

Original Research Article

Research on the Exploration of Micro-Space under Urban Renewal—Take Paley Park in the United States as an Example

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Abstract: In recent years, with the continuous development of the economy and the continuous acceleration of the urbanization process, the city is in a new period of construction and development, and the lack of urban land resources and the lack of public space have become more and more serious. In this context, how to further explore urban public space resources and improve land use efficiency has become the focus of attention, and Micro-space applications have emerged. Based on the analysis of the plane scale, space quality, streamline organization, plant configuration, environmental sketch, material selection, and activity content, this paper explores the design techniques of micro-space in order to inject vitality and improve the quality of the city. We will improve the living standards of the residents and adapt them to the social development of the cities.

Keywords: Urban Renewal; Micro-Space; Urban Public Spaces; Revival of Vitality

1. Introduction

1.1 Research background of micro-space under urban renewal

With the improvement of urbanization level, there are more and more unreasonable land use problems such as gray space, idle area and idle area. Urban renewal has changed from large demolition and large-scale construction to the repair and perfection of small plots and the application of micro-space. Urban micro-space not only has a direct impact on the overall competitiveness of urban residents' housing rate, but also has a great impact on urban spiritual culture, environmental quality and space quality, which is the symbol of regional prosperity and development.

1.2 Related concepts of urban micro-space

(1) The concept of urban renewal: Urban renewal refers to the demolition, reconstruction, investment and construction of a certain declining area in the city, so as to replace the material space with new urban functions, so as to make it redevelop and prosper^[1]. It includes two aspects: one is the transformation of the objective existence entity; the other is the transformation and continuation of various ecological environment, space environment, cultural environment, visual environment, recreation environment, etc.(2) The concept of urban public space: In the city, the urban public space refers to the open space between the architectural entities. It is an open place for urban residents to carry out public communication and hold various activities. Its purpose is to serve the general public^[2]. It is composed of natural environment and man-made environment, including Park, road parking lot, urban landmark building entity, large public open space, etc. The emergence of urban public space is to improve public living space, quality of life and types of collective activities, and create more attractive public activity space.

2. Research on urban micro-space at home and abroad

2.1 Research on urban micro-space in China

With the acceleration of China's urbanization process, the rapid rise of new buildings, more and more high-rise buildings in the city, but the real place for citizens to relax and communicate is less and less. Tang Yezheng put forward the market and social operation of Suzhou's micro-space in urban renewal. Taking the renovation of Pingjiang road as an example, it is proposed to establish independent renewal platform and formulate safeguard measures according to different social, economic and cultural backgrounds, so as to realize sustainable urban micro-space renewal mechanism^[2]. Xue Minghua proposed three micro renewal methods: Micro transformation, micro promotion and micro design. Under the deduction of the three ways, it shows the street and the readable building, so as to create a city with temperature. After that, scholars discussed the cost and operation of renewal funds^[3].

2.2 Research on foreign urban micro-space

In Europe, streets, trees, landscapes and buildings themselves participate in the distribution of urban space. Luyuan·Yixin believes that: the external space of a city is first of all the mechanism of the city, the landscape axis, the direction of the road, and some things of the original planning. The external space starts from limiting the nature in the nature^[4]; Jan Gail thinks that the quality of public space in cities and residential areas should be studied and evaluated from the perspective of the requirements of people and their activities on the material environment^[5]. Foreign researches on micro-space pay more attention to the remodeling of urban texture and humanistic color. The definition of space is not so clear. Maybe a wall can become a representative of micro-space.

3. Micro-space case study

3.1 The proposal of Paley Park in the United States

The New York Association proposed Paley Park for the first time when discussing the development and utilization of urban narrow plots by urban renewal. Its purpose is to “serve the new park of New York”. Its prototype is small parks distributed in the center of high-density cities. On May 23, 1967, New York Paley on 53rd Street of American route officially opened. The emergence of this new form of urban public space has a good response in terms of scale and function, adapts to the urban conditions of Manhattan, and better promotes the improvement of the quality of life of urban residents.

3.2 Design analysis of Paley Park in USA

(1) Location: Paley Park in the United States is located on 53rd Street in central Manhattan, between Fifth Avenue and Madison Avenue in New York City. The south side of the site is facing the street, and the other three sides are adjacent buildings. It is a semi enclosed urban open space surrounded by residential and commercial areas. In the design, the best opening is in the south. The flow of people is mainly composed of street flow and residential area residents, which is introduced from the south entrance^[6].

(2) Plane scale: The park covers an area of 390 square meters, with a length of 32.5 meters and a width of 12 meters. It is a rectangular area with less than two classrooms, surrounded by three sides^[7]. L represents the length of the rectangle, D represents the width of the rectangle, and L/h should be less than 3, which avoids the change from node space to slender space. Some scholars pointed out that the park surrounded by three sides is more pleasant, because the opening on one side is convenient for pedestrians to see and enter, and at the same time, it produces a welcome psychological hint.

4. Design method of urban micro-space

4.1 Design concept of urban micro-space

Landscape construction, close to nature. Generally, the local landscape configuration with long development history and long growth history is adopted to retain the landscape of the plot to be developed. Due to the change of seasons, we can use different colors of landscape, reasonable collocation of plants, and adjust the color change of micro-space. Create an enclosed urban space with different landscapes, create a natural barrier, and provide urban micro-space with great affinity.

4.2 Design methods of urban micro-space

Good visual design: Line of sight Corridor, through the consolidation and unification of the volume, shape and color of the buildings in the space, the corresponding interface color can be changed, the building boundary is retreated, the road extension, the unity of tree species and the placement of seats can achieve a unified interface and form the line of sight corridor. The line of sight corridor can stimulate the public to explore the space, form a good visual enjoyment, and arouse the public's curiosity, so as to achieve the sightseeing and browsing of the whole plot and play the design purpose.

5. Conclusion

In the process of rapid urban development and construction, urban environmental construction, cultural shaping and social relationship transformation can be comprehensively dealt with through micro-space, which has become the main direction of urban construction and development in the future. It stands out from the tradition and breeds a new spiritual culture all over the world^[9]. Based on the research on the utilization of urban public space, this paper aims to enhance the activity enthusiasm of community residents, improve the collective living space, and create a positive public sphere, so as to rejuvenate its vitality and provide a high-quality living environment for the city.

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