Rural Tourism Spatial Reconstruction Research of Tongxin Rural Historic District, Sichuan Province, China Based on Landscape Architecture

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Abstract. The rural historic district is the cream of a country, and it is also the most vigorous space in a township with fabulous cultural resources and a large number of users. The rural historic districts are not only the carriers of national morphology but also as the representations of national culture. Meanwhile, the rural historic district is one of public space in a township, which owns maximal culture, maximal art fascination and reflects the history of a township. Based on the background of the development of the cities in China, the rural historic district is the most complex strip in a township. The central area or rural historic district has always been the pioneer in the development and construction of cities. The rural historic district was the center of township politics, economy, and culture.

The rural historic district is an area with complicated function, the major facilities include the residential area, public service, and ancient building group, it reflects the township features and the cultural characters, and it is the core space of the township. Now, the land resource of China becomes tenser day by day. The low level of national land use has caused waste and the reduction of land benefit. With the economic and national development in townships, there are some issues in the rural historic district, such as shortage of land resources, population pressure, national construction and the protection of the rural historic district, particularly in the conflict. So spatial reconstruction of a rural historic district is an important way for townships to obtain space for development on the condition of land scarcity.

Tongxin Rural Historic District, like a shining pearl island in the Dayi county of Sichuan province, China. This rural historic district is a large architectural complex composed of complete township lanes and residences, there are many folk houses and bamboo dating from the Ming and Qing Dynasties. From this, the protection and development of the historic and cultural value of this district had become the focus of local social attention. However, the districts in Dayi county there are various problems of protection and development of rural historic districts. The paper based on the in-depth investigation of the protection and current situation in Tongxin rural historic district, took the local regional development as the research object, from the perspective of landscape architecture, Based on sustainable development planning thought, by use of inducement and comparative method, explore the resource of cultural potential through landscape planning approaches, used the design strategy of Rural Tourism Spatial Reconstruction to make the full use of existing land resources and provide local residents with a livable environment, promote the development of local cultural tourism and economy.

Introduction

I choose the direction of rural tourism spatial reconstruction research of Tongxin rural historic district based on landscape architecture as a research subject. The cause is that the rural historic districts are the great wealth of local national communities. Historic district creates the characteristics of the township. As the increasing development of the towns in China, massive rural renewal makes historic districts suffered the serious impact.
Meanwhile, as a cradle of local national culture. The rural historic district is the township special and the core region, it has complex roles, including the historic housing area, school, office, and other groups. Because of the growing tension of the historic district land resources, land price expensive and land privatization, which have caused lacks profitable public space in the rural historic districts.

That will be difficult to build a new large public square in a rural historic district. The neighborhood unit as a complement to large public square, it can make full use of existing public space for spatial reconstruction. The most outstanding characteristic of the neighborhood unit is closely connected with local residents’ daily life.

At the same time, rural spatial reconstruction has become an important means of improvement of the rural historic district. Green wall has great environmental and aesthetic value, but the local authority did not use the new design method into the reconstruction project. With the land resource being scarce gradually in current days, a series of environmental problems have occurred in Chinese townships. While the green wall is the most important method to solve this problem. With the development of the green wall, the plants have been extended in the spatial space. So, the green wall is the requirement and inevitable trend of rural greening sustainable development. With the rapid development of society and economy in Tongxin, the residents of the rural historic district put increasingly higher demands on the quality of the living environment. However, at present, due to the shortage of the land resource in the rural historic district, the increasing of living standard for the residents is extremely difficult. If the local government want to improve the living environment of the historic district, they must develop the underground space. Therefore, the spatial reconstruction design method will provide local residents with a livable environment by developing the underground space and the green wall.

In addition, this paper researches the rural tourism spatial reconstruction of Tongxin rural historic district. By studying the concept and classification of public spaces, we analyzed the most useful public spaces in the Tongxin rural historic district, try to find a way to effectively protect the historic district and improve the lives of the residents. Based on the distribution of the public spaces, we analyzed of the present problems of the Tongxin rural historic district. Finally, we put forward the design proposal the Rongxin rural historic district.

Definition of Rural Spatial Reconstruction

The spatial reconstruction in a rural historic district is a coordinated reconstruction project includes the population, environment and public open space. If the public open space wants to maintain sustainable development, it is necessary to increase land use efficiency, develop in a direction of the building’s exterior wall and underground space, and promote the sustainable development of the local environment. The main contents of rural spatial reconstruction basically including the following points: historic district protection, neighborhood unit construction, underground space development, and green wall application.

The rural historic district is an area of a city, and many ancient buildings have been preserved in this area. The rural historic district also reflects social politics, economics, cultural conventions and artistic ideas of the particular historical period [1]. In China, the rural historic districts are protected by state laws. The historic building, it means the structure has inestimable historical, scientific and artistic value. In China, the various historic building certification bodies are authority institutions who have achieved the accreditation of the national accreditation agency and they are very strict audit to historic buildings. So the list of heritage registers cannot cover all the historic buildings.

Neighborhood unit, the term originated in ancient China two thousand years ago [2]. Neighborhood unit conception now has become a hot issue for the rural development and environmental improvement. As basement to fill the trunk network of the public space, the neighborhood unit plays an important role in promoting the communication, reserving the social network inside the districts and stabilizing the social structure [3]. As the basic unit of the township, the neighborhood unit provides an effective platform to join sustainable rural development.
The development of underground space have experienced a long and tortuous history. Cut a house cave is the early human practice of underground space development [4]. The techniques of European underground space development were transformed during the 17th and 18th centuries by use of gunpowder and by the substantial progress of steam engine. For instance, the Thames tunnel was the first tunnel known to have been constructed, and was built between 1825 and 1843 [5].

Green wall is a form of vertical greening, it is combined with vegetation, soil irrigation system and support structure. The green wall is famous for its alias, the vertical gardens. American landscape architect Stanley Hart White, He is considered to have invented the first green wall [6]. The green wall can be attached to interior or outside of existing wall. The green wall could effectively decrease the intrusion of external noise. In the streets outside the buildings, the air smelled like smoke and roared with noise. When the noise gets to people’s ears can amount to 70 decibels or more, which can increase the risk for hearing loss and damage to the heart. A green wall is a new form of the sound deadening mat that has improved noise reducing properties and is greener than conventional materials. The utilization of green wall not only increases the expressive power and sense of the beauty of buildings, but also gives vitality and infectivity to architecture. Therefore, the green wall has become the important element of landscape design projects.

Related Research

During the development of townships, the rural renewal theory’s rural development-leadership role experienced the course of the sprout, formation, development, and perfection. After the second world war, Through the long-term practice research, the rural renewal concepts of the developed countries has transformed greatly. The rural renewal of cultural heritage has been changed from the reconstruction of a single building into the reconstruction of a rural historic district. Large-scale reform is unrealistic, the rural historic district needs more humanistic care and spiritual care. The rural historic district as a national cultural symbol, it is the carrier of humanistic spirit. Since the 1960s, in the construction of townships, it is important to inherit the historical tradition and develop the international influence of the local national culture. Therefore, in the process of township construction and internal reform, excavate cultural connotation and protect historical and cultural heritage is to become an international consensus. In the 1980s, the international community has reached a series of international conventions, in order to deal with the destruction of rural development to rural historic district protection. The rural historic district as a witness to the development of township and human society, it is the symbol of local national history. Therefore, the protection for historic districts is very important for us. It is not only to protect a historic district, but also the local national cultural.

The public space is the main location of human activities, also a big system including the cultural and natural environment. The rural public space belongs to the space category, and it is the area contains lots of population and infrastructures. The land is the basis of activities for human beings, the public space is the result of economic development in human society. The scenes of rural public space always show to what extent the economic, cultural, environmental and social development has reached in a region, and it also decides the basis and platform of social, economic, cultural and environmental development. According to German architect Robert Krier, the rural public space as defined is one where between buildings incites and other localities. This space is geometrically bounded by a variety of elevations. It is only the clear legibility of its geometrical characteristics and aesthetic qualities which allow us consciously to perceive external space as rural space [7]. Simply stated, the rural public space, it means space can be perceived directly, it consists of three main parts: public open space, neighborhood unit and architectural interior space. Since human being entered into the civilized society, the neighborhood becomes one of the essential parts of the lifestyle of human-being. Neighborhood unit was constructed out of mankind’s need for secure, for social events, for economic development. Neighborhood units are the place where the social activities are mainly conducted. Therefore, the square in the center of a primitive tribe, that is the earliest known
neighborhood unit [8]. The rural development is the course of the development of human residential environment, the symbol of social development. The sustainability of the township is an important part of sustainable development of the entire society. In the process of township development, every township has its unique history, cultural tradition, customs, environment, which find reflections in its neighborhood unit. The neighborhood unit as the basis of the rural public space, its do reflect the lifestyle of local residents. It is a direct portrayal of the social and historical development of a township.

The land surface system is a complicated system which includes lithosphere and atmosphere. The surface of lithosphere has been breaking down gradually into soil [9]. The weathering form kinds of soil-forming material, the surface of the land is covered by soil. Under the natural state, there is not space in the lithosphere. If the local government wants to make use of the vertical space, the government must develop the urban underground space. In the course of historic district protection, the most central and obvious difficulty and contradiction are not enough public space in the historic district. The excessive development and reconstruction of the overground will destroy the environment, style and features of the historic district to some extent. Under the premise of protecting the urban traditional layout. Meanwhile, the government must insist on the effective use of underground space, such as the construction of the underground garage, underground tunnel and underground market. This measure will not only solve the traffic, environment and land shortages problems but also protect the landscape and feature of historic district. Meanwhile, make full use of underground space of historic buildings, in this way, the more space can be expanded without affecting the appearance of buildings.

The green wall is the fully integrated product of modern landscape architecture theory and vertical greening technology. To study on the green wall is conducive to discover the forms and an exciting problem of vertical greening and improve the situation with appropriate methods and approaches. Though the reviews the process of developing green wall in the world and summarizes the experience and lessons. These practices could compensate for the lack of experience, and make its theories systematized. The green wall is the excellent technology as developing and interacting with each other between architecture and landscape architecture, all these make us necessary to connecting with other projects during planning. To deepen the understanding of the green wall. A lot of landscape architects are the stranger to the vertical greening technology. However, the lacks of vertical greening theory and practice guidance in planning, and therefore lead to the spatial value of landscape architecture is ignored. The research of green wall started early in developed countries and also achieved very great success. In order to improve the residential environment, the developed countries are summarized in the newly-updated knowledge, and put the theory into practices to make innovations and develop by green wall theory with the development of the practice.

Assumption of Spatial Reconstruction Method Used in Chinese Rural Historic District

Due to historical and social cultural differences, the process of rural development in China is different from that in European countries. The Chinese ancient rural community structure always in chessboard shape, that is the product of 3,000 years of the feudal hierarchical system [10]. There are a number of plazas in European ancient township, because of the innovation and humanity are characteristics of the urban development of humanism in Renaissance. The rural development of European ancient cities mainly on the extroversive pattern. But, the Chinese ancient rural communities’ development are based on the introversive pattern. After entering the 20th century, the dominant direction of rural development in China is converting to extroversive pattern [11]. For all the differences between Chinese rural historic district and western rural historic district, but people are the key element in rural development, people make the difference more than the buildings and rural development plans. Only when the people live in the township as a subjective existence, then the township becomes meaningful and specifically orientated. As the center of the township, the problem is serious in the historic district. The development and protection in the historic district have been received great attentions in
developed countries. Due to the characteristics of the historic district, the public green spaces are increased through the construction of neighborhood units. Because, compare with large city park and square, the neighborhood units are more suited to the historic district. But, I still think that the existing public space of the historic district did not fully be used. If I can rational planning and make full use of the existing public space in the spatial structure, it will greatly improve the utilization rate of local communities.

Since the 1920s, people started to reflect upon the real meaning of city, landscape architects have put the construction of neighborhood unit on the important position in steps. Today, western developed countries have the mature theory and practice experiences of neighborhood unit construction in the historic district. According to the analysis and study of the previous cases, I have summed up the major features of spatial reconstruction in historic district:

A. Non-design and homogenization: people usually go to the community parks or large squares on weekends, and few people go to the community park every day, in addition to the seniors and children. But, we can see that the neighborhood units are more often used on weeknights. As we can see from the example district, the neighborhood unit as an essential section of residents’ daily life. The design of neighborhood units was simple, practical and easy to be popularized.

B. Local government pays attention to protecting and developing the historic district: the urban culture is developing along with the rural development. The combination of traditional culture and times feature that is most important part of the essence of local culture. With the development of city, neighborhood units, as the carriers of rural culture, plays a very important role to carrying forward the urban culture and history. The neighborhood unit, as the existence of the public space, it is a large and wide system which involves the whole township. Which is a combination of the local history with public space environment, from the case studies.

C. Public participation: during the design process, the planner should follow the residents’ idea, and to meet their reasonable demands. The questionnaire is the simplest way to ask for advice.

D. The public space should be harmony with the architectural style of surrounding areas. The public space is an important part of the historic district, the traditional architectural style of the feature is basically through the materials, pavements and public facilities. The cases have in common that the pavements, materials and public facilities were all designed based on the continuation of traditions.

E. Innovations of the historic district development model: from these cases, we can see that the development model of the historic district is not only restricted to government investment. The government should take measures to encourage enterprises to invest in spatial reconstruction projects.

F. The development of underground space plays a positive role in the protection and development of the historic district. Underground space development has special advantages in historic district protection and development, other ways cannot replace it.

G. The green walls can improve the quality of the public space, and make the landscape have a higher public recognition and affinity. The neighborhood unit, the underground space and green wall, the three methods build up the rich and colorful scenes of the public space.

**Summary**

Though the research of literature, you can find that all excellent cases in the world according to the actual situation of the local environment, history and culture adopted different design methods. A successful design proposal, which has an important meaning for the reconstruction of a historic district, is obtained by analyzing the comprehensive local situation. The successful master plan can avoid the destruction of irrational development in the historic district, enables the government has the internal motivation to truly protect the historic district, and also promote local economic and tourism development. Protecting the historic district, and in the meantime make full use of existing land resources to improving the living environment, and bring their recreational, educational and
ecological functions into play is a good alternative to removing them. This is an important way to achieve the sustainable development of the historic district.

While European countries show the mature theory and practical experience in the historic district spatial reconstruction, in China has great practical significance, but more should be based on the conditions and characteristic of China, there is a difference between western architecture and eastern architecture. In China, the land belongs to the country, it is biggest different between China and other countries in development and protection of historic district, which determines that the development and protection of historic districts are only by the wishes of the government. But these cases still can be used for reference to my design proposal of spatial reconstruction in Tongxin rural historic district. The historic districts in China are very abundant, it has laid a good foundation for historical and cultural inheritance. But, we can see from the practices of historic district development in China that there is so many problems with rural development. Especially during the fast development of the rural construction period in China, local governments also lack the consciousness and measures in protecting and develop the historic district in accordance with their characteristics.

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