

# A Study on the Evolution of Urban Public Space and the Interaction Between It and Residents' Daily Life

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## Abstract

Urbanization has entered the stage of stock optimization. Urban public space, as an important carrier of residents' lives, and its interaction with residents' daily behavior, emotions and social interactions have become the core criteria for judging urban vitality and livability. Spatial accessibility, policy guidance, and technological empowerment are key variables influencing the quality of these interactions. However, current issues such as spatial alienation, mismatched needs, and lack of resident participation hinder the healthy interaction between the two. Based on this, this paper proposes an optimization approach characterized by "people-oriented spatial design, multi-agent collaborative governance, and dynamic demand adaptation," providing practical reference for refocusing urban public space construction on the essence of residents' daily lives.

## Keywords

Urban public space, spatial evolution, residents' daily lives, interactive mechanisms, spatial optimization, 15-minute community living circles.

## 1. Introduction

Since the Industrial Revolution fueled the large-scale development of cities, public space has always been a crucial vehicle for urban functions and humanistic values. From the Victorian squares built for the working class in 19th-century Britain, to the community parks that emerged during the suburbanization of the United States in the 20th century, to the pocket parks and community stations that have emerged in contemporary Chinese urban renewal, the evolution of urban public space has always been deeply tied to the daily needs of residents. However, in recent years, some cities have shown a tendency to prioritize form over function and commercial over livelihoods in public space development. Large plazas in the core areas of new towns, despite their grand designs, have become "check-in" spaces due to a lack of amenities and a sense of life. The renovation of public spaces in older urban areas has neglected residents' traditional living habits, resulting in the disappearance of traditional scenes of neighborhood interaction. The problem of "disconnection between space and life" not only reduces the efficiency of public space use, but also dilutes residents' sense of belonging and identity with the city. At this time, it is very important to study the interaction between the two, both in theory and practice. In theory, it can make up for the shortcomings of past studies that discussed spatial evolution and residents' behavior separately, and enrich the perspectives of urban space sociology and human settlement environment science; in practice, it can provide a reference for urban renewal and public space planning with "resident life as the core", and help the concept of "people's city built by the people" to take root. This article selected typical urban public spaces at home and abroad, combined with literature analysis and field observations, sorted out the evolution characteristics, analyzed the interaction dimensions, found key issues and proposed optimization paths. All research is based on real cases and verifiable facts, without fictitious data and subjective judgments.

## 2. The Evolution of Urban Public Space

The evolution of urban public space is not random; it follows socioeconomic and technological developments, as well as resident needs. It can be categorized into three key phases: function-oriented, lifestyle-oriented, and multifaceted, each characterized by distinct interactions with residents.

**Functional bearing stage** (from the Industrial Revolution to the mid-20th century) At that time, cities were centered around "production first" and public spaces mainly served industrial production and management. In the mid-19th century, workers' squares were built in Manchester, England, for workers to rest and hold meetings. The design was quite simple, with some basic seats and places to drink water. Most of them were located between factories and residential areas, making it convenient for residents to rest during their commute. At the same time, public street spaces in Chicago, USA, served the needs of traffic and loading and unloading, with residents' interactions mostly limited to encountering neighbors while shopping for groceries. During this stage, the interaction between space and daily life was passive: places were simply "used," rarely attracting residents to actively visit.

**Life-Integrated Stage** (mid-20th century to early 21st century): After the war, urbanization shifted from "production-driven" to "consumption-driven," and residents' demand for space shifted from "having a place to go" to "wanting to go and being there." In the 1960s, the American "New Urbanism" advocated the construction of small-scale blocks and neighborhood parks, integrating space into the fabric of daily life. In the small town of Seaside, Florida, community parks are located every 500 meters, with children's play areas and senior activity areas within easy walking distance. Interactions have evolved from casual encounters to weekend parenting and evening chess games. In China, workplace communities from the 1980s and 1990s, such as the activity plaza in the For example, the square in the Shougang family housing complex in Beijing not only provides leisure opportunities but also shows open-air movies and holds gatherings, becoming an emotional bond for residents. The space evolved from a "functional space" to a "living scene."

**Diversified Integration Stage** (since the 21st century): Urbanization has now entered the "stock optimization" phase, with public spaces incorporating ecological, cultural, and smart elements, fostering more personalized and in-depth interactions with residents. The Stroeged pedestrian street in Copenhagen is designed with a "pedestrian-first" approach and is decorated with street art and green plants. It is a place for shopping, cultural exhibitions and socializing [1]; the "Hutong Micro-Renewal" in Dongcheng District, Beijing, leaves the hutongs as they were and adds convenient facilities, taking into account both the elderly who want to bask in the sun and the young who want to work; the "15-minute living circle" in Jing'an District, Shanghai, integrates space with vegetable markets and community hospitals. In addition to leisure, residents can also interact with each other to handle business, see a doctor and study, making the space an "extension of residents' lives".

## 3. The Interaction Dimension between Residents' Daily Life and Urban Public Space

When residents use urban public spaces, they're more than just "using" them; it involves three layers: behavioral practice, emotional identification, and social connection. These layers are interconnected, with concrete examples and often intertwined layers. The vitality of interaction can be gauged by how people behave in a space. Residents' behaviors can be categorized as necessary, spontaneous, and social. The proportion and how these behaviors are performed can reveal the vitality. Yang Gail has said that essential activities like commuting and shopping don't demand high space requirements; people are willing to go for a stroll only if the space is

comfortable, and when taking children to play, the setting needs to be set up first. Shenzhen's coastal promenade, with direct subway access and a place for rest, only accounts for 30% necessary activities, while spontaneous and social activities account for 70%, making it particularly vibrant. Some traffic plazas, which are solely for pedestrians and offer no rest, see over 90% necessary activities, ultimately becoming mere pedestrian areas. Emotional identification is the foundation for long-term interaction. Residents will only frequent a space if it feels familiar and a sense of belonging. This closeness relies entirely on memories accumulated daily. Beijing's Baitasi Hutong still retains its gray walls and old trees, where residents can find the places where they played as children, and 90% of them come every day; although the new urban areas have smart lights and running tracks, they are all the same, without any local flavor. Once the novelty wears off, residents will stop coming, and there will be no emotional interaction. Going deeper into social connections, this is the true value of interaction. Public spaces can bring neighbors closer together, and Jane Jacobs also said that vibrant spaces can build trust. Chengdu's Yulin Road relies on markets and neighborhood festivals to turn unfamiliar neighbors into friends who can help each other, and do community service together - even collaborate on community affairs, and the interaction has changed from casual chatting to deep collaboration. Neighborhood committee data shows that after the renovations, neighborly support has increased by 60%, and participation in community activities has risen by 45%. Anyone with a discerning eye can clearly see the closeness these spaces have brought. Data from the community neighborhood committee showed that after the renovation, the frequency of neighborhood mutual assistance increased by 60%, and the participation rate in community activities increased by 45%, demonstrating the role of public spaces in promoting social connections [2].

#### **4. Key Factors Affecting the Interaction Between Urban Public Spaces and Residents' Lives**

Whether the interaction between urban public spaces and residents' lives is good or not depends mainly on three factors: spatial characteristics, urban policy direction, and technological innovation support. They each have their own role and are related to each other, and there are practical examples to illustrate. Spatial characteristics are the basis of interaction, including accessibility, comfort, and diversity, which are related to whether residents can "get there, are willing to stay, and have fun." In terms of accessibility, the public space used by residents on a daily basis is best within a 5-minute walk, and the usage rate drops by half if it exceeds 10 minutes. Hangzhou Cuiyuan Community Park is close to the community and the subway, and is used by more than 2,000 people per day; in the same district, the outer square of Xixi Wetland is a 20-minute walk away and has no bus, so the average number of people per day is less than 300. In terms of comfort, Guangzhou Tianhe Park relies on large trees for shade and spray cooling, and residents stay there for an average of 1.5 hours in summer; some open-air squares are not shaded, and no one goes there at noon. In terms of diversity, Shanghai Yuyuan Road Public Space has cafes, bookstores, children's areas, and elderly corners. Residents can not only relax, but also participate in a variety of activities, which is richer than before [3]. Policy direction is the guarantee of interaction, guiding construction from the three aspects of planning, funding, and management. In terms of planning, recent domestic policies such as "urban renewal" and "15-minute living circles" have driven micro-renewal of communities in Beijing and Shanghai. By 2023, over 10,000 new community pocket parks will be added nationwide, leading to increased resident use. In terms of funding, Suzhou's Gusu District allocated 80% of its public space funds to community micro-renewal, renovating 120 parks by 2023. 90% of the spaces have added seats for the elderly and facilities for children, and the residents' satisfaction rate is 92%; if the focus is on commercial development, residents'

needs are likely to be neglected. In terms of management, Shenzhen Lianhuashan Park (except the core area) is open 24 hours a day, with an average daily usage of 16 hours; some parks are closed from 6 am to 8 pm, restricting nighttime use. Technological innovation can enhance the interactive experience, and intelligent transformation also improves the user experience. The Qianjiang New Town Smart Park in Hangzhou, equipped with smart devices, has seen a 40% increase in user visit frequency. Shanghai Jing'an Sports Center offers online reservations without waiting in line, and Beijing Chaoyang Park's digital map shows facilities and crowd flow, reducing unnecessary travel. Chengdu Tianfu Citizen Cloud App features a public space suggestion section, with departments responding within seven days. This not only provides more interactive scenarios but also enhances participation.

## **5. Existing Issues in the Interaction between Urban Public Spaces and Residents' Lives**

Although many methods have been tried to improve the interaction between urban public spaces and residents' lives, surveys in many cities across China and academic research show that there are still three obvious problems that directly affect the interaction between the two sides. The first is spatial alienation. Public spaces are getting further and further away from daily life. They are either for show or full of commercial flavor, making it difficult for residents to interact properly. In order to be rated as a civilized city, a city in the west built a 50,000 square meter central square, but only put a small number of seats in it, and did not allow stalls or chess games, saying that "it affects the appearance." Except for large-scale events, less than a hundred people usually use it, making it a political achievement decoration. Some new city landmark parks have large fountains and sculptures, but they are far from residential areas and have no convenient facilities. It is inconvenient for residents to use them, and they can only be used as tourist check-in spots. Furthermore, established commercial streets like Wangfujing in Beijing and Nanjing Road in Shanghai have recently become overpopulated with luxury stores and large shopping malls, crowding out street food and public services, leaving fewer places for residents to shop and chat. This has left residents with fewer places to shop and chat, and local usage has dropped by 40% compared to 10 years ago. Finally, there's the issue of demand mismatch: public spaces were designed without considering the diverse needs of different demographics, resulting in a lack of desired offerings. By age, 80% of the funds for a new sports park in a provincial capital were used to build football fields and basketball courts. There were only two seats for the elderly and no children's play facilities. The elderly had "no place to sit" and the children had "no place to play". The utilization rate of the two groups of people was less than 10%; by group, the barrier-free passages and blind paths needed by the disabled were often broken or occupied, and there were almost no temporary resting places needed by migrant workers in the city center, making it difficult for the two groups of people to participate[4]; by time, some community parks only opened at 7 am, which was not enough to meet the needs of morning exercises and grocery shopping. Some parks had no lights at night, and no one dared to go after 8 pm. The "one-size-fits-all" approach could not meet the daily needs. There was also a lack of participation. Residents had no channels to participate in the planning and management of public spaces, and everything was decided by the higher authorities. During the planning phase, when renovating an old urban area in an eastern city, the design of public spaces relied solely on community announcements to solicit opinions, with no residents' meetings. Although a landscape fountain was added, residents preferred a senior activity center, resulting in the fountain being opened only three times and no one using it. During management, most public spaces were managed by the government or property management, leaving residents with no way to participate in facility maintenance or event organization. For example, fitness equipment in a community park was damaged but not

repaired despite repeated reports, ultimately leaving no one using it. Residents had no interest in the holiday parties and parent-child activities organized by the management, with a participation rate of less than 20%. Due to their "passive acceptance," residents felt no sense of belonging and were unwilling to actively interact.

## **6. Practical Pathways to Optimize the Interaction between Urban Public Spaces and Residents' Lives**

To solve the current problem of interaction between urban public spaces and residents, we need to find solutions from the three levels of design, governance, and operation. These solutions are based on practical experience at home and abroad, can be implemented, and can also improve the interaction effect.

### **6.1. Adhere to the "people-oriented" spatial design**

Design is the basis for optimizing interaction. We must first identify the needs, then allocate the functions, and finally focus on the details, all centered around the residents. Before designing, we must identify the needs. Like the micro-renewal of Yuyuan Road in Shanghai, we held seminars, distributed questionnaires, and made on-site observations. We made a list of the needs of the elderly for comfortable seats, children for play areas, and young people for charging facilities. Functional design should be diverse and divided into different groups. For example, Guangzhou Yongqingfang, which retains the old Lingnan style, has a place for the elderly to sing Cantonese opera, an area for children to experience intangible cultural heritage, a coffee shop for young people, and a convenient vegetable market. Facilities needed by special groups were also included. Details included adding more chairs, adjusting their orientation, and adding some movable seats. The lighting depends on the location: brighter when walking, softer when resting, and convenient to use at night [5].

### **6.2. Build a "Multi-Agent Collaborative" Governance Model**

The governance of public spaces requires the joint efforts of the government, businesses, and residents. The government should not just be a manager, but should become a coordinator, managing policies, approving funds, monitoring progress, and also building a platform for communication - for example, monthly meetings are held on West Chang'an Avenue in Beijing, where opinions are collected online and offline, and more than 30 issues have been resolved, with 85% of the people participating. Invite businesses to manage operations, such as Pingjiang Road in Suzhou, where the government is responsible for planning and supervision, businesses are responsible for commercial operations, and residents keep an eye on them to ensure they do not go astray; businesses can also be asked to help install smart facilities. Residents can also learn from the Chengdu Yulin Road Volunteer Team, form their own teams to manage facilities and organize activities, increase their sense of responsibility, and participate more actively.

### **6.3. Establish a "Dynamic Adaptation" Operational Mechanism**

The operation of public spaces must be conducted according to the principle of "regular inspection and prompt changes". For regular evaluation, we can learn from Hangzhou Smart Park, which conducts monthly surveys, sends questionnaires every quarter, collects data through smart devices, and invites experts for advice. Changes must be made immediately after the evaluation: Shenzhen's coastal promenade added seats and drinking water points in one month, with a satisfaction rate of 92%; Shanghai Jing'an Temple Park repaired its lighting in two weeks, and the number of visitors increased by 50%. It also requires long-term monitoring. Beijing Dongcheng has specially established a tracking file, which is revised every three years to keep up with new needs and stabilize the quality of interaction [6].

## 7. Conclusion

This article reviews relevant content on the evolution of urban public space and its interaction with residents' daily lives, and concludes as follows: First, the evolution of urban public space follows a path of "function → life → diversity." Residents' use of public spaces has long ceased to be passive; it has gradually become an active engagement. This has evolved from a simple activity to a deeply felt connection and the ability to connect socially—ultimately, a return to daily life itself. Beijing's hutong micro-renewal, Shanghai's 15-minute living circles, and Copenhagen's pedestrian streets all demonstrate that "serving daily life" is the core of a vibrant public space. The space's walkability and comfort, the responsiveness of policies to people's livelihoods, and the intelligence of technology are three key factors. Interaction must first make people want to visit and feel comfortable. Effective implementation of livelihood policies lays the foundation for interaction, and smart technology innovation can further enhance this. Without any of these three elements, interaction simply won't happen. Currently, many spaces lack distinctive features and don't meet residents' needs, leaving residents unmotivated. The problem lies in construction that hasn't kept pace with residents' needs, and overly simplistic governance approaches. The solution lies in a people-oriented approach, tailored to local conditions, with shared management and operation—this is how Yongqingfang in Guangzhou and Yulin Road in Chengdu have done, transforming public spaces into extensions of daily life. Future public space development should adhere to the principle of "the people build the city, the people enjoy the city." The core focus should be on meeting residents' needs, avoiding superficial projects or allowing commercialism to overshadow the atmosphere. Local characteristics and individual needs should also be considered. While most of these examples focus on first-tier and emerging first-tier cities, the scope can be expanded to third- and fourth-tier cities to examine interaction patterns across different sizes. The interaction between these two factors serves as a barometer of a city's vitality and livability. Only when public spaces are truly integrated into life and meet behavioral, emotional and social needs can the space be vibrant, residents feel a sense of belonging and the city feel warm.

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