It Can Exist, but Not in My Backyard! Discussing the Diffusion Effect of Neighbor Nimby From the Relationship Between Community Park Green Space and Ground Floor Entrance and Exit Section

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Abstract
The aim of this study is to explore the impact of the Not In My Backyard (NIMBY) effect on the ground floor entrance and exit section and community park green space in urban design. Through the analysis of various community park cases, this study found that the diffusion of NIMBY effects has a significant impact on the design of the ground floor entrance and exit section, especially in high-density, large-scale residential redevelopment areas after urban expansion. In these areas, the territoriality and distance significantly influence the openness and comfort enhancement of the ground floor entrance and exit section, aiming to mitigate the negative impacts brought about by the NIMBY effect. Meanwhile, as part of the YIMBY system, community park green spaces also need to consider the diffusion of their informal, diverse by the NIMBY effects. This article use case analysis (environmental behavior) and semi-structured interviews (grounded theory) as research methods. Focusing on issues such as optimizing the layout and facilities configuration of the ground floor entrance and exit section and accessibility of community park green spaces. The final research contribution lies in two aspects. Firstly, it examines how the NIMBY generated by territoriality and distance influence civic awareness. Secondly, considering the structural conflict stemming from spatial imbalance and benefit distribution issues generated by community public green spaces.

Keywords: Not in My Backyard (NIMBY), Ground Floor Entrance and Exit Section, Community Park Green Space (Public Green Space), Territoriality, Distance

Introduction

Due to the impact of colonization, Taiwan's urban development history can be divided into two distinct periods, with the Japanese colonial period as the demarcation point. Prior to this period, urban development focused on the organic growth of traditional Chinese settlements, and public green spaces such as parks were relatively underdeveloped. It was not until the Japanese colonial period that the concept of "public green spaces" began to emerge clearly, influenced by Western ideas. With the progress of urbanization, people's concern for the quality of the urban environment and living conditions increased, prompting urban planners to emphasize the construction of various scales of public spaces within cities. These included Central Parks, Regional Parks, Community Parks, and Pocket Parks. However, the specific timing of their emergence varied by region, with different cities beginning to plan and build community neighborhood parks at different points in time.

In traditional Western urban planning strategies, "public green spaces" are a quintessential example of "Yes In My Backyard" (YIMBY) facilities, conveying an undoubtedly positive environmental atmosphere. However, when considering these facilities from the perspective of stakeholders, ranging from local government and the broader community to the immediate neighbors and secondary surrounding residents affected by the park, the fundamental debate lies in whether the environmental behavior generated is inevitable. If so, the crux of managing strategies with the goal of maximizing public benefit is not merely about the YIMBY facility itself, but rather whether the information conveyed by the facility is accurate, complete, limited, transparent, and meets the basic criteria of symmetry.

Based on the above, this paper examines how the NIMBY (Not In My Backyard) effect influences the design and use of community parks and green spaces in large suburban communities. Specifically, it explores how the openness and comfort of ground-floor residential courtyard spaces are affected by the community environment. Finally, the discussion focuses on how the relationship between community parks and residents can transform from that of NIMBY facilities to YIMBY facilities.

Literature Review

1. Boundary and Territory

The “boundary" is a noun specifically used to delineate borders and limits, often employed in the context of national borders, county lines, community divisions, residential boundaries, and the like. On the other hand, “territory”, in the field of ethology, refers to a specific area occupied by an individual within a particular species, used to resist the intrusion of conspecific or heterospecific individuals. In the study of 'residential territories,' previous research in indigenous traditional territory surveys has focused on discussions related to land management. The text describes changes in the territories of specific groups, land rights relationships, and subsequent investigation and assessment recommendations.

In contrast to this, the field of design psychology proposes a more in-depth discussion focused on 'identity' and the 'residential effect,' beyond memory, ideals, comfort, and happiness. The field of study posits that the individual characteristics of residents and their living conditions, encompassing both material and psychological aspects, serve to accentuate the territoriality inherent in biological individuals or groups within specific spatial configurations, such as single-entrance detached residences or gated communities. On the

other hand, it ensures safety within the domain of daily life and the establishment of defensive spaces externally. However, a stance extending from individual residences to communities has not been observed. In light of this, the present study conducts an in-depth investigation into the adjacent and internal facets of ground floor entrance and exit section of a detached house in single-entrance residential units and their external facades.

2. Openness/Closure and Security

The concept of 'security' is a fundamental requirement for residential environments. In the fields of architecture and civil engineering, it is intricately linked to factors such as residential satisfaction, community layout, spatial openness, and smart living. The research findings underscore the significance of external environmental threats and evolving societal dynamics as pivotal contributors to the perceptual variations in residential environments. Furthermore, research primarily centered on the elderly demographic is constrained to strategies for mitigating risk factors following age-related functional decline and post-space adaptation (remodeling).

Based on this research review, it is evident that the establishment of " security " in living environments necessitates a close integration of the residential and community spaces at both the psychological (internal) and environmental (external) levels, achieved through the active participation of residents or community members. This study focuses on the delineation forms and materials of ground floor entrance facades, elucidating the characteristics and issues related to safety that they manifest.

3. “Not in My Back Yard, Nimby” Effect

"NIMBY facilities" refer to facilities that the local population does not want to accept. However, from the standpoint of ensuring urban quality and the proper functioning of social public welfare, these facilities are unavoidable. Since the Industrial Revolution, with the expansion of urban populations and residential areas, these NIMBY facilities have gradually fomented negative sentiments among nearby residents due to the tangible or potential adverse effects on their daily lives (such as air pollution, noise pollution, and environmental filth). This sentiment has led to the firm articulation of slogans like "Not in my back yard," "Not on our street," "Locally unwanted land use," and "Not on planet earth" to express dissatisfaction with the perceived risks (Lee, Y. J., Chen, B. T., 1996).

This study aims to challenge the concept of NIMBY facilities by exploring the opposite—YIMBY (Yes In My Back Yard) facilities. YIMBY facilities contribute positively to the living environment and convenience of surrounding residents. However, the literature review also reveals that positive facilities may still have negative impacts. In other words, a YIMBY facility might still generate NIMBY sentiments. This study will examine the facilities and activities in community parks, their impact on the spatial form of nearby residents' first-floor entrances, and conduct interviews to discuss this causal relationship.

Materials and Methods

This study centers on the "NIMBY facility" effect, aiming to explore the impact of the design of Lǐ-siǎng Park and Ji'-an Park on user behavior and overall usage patterns. The research is divided into two stages according to its objectives. First, a literature review will be conducted to define and challenge the concept of NIMBY facilities and discuss various trade-offs

related to the construction of public spaces. The second stage involves semi-structured interviews and field surveys to analyze and discuss the trade-offs faced by designers and users in the planning and practice of public spaces. By analyzing the two sampled parks within the community, this study will compile the design features and user experiences, providing insights for future urban public space planning.

1. Framework Design of the Study

This study identifies the width of the roads adjacent to community park boundaries and the front, back, and side views of surrounding buildings as key influencing variables. The study employs purposive sampling in the areas of Ideal Park and Jian Park. The research framework comprises three main aspects: (1) Organize the forms and considerations of community park boundaries adjacent to roads. (2) Explore the orientation and reasoning behind the community park's relationship with surrounding single-family homes. (3) Understand the impact of internal configurations and activities within the community parks on residents. The research framework is illustrated in Figure 1.

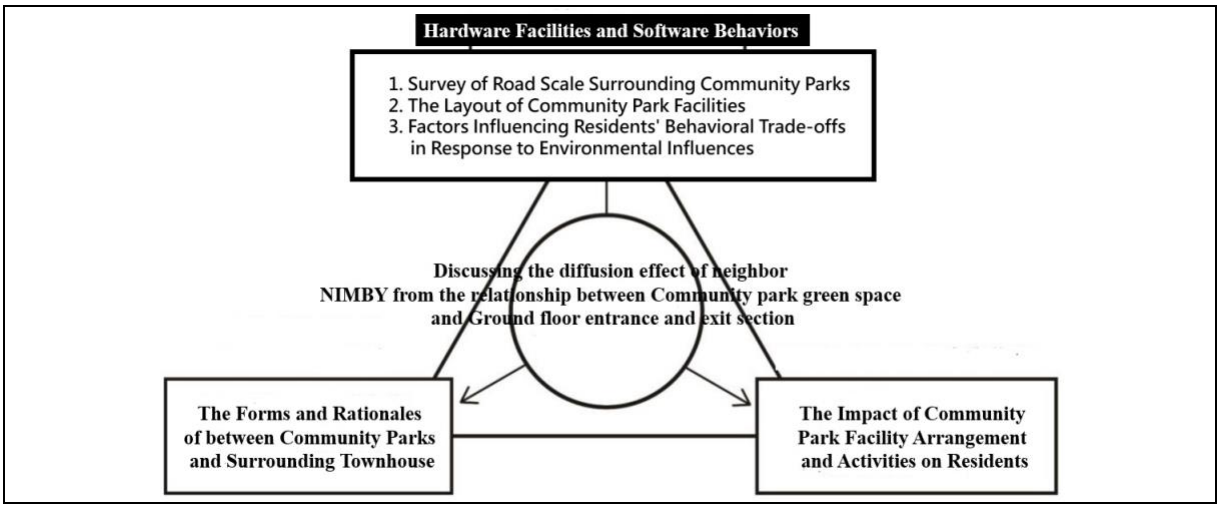


Figure 1: Research Framework Diagram.

2. Basic Information and Survey of Research Samples

The ' Lǐ-siǎng Community,' comprising Lǐ-siǎng Village and Da'an Village, is located in the Anping District of Tainan City, Taiwan (formerly known as Anshun), bordered by the Yan Shui River, Anping District, Zhongxi District, and Beiqu. Prior to the 1970s, it consisted of fish ponds and agricultural land adjacent to the drainage branch of the Jiannan Canal, but later evolved into a large-scale new town planning base to accommodate urban expansion. The research site is located in Lǐ-siǎng Village (1,784 households, population 5,212) and Da'an Village (1,538 households, population 4,220). Both villages have been developed by the Ideal Construction Company for over 40 years, and residents (either buyers or renters) mostly come from the laboring class migrating from outside the urban area. Various public facilities within the Ideal Village community, such as Lǐ-siǎng Park, Lǐ-siǎng Activity Center, designated market areas, and parking lots, have been gradually constructed over the past decade. In Da'an Village, public facilities like Ji'-an Park, Yi'an Park, and parking lots have been developed in response to new construction projects, with Ji'-an Park being established within the last two years.

The research scope involves sampling at Ideal Park and Ji'-an Park. The study focuses on the road width and internal facilities within the park area as significant variables. Each of the two villages within the Ideal Community has two parks, with Lǐ-siǎng Park being established earlier and Ji'-an Park later. In this study, Lǐ-siǎng Park is coded as Area A (A-1 side, A-2 side, A-3 side, A-4 side), and Ji'-an Park is coded as Area B (B-1 side, B-2 side, B-3 side, B-4 side). A purposive sampling of residential forms on all four sides of the parks in these two zones is conducted, with 25 cases in Area A and 20 cases in Area B, totaling 45 cases. Field surveys were conducted from November 2023 to May 2024 (Figure 2, Table 1).

Figure 2: Study Area and Sample: -siǎng Park and Ji'-an Park.

Research Samples for Area A (Residential Area around Lǐ-siǎng Park)

Regional Location	Road Names	Width	Sample Number	Quantity
A-1 Side	Ln. 117, Da-an Street	6m	A-1.1/ A-1.2/ A-1.3/ A-1.4/ A-1.5/ A-1.6/ A-1.7	7
A-2 Side	Aly. 54, Ln. 150, Sec. 2, Hai-dian Road	9m	A-2.1/ A-2.2/ A-2.3	3
A-3 Side	Ln. 145,Da-an Street	6m	A-3.1/ A-3.2/ A-3.3/ A-3.4/ A-3.5/ A-3.6/ A-3.7 / A-3.8/ A-3.9	9
A-4 Side	Da-an Street	9m	A-4.1/ A-4.2/ A-4.3/ A-4.4/ A-4.5/ A-4.6	6

Research Samples for Area B (Residential Area around Ji'-an Park)

Regional Location	Road Names	Width	Sample Number	Quantity
B-1 Side	Ln. 70, Yiii Street	9m	B-1.1/B-1.2/ B-1.3/ B-1.4	4
B-2 Side	Yi-ji Street	9m	B-2.1/ B-2.2	2
B-3 Side	Ln. 86, Yi-ji Street	12m	B-3.1/ B-3.2/ B-3.3/ B-3.4/ B-3.5/ B-3.6/ B-3.7 / B-3.8	8
B-4 Side	No	No	B-4.1/ B-4.2/ B-4.3/ A-B.4/ B-4.5/ B-4.6	6

Table 1: Area of research: A and B

Survey Results

1. The Relationship Between Community Parks and Adjacent Road Width

The survey results found that the community park in Area A covers 44 square meters. Based on the surrounding environment survey and mapping results, the following observations were made: Side A-1 and Side A-3 have adjacent road widths of 6 meters. Side A-1 is mainly planned for an outer walkway (3 meters) around the park and temporary roadside car parking. Side A-3 is planned for a 6-meter outer walkway around the park, a strip of planted area, temporary roadside car parking, a public bicycle parking area, and an activity center entrance. Side A-2 and Side A-4 have adjacent road widths of 9 meters. Side A-2 is planned for an outer walkway (3 meters) around the park, temporary roadside parking, and a park entrance. Side A-4 is planned for an outer walkway (3 meters) around the park, temporary roadside car parking, a public bicycle parking area, and an activity center entrance.

The community park in Area B covers 71 square meters. Based on the surrounding environment survey and mapping results, the following observations were made: Side B-1 and Side B-2 have adjacent road widths of 9 meters. Side B-1 is mainly planned for an outer walkway around the park, double strip plantings (6 meters), and a park entrance. Side B-2 is mainly planned for an outer walkway around the park, single strip plantings (5 meters), temporary roadside car parking, and a public bicycle parking area.Side B-3 has an adjacent road width of 12 meters and is mainly planned for an outer walkway around the park and the playground entrance. Side B-4 is mainly planned for an outer walkway (3 meters) around the park.

In the survey samples from Areas A and B, objective observations indicate that the community park and adjacent road widths range from 6 to 12 meters. The road widths in Area A are smaller than those in Area B, primarily due to the age of the communities. The survey results show that 75% of the spaces are used for "temporary parking" and 25% for "public bicycle parking," indicating that residents' private domain behaviors extend significantly into the public domain. The main facilities of the community parks, along with the park walkways, are designed to maintain a certain distance from traffic roads for safety and comfort. However, on sides A-4 and B-4, only the outer park walkways separate the parks from the residences, resulting in a close proximity, especially near the basketball court facilities, which leads to a NIMBY (Not In My Backyard) effect due to the noise from activities. The relationship between the road widths adjacent to the community parks and the residents is crucial in terms of public domain awareness. Residents expect to maintain a proper distance from park facilities to avoid noise but also wish to use the ample road width for temporary parking.

The comparison between Areas A and B reveals that Area A is an older developed community with narrower roads between the street parks and residences compared to Area B. However, residents in Area A extend their private domain into the public space more than those in Area B. This results in a vibrant neighborhood social circle on one hand, but on the other hand, it is detrimental to the residents living adjacent to the park, creating a NIMBY (Not In My Backyard) effect. In contrast, Area B is a newly developed community within the past three years. The road dimensions are influenced by urban planning and land reorganization regulations, resulting in wider roads. In this survey, residents noted that while the wider roads enhance traffic convenience, they also increase the likelihood of accidents. Additionally, respondents pointed out that the greater road width in Area B is less favorable

for the surrounding residents' use, rendering the park merely a "green space" without effective utilization (Table 2).

Surveyed Locations	Usage Status of Park Adjacent Roads	Noise Presence or Absence	Proximity to Park Facilities	Residential Orientation
Side A-1 Road width of 6 meters	1. Perimeter walkway of the park (3M)	V	1. playground 2. outdoor gym equipment	Façade / 6 Side / 1
	2. Temporary car parking on the road			
Side A-2 Road width of 9 meters	1. Perimeter walkway of the park (3M)	V	1. outdoor gym equipment 2. outdoor gym equipment 3. playground	Side / 3
	2. Temporary car parking on the road			
	3. Park entrance			
Side A-2 Road width of 9 meters	1. Perimeter walkway of the park (3M)	V	1. outdoor gym equipment 2. outdoor gym equipment 3. playground	Side / 3
	2. Temporary car parking on the road			
	3. Park entrance			
Side A-3 Road width of 6 meters	1. Perimeter walkway of the park (3M)	V	1. community active center 2. public bicycle parking area	Façade / 8 Side / 1
	2. Double-sided strip planting area (3M)			
	3. Temporary car parking on the road			
	4. Public bicycle parking area			
Side A-4 Left road width of 9M No road width on the right	1. Perimeter walkway of the park (3M)	V	1. community active center 2. basketball court 3. public bicycle parking area	Back / 6
	2. Temporary car parking on the road			
	3. Public bicycle parking area			
	4. Activity center and park entrance			

Side B-1 **Road width of** **9 meters**	1. Perimeter walkway of the park (3M)		1. badminton court 2. public bicycle parking area	Façade / 4
	2. Bilateral strip planting (3M)			
	3. Park entrance			
Side B-2 **Road width of** **9 meters**	1. Perimeter walkway of the park (3M)		1. badminton court 2. public bicycle parking area 3. pavilion	Side / 2
	2. Unilateral strip planting (1.5M)			
	3. Temporary car parking on the road			
	4. Public bicycle parking area	V		
Side B-3 **Road width of** **12 meters**	1. Perimeter walkway of the park (3M)		1. pavilion 2. playground	Façade / 8
	2. Entrance to the playground area			

Table 2: Park Adjacent Road Width and Usage Record

2. Trade-Off Between the Interface and Form of the Ground Floor Entrance and Exit Section of a Detached House and Adjacent Roads

According to the perspective on "trade-offs" proposed by Nickel, J., Duimering, P. R., & Hurst, A. (2022), this article adopts this viewpoint to analyze the choices made by residents/designers when faced with residential/design issues. It uses this perspective to predict the "static space mechanism" among the three trade-off mechanisms, where residents do not change parameters or clearly defined living spaces. Residents will try to determine feasible solutions within the original framework. This can mainly be divided into "Surrendering," "Satisficing," and "Optimizing" to interpret how the ground floor facades of residences around the community park adapt to community park activities through trade-offs.

The survey and interview results indicate that among the four sides of the community park in Area A, residents' trade-off choices in response to the discomfort caused by park activities through changing the form of their ground floor doorways are as follows: 14 out of 25 cases expressed "surrendering," 8 out of 25 cases expressed "satisficing," and 3 out of 25 cases expressed "optimizing." The study found that the "surrendering" option accounted for as high as 56% in areas A-1, A-3, and A-4. Comparing this with the layout of the park facilities, it was found that the basketball court, outdoor fitness equipment area, and outdoor play area are closer to these three sides. The ground floor doorways in these areas tend to be old and patchwork in materials, both closed off and unable to completely block external disturbances, thus preventing residents from fully enjoying the benefits of the community park. Ultimately, it was discovered that these three sides not only exhibit the most significant NIMBY (Not In My Back Yard) sentiments but also show a passive approach to trade-offs. The three cases expressing "optimizing" (A-1.2, A-1.3, A-3.8) feature function-oriented ground floor doorway designs. These houses have been renovated and designed to better mitigate external

disturbances, and their locations are not in the core areas of interference, resulting in lower negative sentiments in the trade-off performance evaluation.

The survey results for the four sides of Area B indicate that the facades of the new community residents are heavily influenced by the construction company. The trade-off choices are as follows: 9 out of 20 cases expressed "surrendering," 11 out of 20 cases expressed "satisficing," and none expressed "optimizing." So far, in areas B-1, B-3, and B-4, there have been no instances of residents independently making modifications, yet there are still residents who express being affected by park activities and are currently in the "surrendering" category, gradually shifting towards "optimizing." This is particularly notable in the B-3.3, B-3.4, and B-4 study areas, which account for 36% of the cases. According to the community park's planning layout, these sample areas are very close to high-activity facilities (such as the basketball court and play area). Additionally, there is no road in front of area B-4 to provide a buffer between the park and the residences.

In summary, the statistical discussion on the relationship between ground floor doorway forms and park activities reveals that Area A exhibits more diverse forms (single door, two-door split, three-door split). These doorways have lower thresholds, fostering neighborhood social relationships and even aiding the tacit mutual aid system within the community. In contrast, the forms in Area B are primarily determined by the construction company, typically featuring a fixed two-door split type, with doorways at a higher threshold compared to Area A. Only the B-3 side, being part of an older community, exhibits a more conservative and generic form. The proportion of the "optimizing" trade-off option is the lowest in this study. It is estimated that in Area A, this is due to the economic constraints of the old community residents. In Area B, the lower willingness to "optimize" is because most buildings in the community have been constructed within the last three years (Table 3).

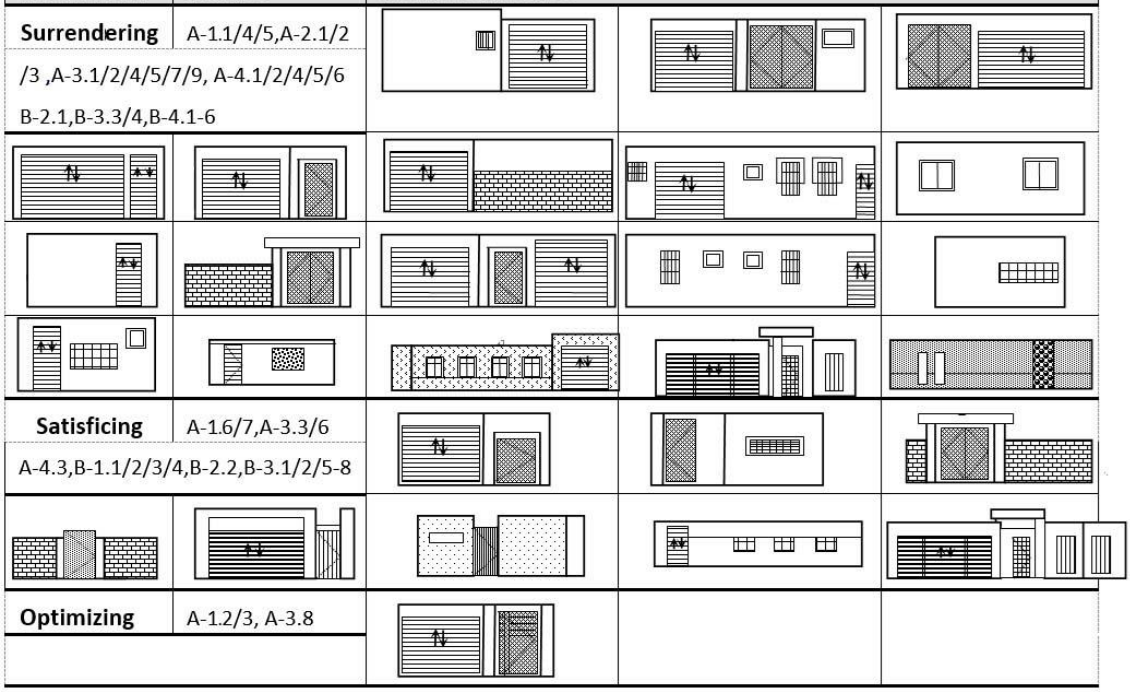
Static Space Mechanism	Study Sample Number	The division of ground floor entrance and exit section of a detached house
Surrendering	A-1.1/4/5,A-2.1/2/3 ,A-3.1/2/4/5/7/9, A-4.1/2/4/5/6 B-2.1,B-3.3/4,B-4.1-6	
Satisficing	A-1.6/7,A-3.3/6 A-4.3,B-1.1/2/3/4,B-2.2,B-3.1/2/5-8	
Optimizing	A-1.2/3, A-3.8	

Table 3: The division of ground floor entrance and exit section of a detached house and Trade-off

Discussion and Conclusion

This study focuses on the "NIMBY (Not In My Back Yard) effect" and explores the impact of the planning of Ideal Park (Area A) and Ji'an Park (Area B) on the ground floor doorway forms of surrounding residents (users), as well as the various trade-offs faced in constructing public spaces. Through field surveys and semi-structured interviews, the research methods analyzed the design features of the parks and user experiences, aiming to provide insights into the design trade-offs for future urban public spaces.

Firstly, the field survey data reveals that in both the A and B research samples, although the NIMBY sentiments were taken into consideration during the park configuration planning phase to minimize adverse factors and enhance user comfort and safety in public spaces, there were indeed uncontrollable factors in the implementation outcomes. Area A primarily serves residents of the surrounding old communities on all four sides, with the park being quite closely situated to residential areas. In contrast, Area B primarily serves residents from distant old communities rather than the new community developments on all four sides, with the park being farther away from residential areas except on one side, and road dimensions being larger compared to Area A. This resulted in additional considerations regarding directing pedestrian and vehicular traffic flow and temporary parking. However, both areas feature open landscapes and multifunctional recreational areas, providing residents with spaces for relaxation and social interaction.

Furthermore, through semi-structured interviews, differences were found in user evaluations of the two parks. In Area A, users generally appreciated the lively social atmosphere and well-equipped facilities, but they found the environment to be unfriendly to the peace and quiet of surrounding residents. In Area B, users emphasized the social functions and convenience of transportation, but expressed concerns about the safety of the park environment. Empirical research has found that when communities allocate green resources (parks), unless they reduce the impact on surrounding residents' lives, it is not possible to effectively improve residents' quality of life. In simple terms, when the ratio of community park allocation has reached an optimal urban planning status, unless the NIMBY effect caused by activities is effectively controlled, there cannot be further improvement in environmental quality.

In conclusion, this study highlights the importance of trade-offs in public space design and calls for urban design to pay more attention to the real needs of residents while balancing functionality and comfort. Future research could further explore community public space planning with high degrees of background diversity, examining the correlation between residents' quality of life and community public resources.

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