Research on the Development of Spatial Renewal Design based on Old Rural Buildings

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Abstract. Under the specific implementation requirements of "rural revitalization" and a number of national policies on the construction of beautiful villages, it is also a positive attempt and response to how to get rid of the most direct contradiction and subsequent development of Chinese villages. Pointed out that the development of the country should not be merely a return to traditional, need to seek a reasonable way to balance the development direction of the village, and get the correct position in the development of their own in the future, targeted to solve the dilemma facing the country, retain their own characteristics, in under sustainable development and the basic principles of people-oriented, To achieve the organic development of rural areas with micro-update design strategies and principles. This paper constructs a research framework from three directions: First, it studies the main current situation and contradictions of rural areas through a large number of field survey villages, summarizes the relatively successful practical cases of rural transformation at present, classifies and compares the basic situation and development situation of the surveyed villages, and summarizes the main development routes. Secondly, the composition and transformation of village texture under the disorder evolution and orderly intervention are studied through the composition micro-elements of villages from bottom to top. The reconstruction and continuation of the old building space under the guidance of micro-renewal is analyzed comprehensively from the symbols, language and constituent elements of the old building. It emphasizes the important influence of place spirit and special memory points on villagers' emotion and determines the protagonist status of villagers. Thirdly, through the evaluation and analysis of Nanhegang Village and the conceptual design scheme, it studies how the village carries on the spatial function transformation and the life continuation under the guidance of the micro-renewal strategy.

Keywords: Micro Update; A Rural Settlement; Old Buildings; Space; Conversion.

1. Introduction

1.1 Research Background

With the rise of rural construction boom, the Chinese countryside, which is constantly protected, restored and updated, has passively entered the construction and development of urbanization and modernization. In this state, the development has long been guided by the mainstream of urbanization and the basis of construction[1]. Led to the weakening, the country's dominant texture in the country and labor flow, land transformation, essential changes have taken place in the aspects such as capital development, caused the disintegration of the village structure, deterioration of rural environment and the decrease of the villagers' sense of belonging, village gathered spirit lost status, widening gap between urban and rural areas and a series of problems.

Chinese villages are opening up from an isolated and closed space to urban space, and the boundary between urban and rural areas is gradually blurred[2]. On the one hand, this change is due to the external expansion of the city to get closer to the countryside, on the other hand, the countryside itself wants to break the closed and backward status quo and seek a new direction for survival. The spatial transition between them includes the reconstruction of original rural buildings and self-built houses conforming to rural development; The restoration of rural natural ecological environment and the construction of man-made landscape environment; In terms of the restoration of rural basic farmland area and the intersection of other industries and cities, such changes have exerted unprecedented influence on the whole village space. Urban sprawl increase both the road infrastructure and public service facilities in urban and rural areas, establish and gradually seep into the villages, the

transformation for traditional closed the country to the modern open country important development structure, the development of the rural road led to the village architecture to urban style evolution, so the traffic road development accelerated the pace of rural and urban connection[3]. However, the overall structure and style of Chinese countryside should not be a uniform arrangement and layout form, but should have complex dynamic development characteristics and be a free and individual rural settlement space. Therefore, the change of rural settlement space and ecological environment should respect nature, culture and villagers. If the government ignores nature and blindly seeks self-appreciation under economic development, and the government does not implement policies and human intervention, and adopts a laissez-faire attitude, the fabric structure of rural settlements will be constantly destroyed and even disappear[4].

1.2 Research Purpose and Significance

In China about the rural reform development from early infancy to the mature stage gradually, aimed at the weakness of the rural development itself in the economic aspect, this article mainly in small scale transformation way, to point with surface, using micro updated concept of urban transformation, as the basic strategy, alleviate the limitations of rural development and pressure, strive for the realization of the aim of small into big returns. It is necessary to avoid blindly pursuing formalization in rural reconstruction, and ensure people-oriented and humanized transformation. Rural development needs to realize the harmonious relationship between human and natural environment, rather than to meet the policy requirements and stimulate local economy, and unilaterally realize the external beauty of villages[5]. Rural reform one of the most fundamental purpose is for the sake of its protagonist, the villagers in their homes the happiness of life, is to promote our country to the specific requirements of the implementation of well-off, in developing to avoid into the erroneous zone of urban development, city has experience of error, protect rural traditional forms and characteristics, realize people, village, environmental symbiotic relationship. Therefore, the main purpose of this paper is to seek a direction that is truly suitable for the renovation and transformation of most rural areas in China, based on the close connection between natural and humanistic environment, villages, buildings and space in the common and open social background of urban and rural areas[6].

Starting from the whole, grasp the integrity of rural context, rural renewal is a process of rural regeneration. According to the specific requirements of the rural revitalization strategy, the new-style rural renovation should start from the overall perspective of rural development. On the basis of maintaining the original form, the countryside can always be maintained as a continuous, coordinated and unified whole, so as to promote the organic and sustainable coordinated development process of the countryside[7]. Micro-centered rural improvement, rural micro-renewal advocates starting from subtle points, small-scale or local based transformation activities. With the point into a line, with the line with surface, strive to use the minimum and most reasonable investment to stimulate the maximum income results, and demand in a short time to have an impact, and then to the whole space to promote the development of the role[8]. Aim at sustainability and activate rural self-regulation system. The premise of micro-renewal and transformation of rural architectural space must respect the original space, protect the spatial characteristics and structure, stimulate the regeneration of rural self-regulation ability, so as to gradually improve and realize long-term and sustainable development.

2. Development Trend and Theoretical Reference of Rural Renewal

2.1 Rural Evolution and Dilemma

There should have been a clear demarcation line between urban and rural areas. With the mutual flow of population between urban and rural areas and the radiation effect of urban development on rural areas, this demarcation line gradually dissolved and began to form a new boundary line, with ambiguity and uncertainty, which could not accurately and clearly divide urban and rural areas. The fundamental reason for this phenomenon lies in the emergence of a new phenomenon of spatial

environment with functional integration and property crossing between urban and rural areas, which breaks the traditional inherent concept of rural areas, and the emergence of hybrid urban and rural concepts such as urban-rural fringe and urban village. The main purpose of in-depth local practical research is to investigate the characteristics and current situation of rural architectural space, but the premise of studying architectural space needs to make clear the development process of rural China so far. Under the influence of the current environment, the contradictions faced by the countryside and the problems that need to be solved urgently are included. At the same time, attention should be paid to the road and direction chosen by the countryside in the process of transformation and development [9].



Figure 1. Rural hollowing out

Poor economic development, single and backward industries, limited income of villagers and other problems are the main reasons for rural labor outflow. At present, the rural resident group is mainly composed of the elderly, women and children. There are a series of problems: for example, the aging of the rural population is significant, the labor force gap, backward education resources, lack of economic sources, poor quality of life and so on. This is shown in Figure 1.

2.2 Choice and Transformation

Under the guidance of national policies such as the rural revitalization strategy and the development of beautiful countryside in the New era, and relying on the development of rural tourism and the strengthening of the awareness of protecting traditional culture, many villages began to carry out commercial development by retaining and protecting traditional architectural features and historical buildings in a planned way, hoping to promote the development of local economy. This method is one of the main strategies for the development of most rural areas. However, the implementation of this method will inevitably lead to the excessive pursuit of economic benefits in the process of development, compulsory repair and protection of old buildings, blindly pursuing the historical original, and dividing the untouchable boundary between historical buildings and modern people. At the same time, the blind pursuit of the overall appearance of the village has brought modern concrete and other cold materials to the countryside in a large range. The countryside has spacious roads, new facades, neat and uniform houses, but also lost the inside information. In order to realize the real revitalization of rural areas, rural tourism can not only drive economic development. The most important thing is to explore rural characteristics, improve residents' living conditions, properly solve the problem of villagers' resettlement, and promote the coordinated development of rural resources. To avoid blindly pursuing the superficial beauty of the countryside, we need to learn to attract foreign tourists with the help of the surrounding natural environment[10]. It should be clearly recognized that the rural transformation behavior that does not start from the standpoint of the protagonist of the villagers will eventually lose its characteristics and become a short-term profit-seeking tool. Therefore, in the process of rural transformation, we need to clearly realize that all the design that cannot be based on people is only an idea on paper after all. The fundamental purpose of rural development is to seek social welfare for villagers, to achieve sustainable survival and

development, to achieve an ecological and livable living environment, and to perpetuate Chinese rural characteristics for a long time.

2.3 Theoretical Reference of Rural Renewal

2.3.1 Relationship between Old and New

How rural things develop, we must clearly understand why it needs to develop, how things will change in the process of development, to thoroughly analyze and understand these issues is complex and difficult. "New" relationship is the antithesis of the "old" and other things with the passage of time development change, the development of the so-called dying on behalf of the old things, new things slowly begin to emerge and to a certain extent, instead of part of the old things or directly replace the old things, and then in the process of a new round of new becomes old, so the generation of new things is based on the old things to develop[11]. The so-called "no breaking, no breaking" does not mean the total denial of the old things, we should learn to inherit and carry forward the fine traditions of the old things, and cultivate the spirit of innovation to promote the progress of new things. In the process of rural renewal, the core issue is to deal with the relationship between the old and the new, explore the coordination between the old and the new space, propose specific design methods, and improve the specific design methods of rural renewal based on previous relevant cases.

2.3.2 Metabolism

Famous Japanese architect black JiZhang metabolism theory is put forward, he thinks that "the city and the architecture is not a static relationship, but rather as a biological metabolism of dynamic process of 60" this process is the process of urban and environmental structure transformation in balance in the form of an order, because there are changes in the city can be given the definition of life. Metabolism is a disordered development law in which new things replace old things. It is a long process of replacement. Traditional villages are more suitable for the theory of "metabolism" than cities that change with time under planning. The formation of the countryside has never been a specific standard requirements, mostly by the mountains and rivers, with the development of the population, the formation of settlements. The countryside is alive, and overthrowing everything is always aimed at the inanimate organism[12]. However, the countryside has the changes of spring and autumn, the neighbors and the people, and the nostalgia memory, which is not suitable for blindly denying the old things and pursuing the new things. The so-called living village does not only mean that there are people living in it, but also that all natural life exists together. Under the large life body of the whole ecosystem, the settlements, buildings, paths, grass, soil and so on are endowed with vitality from the large to the small. But the most important part is the human breath. Unfortunately, most villages in China are slowly losing these breath. So at the beginning of the rural reform the introducing the theory of "metabolism", was not meant to overturn the traditional villages all does not meet the modern needs and aesthetic, and many other aspects of the old things, but the village as a living being, follow the rules of its natural and human development, to confirm the part which need to be replaced to restore life cycle, prolong the service life of the village[13]. The ultimate goal is to bring the lost popularity back to the countryside from the city and make the countryside "live".

2.3.3 Organic Renewal

"Organic" stands for life and refers to the unity of coordination and cooperation among various parts of things. It emphasizes the interrelation of internal components and represents the idea that the whole is greater than the parts. Organic renewal needs to follow the specific situation of the project site and the main design and transformation, formulate a reasonable scale and scale, and develop the relationship between the present and the future in a positive and beautiful direction[14]. It emphasizes the appropriateness of the renewal process, coordinates the adaptability of space with nature, humanity and the overall planning scheme, attaches importance to the continuity with modern technology and traditional skills, and intervenes in the space renewal with appropriate principles and means.

3. Rural Micro-element Composition from Bottom to Top

3.1 Texture Composition and Evolution of Rural Settlements

Rural areas are mainly composed of three parts, namely living, production and ecology, including activity areas where people live together, working areas such as farming as production factors such as agriculture, and natural areas such as ecological environment, mountain woodland and river system. The geographical environment and the degree of social and economic development have influenced the external morphological evolution of rural areas, the basic units of which are composed of various spatial elements in different forms and sequences. Material elements are main factors affecting the formation of village form, including natural environment, infrastructure (roads, network, communications, water, etc.), social services, pension, education, medical treatment, etc.), indoor and outdoor space environment (street road, public squares, node space, etc.), every major elements below contains a number of minor elements at the same time[15].



Figure 2. Rural development planning

Physicist Boltzman pointed out that the evolution of the world we live in is a process from order to disorder. If you order on behalf of the material, disorderly representative as a result, so things are more likely to become mess, so if you want to avoid the final result to we need in the process of the evolution of the things to do and keeping, to promote things a new and good direction of the evolution in the development of the rural space. "The Tao Te Ching" mentioned: "The way of heaven, its bow and! High and low, the next to lift, the remainder of the loss, inadequate to make up for it. The way of heaven is broken and filled." Therefore, the law of natural development means to discard the dross, take the essence, and use the advantages to make up for the congenital missing part. The renewal of China's countryside faces many difficulties. If the countryside continues to develop itself in a single and disorderly way, the unique culture and elements of the countryside will disappear in the near future. So under the respect natural unordered evolution law, need human factors to intervene at the same time, will be included in a new country and orderly system, is committed to looking for a new order of things to balance the contradiction between the old and new things, to the integration of modern and traditional design idea and ways to solving the plight of rural development space is irregular. The development plan is shown in Figure 2

3.2 Continuation and Reconstruction of Old Buildings

Compared with urban architecture, rural architecture is the indigenous traditional architecture, which is closely related to production and life. Life and production mode determine the clan and belief of different people. In addition to residential areas covering the largest area, rural areas also include shops, workshops, archways, opera stages, academies, ancestral halls, temples and other active buildings. However, not every village has all the activity space, which is related to the development of the village's own economic conditions. The present rural construction from the

traditional rural nature development up to now, many parts of the rise of the new building is to combine modern and traditional characteristics in it, from the study of source of local architecture, the advantage of other parts of the building at the same time achieve mastery through a comprehensive, enrichment both unique architectural art structure, integrated modern technology can meet the local form and technical requirements. At present, in the process of rural building renovation, in order to make the building better meet the development needs of rural modernization and avoid villagers' unauthorized construction behavior, designers should be invited to intervene in the initial planning. A good vernacular architecture designer mainly plays an auxiliary and guiding role. The most important thing is to let villagers participate in it, respect their will, choose local construction techniques, and control the overall situation of the designer to complete the transformation of vernacular architecture.

3.3 Update the Principle

The renewal and transformation of rural architecture is not only the inheritance and continuation of tradition, but also the innovation under the coordination of various factors. After a long period of exploration, a series of local practice methods are adopted to activate the vitality of villages and transform to a dynamic and sustainable development direction. Rural housing culture is essentially a dynamic system, which has stability, but at the same time, this stability is limited by time. Once economic conditions and superior policies are contradictory with rural development, the traditional pattern of settlement building will lead to qualitative changes. The most direct conflict is that the status quo no longer meets demand, especially in rural areas where people are the main body. Therefore, no matter how rural buildings are renovated, a renewal principle suitable for most buildings must be formulated before the renewal means. Based on the specific contents related to micro-renewal intervention in this paper, combined with the "5R principles of sustainable development of buildings, namely, Revalue, Renew, Reuse, Reduce and Recycle, the continuous reconstruction of rural buildings should follow the following principles.

4. Conclusion

The study of micro-renewal in the old rural building space is not only a theoretical support and space design method, but also a series of guiding strategies and the value orientation of rural development. This is also the obvious difference between micro-renewal and other similar guiding concepts. The research of this paper is established in the rural settlement space, cultural space, architectural space, social space and other aspects of the formation of the research framework, from the object to the subject, from the material level to the spiritual needs level, from the static internal space to the dynamic external space of the research process. Through the study in this paper, various space can understand rural old buildings still need further study design to planning, architecture, landscape, social, cultural, psychological, economic and cultural aspects of multi-level comprehensive study explores, so in the process of follow-up studies to the research topic needed to expand to more involved discipline crossover study, From a more diversified perspective to examine the continuation of the rural old architectural space inheritance and renewal conversion problem. In addition, China has a wide land area and abundant resources, and the rural areas are deeply influenced by regional culture. Therefore, in the subsequent research, we should carry out regional division and study the typical villages in different regions, so as to expand the depth and scope of the subject research.

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