

Original Research Article

Humanized elements in urban public space environmental design

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Abstract: With the acceleration of urbanization, the quality of urban public space environments has garnered increasing attention. Humanistic elements play a pivotal role in the environmental design of urban public spaces, as they directly impact users' experiences, emotions, and sense of identity with urban spaces. The paper delves into the humanistic elements in urban public space environmental design from three primary aspects: spatial scale, functional layout, and sensory experience. It analyzes their connotations, significance, and specific design considerations, aiming to provide theoretical references and practical guidance for creating more humanized and culturally considerate urban public spaces.

Keywords: Urban public space; Environmental design; Humanistic elements; Architecture

1. Introduction

As an integral part of urban areas, public spaces serve as venues for daily social interactions, leisure activities, cultural heritage, and numerous other functions, playing a pivotal role in showcasing a city's vitality and charm. In contemporary urban development, people no longer settle for merely functional public spaces but increasingly seek environments infused with humanistic elements, aspiring to find emotional resonance, comfort, and a sense of belonging within them. Humanized design in urban public spaces can bridge the gap between people and their surroundings, foster social interactions, and enhance the quality of urban life, making it a crucial factor in building harmonious and livable cities. Therefore, a thorough analysis of humanistic elements in the environmental design of urban public spaces and their thoughtful application in design practices has become a significant topic in the fields of urban planning and design today.

2. Humanization of spatial scale

2.1. Appropriate pedestrian scale

Walking is one of the most common activities in urban public spaces, and an appropriate pedestrian scale can create a comfortable and pleasant spatial experience. In architectural design, excessively long or wide streets or squares and parks should be avoided to prevent pedestrians from feeling spatial oppression and fatigue. Generally, a street width of around 10–20 meters is considered suitable, as it not only meets the basic needs of vehicular traffic but also allows pedestrians to experience an intimate spatial atmosphere between buildings on either side. For parks, the side length should not be overly extended. Small parks should be controlled within 50–100 meters, while medium-sized parks should range between 100–200 meters. Within these dimensions, people can visually grasp the entire space with relative ease, and walking across the area will not be overly strenuous, facilitating opportunities for stopping, leisure, and social interaction.

In the design plan of the Beijing Olympic Park as shown in the following picture, the designer divided the park into four smaller parks by utilizing the existing streets and water systems. This was done to address the issue of the park being too large in scale in the original plan, making this public space more user-friendly.

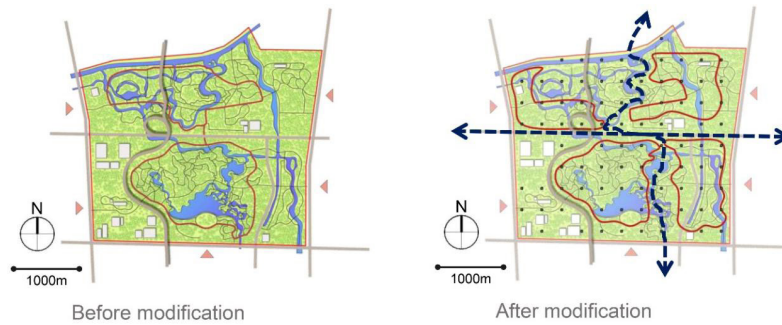


Figure 1. The design plan of the Beijing Olympic Park.

2.2. Human-Scale interface treatment

The interfaces of urban public spaces, such as building facades, walls, and railings, directly influence people's perceptions through their scale treatment. Human-scale interface design emphasizes alignment with human proportions to foster a sense of closeness. The ground-level sections of buildings, with heights around 3m–5m, can incorporate functional spaces closely related to human activities, such as shops, cafes, and seating areas, enabling pedestrians to interact with these spaces at close range during their walks. The height of walls and railings should also be moderate, generally kept between 1200–1500. This ensures a degree of separation and enclosure without creating feelings of isolation or oppression, allowing people to easily view the scenery within the space while maintaining visual transparency and connection.

2.3. Reasonable spatial hierarchy and open-Closed transitions

Urban public spaces should possess rich spatial hierarchies, creating diverse experiences through well-planned variations in openness and enclosure. For instance, in park design, expansive lawn squares can serve as gathering areas for public activities, surrounded by tranquil wooded paths, small pavilions, and other semi-private or private spaces. This arrangement forms a gradual transition from open to semi-open and then to private spatial layers. Within such spaces, people can engage in group activities and experience lively atmospheres while also finding relatively quiet, secluded corners to meet different psychological and social needs.

Simultaneously, the transitions between open and enclosed spaces should follow a certain rhythm, avoiding excessive monotony or disorder. This allows people to continuously encounter new spatial experiences during their movement, enhancing the sense of exploration and interest. For example, the “gray space” proposed by the Japanese architect Kisho Kurokawa is a spatial concept that lies between the open and closed spaces.

3. Humanized functional layout

3.1. Diversified activity function settings

Urban public spaces should cater to the needs of diverse groups and activities across different time periods, necessitating the provision of varied functions. Beyond common features like walking and resting areas, considerations should include children's play zones, fitness areas, cultural exhibition spaces, and open-air theaters. The children's play zone should be equipped with age-appropriate facilities such as slides, swings, and climbing frames, offering a safe and engaging environment. The fitness area should provide a range of exercise equipment to facilitate daily workouts for residents. Cultural exhibition zones can showcase urban history, traditions, and customs through sculptures, murals, or bulletin boards, fostering a sense of cultural identity. Open-air theaters serve as venues for performances and community events, enriching spiritual and cultural life. Such diversified layouts ensure that people of all ages and interests find appealing activities, enhancing the space's utility and appeal.

3.2. Convenient transportation and connectivity

Accessible transportation is fundamental to the functionality of urban public spaces. Surrounding areas should feature convenient public transit stops, enabling easy access via buses, subways, or other modes of transport. Internal circulation routes must be clearly and logically designed to prevent pedestrian-vehicle conflicts. Walkways and barrier-free ramps should connect different functional zones, ensuring smooth movement for all, including the elderly, children, and individuals with disabilities. For larger spaces like city parks or cultural plazas, integration with adjacent commercial and residential areas can create a cohesive urban public space network, expanding activity ranges and fostering regional interaction. As shown in the following picture, as another type of public space, means of transportation also need to take into account the humanized spatial needs of different groups of people.

This section drawing shows: in a running train car, mixed group of people are enjoying tea and snacks.

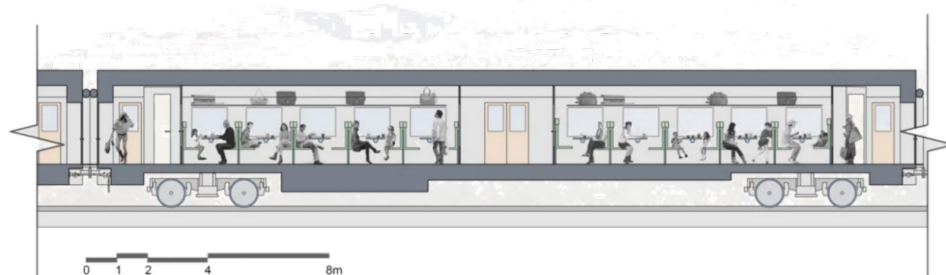


Figure 2. Cross-section of a moving train carriage.

3.3. Zoning for dynamic and static activities

Functional layouts should emphasize the separation and complementarity of dynamic and static zones to ensure harmonious coexistence. For instance, in a library plaza, the area near the building could be designated as a quiet reading and relaxation zone with seating and shade, while the opposite side could host lively activities like small concerts or street performances. Green buffers or low partitions can demarcate these zones while maintaining visual connectivity, balancing tranquility with vibrancy. This approach offers diverse spatial experiences, where quiet and active areas coexist and enhance one another.

4. Humanized sensory experience

4.1. Aesthetic and guiding visual design

The visual design of urban public spaces is crucial. First, emphasis should be placed on overall aesthetics, creating a pleasant visual environment through appropriate color schemes, material applications, and landscape shaping. In terms of color, soft and harmonious combinations should be chosen, avoiding overly glaring or chaotic schemes. For example, natural green can serve as the primary hue, complemented by neutral tones such as beige and gray, fostering a fresh and comfortable atmosphere. Material selection should consider texture and durability—wooden materials evoke warmth, stone conveys solidity, and metal reflects modernity. In landscape design, carefully planned greenery, artistic sculptures, and well-arranged architectural forms can serve as visual focal points, drawing attention. Additionally, visual guidance is essential. Variations in pavement, the arrangement of landscape features, and other methods can naturally guide people to walk and explore the space, enabling clear perception of spatial order and direction. In the design plan of the ACE-cafe as shown in the following picture, a complex mechanical transmission device is used to showcase a unique visual aesthetic.

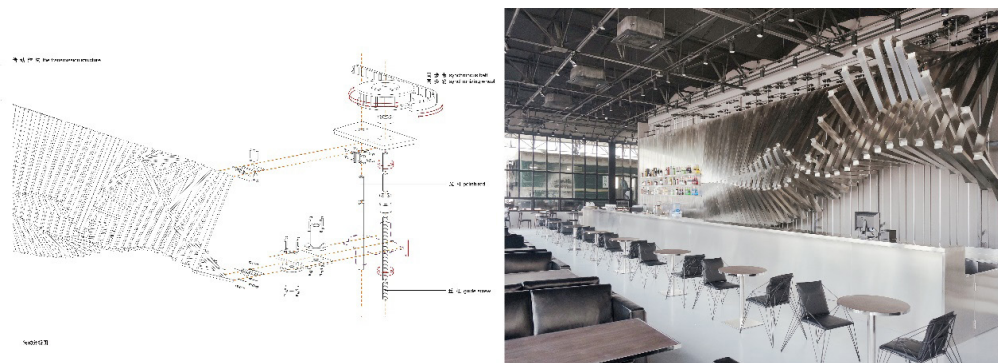


Figure 3. Design of Beijing ACE-cafe themed restaurant.

4.2. Multisensory design

In addition to the visual experience, auditory, tactile, and olfactory experiences also play a crucial role in shaping high-quality urban public spaces. During the design process, noise interference should be minimized through rational planning and layout, such as separating traffic arteries from activity areas. At the same time, natural or artificial pleasant sounds should be incorporated, such as the babbling of brooks, the chirping of birds, and background music, etc. Interactive sound installations can also be set up to add a sense of fun. In terms of tactile and olfactory experiences, materials for public facilities that are comfortable in texture and suitable in temperature should be selected, and plants that emit pleasant scents should be planted. These subtle aspects not only bring a pleasant feeling but also help to strengthen the emotional connection and sense of belonging of the public to urban public spaces.

5. Conclusion

The humanistic elements in urban public space environmental design encompass multiple aspects such as spatial scale, functional layout, and sensory experience. These elements are interconnected and mutually influential, collectively contributing to the creation of urban public spaces that embody humanistic care and cater to people's psychological and physiological needs. In future urban construction and development, designers should deepen their understanding and mastery of these humanistic elements, integrating them into every design phase. This will ensure that urban public spaces are not merely physical entities but also spiritual havens that carry emotional significance, foster social interactions, and preserve urban culture. By doing so, residents can truly enjoy comfortable, pleasant, and meaningful public space environments, thereby enhancing the overall quality and appeal of the city.

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