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Research on Architects' Intervention in Rural Construction Path under the Background of Rural Revitalization Strategy

To cite this article: Yaolong Zhang *et al* 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **242** 062016

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Research on Architects' Intervention in Rural Construction Path under the Background of Rural Revitalization Strategy

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Abstract. Studying the path of architects involved in rural construction in China can truly promote the sustainable development of the countryside and achieve the great strategic goal of rural revitalization. Based on the relevant literature, this study explores the differences between individual values involved in rural construction and the actual needs of the people, the problems caused by the imperfections of the existing rural environmental construction guarantee mechanism, the limitations of architects' intervention in rural construction, and puts forward the outlook: (1) Architects should return to the values of "vernacular" and consider the ways of intervening in rural construction from the three levels of technology, humanities and society. (2) Architects should guide the villagers to participate in rural construction throughout the whole process, give full play to the traditional construction techniques, and awaken the villagers' awareness of self-protection of traditional villages. (3) Establish a mutual cooperation mechanism to ensure that all parties' construction forces can exert their maximum effectiveness in rural construction. (4) Architects should fully consider the planning of industrial space suitable for regional ecology and culture, explore the dynamics of rural endogenous life, and combine the renewal of industry and social space to achieve sustainable development of the countryside.

1. Introduction

General Secretary Jinping Xi proposed a strategy for comprehensive rural revitalization in the report of the 19th National Congress. The problem of agricultural and rural peasants is a fundamental issue concerning the national economy and the people's livelihood. The issue of solving the "Three Rural Issues" must always be the top priority of the whole party. To solve the "three rural issues", social organizations such as social welfare organizations, rural and agricultural experts, architecture and planners should actively participate in rural construction practice activities, and make useful explorations and contributions in rural environment improvement, local architecture construction, rural cultural restoration, rural social guidance and even rural industrial assistance. Engaged in construction activities in the local environment, the architect's professional role and identity are more subtle than in urban construction projects. Their work patterns are diversified and may be combined with the promotion, supervision, construction and even business operators [1-3]. Studying the path of architects involved in rural construction has a strong reference for the improvement and improvement of the architect's intervention path in the process of multiple subjects participation in rural construction at this stage. More importantly, the architects can only further strengthen the study of rural construction and have multiple subject capabilities to truly promote the sustainable development of the countryside and achieve the great strategic goal of rural revitalization.



2. Research object and method

2.1 Research object

China has a vast territory and regional differences in rural areas. Its complexity and particularity make it impossible to draw on a unified model. Therefore, this study takes a part of the strength of the rural construction-architects as the research object, with their participation in the rural construction, the participation model, the individual value, the solution to the rural problems and the cooperation relationship with other participants as the entry point. Explore the path of architects involved in rural construction.

2.2 Research method

This study explores the differences between the individual values involved in rural construction and the actual needs of the people, the problems caused by the imperfections of the existing rural environmental construction guarantee mechanism, and the limitations of architects' intervention in rural construction. It is expected to play a certain role in promoting the sound development of rural construction in the future and the effective development of the professional competence of architects.

3. The mode of contemporary architects involved in rural construction

3.1 "Top-down" design guidance model

The introduction of new rural construction in 2006 led to the construction of a series of construction projects in China's villages and towns to build new rural houses, improve rural infrastructure and environmental governance. The proposal of "beautiful villages" led more architects and planners to leave the city and join the rural construction. Guided by the government and involved by the architects, it presents a "top-down" (Figure 1) design guidance model [4]. This model has become the most common mode of rural construction in China because of its short construction period and good effect. However, this kind of government-led operation has its own drawbacks, mainly focusing on the enthusiasm and implementation bias of the dominant role in stimulating the participation of all parties in the countryside, such as the "vanity projects", "whitewash projects" in the new rural construction. At the same time, the vacancy of the house and the waste of resources due to the decision deviation [5]. Under this model, most of the architects did not really go deep into the countryside, understand the life and actual needs of the villagers, and lacked in-depth thinking about the social problems of the village. The work content was limited to the design of the drawings, and then was built by other construction agencies.

3.2 Architect-led, multi-cooperation

In recent years, the main body of rural construction has gradually shifted from the "government-led" development model to the "multiple participation" [6]. In the rural design with multi-participation (Figure 2), the government, as the initiator, decision-maker and organizer of rural planning and construction, aims at comprehensive interests and coordinates and participates in the planning process. The villagers are the main participants and beneficiaries of rural planning and construction, and are the key to ensuring the implementation of the plan. NGO, planning and design teams are the technical providers, concept guides and interest coordinators of planning and design, which are the key to ensuring the implementation of the plan and the sustainable development of the village. In this mode, the architect's work runs through the previous research, design and construction, while paying more attention to the social effects behind the architectural activities, and closer to the state of building [7]. The architect himself went deep into the village to participate in the preliminary research, architectural design, construction process, and passed the construction experience to the local villagers. During the construction process, the local villagers learned new construction experiences and methods, and fed back the traditional construction process to architects. This is a model of common construction and a necessity in the choice of contemporary rural society.

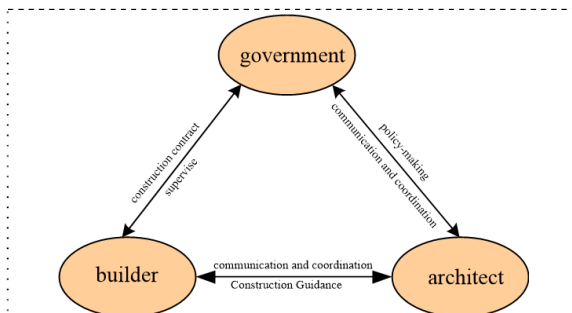


Figure 1. "Top-down" design guidance model.

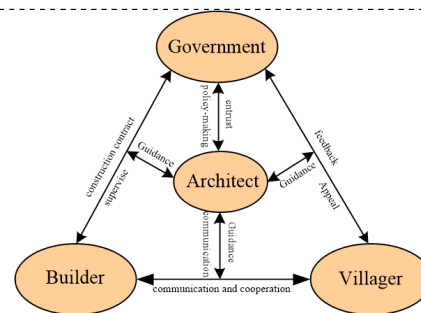


Figure 2. Architect-led, multi-cooperation model.

3.3 Summary

The two ways in which architects participate in rural construction have a process of technical output in terms of the entire construction process, but only in the participation process. In the "top-down" mode, the architect is responsible for the provision of professional skills, which is a division of labor, and the architect-led, multi-participating model is actually a "Common construction" model. In this mode, the architect and the villagers are the main part, and the government department is the auxiliary rural construction model. On the basis of providing technology, the architects need to deeply participate in the construction process, cultivate the ability of the villagers to build their own, and establish good communication methods with the villagers and other participating parties. Based on the rural rejuvenation under the "Common construction" model, architects and villagers are not only a community of construction, but also a community of thought and emotion[8].

4. Thoughts on Contemporary Architects' Intervention in Rural Construction

4.1 Individual value and actual demand

The rural construction activities have strong autonomy and spontaneity, and their organizational model, construction process, space form, building materials, construction skills and cost level are all different from urban construction[9]. The countryside is another paradise for architects, where they can show their talents more freely. The ideals of architects and the reality of the countryside are intertwined and gamed[10]. The training of the architects is mainly based on the urban environment. The development level of the Chinese countryside is obviously lower than that of the city. Most of them are not familiar with the rural environment, and will naturally apply the urban design thinking to the rural design. In 2008, the team of Professor Wu Enrong from the Chinese University of Hong Kong conducted a construction of an ecological primary school in Maosi Village, a poverty-stricken mountainous area in the Mainland. This design project was designed from the perspective of "earth construction" and adopted modern design techniques. This design project won the Asia's Most Influential Design Award and Asia's Most Influential Sustainability Special Award. However, many problems occurred shortly after the project was used by local villagers: The wall skin was washed away due to poor waterproofing, the villagers feel that the exposed skin is very ugly. This project has now been idle. The villagers spontaneously painted white on the outer wall, added glazed tiles to the gable wall, and built a new building on the side of the original building as a place for village committee.

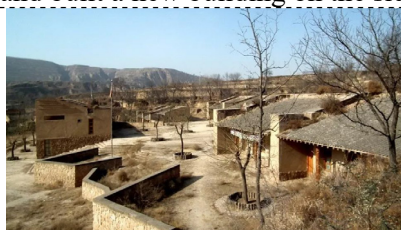


Figure 3. original appearance



Figure 4. Independent transformation

4.2 Imperfect rural construction mechanism

The construction industry in the city is subdivided and has fixed procedures and models. However, in the countryside, it is a model of self-built and mutual assistance. The undeveloped mechanism and the process still to be standardized in rural construction make the project retain its particularity and diversity. Faced with this particularity and diversity, architects need to consider establishing a mechanism to organize the various entities built in the countryside, thus promoting better development of the construction work. In rural construction, the architect's work can not only be placed on the level of technical guidance, but also in the management, management and co-ordination, and the level of collaboration between other participating entities.

4.3 The limitations of architects' intervention in rural construction

The current rural recession in China is not only a spatial representation, but also reflects the loss of the rural youth population, the collapse of grassroots social organizations, the low price of agricultural products, the collapse of agricultural production systems, the loss of rural traditional culture and the loss of skills. As far as current rural construction is concerned, its promotion often relies on external intervention forces. However, this subjective initiative that relies too much on the help of outside forces and ignores internal forces is not sustainable. The architects focused on building the building and focusing on the research, planning, and construction process before the building was built. After the building is put into use, there are fewer considerations for the later operation management. The users and managers of the building space are villagers, and they lack mature operational and management mechanisms. Constructing appropriate management and operation mechanisms is the prerequisite and guarantee for the normal operation of buildings. In addition, the sustainable development of the village needs the support of the industry. If the architect only intervenes in rural construction through the simple material space, there is no way to change the rural poverty from the rural social level.

5. Conclusion and Outlook

5.1 The return of the architect's "vernacular" values

Architects need to have a deep understanding of the country's natural environment, social environment, economic level, traditional construction skills, and understand the living habits and cultural connotations of people living in this land. Architects should start from the actual situation in the countryside to face the specific problems faced in rural construction. Respond to the natural and human factors in the site through the form and materials of the building; meet the needs of energy saving and environmental protection by applying adaptive technology to cope with local climatic conditions; maintaining the continuity of regional culture through the inheritance and reference of traditional architectural forms and spaces; by following low-tech, low-cost strategies, using locally accessible building materials and improving traditional construction techniques to adapt to rural economic and technological conditions. Architects should consider the three aspects of technology, humanities and society to achieve sustainable development of the countryside.

5.2 Architects guide villagers to participate in rural construction

The users of the rural space environment are not architects or government planning departments, but the villagers themselves. The villagers have the right to participate in the design of new houses, and may also bring local wisdom to the architects to enhance the practicality of the design. Especially in terms of the protection of some traditional villages, by letting the villagers participate in the design of the rural space, they can awaken their awareness of self-protection of traditional villages. Therefore, the architect should make reasonable and effective interventions, which can link the users of the building with the design subject, and activate the optimization mechanism to continuously inherit the building skills of the traditional dwellings, and at the same time reduce the cost of construction. On the one hand, architects should guide villagers to accept value and aesthetic concepts as well as advanced technology and actively learn local folk skills.

5.3 Establishment of multi-party collaborative construction mode

Rural construction should give full play to the important role of multi-subject participation, use multi-subjects to promote the enthusiasm of villagers to participate in rural construction, improve the social and economic benefits of rural construction, and enable rural construction to fully reflect the true demands of villagers and protect the traditional style of villages. Secondly, let the villagers become the main beneficiaries of rural construction, balance the interests of each subject and increase the participation of multiple subjects. Participants in rural construction should make full use of their respective resources and advantages, clarify their respective job responsibilities, and form a cooperative mechanism with appropriate functions and efficient and orderly. In addition, rural construction activities can be combined with the teaching and research of local universities to obtain human and technical support.

5.4 Industrial space intervention suitable for regional ecology and culture

The sustainable development of the countryside requires the support of the industry. In the process of rural construction, architects should fully consider the process of re-establishing the relationship network with different factors of capital, thinking, action, facing different historical and modern, local and global, manual and industrial factors. Eliminate the duality between urban and rural areas. The rural environmental space designed by the architects needs to have a positive impact on the rural industry and society. After the material space is well established, it is necessary to explore the dynamics of the rural endogenous, combined with the renewal of the industrial and social space, so as to attract rural talents to return and achieve sustainable rural construction.

Acknowledgement

This work was financially supported by the Youth Science and Technology Innovation Foundation of Longdong University (No. XYBY140212; XYZK1710).

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