



THE SOCIAL LANDSCAPE: EXAMINING HUMAN INTERACTION IN OPEN SPACES

Amol Shankar Magdum^{1*}, Dr. Rajendra. B. Koli²

Abstract :

This study explores the integral role of open spaces in city sustainability, emphasizing their impact on human interactions and environmental well-being. Focusing on a case study in Pune, India, the research analyzes urban residents' responses to green spaces, evaluating design elements influencing social interactions. Results indicate a strong correlation between human-human and human-nature interactions, with high satisfaction levels in various aspects. The study underscores the significance of specific elements within open spaces, such as green areas and water features, in fostering a harmonious relationship between humans and nature, ultimately contributing to a sustainable and vibrant urban environment.

Keywords: Open spaces, Urban sustainability, Human interactions, Social cohesion, Design, elements.

^{1*}Doctor Candidate, Visvesvaraya Technological University, Karnataka, India, mamol6000@gmail.com

²Professor, Anantrao Pawar College of Architecture, Pune, India, rbkoli2006@yahoo.co.in

***Corresponding Author:** Amol Shankar Magdum

*Doctor Candidate, Visvesvaraya Technological University, Karnataka, India, mamol6000@gmail.com

DOI: 10.53555/ecb/2022.11.9.32

1. Introduction

Open spaces serve as crucial social infrastructure in housing developments, playing a pivotal role in enhancing the environmental ecosystem (Marzukhi, Karim, & Latfi, 2012). Primarily designed to meet recreational needs (Chiesura, 2004), open spaces, particularly those adorned with greenery, act as vital sources of oxygen production, ecosystem control, and soil water management (Arifin, 2005). Additionally, these spaces function as buffers against sound, wind, dust, and sunlight. However, the success of open spaces, as outlined by Philips (1996), hinges on good design, proper management, and community support.

Open spaces, broadly defined as lands designated for public gardens, parks, sports grounds, or recreational areas, contribute positively to urban environments (Philips, 1996). Chiesura (2004) characterizes open space as an exposed area conducive to nature-oriented outdoor activities. It can be categorized into public and private open spaces, each serving distinct societal needs.

Urban green spaces are deemed vital in new townships, offering opportunities for social contact and contributing to social well-being by mitigating negative behaviors like aggression (Dempsey, Brown, & Bramley, 2012). Ultimately, well-designed green spaces play a pivotal role in fostering social cohesion and identity, contributing to a harmonious urban environment.

2. Literature Review

Urban residents often show a preference for areas with green spaces, a sentiment supported by numerous studies (Bell et al., 2008; James et al., 2009). The proximity to green spaces correlates with increased utilization, and the design of urban green spaces plays a pivotal role in shaping societal activities, thereby influencing behavioral patterns and cultural norms within urban communities. Strong social ties among urban dwellers foster an environment of connectedness, meaning, and purpose, while a lack of integration may contribute to feelings of hopelessness, elevating the risk of depressive symptoms (Abada et al., 2007). Interaction among urban residents provides an opportunity to acquaint themselves with their neighborhoods and fellow residents.

Previous research highlights the inclusive potential of urban green spaces, viewing them as favorable for stimulating social interactions. However, contemporary communities often lack intensive social interactions with strangers, preferring communication within their established social groups. This aligns with earlier findings (Lofland, 1998), which suggested that interactions

with unknown individuals are less common than those with familiar ones. Despite this, many individuals enjoy being in green spaces, encountering others, fostering a sense of connection to the place, and building strong community cohesion (Peters et al., 2010).

While some people seek social interactions in green spaces, others use these areas as private spaces for personal reflection. Lawson (2001) proposed that individuals and their social groups in urban areas require approximately 4 meters of space to achieve a self-comfortable zone, allowing them to ignore the presence of others. Additionally, a distance of approximately 24 to 60 meters has been identified as the limit for facial recognition zones (Thiel, 1997). Regular visits to green spaces can transform familiar strangers into friends (Nayak, C. B. 2021).

Furthermore, the enjoyment of the presence of others can lead individuals to disregard comfortable distances. Urban green spaces provide enclaves and sub-spaces for private moments, communal gatherings, or observing others from a distance. Therefore, these spaces are essential for promoting mingling and communication among different ethnic groups (Nurzuliza, 2012), serving as areas for informal interactions that foster a sense of connection. Understanding the characteristics of green spaces is crucial for comprehending their role in facilitating social interaction. Urban green spaces that function as everyday places contribute to a sense of belonging and comfort for individuals. People's relationships with open spaces vary based on factors such as socio-economic status, gender, types of activities, and park facilities. According to Mutiara & Isami (2012), involvement and interaction in open spaces enhance the sense of belonging and neighborhood attachment. Insights from Matsuoka & Kaplan (2008) provide valuable information on how humans interact with outdoor urban environments, encompassing the open spaces themselves.

3. Methodology

This research investigates urban residents' responses to green spaces, focusing on their social preferences and experiences. It aims to understand the design elements influencing social interactions within these spaces. The study assesses green space properties (green quality, setting, accessibility, and dynamic features) and social attributes (personal information, social division, and preferences) through documented responses. The unit of analysis is diverse age groups of new township residents in Pune, chosen as

representative of typical inhabitants. The research emphasizes the relationship between green space design complexity and increased user engagement. A survey questionnaire was distributed randomly within selected green spaces without consideration for users' age, race, or ethnicity, resulting in 72 reliable respondents for further analysis. Subsequently, green inventories were conducted at each site to map the spaces and their characteristics. Unobtrusive observations were then performed to capture spontaneous user behavior and generate movement patterns within the green spaces. A comparative analysis was conducted, considering different time periods (morning, afternoon, and evening) to observe varying usage patterns on different days of the week. The observation techniques included systematic walks and pauses for visual scans in each sub-area of the green spaces.

4. Case study

The chosen research site is OKAYAMA garden, serving as the urban park for the city of pune. It is a popular retreat for local residents, particularly in the evenings and on weekends. Situated in the city center, this man-made lake boasts a captivating landscape.

This picturesque garden draws inspiration from the renowned 300-year-old Kōraku-en Garden in Okayama. Spanning 10 acres, the meticulously maintained landscape features naturally flowing water from a canal, artfully distributed throughout the entire garden. Designed to allow visitors to stroll along paths that reveal ever-changing landscapes, walking on the lush lawns is strictly prohibited. The garden's layout invites individuals to appreciate the scenery while traversing its paths. Positioned at the heart of the garden, a small bridge offers a vantage point to observe vibrant fish swimming in the clear waters. This Japanese garden stands as a testament to cultural connections and natural beauty.



Fig.1. Panoramic View



Fig. 2. Meandering pathways along the water channel



Fig.3. space alongside the water channel facilitates water therapy



Fig.4. Interaction spaces



Fig. 5. Space for activities



5. Results and findings

The survey questionnaires were coded into R software to conduct statistical correlation analysis. The primary objective of this analysis is to explore

the relationship between human-human interactions and human-nature interactions in open spaces. Additionally, attributes such as users' gender, race, age group were included to provide

supplementary information about these relationships. Table 1 in the descriptive analysis

presents summary of the number of users by gender engaged in activities.

Table 1. Detailed observations of personal and visit-related data of the participants

Categories	Variables Measured		Gender			N=72 %
			Female	Male	All	
Personal	Age group	Kids	6	8	14	19
		Young Adult	7	8	15	21
		Adult	11	12	23	32
		Middle age	3	5	8	11
		Old age	8	4	12	17
	Neighbourhood	1-5 years	12	7	19	27
		5-10 years	15	10	25	35
		More than 10 years	16	12	28	38
	Companion Type	Family	17	29	46	64
		Peer and friends	6	10	16	22
		Alone	6	4	10	14
	No of Members	1 person	6	4	10	14
		2-5 person	33	20	53	73
		In groups	5	4	9	13
	Interaction duration	5-10 min	4	9	13	18
		10-30 min	7	9	16	22
		More than 1 hour	29	16	45	62
	Visit Frequency	Every month	11	6	17	24
Twice a month		13	10	23	32	
Every week		9	3	12	16	
Everyday		4	3	7	10	
First time		7	6	13	18	
Activities	Play	23	12	35	49	
	Interaction	24	21	45	62	
	Photography	13	9	22	30	
	Exercise	22	34	56	78	
	Yoga	13	10	23	32	
Attractions	Green Space	34	14	48	67	
	Flora	16	16	32	45	
	Activity space	18	27	45	63	
	Water body	32	26	58	81	
	walkway	27	15	42	58	
	Shelter and Seat	17	11	28	39	
Settings	Enough Facilities	23	32	55	76	
	Attractive	35	24	59	82	
	Safe	25	21	46	64	
	Clean	32	30	62	86	
	Design appropriate	25	35	60	83	

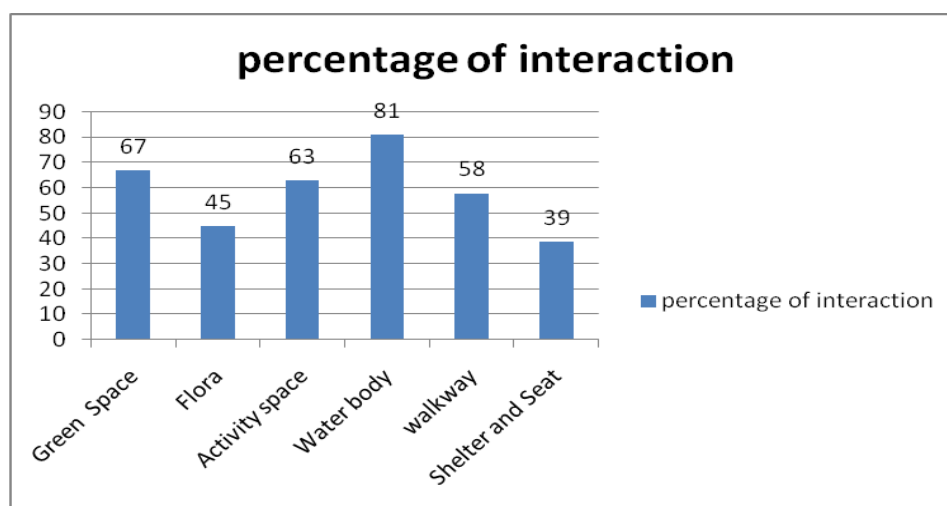


Fig.1. Percentage of interaction in different space type

In Fig 1, it can be seen that the highest percentage of respondents interaction observed near water bodies (81%) with the total number of 58 people. It is followed by contact with green spaces (67%) with the total number of 48 respondents, Activity space (63%) with total respondents of 45, walkway (58%) with 42 respondents, Flora (45%) with 32 respondents and lastly, shelter and seating (39%) with the total number of respondents 28.

The respondents were asked to rate their level of satisfaction with the interaction. The subthemes were then divided into several category such as the design of the open spaces, the natural and physical elements of the open spaces, the ability to pursue the interaction required, the sense of calmness and happiness in the open spaces, the appreciation of the open spaces towards the level of interactions and the overall satisfaction level of interactions that respondents experienced in the

open spaces. In Table 2 shows a summary of overall satisfaction level of respondents towards the interaction.

As in Table 2, the majority of respondents expressed satisfaction with all attributes of the space, except for community engagement and activity, where 34% reported dissatisfaction. This indicates that the flexibility of community engagement and activity in these spaces is perceived to be limited for the residents. The findings also reveal that respondents using these spaces are content with safety, security, shade, and shelter, with high green provision and a visually appealing environment contributing to their satisfaction. Moreover, the results highlight that 48% of respondents are highly satisfied with maintenance and cleanliness, and 50% express happiness with the cultural and social relevance of the space.

Table. 2 The respondents exhibited a satisfactory level of interaction.

	Accessibility and Connectivity	Safety and Security	Aesthetics and Landscaping	Comfort and Seating	Recreational Facilities	Shade and Shelter	Environmental Sustainability	Noise Levels and Ambient Environment	Community Engagement and Activities	Maintenance and Cleanliness	Technological Integration	Cultural and Social Relevance	User Satisfaction	Biodiversity and Ecosystem Health	Well-being & Mental health	Social Interactions	Sense of Community	Sense of belonging
Highly satisfied	22	23	40	40	14	17	38	28	11	48	32	50	23	36	26	32	24	26
Satisfied	68	73	46	42	50	69	42	60	55	40	52	41	70	52	63	56	65	63
Not satisfied	10	5	4	8	31	14	10	12	34	12	16	9	7	12	11	12	10	11

6. Conclusions

This research underscores the critical role of open spaces in fostering city sustainability. It emphasizes the symbiotic relationship between human interactions and open spaces, elucidating the reciprocal benefits derived from this synergy. The positive impact extends not only to human well-being but also contributes to the health of the natural ecosystem, establishing a harmonious correlation between the two elements. Furthermore, the study highlights the indispensable role of specific elements within open spaces, such as green areas, water features,

and physical attributes, in augmenting interactions between humans and nature.

References

1. Marzukhi, M. A., Karim, H. A., & Latfi, M. F. (2012). Evaluating the Shah Alam City Council Policy and Guidelines on the hierarchy of neighborhood open space. *Procedia - Social and Behavioral Sciences*, 36,456–465. doi:10.1016/j.sbspro.2012.03.050
2. Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning*, 68(1), 129–138. doi:10.1016/j.landurbplan.2003.08.003

3. Philips, L.E., (1996). *Parks: Design and management*. United States of America: McGrawHill.
4. Bell, J. F., Wilson, J. S., & Liu, G. C. (2008). Neighborhood greenness and 2-year changes in body mass index of children and youth. *American journal of preventive medicine*, 35(6),547–53.
doi:10.1016/j.amepre.2008.07.006
5. James, P., Tzoulas, K., Adams, M. D., Barber, A., Box, J., Breuste, J., Elmqvist, T., et al. (2009). Towards an integrated understanding of green space in the European built environment. *Urban Forestry & Urban Greening*, 8(2), 65–75.
doi:10.1016/j.ufug.2009.02.001
6. Abada, T., Hou, F., & Ram, B. (2007). Racially mixed neighborhoods, perceived neighborhood social cohesion, and adolescent health in Canada. *Social Science & Medicine*, 65(10), 2004–17.
doi:10.1016/j.socscimed.2007.06.030
7. Lofland, L. H. (1998). In: *The Public Realm: Exploring the City's Quintessential Social Territory*. New York: Aldine de Gruyter.
8. Peters, K., Elands, B., & Buijs, A. (2010). Social interactions in urban parks: Stimulating social cohesion? *Urban Forestry & Urban Greening*, 9(2), 93–100.
doi:10.1016/j.ufug.2009.11.003
9. Lawson, B. (2001). *The Language of Space*. (A. Press, Ed.). Oxford.
10. Thiel, P. (1997). *People, Paths and Purposes: Notations for a Participatory Envirotec-ture*. (U. of W. Press, Ed.). Seattle.
11. Nurzuliza, J. (2012). How Urban Green Space Design Affects Urban Residents' Social Interaction. 7th Singapore Graduate Forum on Southeast Asia Studies 2012 (Vol. 2012, pp. 1–13). Johor Bahru, Malaysia: Asia Research Institute, National University of Singapore.
12. Mutiara, S., & Isami, K. (2012). *Characteristic of public small park usage in Asia Pacific Countries : Case study in Jakarta and Yokohama City*, 35(December 2011), 412–419.
doi:10.1016/j.sbspro.2012.02.106
13. Matsuoka, R. H., & Kaplan, R. (2008). People needs in the urban landscape : Analysis of landscape and urban planning contributions, 84, 7–19.
doi:10.1016/j.landurbplan.2007.09.009
14. Nayak, C. B. (2021). A state-of-the-art review of vertical ground motion (VGM) characteristics, effects and provisions. *Journal of Innovative Infrastructure Solution*, 6, 1-18.