Application of Stilted Architecture Style in the Design of B&B in Zhuang Nationality Area

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Abstract
This paper mainly sorts out and discusses the reasons for the formation of stilted architectural style, the construction characteristics of stilted architectural style and the cultural value of stilted building in Guangxi Zhuang Autonomous Region. Based on the existing theoretical basis, this paper explores how to inherit and develop the advantages of traditional stilted architectural style under the background of rural revitalization strategy. The functional style, cultural implication, national spirit of the stem-column architecture and the B&B design are organically combined to provide new ideas and new methods for the design of traditional B&B and effectively promote the development of rural tourism.

Keywords
Stilt Style Architecture; Zhuang Autonomous Region; B&B Design

Introduction

In the language system of the Zhuang people in Guangxi, “Gan” means “above the rice stalk”, while “Lan” means “house”. “Dry” and “bar” together have “above the house” meaning [1]. The Zhuang people also use thorns or bamboo to weave fences. Then they plant vegetables, fruit trees and other crops in the open space between the fences. The garden is full of luxurant leaves with spring scenery and fragrant flowers, which is of special interest. Therefore, this kind of “Ganlan” style building adapted to local conditions is enduring, deeply loved by the Zhuang people.

The Historical Origin of Zhuang Stilted Style Architecture

The Origin

Located in tropical and subtropical regions, the Zhuang ethnic group in Guangxi has a hot climate, abundant precipitation, small temperature difference and high humidity. According to the geographical and climatic characteristics of the local natural environment, the primitive people here improved and invented the architectural style with the most national style and characteristics -- the stilted building.

According to archaeological research, as early as ancient times in South China, stilted architecture prevailed. The wooden structure of Hemudu Site in Yuyao, Zhejiang, 7000 years ago, found in archaeological research, is the earliest stilt-style building discovered so far [2]. The earliest written record of gantry architecture is in 'The Biography of Wei Shu Liao'. Fan Chengda of the Southern Song Dynasty has a detailed record of gantry architecture in 'Yu Heng Diary of Gui hai' . He mentioned that people live above gantry architecture and livestock are raised below, which is mostly the case for the permanent residents in Guangdong and Guangxi areas.

The Development and Evolution

In the Baiyue area in the southwest of our country, there are many ethnic minorities, and the ethnic minorities here retain the primitive and simple culture of their ancestors. Taking the Zhuang ethnic group as an example, the Zhuang ethnic group has its unique folk customs and aesthetic style. It can combine elements derived from nature with individual imagination to create a highly imaginative national totem. Not only that, they also have a thousand years of history of architectural manual technology, because the stilted construction technology has adapted to the southern mountainous terrain, climate and prevention of venomous snakes, fierce beasts, and other advantages, so has been used up to now. In the long history, the main construction strategy of stilted architecture in the Zhuang region is based on the villages where people live, and the site is located on the big bend of the river and the flat ground; Or choose to build in the river and the confluence of small rivers, channel wide, smooth water; Or near the foot of a mountain, near a river, or relatively flat. The method of elevating the ground floor of the building is adopted to maximize the use of architectural space [3]. In traditional stilted buildings, people lived on the upper floors, raising livestock and storing farm tools on the lower floors. In architectural form, the column type building has formed a rich architectural after thousands years of accumulation and improvement, such as full stilted type, half stilted type and so on. At the same time, the stilted type building inherited the aesthetic appeal of the traditional Baiyue ancestors on the modelling: the modelling is rough and simple, the decoration is little but fine, the matching color is simple and elegant. In terms of building materials, the railing architecture mostly adopts local materials, such as wood, stone, brick and tile, to form a unique building with rich texture and texture.

The Material and Architectural Style of the Zhuang Nationality Stilted Building

The Material of Zhuang Nationality Stilted Building

The main materials of stilted buildings in Zhuang region are generally wood and bamboo materials, and some buildings adopt the composite form of combining brick, stone, soil and bamboo or wooden column feet. The eaves are usually elaborately painted or carved with totems of ethnic patterns. In front or back of the house, there are sunbeds for drying grain crops or enjoying the cool. Due to the mutual influence of many factors such as historical and cultural background, environmental climate, local customs and customs in southwest China, the stilted buildings have various forms, layer upon layer, row upon row, and become magnificent.

The Style of Stilted Building in Zhuang Nationality Area

The whole column. The whole column type is the most basic form of the dry column type building, also known as the whole building dwelling type, with the upper floor housing people and the lower floor raising livestock and storing farm tools. It is also the most basic form of housing construction in the Zhuang area. In the past, this type of building was mainly used to prevent the invasion of poisonous animals and the rampant theft of livestock. Now, it seems that the sanitary condition of the upper living environment is very poor due to the fumes generated by the excretion of livestock, which are raised in the lower level.

Half column. Half column type is brick or civil structure tile house or grass house, and then cooperate with wooden column for the bottom. Generally there are three rooms or five rooms with two closed bungalows next to them, which has become the main form of housing in the Zhuang area. The exterior walls of half-column buildings are painted with white lime, and the eaves are mostly painted with exquisite ethnic totem patterns or carvings. The middle part is two stories, the second story is a building, upstairs people, both sides of the closed bungalows for livestock or placed farm tools, its advantage is to improve the sanitary conditions of living. Although the half-column architecture is slightly different from the dry-column architecture in terms of internal structure and external style, it can be seen that the dry-column architecture has its clue and the pattern has not changed much.

The Internal Structure of Stilted Building in Zhuang Nationality Area

The Internal Structure and Religion

Zhuang people in Guangxi believe in severals gods, and there is no unified religious belief in the whole nation. At the end of the primitive society, the religious thought of the zhuang people began to sprout, but with the development of the zhuang clan society, the religious thought of the zhuang people gradually developed the exclusive religion of the ethnic group -- witchcraft. At the latest, in the Southern Dynasty, due to the increasingly frequent communication with the Han culture, Taoism of the Han culture was introduced into the Zhuang region, and merged with the wizard religion of the Zhuang nationality, forming the wizard Taoism. The feudal thought of witchcraft Taoism gradually formed the folk custom of the Zhuang people, which also led to the layout of the interior of the Stilted building according to the ethical thought and the characteristics of life.

A Couple with Different Room

The layout of different rooms of husband and wife is mainly to comply with the feudal thought of witchcraft Taoism. The family core is mainly controlled by patriarchy, and the husband and wife live in separate rooms. The son is expected to live in the same house with his parents for a period of time after marriage, and the son's wife is expected to "stay in the husband's house" before giving birth. But as soon as the baby is born, the parents need to move into the new house with the other unmarried children. Therefore, the interior space shows a special relationship of binary opposition, with the meaning of hermaphrodite. On the one hand, the layout of the husband and wife living in different rooms can be used to relieve the pressure of the husband's home, which strongly expresses the local taboo of the husband and wife's sexual life; Secondly, the first child of the family could be given a grand birth ceremony, but only the man and woman who gave birth to the first child could become the head of the family. This suggests that the ability to reproduce to keep the family alive should be "clean and non-sexual, independent of the couple's fertility". The floor plan of the house is centered around the nave, with the houses for living arranged on either side.

Funtion of the Bottom of the Dry Bar

Due to the influence of climate and environment, the traditional building of Zhuang nationality usually uses the bottom floor to raise livestock. Located in the southern part of the motherland, the climate of the Zhuang nationality in Guangxi is tropical and subtropical, with high temperature and rainy summer, mild and rainy winter, four distinct seasons and abundant precipitation. In addition, in ancient times, the remote and wild areas inhabited by the Zhuang people in Guangxi were rampant with thieves. The early Zhuang people raised the bottom of the crate building according to the characteristics of the natural environment and used it to raise livestock. On the one hand, it can avoid poisonous insects, ferocious beasts and thieves. Secondly, it can increase the functional conditions of the building, such as raising livestock, stacking farm tools, and reducing the handling work on the ground. Third, it can be directly built after arson, to meet the needs of flood resistance

and dampproof living; Fourth, to solve the high temperature in the south and the need for cooling and ventilation.

Thinking on the Application of Zhuang Nationality Stilted Building in the Design of Homestay

The Impact Brought by the Integration of Multi-ethnic Cultures

Guangxi Zhuang region ganlan style architecture itself is extremely limited, has been affected by the impact of foreign culture, such as the northern region is affected by the Han nationality culture and the fusion, some local areas of ethnic minorities such as Yao, Miao, Dong, Mulao, Maonan, Hui, Jing, Yi, Shui and ancestral Zhuang. According to relevant literature records, since the Han Dynasty, the slanted buildings in Lingnan region have been gradually replaced by the ground-based buildings in the north. By 1950, the main buildings in the Zhuang region had been replaced by the one-story houses that were easy to construct. However, the process of Stilted architecture in Guangxi Zhuang Autonomous Region leaving the historical stage is relatively slow, and there are still a few preserved up to now, but their quantity and preservation condition are not good.

The Loss of Functionality

With the progress of generation, traditional stilted buildings have a single structure, and the original functions of raising livestock and stacking farm tools can no longer meet people's living needs. stilted buildings mainly exist in traditional ancient villages in Zhuang ethnic areas of Guangxi, and now there are few villages intact with stilted architectural features. As aboriginal people move to modern towns and excessive tourism development has caused a lot of damage to traditional features, the traditional rail-style buildings are vulnerable to damage due to lack of timely repair, and can no longer meet the needs and development of today's society.

The Limitations of Traditional Materials

Traditional stilted buildings in Guangxi Zhuang Autonomous Region are usually constructed with wood and bamboo and the original materials from the local environment. These materials are easy to be damaged by moisture, moth-eaten and fire-proof. Wooden and bamboo structures are not suitable for large-scale construction and popularization due to their great damage to the natural environment.

Thinking on the Application of Zhuang Nationality Stilted Building in

the Design of Homestay

Improve and Optimize the Function of the Stilted Building

In the traditional stair architecture of Zhuang nationality area, the ground floor stair is used as a place to raise livestock and pile farm tools [4]. With the development of tourism, this function has gradually lost its practical value, and the ground floor design could be converted from the function of livestock to shops or public garages. Longsheng Zhuang village, for example, stockade on tourism as its main business, thousands of visitors each year, most of the villagers have been living not for agriculture, integrating even livestock will no longer human, but on the other fence outside his home and the pigsty, so can be close to the street at the bottom of the pole into the shops selling the goods, if you are not close to the street can into the garage, storage or utility room, etc.

Innovate the Architectural Form and Expand the Space Volume

Zhuang area of stilted style architecture in the high speed development of tourism industry today, its main function is mainly residential or commercial, so the volume of construction must be expanded, but itself for construction of building built on the use of indoor and outdoor space is less, so it can be tied to build multiple dry column construction, connect part space into a public space corridor and the hall. And the external surface of the space for transparency or expansion of the external space extension processing, so that it expand the internal space and the external space of the organic connection. In particular, the exterior space of the building can be combined with the elements of the garden landscape, such as rockery, strange stones, ponds and green plants, into the landscape content of the freehand style, so that the building and the surrounding natural environment form a coordinated and unified organic whole.

Improve Vegetation Coverage and Build Ecological Livability

Because the wooden or bamboo building is not fire prevention and anti-corrosion, so you can plant climbing plants such as passion flower, windmill jasmine, trumpet creeper, etc., on the surface of the building facade, vertical greening. Because climbing plants are not easy to burn, they can avoid the generation and spread of fire to a certain extent. In addition, the coverage rate of green plants has increased, which is also conducive to improving the overall environment of B&B and making it more suitable for tourists to live, laying a foundation for building a characteristic B&B and shaping the brand of B&B.

The Elaborate Design Enhances the Tourist Consumption Experience

In Zhuang stilted architecture, the use of external space is generally based on agricultural functions, such as field planting and poultry breeding, etc., but the implication of farming is rarely applied in the environment planning of B&B in tourism [5-7]. Therefore, railings and low stools can be set along the external walls of the dry-rail buildings, and the traditional ink screen can be used as decoration and partition locally. The top is covered with a canvas ceiling, so that it can jointly form a place for tourists to chat, enjoy the cool and rest [8-10]. This kind of open space is the transition between the external space of drapery building and the closed space. Outside, we can enjoy the outdoor beauty better, and because the shelter of the roof can avoid the sun and rain, this kind of design can be applied to the improvement of drapery building now.

Conclusion

The traditional stilted architecture in the Zhuang region of China is a historical product under the joint action of specific natural environment and traditional feudal ethics, reflecting the pursuit of the Zhuang aborigines for national culture and a better life at that time [6]. With the implementation of the national rural revitalization strategy and the rise of tourism in the new era, it is necessary to sublate and discard the cantilever architecture which represents the traditional culture of the Zhuang people, take the essence and discard the dross, and continuously improve and design the modern cantilever architecture which enables people to live in harmony with nature and achieve sustainable development. Also revelation we should not directly to the traditional architecture in modern social development directly, we should respect the regional traditional culture and national characteristics and combined with the social development, given the traditional value of a kind of national culture and regional culture, turn them into ecological and livable and cultural significance, and the sustainable development of the new building.

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