Discussion on renewal mode of historical residential area in modern cities

Liu Qu\textsuperscript{1,2}\*, Chuang Han\textsuperscript{3}

\textsuperscript{1}College of Civil Engineering and Architecture, Harbin University of Science and Technology, Harbin, Heilongjiang Province, 150000, China

\textsuperscript{2}College of Civil Engineering and Mechanics, Yanshan University, Qinhuangdao, Hebei Province, 066004, China

\textsuperscript{3}School of Measurement and Communication Engineering, Harbin University of Science and Technology, Harbin, Heilongjiang Province, 150000, China

\*Corresponding author’s e-mail: quliu1990@126.com

Abstract. In the context of the continuous renewal of the urban environment, it is an important problem that how to coordinate the spatial form of the decline of the area and the demand for the high quality environment in the continuation of the cultural resources in the historical residential area. Through the analysis of several practical cases, this paper compares the updating background, the renewal target and the renewal mode of the different historical residential area, and probes into their renewal mode under the different urban development requirements.

1. Challenges in the context of urban renewal

At present, China is in a state of rapid economic development. The integration and reform of the regional economic systems have led to the innovation and transformation of the production modes of all walks of life. In this context, the ideas of developing advantages and adapting to the law of development have become dominant.

In the field of urban design, the idea of "urban renovation and ecological restoration" and "stock design" has been constantly explored and implemented in recent years [1], which is affecting the future urban renewal. The historical residential area can be said to be the "stock" of rich cultural values in the city. Although there have been a lot of practical exploration in recent years, it still faces severe challenges. On the one hand, the "landscape renovation", which has been popular in recent years, has lost the true sense of the city's traditional life state [2], which involves the grasp of the renewal scale. On the other hand, the historical residential area, as the player of the urban residential function, often loses its original function in the large-scale reconstruction, which involves how to determine the goal and direction in the process of renewal, and effectively cooperates with the multiple functions of residence and commerce.

2. The updating elements of historical residential area

The historical residential area has multiple identities, such as the function of living and the continuation of the city culture. The elements of its existing form include not only physical form, such as street layout, architectural style, but also non-physical form, such as functional composition and social network [3]. These elements make the historical residential area a complex whole in the modern
city, experienced the erosion and precipitation of the years, the decline of the elements caused the decline of the whole area, therefore, the renewal of the area needs these elements to cooperate with each other only to be able to complete.

2.1. Street layout based on traditional city form

Urban construction in ancient China is influenced by traditional culture. The layout of streets and lanes should follow certain patriarchal clan system to embody ethical norms. The urban space of residential function mainly presents similar chessboard layout, and has gradually changed from the early Li Fang system to a more open layout form [4]. Now it forms a variety of hierarchical structure, such as "hutong - lane - courtyard", represented by Beijing, or "main alley - alley - atrium", represented by Suzhou. As a skeleton element of an area, its form and distribution also determine the spatial feeling gained by people in the street action and convey a certain image of the city.

The traditional street and lane layout expresses the low density and relatively closed form of the area, which will inevitably aggravate the contradiction between the new and the old in the face of the expanding city and the growing urban population. In the process of the use of residents, the low building density is difficult to meet the needs of life, therefore, there will be some additions, alterations and other behaviors, which will change the layout of the unique streets and lanes, and gradually lose the intention expressed in the original space.

2.2. Architectural style based on urban context

The main feature of historical residential area is that they contain rich traditional elements. They represent specific architectural and residential culture, and form unique and harmonious architectural features by adapting to regional climate and building materials. These features are mainly embodied through material, detail structure and color.

However, any building has a certain useful life. The buildings in historical residential area mainly consist of wooden structures, combined with brick, stone and other structures. Compared to the steel, concrete and other materials used in modern architecture, the durable life is shorter, and the traditional elements in the area will be blurred if they can not be repaired in time. At the same time, for the cities with fast pace of development, the building repair process is unavoidable to be doped into the incongruous architectural vocabulary, so many traditional elements have not been able to get the accurate inheritance.

2.3. Functional composition and social network

The historical residential area in modern cities are developed from a part of the early cities. Although the city's commercial activities are frequent since the Tang and Song Dynasties, the part of the street lane is no longer limited to the residential function, but its internal functions nowadays are still mainly residential, while other functions are auxiliary. Based on this feature, and influenced by factors such as custom and habit, the interior of the area has gradually formed a relatively stable and rich social network, and is externalized into a unique place spirit, bearing the memory of the city and the sense of belonging of the residents.

In the face of the renewal of modern cities, historical residential area not only need to provide a good living environment for the original residents, but also need the diversity of functions to improve the vitality of the city [5], which will inevitably lead to the change of social network, thus changing the spirit of the original place. Therefore, the area is faced with the renewal goal of how to conform to the law of development according to the demand of urban development, and reasonably balance the relationship between the integration of other functions and the changes of social network.

3. Analysis of renewal mode in actual cases

Based on the various problems and challenges under the background of urban renewal, some historical residential area in our country have already carried out different explorations and practices, and become examples for reference. Because each city has different development goals, the renewal of
historical residential areas plays a different role in cities. According to the different emphasis of preserving and excavating the value of residential culture and commercial culture, it can be generalized to several typical renewal modes.

3.1. Residential area with historical features
The first mode is to renew the original area as a historical residential area. Its characteristic is to restore the declining architectural style during the renewal of areas, so as to reproduce its historical original appearance. At the same time, residential buildings with functional deterioration will be renovated so that they can adapt to modern urban life.

Nanchizi in Beijing is the representative of this renewal mode. The renewal of this area is mainly based on the interests of the original inhabitants. In this case, nearly 1/3 of the original inhabitants are retained, the area still maintains its residence function. For the buildings in the region, they are divided and classified to protect and update [6]. With typical residential buildings as reference, modern materials are re-expressed in buildings that need improvement. Therefore, the updated area has strong historical characteristics today.

Although this renewal model can restore the historical characteristics and improve the environment, the historical values are easily weakened if the amount of restoration is larger.

3.2. Residential area with special features
When the historical residential area in the city can no longer meet the needs of modern life of residents, and repairs have certain difficulties, they often need to be rebuilt. Some cases have tried to make it a residential area with special features. One way is to take the aboriginal as the main service object, and to formulate a residential construction plan to adapt to the modern city life according to the living conditions and family structure which they face. The other is to improve the economic benefits of the land through real estate development, to serve the group with special needs for the history and culture, but at the same time it will lose the original social network. Of course, despite the differences between the two objects, the similarities between them are that they have explored the redesign of traditional elements in the building.

A typical example of the first way is the Xiaohoucang Hutong in Beijing. In this case, the low level Hutong area is transformed into a multi-storey residential area, and the concept of "hutong" and "courtyard" layout, as well as some of the colors and elements of the hutong architecture, are retained [7]. Similarly, there is an update of Ju'r Hutong in Beijing. Its spatial layout and facade design reflect the refinement and innovation of traditional elements. Another example is Tongfang Lane in Suzhou. The reconstructed Tongfang Lane is a high quality residential block, preserving the layout of the streets and courtyards, and transferring the local traditional architectural elements to the new house [8]. From the decision-making level, the former can not produce more commercial benefit, so the renewal project needs the government leading. For the latter, the proper settlement of the original inhabitants will be the most important problem that the developers need to face.

3.3. Residential - cultural area with historical features
Cities with relatively low economic development but long history often have some historical residential areas which are still used for residential functions and some of them are well preserved. The development of cities does not require them to develop the economy, so they have not been seriously commercialized. They are of great cultural significance to the city, and the main problem in urban renewal is the decline of living environment quality and lack of vitality. In the face of these problems, some residential areas are properly integrated into other functions under the leadership of the government so that they can stimulate vitality and make the area a display place for urban residential culture.

In the renewal of the Xixiaolu area in Shaoxing, the complete historical features and social network are well preserved, the public environment has been properly improved, at the same time, the upgrading of regional functions has also revitalized the region, attracting many visitors to understand
the local culture [9]. This renewal model provides a historical context for modern cities, which not only improves the grade of the city, but also promotes the economic development of other parts of the city. It is a good way of integration of the traditional residential culture and the economic development.

3.4. Residential - cultural area with special features
The renewal mode of the Residential - cultural area with special features refers to retaining part of the residential function in the process of renewal, integrating more commercial, tourist and cultural functions, and redesigning the historical features with modern elements, and finally making the area economy keep pace with the pace of urban development. Tianzifang in Shanghai and the Baroque historic area in Harbin are both representatives of this model. The opportunity of Tianzifang's renewal mainly comes from the promotion of the cultural industry. In the face of the decline of the region, the studios of artists, represented by Chen Yifei's studio, were continuously entered, followed by the gradual development of the functions of commerce and tourism [10]. The Baroque area in Harbin has been reconstructed from the courtyard, and has restored the regional commercial culture and folk culture [11]. In two cases, both residential and commercial functions have been reasonably rehoused.

Although the residential functions and business functions have been reasonably resettled in two cases, there are still some problems to be explored. When the living environment of the original residents has the same importance as the commercial development, it is necessary to deal with the relationship between the two and make the commercial space and the living space independent and form a good transition. At the same time, we should respect the living forms of the original residents and make human based commercial development.

3.5. Commercial street with historical features
The last mode of renewal makes the historical residential area basically rid of the original living function, only taking the characteristic residential building as the carrier, driving the commercial development, and playing the dual role of promoting the city culture and promoting the economic development. For example, the renovation of the Kuanzhai Lane in Chengdu is a strategy of cultural tourism, which aims to demonstrate the long history and characteristic residential buildings in the region, so in this case, the functional composition and social network have been changed [12]. It is similar to the renewal of Xintiandi in Shanghai, which treats the commercial development as the main purpose, and is given a more realistic function [13]. But in the architectural style, it protects the structure and material of the original building to a maximum, so that it is reused.

This mode of renewal is essentially the collision of economic development and traditional culture, and the realization of this model requires special opportunities. For example, the original region has no more demand for the residential function. On the contrary, the region needs more attention to the demand for commercial development. Therefore, it will inevitably bring about the regression of historical characteristics, and can not play a lasting role in the living atmosphere.

Although the cases involved in this article are not all at the same time, they are all under the framework of their own needs and urban development requirements through different ways, they may be aim at the needs of the original inhabitants, maybe aim at the continuity of the urban context, or aim at the development of the economy. Based on these, the elements of different historical residential areas can be updated in different ways, and the cultural value can be excavated at different levels to receive benefits, table 1 shows the details.

| Physical form | Non-physical form |
|---------------|------------------|
| Street layout | Architectural style | Functional composition | Social network |

Table 1. Updating methods of elements for historical residential areas under different renewal modes
4. The enlightenment from the cases

Every historical residential area in the city is a complex whole. Their development and renewal are complementary to the city's development and renewal. On the one hand, the development of the city has put forward higher requirements for the historical residential area. On the other hand, the historical residential area can form the urban characteristics in a variety of ways, so that the city can get rid of the monotony style. In recent years, the practice of the renewal of historical area in our country has some gains and shortcomings. This article only analyzed the renewal modes of historical residential areas under different objectives. The renewal process and future use of such areas still need to be further explored.

In the future of urban development, the renewal of historical residential areas not only needs to repair the environment of recession, but also should actively respond to urban renewal, and establish reasonable goals and status under the basic framework of urban planning. Only in this way can historical residential area in modern cities play a long-term and effective value in the future.

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