

The Dwellings Spatial Form Of Traditional Village Based On The Tunpu-Culture In The Minority Area - The Case Study Of Longli Village

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Abstract: This paper based on the concept of New-type Urbanization and research Guizhou Tunpu-culture traditional village's protection and development from optimizing dwellings spatial form. New-type Urbanization planning, NUP, is a new research field dealing with sociology, ecology, architecture, urban planning and tourism industry. It is a people-centered urbanization aims to replace previous land-centered urbanization. However, there is little specific guidance on protection of residential and traditional village culture. Using Longli village as an example, this paper argues that the human settlements developed by Wu Liangyong can provide a framework for the spatial form of typical residential buildings. Also, it gives to protection and development of Guizhou Tunpu-culture villages under New-type Urbanization Planning. Furthermore, it provides a method of how to combine modern life into traditional village for future.

Keywords: human settlements, the New-type urbanization, traditional village appearance and culture protection.

INTRODUCTION

1.1. BACKGROUND

The primarily target of the New Urbanization Planning is transfer from “land-centered” urbanization into “people-centered” urbanization. At the early stage, this theory apply into the historical ancient villages (towns) protection promotion project and rural cultural fundamental services through solving problem that improving rural public cultural service. Currently, there are five mainly objects of the NUP, which one of them is optimization layout and form of urbanization. Otherwise, the protection of traditional village not only pay attention to the public culture development but also pay attention to the local residential dwellings spatial optimization. However, less researchers deeply study on local culture as elements play a positive role into traditional dwellings spacial and form optimization. Additionally, it remain its original cultural appearance without the concept of “people-centered”. Moreover, scholars less focus on Guizhou Tunpu-culture dwellings during the period of Ming dynasty with the Han-people immigrated from Jiangnan area. Furthermore, Guizhou Longli village is a traditional village with 600 years history of Tunpu-culture, which should pay more attention to inheriting own cultural national characteristics for the further research.

1.2. Importance

NUP relied on the theory of Human Settlements, which aims to improve the quality of residential environment with the application of smart device and fundamental equipment from the modern life. Otherwise,

researcher demonstrated that the environment of traditional village should be a independent regional society that social relationships and activities should be happened among this group⁶. Notably, the concept of traditional village should be composed with human activities and natural environment during specific historical time. At the same time, scholar displayed that the core point may solve village protection problem that intermingled cultural heritage and tourism development⁶. Literally, the environment protection of traditional village need to divided into natural culture and social environment, However, ancient villages faced the severe challenges that many villages blindly develop local tourism industry ignored own national characteristics lead to residential living area were destroyed with image-driven behaviour. Therefore, the reason of traditional villages protection not only the application of historical cultural value into local tourism industry but also focus on the application of local culture into different industries. Compared with previous research on Tunpu-culture in Guizhou among Tunpu-culture villages, it worth that pay more attention to local cultural dwellings with local economy development.

1.3. Previous Research

As previously described, the theory of 'Human Settlements' should pay attention to urban and rural area as research objective, which research hypothesis on both human and environment as the whole organic system. The target of this research aims to narrow the gap between urban and rural through systematically improve local dwellings environment quality². Following previous work, through remaining original spatial forms and architecture types in the protection area of natural traditional village may achieve village appearance and protection management. Scholar proposed that residential original form may be remained through the application of green building design and architectural logo design¹⁰. Actually, many traditional villages desired more tourists through local cultural sources displayed on blandly decorating residential building. Result in traditional village still hollow development with nondescript building appearance. Thus, ancient village historical cultural value and aesthetic value should be reasonable protected, which to play a positive role in currently residential condition and to promote sustainable development of settlements environment.

From macro-perspective view, previous research on the application of local cultural protection into traditional planning and management. Meanwhile, less attention to the relationship between typical dwelling internal spatial types and building construction from micro-perspective⁴. Furthermore, researchers stated that built the dimension that included spacial form variation, ecological environment revolution and social cultural immigration can detected the process of traditional village human settlements⁵. Currently, there are many academic research on 'traditional village' and 'human environment'. However, less research on systematically applied the framework and method of 'human settlement' into local residential environment protection compositions and categories. Additionally, human settlement development of ancient village should be combined modern life based on the NUP. Thus, further research on human settlement of traditional villages should concern about village transformation with own protection and development.

1.4. Research Purpose

This paper research on the protection of Longli traditional dwellings spacial area depended on the theory of Human Settlement. Based on the application of human settlements framework, it analyzed that traditional dwellings spacial protection importance, survival influenced factors and optimization direction. Thus, this paper

mainly detected following three targets:

1. Understand types of traditional dwellings' spatial into Tunpu-culture .
2. Detected reasons of the residential spatial influence traditional village protection.
3. Analyse the optimization measures between Tunpu-culture and local residents.

According to research purposes, these following research questions:

1. What types of traditional dwelling spacial in Tunpu-culture ?
2. How to optimize Tunpu-culture dwellings with the theory of 'Human Settlement'?
3. How to radially protect traditional villages from local dwellings building optimization?

The modern life based on NUP, it emphasized 'people-centred ' human settlements as research theory for traditional villages protection research. It provided protection measures that radially develop traditional village through local dwellings protection. This paper tried to review historical literature and planed to research the database of traditional village and human settlements. After than, field investigation as research method, and analysis Chinese Han-nation traditional village protection development in Jiangnan area. Organized research hotpots and existed questions for creating further deeply research on Human Settlements.

LITERATURE REVIEW

2.1. THE THEORY OF HUMAN SETTLEMENT

Currently, the needs of modern life based on the theory of NUP, the traditional villages are lack to attractions and activities for nowadays. Thus, for the traditional village research, Professor Wu based on western countries theory of 'Human Inhabitation 'and developed Chinese characteristics theory called 'Human Settlement'. It explained that one of targets among 'Human Settlement ' that improved the quality of residential environment, which need to concerned about the integration of society, nature, human beings, living conditions and supporting networks(Wu, 1996). Therefore, it discussed that the importance of residential living conditions reservation in traditional villages through the theoretical framework of 'Human Settlements'. Notably, it emphasized that social cultural environment factors and ecological natural factors should be concerned for residents. However, in term of 'Human Settlements', researchers found that the construction of human settlements in rural areas can be divided into "hard" environment (i.e. rural health, housing conditions and infrastructure) and "soft" environment (i.e. farmers' economic burden and social services)⁸. Among them, it explained that researchers need to pay attention not only to the "hard" environment of the total facilities to support residents' production and life, but also to the invisible "soft" environment of residents' daily life in the living space. Therefore, the research of traditional residential protection, many researchers separately studied the research on the "hard" environment and "soft" environment. Nevertheless, the research on linkage how to connect the "hard" with "soft" is the core relationship between "human behavior" and "environment", which is the effective direction for the protection and development of traditional dwellings in the future. According to the relevant historical literature, it found that the theoretical research on the protection of traditional villages based on "Human Settlements" depended on Western European countries research. Compared with China, the ecological value, cultural value and aesthetic value from traditional dwellings have begun to attract people's attention in recent years.

2.2. RESERVATION STRATEGY FOR TRADITIONAL DWELLINGS

The reservation strategy for traditional dwellings separately emphasized the concept of 'residents' and 'environment' at the early stage, and studied on both the tangible and intangible of cultural ecology into the Eco-system¹². In this strategy, it emphasized the relationship between integrity and locality. Therefore, this paper studies strategy from three aspects: maintaining the unity of the village, protecting the integrity of village and maintaining the authenticity of village. Firstly, it emphasizes that the cultural value is reflected in the visible buildings and ancillary facilities. Hence, those buildings are part of the cultural connotations. Therefore, we should not only pay attention to the protection of individual houses, but also pay attention to residents daily life and production way. Secondly, build "Ecological Museum" may protect the village integrity. The "Ecological Museum" collect data on the current residential life and the local folk ecology. Finally, due to the cultural ecology, the traditional village as a complete system, it reflected the local culture and society. Therefore, the authenticity of cultural spirit is the most important factor in the cultural system. Thus, this paper extended the cultural ecology protection strategy and optimization protection strategy

2.2.1. CULTURAL ECOLOGY PROTECTION STRATEGY

The strategy of cultural ecology protection focused on the ecological overlap of existing residents and cultural connotation¹¹. From previously published studies, it found that many scholars have begun to integrate biochemical elements into historical and cultural villages. Researchers divide cultural ecology into four levels from the "people-oriented" direction. And respectively in-depth studied on the residents for survival needs and spiritual needs. In the survival needs, it found that residents choose the location that integrated the idea of "harmony between man and nature" into the surrounding ecological environment. Primarily, it found that many historical traditional villages are farming culture that can be divided into material farming culture and non-material farming culture. The material farming culture is the crops form as an ecological layout around the residential buildings, which can also provide survival needs. On the other hand, the non-material farming culture perform on the residential buildings through construction and decoration.

2.2.2. OPTIMIZATION PROTECTION STRATEGY

The optimization protection strategy is a strategy for the protection of traditional villages based on the development of urbanization¹². As previously described, researchers found that many villages choose to use the optimal utilization protection strategy to achieve cultural protection. Through integration and development of local cultural resources, villages can improve the local cultural tourism industry develop the economic benefits. Accordingly, this strategy believed that the modern technology application and restoration may not achieve the original appearance of the village. Therefore, this strategy focused on retaining the dilapidated buildings with original functions and layout to show the original appearance. At the same time, villages need to integrate into the modern equipment services that supported ancillary functions and the ability of services, which solved employment problems and increased income.

2.2.3. COMPARISON OF ECOLOGICAL PROTECTION STRATEGIES

Summarily, researchers tend to conduct cultural ecology protection strategy and optimization protection strategy. On one hand, cultural ecology protection strategy emphasized the concept of "human", which studied the cultural ecology integration from survival demand and spiritual demand. Thus, this strategy refer to the

material cultural ecology and the intangible cultural ecology, which biochemical protection of ecological environment and restoration of traditional residential buildings. On the other hand, optimization protection strategy indicated that damaged buildings can not be restored by modern technology. However, it emphasized that cultural tourism can drive the local economic development and prefer to perform the "living" cultural protection. Through cultural performance and national tourism to express local residents' daily life, which can achieve traditional culture protection and inheritance. Consequently, these two strategies that focused on the protection of "people" and "environment". However, both these strategies are still less attention to the relationship between "human" and "environment".

2.3. SUSTAINABLE PROTECTION STRATEGY

Compared with traditional dwellings reservation strategy, the sustainable protection strategy emphasizes how to protect and inherit the traditional village for the future. Thus, the concept of "demand" and "constraint" conducted into cultural landscape protection strategy of traditional villages, and provided a directional basis for the formulation of traditional landscape protection policies⁷. The sustainable protection strategy not only refers to the material form of cultural landscape, but also emphasizes human needs with the connotation of landscape cultural consciousness. The strategy stem from the initial social, economic, political and religious needs, and responded to the natural environment. Therefore, human landscape provides a new perspective for the further study of social evolution and man-land relationship.

2.3.1. LOCAL CULTURE DESIGN STRATEGY

One of the sustainable protection strategies for traditional village protection research, localization design strategy is the concept corresponding to globalization. It explained that traditional dwellings consisted of the local culture, economy and politics, which respected the local landscape, resources, materials and customs. The core of rural landscape protection is to maintain the humanistic spirit and activities. Traditional village positioning emphasizes sustainable development, which is a harmonious way of village heritage protection. This strategy emphasizes to achieve a healthy development of settlements, which to rebuild the local nature, to integrate between man and nature, to promote the revitalization of rural people's life and production. Therefore, the protection strategy of traditional residential measures from the design, function and visual landscape for in-depth study. Firstly, design strategy should priority to the original landscape ecological pattern for protecting the earth landscape. Secondly, function strategy advocated the concept of 'people-oriented' and emphasized spirit of place. Thirdly, visual landscape strategy divided into color landscape control, settlement pattern control and farmland protection control⁶.

2.3.2. URBAN PLANNING PROTECTION STRATEGY

Urban planning protection strategy is one of sustainable protection strategies. This strategy emphasizes the protection of geopolitical environment, village landscape characteristics and the reconstruction design of spatial pattern⁹. From macro-perspective, it emphasized to maintain the integrity of residential buildings and surrounding environment for traditional settlement space. However, it is necessary that traditional dwellings should be kept the internal space connection, which to avoid the harmony between new and old building construction. This strategy studied from three aspects of traditional villages: improving the ecological environment, protecting typical buildings and restoring the environment. Accordingly, the strategy emphasized

the respect of daily life and production with harmonious development of natural environment. Formed an effective management mode, and promoted coordinated development of ecological environment, which achieved ecological environment and social economy sustainable development. Moreover, the strategy according to the degree of internal renewal divided typical traditional buildings into three types: protective buildings, reserved buildings and reconstructed buildings. Traditional dwellings based on the status of different types to in-depth research and analysis. The strategy proposed that restored the environment of traditional villages that the restoration of existing walls, stone steps, trees, mountains, water systems and other elements of historical features.

2.3.3. COMPARISON OF SUSTAINABLE PROTECTION STRATEGIES

Based on the NUP, the sustainable protection strategy emphasized optimization and protection. On one hand, the localization design strategy focuses on the construction of local culture. The strategy hold that integrated the local culture and created new products through modern technology. On the other hand, urban planning protection strategy focuses on geographical protection. The strategy considers geography as the objective expression of blood-relationship, which established typical buildings to effectively protect traditional dwellings. Summarily, it found that urban planning protection strategy based on the concept of "environment" to create protection strategy with cultural heritage. For the further research, strategies not only concerned about the "localization" but also considered the "human factor".

3. RESEARCH METHOD

3.1. RESEARCH OBJECTIVE

This study adopts the method of case study that taking the traditional dwellings in Longli area as a typical case. Reviewed local historical literature and observed field that collected the data. From preliminary investigation of Longli area, it found that this area is located in Guizhou province minority areas. Longli was founded by the Han-people since 600 years, it has maintained that residents are the Han-people in the village without other cultural nationalities. Therefore, dwellings as the basic unit of village, it is necessary to deeply investigate its natural environment, human environment and social environment.

3.2. RESEARCH HYPOTHESIS

1. Longli area can produce different types of dwellings because of different ethnic cultural backgrounds.
2. Under the assumption of cultural infiltration, the reasons why various types of dwellings can to be existed.
3. It is assumed that the preservation of individual building can not play a positive role in the protection of regional spatial settlements.

3.3. RESULTS AND DISCUSSION

3.3.1. RESULTS

3.3.1.1. ABOUT LONGLI

According to the local records of "Longbiao zhi lve", Longli formerly known as "Longbiao", which was suppressed by Zhu Zhen that the sixth son of the Ming Dynasty emperor in 1385. There are 13 officials with families from nine provinces in the south of the Yangtze River were stationed here. It established "one government office, two courtyards, three pavilions, four bridges, five floors, six lanes, seven ancestral halls, eight sceneries, nine dwellings and ten temples". According to investigated, it found that the mainly residential

areas are existed that included Taojia courtyard, seven ancestral halls and one dwelling. It is pointed out in the dragon sign that the pottery courtyard is located in the northwest corner of the city.

The red line map of Longli area (2020 version) indicated the geographical location of Taojia courtyard (Fig. 1 and Fig. 2). Contacted with the local managers and collected on-site data through in-depth investigation.



Fig. 1. Location of Taojia courtyard

Fig. 2. Detail of Taojia courtyard location

Reviewed historical literature, the local residential buildings are mainly Hui-style buildings represented by Han-people. The typical Han-form building is two floors and three rooms for each surrounded by the shape Han-characteristic of "Kou" which the wing rooms of both sides of the Tianjing are guests rooms. On the facade of building, the roof building reflects the green tile and beast ridge, and two sides of the mountain wall are in the sky. The layout of building is divided into three parts that are the front house, the main house and the back house, which is connected with each other. Because the Longli-area is a residential area built on the military of Tunbao-culture. A hidden back door is seen on the behind house wall to avoid the war.

3.3.1.2. ABOUT TAOJIA COURTYARD

Compared historical literature with 13 residential area, it is possible to verify that remaining "taojia courtyard" of "second courtyard".



Fig. 3:the doorplate of Taojia courtyard

Source : Take photos at the scene



Fig. 4:The front gate of Tao's courtyard

Source : Take photos at the scene

It found that the house was located in the northeast corner of Longli, which was the resident of a wood merchant named Taominzhe in the late Qing Dynasty (Fig. 3, FIG. 4). Currently, the older woman and a child live in the building. The Taojia courtyard is a typical Hui-style building that surrounded by patio and high firewall. The residential flat is a typical three-room plan and two-chamber building, which connected with the mode of "main-door-patio hall". The fire wall connected with the patio that set ground of the patio area with the green stone plate. There are four large words on the plaque of the main hall and expressed the historical background of the house owner. The interior of hall retains historical traditional wooden structure with lacking good natural light. In addition, the ventilation of rooms are not smooth, which excepted for the main door with no air-circulation(Fig. 5, Fig. 6, Fig. 7, Fig. 8).



Fig. 5.two floors and three rooms space

Source : Take photos at the scene



Fig. 6.Courtyard of Taojia

Source : Take photos at the scene



Fig. 7At the front door of Tao's courtyard



Fig. 8. Inside the main house

Source : Take photos at the scene



Fig. 9.The corridor

Source : Take photos at the scene



Fig. 10.The corridor

Source : Take photos at the scene



Fig. 11.guest room of the first floor

Source : Take photos at the scene

Source : Take photos at the scene

According to the owner permission, the area on the second floor is a private area and cannot enter for the investigation. However, the owner permission of investigation allowed to view corridor area link the first floor to the second floor. Compared with the interior area, the corridor area have full of light condition and smooth ventilation that the window sashes with wood carved decoration. With the needs of modern life, the electric connected wires can be seen and be exposed in the air day and night. An old wooden-curved bed was found in the guest room area on the first floor, which take function on store sundries. Furthermore, there is no toilet and bath space in the house, which is quite inconvenient for the house owners.

3.4. DISCUSSION

Based on research hypothesis, this paper discussed that the traditional dwellings in Longli area.

3.4.1. RESIDENTIAL TYPE OF LONGLI VILLAGE

Reviewing literature, among the cultural environment, natural environment and social environment are the important factors to protect the traditional villages. Traditional dwelling as the basic unit of village, which should be reflected in the building. Longli village located in minority areas of Guizhou with surrounding Miao and Dong national people. However, the ancient village is known as the "isolated island of the Han-nationality", which means remain Han-people in the village. The residents of Longli still maintain the architectural characteristics of the Han nationality for 600 years. This related to Tunpu culture and policy into village plan of local Han-people. According to the investigation, there are unwritten rules in this area for maintain

blood-relationship. First, taking the fortress besieged as the boundary, which local people are not allowed to marry with other nationalities. Second, the Tunpu-people in the village proud of blood-relationship of the descendants of better generals. Obviously, there are ancestral halls of several major families, which still reserved in the village at present. Ancestral halls as a geographical area of blood-relationship, which indicated the family members should to be governed and restricted. Additionally, Longli established an ecological museum for protection of local history and culture through the project of the cultural exchange between China and Norway in 1999.

3.4.2. CURRENT PROTECTION CONDITION AND REASON OF LONGLI DWELLINGS

According to the "Human Settlement" with five systems, this paper analyzes the protection and application of traditional dwellings in Longli area. Reviewing local record, there are "two courtyards" in traditional dwellings that is Taojia courtyard and Longbiao Academy. The "nine yards" are composed of Yao yard, Lu yard, Su yard, Jin yard, Yin yard, Qian yard, Tie yard, Lu yard and Bao yard. However, through investigation, it found that almost traditional dwellings can not be verified according to display the historical address. At present, the Taojia courtyard is left as the folk houses representative in Longli area since the Qing Dynasty. In addition, there is one door of Jin yard and the scope of Jin yard cannot be defined. The reason is why many traditional dwellings in historical documents can not be preserved that traditional dwellings not only have suffered problems of natural and historical aging but also faced challenges of devastating damage from the war.

However, as one of the "two courtyards", the Taojia courtyard is inhabited with four reasons. First, village constriction, the Tunpu village established with stone-made enclosing wall for safety and security. Second, the geographical location, the courtyard located in the southeast and northwest that near the north door. In ancient China, the Chinese pronunciation of "North" related to "Defeat", which the north door is closed around the year. Third, Fengshui cultural factors, the local people believed that closing the north gate could gather the gas from four gates. Moreover, based on this basis, it built a two-story temple for praying victory. Four, Taojia courtyard avoid downtown area and not clearly to search. Based on above four points, the Taojia courtyard has survived from the damage of history.

3.4.3. PROTECTION OF TRADITIONAL VILLAGE

The protection of traditional villages emphasized the social environment between "human" and "environment". Accordingly, village space through human activities can be divided into necessary activity space, spontaneous activity space and social activity space. In the Taojia courtyard, the activity space of main hall is dark and insufficient ventilation capacity. Secondly, there is no bathing space for functional space. Spontaneous activity space aims to people needs for certain needs in space. It found that the owners of the house are the elderly and child. The building for owners spontaneous activities space is mainly space of the front door. It not convenient for the elderly and child daily life with several steps stone-made floor. Social activity space refers to the space involved in local social or cultural activities. For the Taojiac courtyard, the space that can reflect social activities in the entrance area with the decoration of characteristic signs. Radiational development to the village not clear through the part of the northwest corner in Longli. Therefore, it can not play a positive role in the protection of all regions.

4. CONCLUSIONS

This research choose the method of historical literature review, field investigation and case study in Longli area typical dwellings. Researched on currently objective that Longli had abundant historical record of local cultural into residential area. However, differ from local historical literature, this area had one traditional dwellings building can be researched since Ming dynasty. For further research, the scope of research objective may concern about ancestral hall area in Tunpu-cultural village. The reason is ancestral hall as the mainly place related with a group family. Furthermore, the theory of ‘human settlement’ will as research theory for traditional village protection and development research. It can be concerned more application of the protection strategies from five different dimensions. And cultural ecological protection strategy and local national design strategy as mainly sustainable protection strategies recommend for the further research.

In conclusion, the relationship between local traditional dwellings protection and heritage of Tunpu-culture was not influenced from other culture. Nevertheless, reviewed the architectural material of Tunpu-culture that stone as mainly construct material. The new building were chosen wood as mainly architectural material, which may be influenced by Dong-national traditional culture. However, the spacial form of plan still remain the linkage type of ‘door-dooryard-purlin’.Then, based on the theory of human settlement, it applied cultural ecology strategy to protect culture as elements into ecological landscape integrated protection. After then, the application of local design strategy to promote protection development. Last but not least, cause traditional village were built by many dwelling buildings, which destroy partially information of building trend to the lack of holistic and dynamic protection research.

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