

Chapter title: Researching the applicability of body language methods in urban design

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Abstract

This chapter examines the potential applicability of non-verbal communication methods from experimental social psychology, also known as body language methods, in urban design. It uses an empirical study to understand their effectiveness to study person-environment relationships, with a particular focus to the sociality and spatiality of informal social interactions in public space, i.e., the social and spatial mechanics between people and space in a social interaction. In doing so, it demonstrates their capacity for multi-analysis of the materiality of public space settings, in relation to their social affordances, and varied social perspectives and roles, paving the way for new knowledge in social interactional studies of public space.

Introduction

One theme frequently evoked within urban design is the public realm. Since the 1980s there has been a great interest from urban designers to understand the cultural, ethnic, gender and age groups differences in use and behaviour in public spaces. A variety of methods were developed to research cultural variations in terms of personal spaces, needs and expectations upon public spaces (Loukaitou-Sideris 1995; Low et al 2009). Several methods were also created to gain access to children's unique experiences and engagement with public spatial settings (Hart 2002; Loukaitou-Sideris 2003). New models and methodological approaches were proposed for interrogating experience of marginalized groups such as women, the poor and people of colour, which until then were rarely investigated (Mozingo 1989; Day 2000). Thanks to all these works we were able to gain a solid knowledge about the different user's needs and preferences and key spatial and design characteristics that support their uses and behaviours in a variety of types of public spaces and cultural contexts.

Comparatively little empirical research has been done to study the social and interactional potential of public spaces. Very few studies have focused on informal social interactions between different user groups, particularly among fellow strangers, and their bodily experiences. This is not to say that there are no exceptions. The works of Loukaitou-Sideris (2003) on intergroup relations among racial and ethnically diverse children in various public settings and of Low et al (2009) on interactions among culturally diverse groups in parks are good examples. However, they have not studied individual interactions among fellow strangers per se – they focused on group interactions instead – nor have they specifically focused on their bodily and physical interactions.

The study of informal social interactions among fellow strangers has always been a neglected area of study. This neglect is partly explained by the conventional wisdom that their relations are asocial and therefore irrelevant and uninteresting (Lofland 1998). However, sociologists have long recognized that interactions among strangers constitute the dominant type of human social relations and have profound implications on the way public life is lived and managed (Goffman 1963; Lofland 1998). They also have special qualities that make them both advantageous and challenging objects of study. The fact that their relations have no history and are by nature 'unplanned' and 'risky' makes them highly dependent on the rules of behaviour, types of users and the comfort of the places where they occur, thus offering good criteria to evaluate the spatial qualities that support social use (Karp 1991). Furthermore, their relations involve more bodily than verbal communication

making it possible to understand how a space works in bodily and mechanical terms (Goffman 1990), but also posing several methodological challenges.

The role of the body in framing experience, use and behaviour is still an overlooked element in existing public space research and urban studies more broadly, despite the growing recognition of its importance as the centre of lived experience and agency (Low 2014). Although a series of methodological advances have been made in a range of behavioural sciences, there continues to be a lack of robust methods that can simultaneously analyse interactions between bodies and between bodies and space (Butler and Bowlby 1997; Degen et al 2010; Low 2014). Most studies focus on how people's bodily experiences are affected by the built or natural environments using new types of ethnographic methods such as 'go-alongs', which constitute a hybrid between observation and interviewing methods (Degen et al 2010). These methods are considered effective, allowing close observation and engagement with the participant's body experiences and actions and their immediate translation into verbal descriptions. However, they are not productive to objectively study the material space of the locations where interactions occur. They are highly dependent on the input of interviewees.

On the other hand, there is a range of other studies from the fields of kinesics and proxemics that have studied the interface between people and people and the environment with a primary focus on body language (Hall 1969; Fast 1971; Schefflen 1972). The recognition of the potential applicability of such body-language methods in public space research has been slow. Despite growing research evidence that such methods allow us to concentrate attention on the complex micro-social and spatial mechanics between people's bodies and space (Whyte 1980; Stevens 2007), urban designers have not yet fully engaged with them (Simões Aelbrecht 2016). This is partly explained by the fact that they are still crude and nascent and have rarely been used to analyze the spatial settings of the behaviours studied (Harrigan et al 2005). However, their potential to combine spatial and behaviour analysis indicates they may be able to fill a methodological gap, but for that more research is needed to further refine them, proving the impetus for this chapter.

Methods

Body-language theories and methods can offer useful knowledge for analysing the socio-behavioural cues of an interaction. However, they lack the necessary rigour to achieve reliable results and the tools to examine the spatial setting where the interaction occurs (Harrigan et al 2005). Therefore, if they are to be applied to urban design, a closer integration of the two bodies of knowledge of behavioural sciences and urban design are required. To achieve this, behavioural scientists have suggested making these methods more rigorous and methodical and reasserting the spatiality of social interactions (Harrigan et al 2005). This is not at all an easy task. Indeed, scientists and designers have different research interests, and conceptual and methodological preferences. However, there are clear benefits in integrating their methods. Because their focuses are complementary rather than contradictory, combined they can create a more robust method to study the sociality and spatiality of the public realm, as this chapter will demonstrate. To do so, it proposes to start with a site analysis to contextualize the urban context, following an urban design approach (Carmona 2003; Table 1). Then when it comes to the actual data collection, it adopts a behavioural sciences' approach of sampling behaviour (Harrigan et al 2005; Table 1). Rather than observing every single interaction, it samples situations of interactions which are representative of the best conditions considered in the literature. This requires the combination of unobtrusive video cameras, to enable the re-examination of behaviour, with direct observations to help with sampling behaviour while taking field notes. Regarding the actual data analysis, there is a far more complex range of technical and analytical issues to consider (Table 1). Following the behavioural scientists' recommendations, this study uses a frame advance command that can enable immediate sampling, extracting, and coding behaviours of film stills.

The selection of analytical approach is the stage that raises more disciplinary differences. To avoid them, this study proposes applying a content analysis, a well-known method of analysing images that does not rely on existing knowledge (Rose 2016). Likewise, this only requires a selection of a set of coding categories that is clearly descriptive and representative of the most important spatial, social, or behavioural cues of an interaction (Table 2). A literature review in this subject area revealed the behavioural and spatial cues that can be more objectively coded because they are readily recognized and considered invariant in most European cultural contexts. After coding the sampled interactions, a quantitative and qualitative account and analysis of their content follows.

There are also a couple of ethical considerations that need to be taken during the data collection and analysis. The primary ethical issues are concerned with maintaining respondent's confidentiality and rigorously complying with data protection legislation and best practice, and the university ethics guidelines. The project does involve qualitative data provided by a range of methods and so particular care and attention is paid to thoroughly check that data to ensure the identity of the individuals and groups observed cannot be specifically identified in the sample cluster level. All visual and written recorded data is held securely on secure university servers.

In short, the refined body-language methods promise to be a robust method of spatial analysis from a behavioural perspective. However, before considering them valid, there is a need to empirically test them with a case study.

Table 1. Methodology for studying the mechanics between people and space in a social interaction.

Table 2. Analytical framework of the socio-behavioural and spatial context framing a social interaction.

Case study

This chapter employs original empirical material from one case study, the Parque das Nações [Park of the Nations] (PN) in Lisbon, a new masterplanned neighbourhood built for the World Expo '98 in a former eastern harbour and industrial area. Preliminary analysis of its socio-cultural and spatial context revealed that this is a productive case to problematize some of the critiques against the perceived failures of contemporary newly designed public and semi-public spaces to provide common grounds for informal social interaction, and therefore to examine the applicability of body language methods to study it.

At first analysis the PN seems to provide an exemplar urban regeneration practice. It was conceived with a double plan to organize a mega-event with an end-goal to become a thriving neighbourhood, following the values of vibrant city neighbourhoods with a mixed-use centre, a variety of public spaces and amenities along its 5 km of riverfront and two predominantly residential areas (Machado 2006). A good measure of its success is that in only 10 years it already attracted a total of 20,000 inhabitants and during weekdays a floating population of workers reaching 50,000, and weekly usually attracting over 250,000 of visitors. Despite these successes in terms of numbers, the PN's masterplan has been also largely subject to criticism (Fernandes 2005). As attested by the mass media, its public reception has not been always favourable, due to its large-scale, ordered and sectorised plan and excessive reliance on privatisation, and controlled and thematic public spaces. Many academics, professionals and the general public also criticize its economic emphasis, which not only resulted in the creation of housing for the affluent but also attracted a very socially and culturally homogeneous community of young Portuguese professionals (Moreno 2015). However, these critiques are not always fair when it is realized that most of its public spaces are very much appreciated by a wide range of users, particularly by the PN's residents and workers (Moreno 2015). This evidence is very much in tune with more recent literature, which offers a more nuanced perspective by taking into account the positive sides of this debate (Cybriwsky 1999).

To respond to the research aims, fieldwork aimed to collect a large and optimal opportunity sample of examples of informal social interactions in public space, as defined against an extensive list of favourable locations and socio-behavioural and temporal conditions derived from the literature review (Table 2). To do so, this study was undertaken during seven months spanning across two years in 2009 and 2010, and revisited in 2012, 2014 and 2018 with a view to include a large number of favourable times for observation. It should be noted that the fieldwork was undertaken by one single researcher who was familiar with a Southern European behavioural culture.

Before the actual fieldwork, a pilot study lasting one week was carried out to build an acquaintance with the studied area. Five favourable locations for interactions were identified along the two major axes of public life and leisure, with considerable criss-crossing of activities and variety of public-private interface spaces and greater diversity of users: Oriente station, Oriente Square, Vasco Gama Shopping Centre, Rossio dos Olivais Promenade and Riverfront (Figure 1). This central territory covers only 2 km in length, enabling easier exploration on foot. During the subsequent months, fieldwork took a more structured format. It was carried out two weeks each month, and in each day four structured walks of two hours were undertaken, with 20 minutes spent in each of the five locations. Fieldwork observations were done unobtrusively with a small video camera, which the researcher carried all the time to not lose any single event. These strategies made it possible to observe with great efficiency and to collect enough detailed data on how each location worked in bodily and physical terms, by focusing on people's bodily behaviours and gestures with particular attention to the three behavioural cues of social distances, body orientations and 'tie-signs'. The data obtained from the observations was also complemented, compared, and contrasted with a small sample of interviews with passers-by, who were asked about their social experiences and interactions in the PN's public spaces. In order to provide rich descriptions of the bodily interactions in relation to the spaces and features that supported them, the analysis was more qualitative than quantitative. To do so, the findings were coded into a number of relevant social and spatial themes both identified from the literature and fieldwork, which were later quantified to identify hierarchies and qualified to explore commonalities and relationships (Table 2).

Figure 1. The PN's public realm (Source: Drawing by the author (2013), base map from Archives of Parque Expo. SA (1999)).

Discussion

Fieldwork revealed that many PN's public spaces offer great scope for social interactions, and this is the outcome not only of the functional diversity and uniqueness of its central part but also, and more importantly, of its spatial affordances and the socio-spatial mechanics of the interactions therein.

As observed, the PN's riverfront spatial affordances, particularly its spatial novelty and diversity, play a great part to make it conducive to social interaction. The spatial novelty of its new spaces and design aesthetics is seen to enhance the riverfront's sense of publicness and to make it sociologically more open to a diversity of users. Its spatial diversity in terms of spaces and activities is seen to provide new affordances for both existing and new uses. These two qualities are key to expand the riverfront's socio-spatial and behavioural potential and to challenge the design conventions or preconceptions we might have about its spaces.

This study acknowledges that the socio-spatial mechanics of the interactions occurring in those spaces can shape in as much as they are shaped by the affordances of those spaces. Although the riverfront is new and has no behaviour-place association to build upon and all interactions among strangers therein are unplanned by nature, people's predisposition for interaction, expressed by their body language, can tell us much about the limits and opportunities of the design of those settings. People will always try to strike a good

balance between social comfort and exposure, looking for spaces that feel right to them and appropriating or changing them if they need to.

Fieldwork also disproved some critiques to the PN's public spaces, showing they are also able to provide optimal settings and conditions for different types of social mixing and interaction: from areas of public privacy to areas of passive and active social interaction. This is a confirmation again that they can have not only great scope for interaction but also can respond to different user needs in terms of publicness and privacy.

Further analysis on how social interactions occur in the PN's different settings brought new understandings about the conditions that frame them. It identified that the riverfront offers all the necessary conditions to qualify as an 'open region'. However, it is of a very different type than the established conceptions (Goffman 1963; Oldenburg [1989] 1997). The fact that the PN's riverfront is a very high-profile public space but attracts a highly diverse crowd, it offers a great contrast to the low profile and socially homogeneous character of conventional 'open regions'. In addition, the fact that this is a new type of public space with a novel and diverse design makes it a very popular space, but with an anonymous and somehow undefined character, and by doing so, very distinct from the familiar, homely and fixed character of traditional 'open regions'. Additional analysis on where interactions occurred also demonstrated that the PN's riverfront is seen to offer a variety of optimal settings for social interaction rather than one, as usually expected from an 'open region'. Each setting offers very specific spatial affordances and has very distinct social and interactional potentials, therefore catering very specific user groups, needs and desires for privacy, passive or active social mixing, and publicness. These findings show that the character of 'open regions' as well as other informal social settings is much more dependent on their spatial characteristics than Goffman and other authors have theorized. Indeed, during fieldwork it became evident that the socio-behavioural conditions may help to set the mood and character of the place, but ultimately the spatial conditions are the ones that frame the opportunities for the occurrence of such interactions. The observations illustrated a range of ways in which urban design could promote different types of interaction. The two conditions of spatial novelty and diversity were identified to be important preconditions to develop social uses. Further micro socio-spatial analysis also suggested that the extent of informal social interactions was very dependent on the specific spatial conditions of the locations where they occurred, particularly the type of seating spaces, building edges and visibility provided. These findings attest that urban design has an important role in shaping the publicness and sociability of public spaces, alongside their ownership, accessibility, management, and agency (Varna and Tiesdell 2010; Németh and Schmidt 2011).

Fieldwork also allowed us to examine the applicability of body-language methods to study the bodily socio-spatial mechanics of social interactions among strangers in public spaces. It showed that body-language methods promise to make a valid, original and productive methodological contribution to urban design.

They offer a valid method of spatial analysis from a behavioural perspective. Putting the body of the users at the centre of the spatial analysis allows a deeper understanding of the limits and opportunities of the urban design to meet people's needs in terms of publicness, privacy, and social comfort. They can help to analyze the affordances of space for social interaction in a more tangible and measurable way.

Body language methods can be seen an important methodological contribution to urban design. As demonstrated, they are valid urban design research methods. Despite several past attempts to apply body-language theories into public space research, these were always used as basic aids of observation to read the types and levels of interaction observed (Whyte 1980). Body-language methods were never fully recognized as effective analytical tools by themselves that could be used to examine the mechanics between bodies and space of social interactions and assess the spatial affordances of the public spaces where they occurred.

Such a methodology is productive; it offers an assessment of the public space's socio-behavioural performance, which is possibly more robust than other established studies that

rely only on quantitative analysis of uses and behaviours (Gehl and Svarre 2013). Because it draws upon a far broader and richer conception of urban experience, use and behaviour, it can allow a deeper engagement with the complexities of the public realm and an understanding of the wider scope of affordances, which the built environment, particularly public spaces, offer for human perception, action, and social relations with others. However, the drawbacks and limitations of this research cannot be dismissed. The scope of the research presented here is still limited. Although it made it possible to further knowledge on the informal sociability of public spaces and the role of urban design in it, because it is built upon one single case in a specific geographical cultural context, its findings are far from conclusive or generalizable. More research is needed to expand or contrast these findings with other case studies in other social and cultural contexts, and to deepen our understanding of the optimal social and spatial conditions and locations for social life. There are also several drawbacks of using body-language methods as they require mastering of two distinct bodies of knowledge (socio-behavioural and design), are time-consuming, requiring many hours of observation and analysis, and will always lack rigour as they can only offer partial and superficial information about people's motives. There is therefore a need to continue to test and refine them to gain a better understanding of their full potential and contributions to urban design.

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