancient Buildings in Qingmuchuan

1) Combination mode centered on the patio (Figures 5-7)

Qingmochuan folk houses are based on “one bright and two dark”, and the mixed quadrangle courtyard is the main spatial organization form. The elevated quadrangle courtyard is surrounded by buildings with ring room (wing room) and one hall. Its sealing ability is stronger than that of the quadrangle building on the north side, but it is not as narrow as the courtyard building on the south side, which is a measure of the relationship between the two. Courtyard garden is different also, in the form of size according to the terrain, the size, usually located in the courtyard space of old street because of the terrain ups and downs, land shortages, courtyard generally smaller, the expansion of the supporters because available slope topography condition, patio garden long narrow, cannot expand along the river bank, patio garden in width, is located in the more open to the dam, and the courtyard is wide and open, almost square.

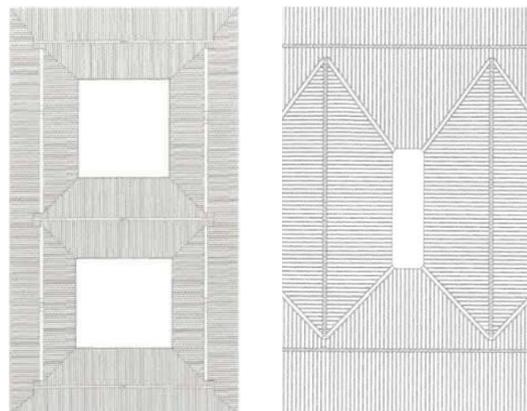


Figure 5. Wei family old house roof plane.

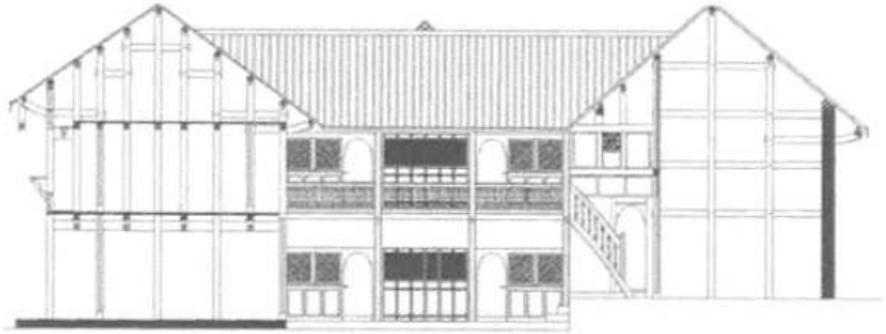


Figure 6. Longitudinal section of Wei family residence.

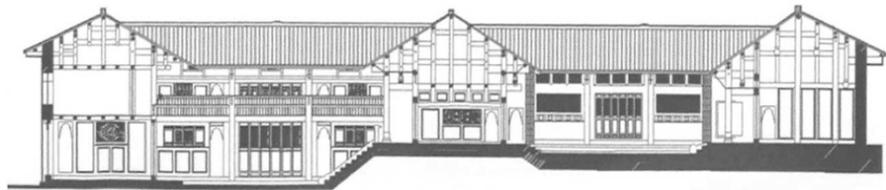


Figure 7. Longitudinal section of the old house of Wei family.

2) Construct three-dimensional traffic flow lines and build rich spatial effects according to the terrain

In the residential buildings of Qingmuchuan, in addition to following the housing sequence and order, the special spatial form is often constructed by combining with the terrain conditions and the architectural elements. First of all, Aoki chuan local-style dwelling houses building takes advantage of the terrain elevation difference to organize courtyard, rich space changes, in the same building, into the yard and binary usually not in the same horizontal plane, even in the same courtyard, first with the wing is not in the same horizontal plane, they tend to use the steps to connect the platform, stairs, corridor, so that the buildings in different levels of mutual integration and connection, thus forming a rich spatial effect. For example, Wei Jiaduo's shop "Hong Shengchang" is known locally as "Dry boat House" (Figure 8). Secondly, the nearly three-dimensional traffic streamline is also one of the characteristics of the spatial organization of the dwellings in Qingmuchuan. In the longitudinal direction, the main traffic flow line is the lobby, the courtyard and the passageway under the two-storey cantilevering corridor and the platform. Meanwhile, the traffic flow line is supplemented by the two-storey circumferentially corridor and the platform in front of the hall. On the lateral is about the former of the main platform for the node to the extension and an auxiliary traffic flow, and the transverse traffic streamline often connects the auxiliary, or another yard space, and it takes advantage of the wing and the main channel formed between solved traffic problems; because of the terrain ups and downs, the auxiliary traffic streamline sometimes also can have certain difference (Figure 9). In this way, the functional organization of residential buildings in Qingmuchuan is completed by the horizontal and horizontal traffic lines, and the changes of architectural space on the time axis are achieved.



Figure 8. Qingmuchuan “land boathouse” longitudinal section, three-storey plane.



Figure 9. Qingmuchuan “landboat house” internal style self-taken.

3) Flexible and flexible structural technology of the dwellings in Qingmuchuan

Behind the distinctive characteristics of residential buildings, the effective support of technology is indispensable: There is no essential difference between Chinese traditional residential building technology and the building itself, they are often combined together to reflect the distinctive personality of residential buildings in a common language. Therefore, the study of residential architecture is inseparable from the study of its structure itself, which will help us to understand the residential architecture itself from the material level. In general, the structural form of residential buildings in Aokigawa is similar to the dip-through wooden frame (Figure 10), but there are certain differences with the traditional dip-through wooden frame. The column distance of the orthodox dipstick wooden frame is dense, and the roof load is basically carried by the floor pillars. Most of the dipstick only plays a connection role. The structure of the residential buildings in Aomukchuan is also directly moulded by the columns, but the column spacing is large, and not all the columns fall to the ground. The columns are also connected by the wear square, and there are differences between the large wear and the small wear. Generally speaking, the building three wear to the top, a wear connected with all the columns: two wear generally connected with the front and rear two gold columns. The three-pass connection is adjacent to the central column (Figure 11).



Figure 10. Self-photography of the wooden frame of folk houses along the street in Qingmuchuan.



Figure 11. Qingmuchuan street residential eaves self-taken.

In the interior, in order to obtain larger space, there are two different processing methods according to the function. In the main hall, it is usually unoccupied and only used for sacrificial ceremonies and large family activities. The interior space is often completely roofed without floor, and the roof tiles and eliminations are completely exposed. There are wooden carvings at the bottom of the roof, which are inlaid between the columns to distinguish each room. In the living room, according to the structural principle of lifting beam type, there is a curved beam below the floor layer along the direction of depth. The load of the upper column falls on the curved beam, and the lower part does not fall to the ground. Only the columns at both ends fall to the ground to support the load passed down by the curved beam.

4.2. Plain Decorative Art of Folk Houses in Aomukchuan

The decoration of residential buildings in Aomukchuan is simple and simple, just like its architecture. Ornate decorative components are hard to see in the residential buildings in Aokigawa, but there is no shortage of places where decoration is needed. It can be said that wood carving and stone carving are the main decorative means of the residential buildings in Aomuchuan without gorgeous colors. The decoration of the wooden frame of the residential buildings in Qingmuchuan mainly focuses on the exposed frame, column base, balustrades

and handrails. Its exposed parts have been decorated with appropriate details, making the building look more pleasant and intimate. Buildings generally do not apply thick color, and most only use earth paint brush; bright color is not the goal of architecture, but more based on the protection of the wood itself. Therefore, the architectural color, structure and decoration show complete unity (Figure 12).



Figure 12. The Windows and doors of folk houses along the street in Qingmichuan.

4.3. Analysis of the Protection Status of Dwellings in Qingmichuan

1) Spatial scale imbalance

The ancient town of Qingmichuan has a good sense of scale in space composition. However, with the intervention of tourism economy, the destruction of the cultural atmosphere of ancient towns by the modern material life concept and way has gradually emerged. Because of the pursuit of commercial interests, the unlimited expansion of street space destroys the traditional street style pattern, which is convenient for shoppers but loses the original sense of space scale with cultural flavor. The change of transportation mode in modern society has broken the style of traditional houses. In addition, the historical and cultural relics protection under the wave of new archaize local-style dwelling houses building, due to a lack of mastery of space overall dimension, only in order to meet the requirements of their own regardless of the relationship with the surrounding buildings and the environment fusion, volume built too tall, to a certain extent, undermined the traditional ancient town of diverse and unified sense of space scale.

2) The imbalance of the style of residential houses

An important principle to judge the authenticity of cultural heritage is the degree of preservation of the original style. There are some images that are not

harmonious with the traditional style in the style of ancient dwellings in Qingmuchuan. Some old buildings are dilapidated and neglected; under the influence of commercialization and transportation, the original buildings are mixed with a large number of modern social elements. New buildings and landscape sketches are “independent portals” without inheriting the architectural style of the original town; apart from the lack of maintenance on the main commercial road, small advertisements can be seen everywhere. All these have seriously affected the overall style of the traditional streets of ancient towns, and the understanding of the concept of harmony and unity needed for the protection of the style of ancient towns is not deep enough.

5. Protection Strategy of Ancient Buildings in Qingmuchuan Residential Houses Based on the Concept of Authenticity Protection

5.1. Keep the Traditional Street Texture

Ancient town consists largely in the preservation of the ancient residential housing value texture “self-organization” in the early formation of the street, according to different degrees of self-organization form streets intact, suggest a gradual small-scale “organic renewal” for a long time, to gradually restore historical style and features, for the purpose of block incrementally course, renovation of the old protect and restore the architectural features of ancient dwellings to the greatest extent. In addition to the comprehensive environmental improvement of traditional streets, residential buildings should be mainly repaired as far as possible. Even if some dilapidated houses or uncoordinated buildings need to be demolished, the demolition and construction of moving areas should be small in scale and carried out in a rolling way. This way of construction cycle is short, easy to raise funds and easy to take effect, but also easy to be recognized by residents, conducive to maintaining the original texture, but also conducive to the relevant departments to timely sum up the experience and lessons.

5.2. Maintain the Physical Form of Traditional Dwellings

Architectural form is one of the important elements of the style protection of ancient town dwellings, including the volume, texture, color, scale, architectural group and private yard space of single building, as well as the street space enclosed by different architectural forms and combination methods. The protection of authenticity should be classified according to different situations, and appropriate measures should be taken to control and protect the building volume, enclosure mode and space scale. The formation of residential buildings in Qingmuchuan ancient town varies in different ages and the situation is complicated. The maintenance and protection of the original residential buildings with conservation value should be repaired by using the methods of original buildings as far as possible. For the new residential buildings, they should be treated separately in accordance with the will of residents who are willing to build houses in

the designated homestead in the new district. Unified planning to maintain the style of new houses, give strong support, to be willing to repair or build new houses in the town should actively guide, and provide a reference.

5.3. Maintain the Historical and Cultural Context of Traditional Residential Buildings

Ancient residential buildings have been formed by material solidification for a long time. Behind these buildings is a profound historical context, which is the reason that attracts countless people to go there. The continuation of historical context should not only respect “tradition”. We should also respect originality. Only by combining numerous “history” and “present”, can the sustainability of historical context of residential architecture be realized.

6. Conclusion

The residential buildings in Qingmuchuan ancient town have some universality and particularity in the special regional environment of southern Shaanxi. Therefore, the study on the protection of residential buildings in Qingmuchuan ancient town has higher research value and significance for the protection of the ancient town in this region. Based on the research of architecture on the basis of Sichuan ancient folk houses of spatial pattern of streets and lanes, the characteristic of local-style dwelling houses building and analyzing the present situation and problems of the protection of ancient dwellings, and combined with the original true protection concepts under the guidance of adjusting measures to local conditions for the existing problems of texture from the streets, residential material form and historical and cultural connections, etc., put forward the protection strategy, in order to provide a relevant reference for future academic research and planning practice.

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Conflicts of Interest

The author declares no conflicts of interest.

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