

People as Navigation Signals

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Abstract:

While approaching a new space, people tend to look past signposts and maps; they tend to survey the area and see how other people behave to make their decisions on where to move. Formal wayfinding makes people aware of the location of the space but does not necessarily make them aware of its activity. A set of people moving in a certain direction, a cluster of people participating in some activity, and a person sitting in a certain place can all give out information without having to communicate anything deliberately. This research studies how other people's presence, actions, and behavior can serve as an informal way of providing information in public spaces. The research was carried out in the Namo Grand Central Park, Thane, Maharashtra. It was conducted using the method of ethnography over several visits and different levels of crowds. Initially, the study was centered on formal wayfinding tools such as maps and directions signs. Yet, on repeated visits, it was found out that people also made their decisions using group discussion, activities going on, and others' behavior. The following five behavioural patterns were found to occur regularly: attraction through active spaces, navigation as a shared task, social cues as well as formal cues, communication of space through behavior, and adaptation of space use depending on crowds and context. These observations were analyzed in conjunction with secondary sources regarding social wayfinding, pedestrian wayfinding, landmarks and social interaction in public space. Wayfinding is known from the existing literature as a social activity, and other people can be considered as cues while navigating. According to this study, humans not only function as users within a public space, but they are also participants in terms of the exploration of the space itself because of their actions within it.

Keywords: Social wayfinding, Navigation, Public space, Social cues, Pedestrian behaviour, Space selection

1. Introduction:

While entering a strange public space, the first question which comes to mind is – Where do I go? In case of an open recreational space, there is another question that surfaces along with it – What do I go for? Both questions are quite different from each other. Choosing a destination point is a conventional process of way finding; which can be easily solved using maps, signages, landmarks and directions. Determining the interesting points of exploration within the environment is a more difficult process. At such points, people observe the environment as well as other people in the environment to make their decisions. The field of wayfinding has conventionally focused on the process of spatial understanding and utilization of information about the environment to navigate between two places. Visual landmarks and spatial organization of the environment help people comprehend the environment. Public spaces, however, are dynamic environments, continually occupied by people and constantly changing their appearance through human behavior.

The study is centered on the Namo Grand Central Park, Thane, which is a sprawling outdoor space for recreational activities that includes different activity zones, gardens, thematically designed buildings, a lake, children's play zones, and open gym. In contrast to the indoor space wherein movement is predictable through a definite system of circulation, in a park, visitors have different routes and destinations to move around. This is because the visitors decide how they would move around depending on their interests, groups, and encounters during the journey.

While we initially concentrated on formal means of communication like maps, direction signages, and information panels, it was clear from observations made in different sessions that the communication process does not end there. We saw the visitors interacting amongst themselves regarding routes, moving towards activity, watching others and interpreting potential uses of spaces from the way people using them behaved.

The research problem thus underwent a shift from how people orient themselves in the park to how people become information as part of the orientation process.

"Peoples as Navigation Signals" is thus the name of the framework that is used in this study to denote a phenomenon – people may unintentionally convey information based on their location and movements in space.

The research asks:

How does the presence and behaviour of other people function as informal information during navigation and space selection in public environments?

2. Literature Review / Secondary Research

Wayfinding has been defined as a process of planning and making decisions when moving through an environment. Wayfinding has traditionally been investigated from a perspective which focuses on aspects of the environment such as spatial configuration, landmarks, maps, and visual aids. Weisman (1981) has looked at architectural legibility where he found that spatial configuration may influence people's wayfinding ability. Another study is that of Lynch in *The Image of the City* (1960) which focuses on what people think and organise in terms of the environment.

Outdoors wayfinding involves additional sources of information. According to Soh & Smith-Jackson (2003) who have studied wayfinding in a recreational park, visitors used artificial cues such as signs together with geographical or environmental cues. Yesiltepe et al (2021) have identified landmarks as key components of wayfinding, especially by being noticeable.

However, wayfinding is never done in isolation from other people. According to Dalton, Hölscher and Montello (2019), wayfinding is a social process where navigation may be affected by others' presence and behavior without the need for verbal communication between them. People have been identified as potential cues in the process of navigation by Dalton et al.

In their review of pedestrian route choice, Tong and Bode (2022) demonstrate that decisions about the routes taken by pedestrians are dependent on the various kinds of information, most of which is strongly influenced by the environment. The studies conducted by Pelé et al. (2017), although carried out specifically in the context of pedestrian road crossings, provide evidence that people can use the behavior and presence of other pedestrians as social information when making decisions.

Recently, Goldenberg et al. (2026) have reviewed 54 studies and have found that wayfinding in everyday life can be described as a dynamic, collective, and socially situated phenomenon. Interaction studies in public spaces also show that mere presence of other individuals can alter the ways in which interaction

and attention are possible in a particular environment. These kinds of interactions include co-presence, co-attention, and co-action, as described by Mohammadi, Heurkens and Mohammadi (2026). As such, this literature creates a basis on which people could be looked at both as users and cues within public spaces. Although other similar areas have been investigated in past studies, this specific topic is less addressed.

3. Methodology

The current research utilized an ethnographic methodology of observing the visitors' behavior, movement and interaction at Namo Grand Central Park, Thane. The research is based on natural behavior, and not any experimental behavior.

Five visits were made to the park at various times in the evenings, with each on site observation taking roughly 30-45 minutes. During each of these visits, the procedure involved accessing the park, making sense of the signs available in the environment, and recording the responses that people had to them via movement, interaction, and behavior; hence different densities and behaviors of the visitors were identified. A low density observation was made followed by a high density observation, during which there were various activities taking place. The purpose of comparing these two observations was to determine the difference in the use of spaces and not necessarily the cause and effect between the two.

Observations were carried out to observe how people from various ages, such as young children, middle-aged people, and elderly, made use of the formal ways of communicating such as maps, signs and information boards, as well as the informal channels of communication, including other visitors, families and activities. Environmental elements like the lake, gardens, theme structure, play ground and gym were also noted in the communication environment.

A communication system map, behaviour map, and communication relationship matrix have been used for organizing the observations. The communication system has been explored with the help of five types of systems; Informational, Environmental, Human, Experiential, and Sensory.

The observations have been organized in repetitive behavioral patterns. These include active places that attract attention, navigation in groups, social signaling, behavior indicating space utilization, and change in space usage due to crowds and situations.

The analysis has distinguished between what has been observed and what has been interpreted from these observations. This means that the results only highlight the relationship between different behaviors and not a cause-and-effect relationship.

4. Discussion: Analysis, Findings, Interpretation and Design Recommendation

Navigation & Wayfinding



Visitor Movement

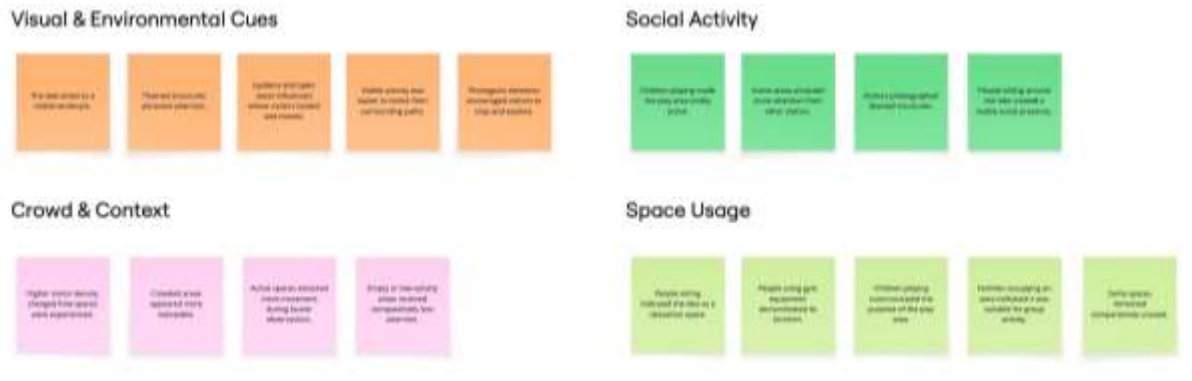


People as Cues



Group Decision-Making





4.1 People as informal information

One of the most obvious observations was that visitors used more than just the formal methods of communication. The park had maps, signs, and information boards, but visitors were constantly reacting to what was going on around them.

The entrance map served as one of the key points of formal information provision. Visitors stopped at it, learned the overall layout, and discussed the places that they had visited and the places they were planning to visit. However, while moving in the park, the directional signs were ignored. Instead, the information was obtained through people, activities, and environment.

It is especially relevant in connection with the work by Dalton, Hölscher and Montello (2019) on social wayfinding and cues provided by people. Their findings indicate that people may impact wayfinding not only through direct communication but just being present and performing activities.

These observations in the park are indicative of the same potential. Movement in one direction by people may be interpreted to indicate a direction. Presence of people at a certain point may mean that some activity is being performed there. The person's presence at a point may give importance to the point.

The individual is not providing any conscious direction, yet their behavior is made readable information by someone else.

4.2 Navigation is a social process

Also, navigation was noted to occur often between people, rather than solely taking place inside one individual.

Visitors would often stop by the map and talk about where they came from, what they have already done and where they want to go next. Thus, families and groups of friends negotiated their movements according to common interests.

This confirms the results obtained during previous studies on wayfinding being a social rather than individual behavior. Dalton et al. (2019) emphasize group decision-making as an important feature of social wayfinding; Tong and Bode (2022) explain pedestrian route choice as a process of integrating diverse kinds of information.

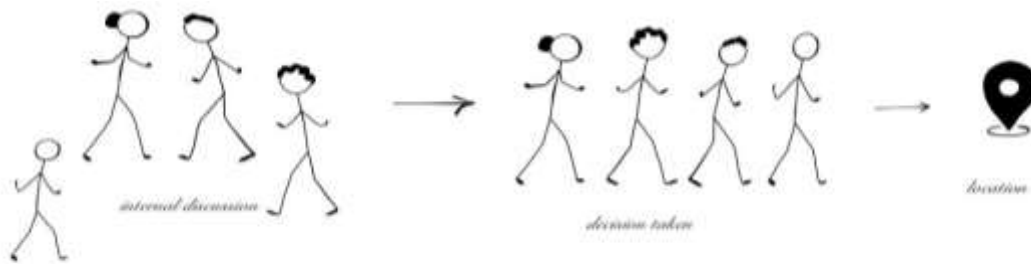
Hence, there are two kinds of social influence present during the observation:

Inside the group:

Discussion and negotiation of where to go next;

Outside the group:

Observing movements/activities of other visitors.



This adds a new aspect to the understanding of navigation as a behavior in a recreational environment. Visitors do not just move towards one common destination. They constantly choose where they want to go next.

Thus, navigation is both choosing and exploring.

4.3 People communicate how a space can be used

Another pattern that emerged was that people seemed to communicate the possibility of use for a space through their behavior.

At the lake, people were seen to sit and relax. At the children's playground, children were seen to play while family members sat in the nearby area. In the high density observation, people were seen to explore and use the open gym equipment.

In all of these cases, it was clear that there was an opportunity created through the physical environment, and it was the behavior of people that made that opportunity more obvious.

This ties into the idea of affordances, which Stevens, Daly and Dovey (2024) describe as the notion that public spaces may be multi-purpose and multi-meaningful in ways that are not necessarily obvious in design terms.

In the park, social behavior was making these affordances more obvious.

People sitting → the space can be used for relaxation.

Children playing → the space can be used for play.

People using equipment → the equipment can be explored and exercised with.

It is clear that in this way, the communication of a space does not always have to be verbal or graphical.

4.4 Crowd and context change spatial behaviour

Comparison of these visits indicates that similar environments could have different patterns of activity depending on specific circumstances.

With regard to lower density visits, there was a low number of visitors in the open gym and some themed areas had quiet atmospheres. With higher density observation visit, the children's playground area was crowded and people were using the open gym area while families with children could be seen in themed areas.

It is impossible to state that crowd density was responsible for these differences. Still, it is clear that the social setting of the environment was changed along with people's occupancy.

This issue correlates with the theory by Goldenberg et al. (2026) suggesting that wayfinding is not only dynamic but also socially situated.

Therefore, the number of people and their distribution may influence perception of visual cues. For example, activity is more visible since it can be observed and heard. An empty place has fewer visual cues. This situation leads to an interesting feedback mechanism when activity is making spaces more noticeable.

These findings seem to indicate such a correlation, but more studies will have to be conducted in order to establish if indeed there is cause-and-effect here.

4.5 Formal and informal communication work together

It does not mean that people should abandon maps, signs and staff for the better. Rather, they seemed to switch between different sources of information as needed.

A visitor may have used the map to make sense of the whole park, have a discussion with their group, observe other people when walking, and seek assistance from the staff when in doubt.

The whole process is thus much more complicated than:

Sign → Direction → Destination

It can rather be described as:

Map → Discussion → Movement → Observation → Choice of space → Experience → Decision making

This relationship is confirmed by the larger body of literature, where wayfinding is more and more often seen in social and ecological contexts.

4.6 Design Recommendation

The results would then indicate that the communication system of the public space can be looked at as a combination of the formal communication system and the social communication system.

This is not to say that the designer must necessarily try to make visitors follow the crowd. Social cues are useful and valuable, but sometimes ambiguous. A busy place can signify popularity and activity in a place, while an empty one might just be a matter of time or user preference. Instead, the idea is for the designer to think about the way in which activity makes a space more readable.

Activity spaces, seating spaces, recreation spaces and gathering spaces can be thought of in terms of how they read from circulation paths around them. Maps would not only indicate destinations but also various kinds of experience to be had inside the environment. The formal communication system would continue to provide reliable information, while the environment itself will offer additional cues.

The overall design implication of this idea is therefore the following: The public space communicates not only by what it tells people but by what people tell each other.

5. Conclusion

This research looked at the role people could play in terms of informal wayfinding signals in an open public setting. From an initial study of maps, signposts and wayfinding tools, the research led to the discovery of how people could be a part of the process by which the space is navigated.

Three important themes emerged from the observations conducted in Namo Grand Central Park: People as Information, Wayfinding as a Social Experience and Spatial Organization as Defined by Social Behavior. People relied on group discussion to determine what direction they should take, they responded to active areas, watched the behavior of other people, and perceived the potential uses of various spaces from observing people already present in them. The change in activity levels during different visits also reinforced the influence of the social element of a place on the visibility and utilization of space.

These findings can be related to previous studies concerning social wayfinding, pedestrian behavior, affordances and socially situated wayfinding.

The limitations of the study include its concentration on just one public setting and just a few observation sessions. In doing so, the study remained quite specific to the setting of Namo Grand Central Park.

In conclusion, the original contribution of studies shows that public spaces do not only convey their messages verbally but also by what they exhibit. People do not just occupy a place; they can also help decode it through their actions.

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