

# Research on the Design of Public Space in Post-Epidemic Era Settlements based on the Theory of Daily Life

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**Abstract.** Based on the theory of daily life, this paper presents the new demands of people for the functions and patterns of settlements in the post-epidemic era, and analyzes and summarizes the corresponding design strategies to be applied to the design of public space in post-epidemic settlements. The paper analyzes the existing problems of settlement design, and considers the research to explore the design mode of combined flat and epidemic settlement and harmonious neighborhood interaction, so as to meet the material and spiritual needs of people for post-epidemic living.

**Keywords:** Post-epidemic Era; Theory of Daily Life; Design of Public Space in Settlements; Combination of Flat and Epidemic.

## 1. Introduction

Over the past 40 years of reform and opening up, China's total economic volume has been increasing and the speed of social development has been accelerating. In the process, the urban construction boom has also swept the whole country, and the total amount of all kinds of public spaces has increased dramatically, and people's daily life, work, leisure and other activity spaces have also been developed greatly. However, the quality of public spaces is generally worrying. Architectural public spaces present phenomena such as rigid functions, odd shapes and exaggerated imbalances in scale, which ignore the public's perception and cause great inconvenience to users and contradict the requirements of people's daily lives.

At the end of 2019, after the emergence of the sudden new crown epidemic, people need to be isolated at home for a long time, and the existing design of public space in settlements not only fails to meet the needs of people in isolation for daily life, but also fails to make epidemic prevention and safety a priority. In this way, we must seriously think about the public space of residential areas in the post-epidemic era with a development perspective, and create a livable environment for physical comfort and a humanistic environment for psychological comfort to achieve a win-win situation.

## 2. Changing Housing Needs in the Post-Epidemic Era

With the continuous development of modernization of domestic cities and towns, people's living standard has also improved significantly. People pay more and more attention to the quality of living environment and the construction of living area space. While urban residential construction has been developing at a rapid pace, we have to recognize the impact of public health events such as the outbreak of the new crown epidemic on urban residential construction. Most of the public spaces in residential areas had to be restricted or even banned during the epidemic, leaving people living inside the houses for a long time and lacking interpersonal communication. In terms of the public nature of the space, on the one hand, although a part of it is publicly owned and managed, a relatively large part of it is privately owned and closely related to consumer behavior; on the other hand, the public space in residential areas has a specific group of users, so the public nature of residential space is lower than that of urban public space. However, it is still closely related to the daily life of the public compared to the private space to which it belongs.[1]

Although the domestic epidemic is well controlled at this stage, the end of the global epidemic is still uncertain, and it is not very optimistic to completely control the epidemic. Therefore, it is more important to design public spaces in settlements with a "new posture" to cope with the current

epidemic period, so that people can socialize safely. There are many issues to be solved, especially the psychological changes caused by the epidemic when people stay at home for a long time, and the demand for green, health and safety, all of which put forward a higher demand for its development.

### 3. Overview of Theories Related to Daily Life

When it comes to everyday life, nothing is more familiar. But it seems difficult for us to define what daily life is. Compared with scientific research, artistic creation, religious rituals, political activities and other forms of activities, everyday life is more habitual and empirical without too many rituals and spiritual activities. Since the last century, everyday life has gradually entered the academic sphere, and the issue of everyday life has gradually become an important branch of philosophy and sociology, as well as a major subject in disciplines such as history and cultural anthropology.

Daily life, the secular, timeless and less ritualistic activities that people perform to sustain life and their own development, includes not only the activities of regular people, i.e., daily gossip, interactions and street walks, but also conscious activities, such as living, working and recreational activities. However, this daily life trajectory is ignored or even disregarded as breathing because of its generality and day-to-day normality. Especially after the transformation of society from tradition to modernity, the alienation of daily life has become more and more obvious

According to Lefebvre, modernity is the source of the banality and alienation of everyday life. Modernity has not only transformed society institutionally, but also changed the substance of daily life. Gone are the traditional daily work at sunrise and sunset, and the humanistic interpersonal relationships of intercourse and interchange, replaced by the fast-paced, strong pressure and weak neighborly production and lifestyle of the capital society. In order to solve this situation, we should focus on daily life being experienced through public space in settlements, and finally give the space to the public to master and serve them. In this way, the public space in settlements can truly return to everyday life.[2]

### 4. Existing Problems in Settlement Design

#### 4.1 Lack of Daily Functionality of Residential Buildings

Today's residential architecture design is mostly based on modernist design concepts, and modernist architecture favor's "function". The public space in residential buildings should be the same, especially the public nature, which is to satisfy the general public or specific users and should have daily use such as daily life, work, communication and fitness. However, in the current situation, there are common functional problems in the public spaces of residential communities, especially after this epidemic. To summarize, the following are some of the functional problems of public spaces in residential buildings that are detached from daily life: (1) the functions cannot meet the basic daily use needs. The public space of modern residential buildings often pursues non-daily rituals and spirituality, while ignoring the daily use needs of occupants, or even contradicting the basic use needs of users. (2) Functions cannot adapt to daily use habits. The function of the space is to be set according to the user's use needs, which are also different. In terms of frequency of use, time distribution, and usage patterns, there is not enough awareness of users' usage habits, resulting in deviations in the functional positioning of public buildings, which makes it difficult to meet people's daily usage needs. (3) Dull and rigid functional settings, inflexible. Flexibility means that the functions of the space can be adjusted appropriately under different usage needs. The demand for public space in people's daily life is subject to change and will change to different degrees. At present, the functional settings of public space in residential buildings present problems such as single, dull, rigid and lack of flexibility, which cannot adapt to the increasingly changing needs of daily life. (4) Lack of coordination among functional areas. The coordination of each functional area is the key to the overall performance of residential buildings. Certain functions that are not suitable to be arranged next to each other should be separated. For example, there should be dynamic partitioning in the library area, effective

separation between the reading area and the discussion area, partitioning in the public health area for cleaning, infectious diseases and non-infectious diseases, and common and private spaces used for offices. In general, the organization and arrangement of space does not fully consider the use of daily life, and there is a lack of coordination and cooperation among the functional areas. (5) The unreasonable distribution of functions leads to poor traffic and inconvenience to daily use. There are also some residences that are designed in a way that is functionally contrary to the needs of daily life due to the convenience of management.[3]

#### **4.2 Lack of Daily Formal Problems of Residential Landscape**

In a sense, residential landscape design is also an art related to modeling. From the relationship between form and content to grasp the landscape form and design content, the landscape form should be the external expression of the design content, that is, the landscape form should not be independent, but has an internal logical structure. However, with the improvement of China's economic level and the improvement of construction professional level, the trend of formalization of residential community landscape is increasingly prominent. In fact, it is common to regard landscape vignettes as a purely plastic art phenomenon, which is designed without taking into account the human factor, ignoring the functional needs of life and the psychology of daily emotions, focusing only on the shaping of forms, and eventually falling into the trap of formalism. As far as the actual observation is concerned, the lack of formal problems in daily life are mainly: (1) the tendency of separating formalism from function. Compared with function, the connection between spatial form and daily life seems to be more distant, and function is still unable to meet the needs of daily life, while the problem of neglecting the formalism in daily life is more common and serious. Taking the form as the starting point or landing point of design is actually a design tendency that separates from the main body. (2) The tendency of "fetishism" and imitation and copying. "Fetishism" and "copy" are mostly one-sided, and the landscape space combined with formal fragments and symbols often does not conform to the principle of formal beauty and cannot create beauty; at the same time, due to the lack of local creation, the form of this settlement landscape is not compatible with At the same time, due to the lack of local creation, the form of such residential landscape is detached from the daily life experience and aesthetics of the public, and is an illusory and rootless product, thus lifeless. (3) Over-emphasis on the "symbolization" of forms. For various reasons, designers tend to find some "say" for their works, and the best way to express this "theme idea" is its design form. But fundamentally, the connotation of landscape design comes from the use of space, from the people and things it carries. By "symbolizing" the meaning of space attached to the design, it is a kind of vain behavior to seek the sword. (4) Excessive pursuit of landscape form "stylized". Here, the stylization of the landscape form, means the imitation of different formal styles. Because the formal style has historical and regional characteristics, therefore, the borrowed formal style is often not well adapted to the needs of daily life here and now, is a formal trend away from daily life.

### **5. Exploration on the Design of Settlement Combining Flat and Epidemic in the Perspective of Daily Life**

#### **5.1 Settlement Design Principles for the Combination of Flat and Epidemic in the Perspective of Daily Life**

##### **5.1.1 People-oriented Principle**

With the continuous development of the society, the idea of "people-oriented" is getting more and more attention. People are the main body of daily life and play an important role in the content, form and characteristics of daily life. The public space of residential area is the daily life space of the general public, which carries people's daily life, including clothing, food, housing, transportation, marriage and funeral. Specifically, in order to realize "people-oriented" and return to daily life, the following points should be noted: First, in the design of public space of residential buildings, the daily

needs of residents should be fully considered. Therefore, various types of public spaces should be reasonably distributed, coordinated and configured in the building to ensure fair and reasonable allocation of public resources. Second, the real functional needs of residents are considered comprehensively. Generally speaking, the basic contents and forms of people's daily activities are roughly the same, but in practice, they will change due to differences in geography, gender, age, and living habits, so the functional requirements in the public space of the building are also different. In addition, the same group of people also has different personal needs, so it should be considered in an integrated manner. Third, focus on the irrational factors of residents, such as life experience, daily psychology, and aesthetic feelings. "People-oriented" should pay attention to people's inner psychological, emotional and aesthetic needs, and should be based on improving people's spatial feelings and enriching their spatial experience, so as to create a more dynamic, multi-layered and suitable living space.

### **5.1.2 Dynamicity Principle**

Dynamic analysis is an important part of Levers' theory of everyday life. The public space of a residential community is the carrier of people's daily life, which initially exists as an equilibrium state. However, everyday life is constantly changing dynamically. Therefore, this equilibrium system can be easily destroyed. Therefore, in the design of public spaces in residential communities, it is necessary to introduce the principle of dynamics from the time dimension in order to restore the equilibrium of the system. The principle of dynamism requires, on the one hand, an in-depth study of the law of evolution of the daily life of the subjects using the space, taking into account all periods of the present and the future, and taking into account both the current needs and the future development, to grasp the time scale; at the same time, from the dynamic nature of daily life, the application of various spaces is explored, including the combination of space, form, interface, atmosphere, etc. The dynamic application of space to meet the needs of people's daily life.[4]

### **5.1.3 Diversification Principle**

Diversity is a key characteristic of a healthy and vibrant daily life. People's daily life presents a diversity of characteristics, which requires people to make demands on various spaces in their daily life. In the landscape design of residential communities, the application of diversity should be paid attention to. Firstly, the landscape of residential area should meet the needs of various levels and different levels of life, and meet the basic functional space at the same time, and meet more diversified functional space as much as possible. Secondly, attention should be paid to the composition of the use object, that is, oriented to the needs of the main users, while not ignoring the individual requirements, and also promoting the integration and flux of the needs of minority groups.

### **5.1.4 Sustainability Principles**

It is clear that the design of public space in settlements should not only meet the functional needs of the moment, but also retain some flexible space that can be used sustainably, consider and prepare the layout from both regular and non-regular functions, and explore a variety of spatial forms. At the same time, it is necessary to consider not only the impact of the epidemic on the design of spatial forms, but also to prepare for various other natural and man-made disasters. Eventually, the public space inside residential buildings will evolve into a spatial form that is resilient in the face of different situations and temporal conditions.

## **5.2 Settlement Design Methods for the Combination of Flat and Epidemic in the Perspective of Daily Life**

### **5.2.1 Resilient Design of Public Space in Residential Areas**

The concept of resilience is widely used in all aspects of physical, ecological, economic, and management, and it refers to the strain response of a system that occurs when internal and external conditions change. In the design of public spaces in settlements, flexible spatial design can reflect the advantages of adapting to daily life. First, flexible design increases the adaptability of space to daily

life. Secondly, the design of flexible space can coordinate the spatial needs in daily life. At the same time, flexible space design can effectively prolong the use of public space, which can save social resources while reducing the impact on residents' lives due to new construction and renovation. The design of flexible space can be carried out in the following aspects: First, the space can be divided flexibly. Flexible division is an effective method of spatial elasticity, which can change the original spatial form through flexible organization of division to make it elastic, so as to adapt to the changing requirements of use. Second, the spatial form can be expanded and superimposed. Expandable and superimposable spatial forms usually have the modularity or unitization of space. The space group composed of multiple units can be adapted to different needs by adjusting different functional space forms and sizes under different living environments. Third, set up temporary space. Temporary space is also a special way of spatial flexibility, which can be constructed according to the temporary space use needs to meet people's daily needs. In the post-epidemic period, temporary space can carry functions such as temporary isolation and nucleic acid testing, and can also be easily dismantled or relocated, with good spatial and temporal adaptability. [5]

### **5.2.2 Creating a Sense of Place in the Public Space of a Residential Area**

Sense of place refers to a comprehensive response of spatial emotionalization and emotional spatialization resulting from the interaction and interaction between human emotions and the spatial environment in which they are located. The activities, events and human cognitive sensations carried out in this space are important factors that constitute the sense of place in space; accordingly, a space with locality can evoke people's life experience, thus creating a sense of identity and belonging to the space. Therefore, to create a sense of place in space, we must focus on human behavior in space, emotion and the interaction between people and space. The residential space is an important place for human daily activities, in which it constantly generates a variety of behaviors and activities, which contains the residents' emotional experiences, creates a sense of place in the public space, helps people to improve their sense of identity and belonging to the daily life space, and gives the space a meaning of life. Specifically, in creating a sense of place in the public space of residential communities, we should focus on spatial narrative, memory implantation, atmosphere enhancement and emotional interaction, and pay attention to residents' emotional identity from the perspectives of spatial order, interface form and visual texture.

## **6. Summary**

The sudden outbreak and rapid development of the Newcastle pneumonia epidemic has led to much attention and research, but not much discussion has been done on the combination of the epidemic and design, and even less research has been done on the design of public spaces in settlements in the context of everyday life and the post-epidemic period. China's population is the largest in the world, and public space in settlements is an important space used by the public in their daily lives, and it deserves more attention, especially in the context of the epidemic, to meet the new needs of residents in their daily lives.

"Daily life" is a public perspective, and therefore has a strong humanistic concern. The public space in the residential area, which is the basic aspect of the public space discussion and the main carrier of people's daily life, requires not only the joint design of various professional designers, but also the participation of residents, so as to fundamentally solve the new daily needs of residents for safety, health, green and comfort under the epidemic prevention and control, and finally realize the dual satisfaction of residents' physiological and psychological levels.

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