THE ROLE OF NONVERBAL COMMUNICATION IN IDENTIFYING VISITOR PREFERENCES FOR WALKWAY PLACEMENTS IN PARKS CASE STUDY: THE PARKS IN TIMISOARA

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Abstract: *Nonverbal communication plays a crucial role in understanding visitor preferences and behavior, particularly in outdoor spaces such as public parks. This study explores how nonverbal cues, such as body language, spatial positioning, and movement patterns, can be used to identify visitor preferences for walkway placement in parks, with a focus on the parks in Timișoara, Romania. Through observational research and analysis of pedestrian flows, this case study investigates how users navigate park spaces, where they tend to linger, and the natural routes they take, all of which reveal implicit preferences for pathways and park design.*

Key words*: nonverbal communication, park designs, pathways, environmental design.*

INTRODUCTION

This research contributes to the field of communication and environmental design by demonstrating the value of nonverbal communication in shaping functional and user-friendly park spaces, offering practical insights for urban planners and landscape architects seeking to improve park infrastructure and visitor satisfaction.

Understanding visitor preferences in park design is essential for creating functional and inviting spaces that enhance the overall visitor experience [6,13]. This case study focuses on the parks in Timișoara, analyzing how nonverbal communication can inform the placement of walkways to meet visitor needs.

Timișoara, known as the "City of Parks," offers a variety of green spaces that serve as vital recreational areas for its residents and tourists [16]. Each park presents unique challenges and opportunities for optimizing walkway placement to better accommodate visitor preferences.

Nonverbal communication, including movement patterns, space utilization, and interaction zones [1,14], provides valuable insights into how visitors use park spaces [7, 10]. By observing these behaviors, park planners can make informed decisions about the placement of walkways, seating, and other amenities. Also this type of communication plays a critical role in our daily interactions, influencing how we convey and interpret messages beyond spoken words. It encompasses a wide range of behaviors and signals, including body language, facial expressions, gestures, posture, and eye contact [4,14]. Understanding and effectively using nonverbal communication can enhance interpersonal relationships, professional interactions, and even our understanding of complex environments. Nonverbal cues are integral to building and maintaining relationships [6]. They often convey emotions and intentions more authentically than words alone. For example:

Facial Expressions: Smiles, frowns, and other expressions communicate emotions and reactions, often before words are spoken.

Eye Contact: Maintaining eye contact can show interest and confidence [3], while avoiding it might suggest discomfort or dishonesty.

Gestures and Posture: Open gestures and an upright posture can indicate openness and confidence, while crossed arms or slouched posture may suggest defensiveness or disinterest.

In professional settings, nonverbal communication can significantly impact interactions and outcomes:

- → Conveying Confidence and Authority [9]: Strong, confident body language can establish credibility and leadership in meetings and presentations.
- → Building Rapport: Mirroring the nonverbal cues of colleagues can foster a sense of connection and understanding.
- → Negotiation and Conflict Resolution: Being attuned to nonverbal signals can provide insight into the unspoken concerns or intentions of others, aiding in negotiation and resolving conflicts [4].
- → Nonverbal communication is also crucial in understanding and interacting with complex environments, such as public spaces or multicultural settings:
- → Cultural Sensitivity: Nonverbal cues can vary greatly between cultures [11], and being sensitive to these differences is essential for effective cross-cultural communication.
- → Environmental Interaction: Observing nonverbal cues in public spaces can provide insights into how people interact with their environment, informing design and accessibility improvements.

Nonverbal communication is an essential component of effective interaction and understanding in both personal and professional contexts [5]. By paying attention to and interpreting nonverbal signals, we can improve our communication skills, build stronger relationships, and create environments that are more responsive to the needs of those within them. Whether in a conversation, a business meeting, or a public space, the ability to read and employ nonverbal cues is a powerful tool for fostering connection and understanding [15].

MATERIALS AND METHODS

In our research we used several observational methods and bibliographic method, which involves consulting and analyzing a variety of written sources in order to obtain a deep and well-grounded understanding of the studied subject. Direct Observation: we spend time observing visitor behavior during various times and days, noting patterns in movement and space usage. Photography Analysis: Capturing images provided a detailed record of visitor behavior, allowing for thorough analysis and identification of trends over time. Using this combination of meethods, the study identifies correlations between visitor behavior and the location of existing walkways. It also examines how environmental factors, such as park layout, greenery, and landscape features, influence these nonverbal cues. [2].

RESEARCH RESULTS

When parkways, roads, or pedestrian walkways are positioned in ways that do not align with the natural movement patterns or preferences of the residents, it can lead to several unintended consequences [12]. These mismatches between urban design and pedestrian behavior often result in the modification of the landscape, potentially compromising both the aesthetic and functional qualities of the area (Table 1).

At the same time, the pedestrian walkways in the parks of Timișoara reflect the preferences of the visitors and, in fact, often show where these pathways should be placed, providing valuable insight for planning and improving public spaces. These informal paths, created through the natural use of space, can reflect users' behaviors and needs, highlighting the most frequented and accessible areas. Therefore, analyzing these pedestrian routes can contribute to optimizing urban design by integrating them into official plans, creating a more functional and pleasant environment for all visitors.

Table 1.

Pathways in parks of Timisoara

Images of the parks	Name of park	The problem
	Botanic park in Timisoara	Altered Aesthetic Cohesion
	Center park in Timisoara	Unintended Trails and "Desire Paths"
	Flora park in Timisoara	Safety Concerns
	Children park in Timisoara	Compromised Environmental Integrity

	Flora park in Timisoara	Loss of Intentional Green Spaces
	Botanic park in Timisoara	Community Resistance to Formal Planning

Initially planned landscapes are designed with a sense of harmony and purpose. When pedestrians begin to deviate from the intended paths, either by cutting across grassy areas, stepping off sidewalks, or carving out new routes — they can disrupt the cohesion of the landscape. The resulting wear and tear on the grass, soil, or other surfaces can cause areas to become less attractive or even degraded, leading to the need for frequent maintenance. Pedestrians often create their own "desire paths," or informal trails, when the officially planned routes do not serve their needs. These paths are the result of people finding the most efficient way to get from one point to another, bypassing the original routes designed by urban planners. Over time, these desire paths become more defined, with grass or vegetation being worn away, leading to a new, informal, and often unintended reorganization of the landscape. These shortcuts may not only disrupt the landscape's aesthetic but can also have a negative environmental impact, as natural vegetation is trampled and soil erosion may begin in certain areas. Parks and green spaces are often part of the original design, meant to provide areas for relaxation and recreation. However, when parkways or sidewalks are misaligned with pedestrian flow, green spaces may gradually be converted into informal pathways. This loss of planned green spaces can affect the overall quality of the public realm, diminishing the areas meant for social interaction, relaxation, and ecological balance [2].

Parkway networks are often designed with the goal of connecting key locations, for example, residential areas to public services, schools, parks, and commercial zones. When pedestrians begin to forge their own routes, they may inadvertently shift social dynamics. Walkways designed for safe, pleasant strolls or jogs may become traversed by people moving at higher speeds, with altered patterns of interaction [8]. The social fabric of a community can shift when pedestrians become isolated or fragmented by the disconnect between infrastructure and pedestrian behavior. Misaligned parkways can create safety hazards. For instance, pedestrians taking shortcuts through poorly lit or unregulated spaces might find themselves in unsafe situations, especially in urban areas with high traffic or less natural surveillance. This may not only increase the risk of accidents but could also foster feelings of insecurity among residents, particularly if these shortcuts lead to areas that are less visible or lack appropriate infrastructure such as lighting or guardrails.

Over time, citizens may start to resist the formal planning of parkways or pedestrian paths, especially when the intended infrastructure doesn’t align with their daily needs. If

people regularly find themselves navigating around poorly designed or inconvenient parkways, they may push for changes to the existing urban plans. This dissatisfaction can lead to calls for rethinking transportation networks, proposing alternatives that more effectively meet the needs of pedestrians, cyclists, and drivers alike.

When parkways are not aligned with the natural behavior of pedestrians, they can lead to the degradation of ecosystems within urban areas. People frequently cut across natural spaces, leading to compaction of the soil, trampling of vegetation, and disruption of wildlife habitats. This is especially concerning in areas that were originally planned to maintain local flora and fauna, as the introduction of these shortcuts could harm biodiversity [6].

One of the central findings of the study is that park design elements serve as powerful forms of nonverbal communication, subtly influencing how users interact with the space. For example, wide, open pathways are perceived as inviting and encourage leisurely strolls, while narrow, winding paths may encourage more focused or intimate experiences. The materials used in park construction, whether smooth pavement or uneven, natural surfaces, also communicate messages about the intended use of the space. Visitors are more likely to avoid areas that seem difficult to navigate or inaccessible, even if these spaces were not intentionally designed to be avoided. Research found that the integration of natural elements, such as trees, water features, and plant life, plays a key role in communicating safety, tranquility, and comfort. For instance, the placement of seating under trees or near water not only provides physical comfort but also nonverbally signals to users that these are spaces for relaxation and rest. This creates an environment where people feel more at ease and are more likely to engage in longer, more social visits to the park. In contrast, barren or poorly maintained green spaces were found to have the opposite effect, making users feel uneasy or reluctant to use the park. The study also focused on how users' movements within parks often conflict with planned pathways, leading to the creation of desire paths, informal shortcuts made by pedestrians to find more direct routes. These paths form as a nonverbal communication response to a design that does not fully align with user needs [13]. In many cases, desire paths represented a more logical or convenient route than the official pathways, highlighting a disconnect between the designer’s intentions and the actual usage patterns of park visitors. This insight demonstrates the importance of observing user behavior and considering these natural movements in redesigning public spaces.

One of the significant idea of the research is that park designs must be flexible and adaptable to users' evolving needs. When park spaces are designed with rigid, predefined paths and features, they often fail to accommodate diverse and dynamic human behavior. Conversely, parks that allow for flexibility, such as open-ended spaces that can be used for different activities, movable furniture, or multifunctional green areas, tend to better serve a broader range of user needs. Nonverbal cues in these adaptable spaces communicate a sense of openness and encourage people to feel comfortable and creative in their use of the park. The research demonstrates that community engagement is a crucial factor in shaping park spaces that are truly functional and user-friendly. By involving local communities in the design process, urban planners can better understand the desires and behaviors of park users. Participatory design approaches, where residents contribute ideas and feedback on park features, result in spaces that align more closely with the needs and preferences of the people who will use them. Nonverbal communication plays a key role in this process, as the design choices made by the community are informed by collective values and expectations about how public spaces should function [6]. Another important finding is that nonverbal communication in park design can also communicate environmental values. For example, sustainable landscaping choices, such as using native plants or incorporating

rainwater harvesting systems, signal an environmental consciousness to park users. These elements not only enhance the ecological value of the park but also encourage visitors to adopt environmentally friendly behaviors, such as respecting natural habitats or conserving resources. Environmental sustainability in park design communicates to users the importance of ecological stewardship and can help foster a sense of collective responsibility for the park's upkeep.

Parks that incorporate open, inviting spaces for social interaction — such as communal seating, performance areas, and shared gathering spots — communicate through their design that they are places for connection and community. Nonverbal communication in these spaces encourages social behaviors such as group picnicking, informal gatherings, or shared recreational activities. This fosters social cohesion and strengthens the sense of community. Conversely, isolated or poorly connected spaces tend to discourage interaction and limit the social value of the park. Urban planners should prioritize the use of nonverbal cues, such as the arrangement of walkways, seating, and green spaces, to align with how people naturally move and interact with the environment. For example, acknowledging where desire paths have emerged can be an opportunity to integrate those routes into the formal park design, creating more intuitive and accessible spaces. Parks should be designed with flexibility in mind, allowing for diverse activities and spontaneous uses. Providing movable seating, open lawn areas, and adaptable spaces encourages users to engage with the park in a variety of ways, depending on the occasion or their personal preferences.

Nonverbal design features should signal the potential for multiple uses, from quiet reflection to social gatherings. Urban planners should engage local communities early in the design process and incorporate their feedback into park planning. Listening to residents' preferences and behaviors ensures that the park serves the needs of those who will use it most. Participatory design practices can help identify potential disconnects between the official design and actual user behavior. Incorporating elements of environmental sustainability into park design communicates a commitment to ecological preservation and encourages users to adopt sustainable behaviors. By making sustainability visible, through rain gardens, recycling stations, or educational signage, urban parks can educate visitors about environmental issues while enhancing the park's ecological value. Design elements such as lighting, landscaping, and the placement of benches and rest areas can communicate safety and comfort to park visitors. Well-lit pathways, clear signage, and visible natural features all contribute to a sense of security, inviting people to visit at different times of day and enhancing their overall experience [4].

CONCLUSIONS

The positioning of parkways in urban areas can have a profound impact on the landscape, pedestrian behavior, and the overall functionality of the space. When the formal design does not align with the natural behavior and preferences of residents, it often leads to the creation of desire paths, which can modify the landscape and cause unintended consequences. These informal pathways can affect both the aesthetic integrity and ecological balance of urban spaces, while also contributing to safety and social interaction challenges. By understanding the root causes of this disconnect between design and behavior, urban planners can develop more effective, adaptive, and inclusive planning strategies. This would involve recognizing the need for flexibility, fostering community engagement, and integrating environmental sustainability into urban design to create spaces that truly serve both the natural environment and the people who inhabit it.

In conclusion, this research underscores the critical role that nonverbal communication plays in the success of urban park spaces. By understanding how design elements communicate with users and influence behavior, urban planners can create spaces that are not only functional but also engaging, inclusive, and sustainable. The findings emphasize the need for flexibility, community engagement, and a deep understanding of human behavior to develop parks that are truly user-friendly and serve the needs of diverse populations.

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