PART I

**INTERACTION OF INDIVIDUAL, SOCIETY AND
LANGUAGE IN THE CITY**

KENTTE BİREY, TOPLUM VE DİL İLİŞKİSİ

CHAPTER 1

AFFORDANCES IN THE CONSTRUCTION OF THE CITY'S LANGUAGE(S)

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ABSTRACT

Environmental psychology seeks to provide a holistic account of the environment where the meaning captures the symbiotic relationship between the individual and their physical surroundings. If we are to achieve this, we need to understand how the environment ‘speaks’ to us and how we ‘read’ and interpret our environmental interactions. This paper begins by suggesting a model for understanding the relationships between environmental conditions, our psychological response to the environment, and how these might be mediated by the presence of other people. This is illustrated with two case studies from the UK, in which it is demonstrated that when a residential neighborhood is seen to be a high risk one in terms of crime, the perceived social order – either by the presence of the police or even by the types of residents who live there - mediates the messages communicated by the physical environment. The paper concludes by demonstrating that the physical environment provides ‘affordances’ which are the perceived physical qualities of a place that have the potential to facilitate people’s physical and social activities. Affordances can be used by architects and landscape architects to not only reduce or design out crime, but also create social spaces that encourage people to use and enjoy the city.

Keywords: Interdisciplinary collaboration, environmental psychology, ‘broken windows hypothesis’, fear of crime, environmental affordances, social judgments

1. The Challenge of Providing a Holistic Account of the Environment

This book on the language of the city seeks to bring a variety of disciplines together to explore the theme of the language of the city. In other words, how does the city speak to us? What does the city say to us and how do we interpret what we hear? What meanings do we derive from our encounters with the city – both from the physical fabric and the people that live and work in the city? I believe that in order to answer those questions and in the process address the most pressing problems of our societies and cities today, we need to develop and share new theories, concepts and methodologies across the arts and humanities, the social, natural and engineering sciences. We also need to work with policy-makers and practitioners.

When many researchers analyse people's relationship with their environment, they tend to focus on either the environment or the person, but as environmental psychologists we know that analyses that fail to treat person-environment relationships in a symbiotic and mutually reinforcing way will only capture part of the story.

- Environmental psychology investigates the relationships between people and their physical and social settings.
- There is no physical environment which is not also a social and cultural environment.
- Likewise, there is no social environment that is not touched in some way by its physical context.
- As environmental psychologists we believe that psychological processes are always situated, that is, they are place-related and place-dependent.

One of the challenges facing environmental psychologists is to provide holistic accounts of the environment, accounts which acknowledge and engage with a complex range of causes and consequences in any situation. The story of the blind men and the elephant is to be found in many cultures. This is a part of John Godfrey Saxe's poem, retelling the Indian parable:

*It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.*

Each blind man feels a different part of the elephant. Each focuses on a different part of the elephant -one feels its legs, one its trunk, one its tail, and one its ears. When they

describe what they have felt, they dispute angrily what the elephant is really like. Their exploration of the elephant revealed many things about the elephant, but the concept and nature of ‘elephantness’ eluded them.

*And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!*

This poem is used to illustrate how people from different perspectives see only one aspect of a phenomenon. We are all blind when it comes to understanding the totality of what we research. We strive to capture the quality of ‘elephantness’, but it is extremely difficult. And so it is with the environment. In environmental psychology we try to capture a holistic appreciation of the environment where the analysis is situated in both the person and the environment.

2. Language of Place

Places speak to us. They have embedded within them scripts. Several years ago, we undertook some research on building entrances. How important is the entrance to a building? What does the entrance say about the building and the people that occupy that building?

We undertook a study in which we showed people three photographs of a building entrance but manipulated the photographs so that the entrances had varying degrees of vegetation. The experiment showed that not only was the greenest entrance preferred, but respondents thought that the organisation that occupied the building with the greenest entrance was more caring, a better employer and was more concerned about sustainability issues. In other words, the environment not only spoke about itself, but conferred values and identities on the occupants and the organisation.

2.1. How Do We Read the City?

The planning, design and management of the city speaks to us about what activities are encouraged, permitted and tolerated, and who is in control; when the streets are likely to be well-populated or busy and safe, and when are the streets likely to be empty and therefore perhaps dangerous. It whispers in my ear – be cautious, be alert, be relaxed. When I am in

the UK I can usually read and interpret the language of the city. As I walk around it all looks familiar – cars, traffic, financial buildings, cafés, benches, parks, beggars, office workers. Can I read Istanbul in the same way? As I walk around Istanbul can I read the city in the same way? Misreading the signs in other cultures – cultures in the widest sense – can place one at risk.

I want to put forward a very simple model of the relationship between how we see the city – or more specifically, how we may see even just a single street, and how that effects our feelings of safety and fear. In other words, how does the city speak to us in such a way that it makes us feel relaxed or anxious?

In the area of environmental criminology, Wilson and Kelling (1989) put forward the ‘broken windows’ hypothesis (Figure 1). Underlying the ‘broken windows hypothesis’ is the idea that as the environment deteriorates so do people’s anxiety increase. There is a descending spiral of environmental degradation and social control leading to a spiral of perceived risk and anxiety.

Figure 1: Broken Windows Hypothesis, Wilson and Kelling (1989)

This can be represented in a graph (Figure 2) in which environmental degradation is plotted against the level of anxiety. This leads to the question, what is the angle of the slope? To begin with we would probably assume that the slope is smooth and progressively incremental. That is, as the environment deteriorates so does our level of concern and anxiety increase. But is the slope 45°? Maybe it is steeper, i.e., 75° or shallower, e.g., 22°. Where is the tipping point?

At what point does the curve change so that the person moves from feeling comfortable to suddenly feeling cautious, wary, anxious and even frightened? Small changes in the conditions can make a large difference.

Figure2: Model the Impact of Environmental Dilapidation on Anxiety

One response to this might be to suggest that if people feel concerned, we have to reassure them. People may feel concerned because they feel that no one is monitoring, protecting or controlling this environment. The typical response of neighborhood groups and residents would be to say – we need a police presence – this will help to make us feel safer.

So we can now put forward another model, one which adds this element of oversight and control, and add a police presence. What is the angle of this slope (Figure 3)? Is it sufficiently steep that a small police presence reduces anxiety quite considerably? Or do you need a significant police presence in order to have an impact on people's level of concern? Where is the tipping point? Or indeed, is it a sufficiently curve that a small presence has a significant effect in terms of reducing anxiety but increase the police presence too much and people start to get concerned – you are perhaps sensitising them to a danger of which they were unaware. "What's going down here – should I be worried?"

Figure 3: Model the Impact of Presence of Law Enforcement on Anxiety.

We looked at the effect of increasing police presence and it precisely has this effect. Again, small changes in the conditions can make a large difference.

This poses interesting planning, design, management and ethical questions, such as what can we do in a design sense to change the slope to help people to feel less anxious? By doing this do we expose people to more risk and danger? But how do we know it is the environment that is providing the cues? How do we know that people are making judgements based on what we think they are seeing as the physical environment - what their urban surrounds are telling them? We undertook some research to answer this question.

2.2. Judgements About Place are Mediated by Judgements About People

As with the photograph of the different office entrances, we showed a group of people a photograph of a residential environment but manipulated it so it looked different under three conditions (Figure 4). The street 'as it is in reality', the 'street degraded', the 'street improved' (Acuña-Rivera, Brown, & Uzzell, 2014).

Figure 4: Judgements about place are mediated by judgements about people

When people are allowed to freely express their ideas about residential places and spaces they usually talk about those places in relation to their physical appearance (i.e., do they look run-down or does the quality of housing look good?). Few people talk about social and affective factors such as likeability and friendliness. When we showed people the photos of this street, it was noteworthy that people did not think they would feel particularly unsafe as a consequence of the perceived level of disorder or degradation - only a quarter of the sample referred to the poor condition of the environment in the case of the Street Degraded.

However, when participants were *explicitly* asked to evaluate how dangerous, unsafe or risky the place was, this sensitised people to the issue and the results appear similar to those found in other research on fear of crime. The more disordered/run-down a place is perceived to be, the more unsafe and at-risk respondents felt they would be.

There was, however, a significant difference between the findings of previous research and the results of this study. The run-down street was seen as both physically and socially disordered – and therefore seen as a risky environment. In the case of the other places, even if the street was seen to be physically un-down, if it was seen as socially ordered then it was not seen to be a risky and fearful environment. Therefore, it was the level of perceived social disorder that made the difference between the unsafe and safe places. What this is telling us is that it is not the physical environment by itself as such that that leads people to be anxious or fearful of being in the environment, but the perception of the social dynamics of the place which communicates to them how safe they might be, and how risky it may be for them to be in that environment. Two conclusions can be drawn from these results:

1. The way you ask the questions can have a significant effect on the response.
2. When people read and make sense of a street scene, they are not simply looking at its physical properties. They are also making inferences about the type of people who live there, and what they do. These residents are seen to be responsible for this environment - therefore it might be inferred that the residents don't care about the environment. Then if they don't care about it, then they probably don't care about the people who use it because if there is a problem while walking through the area, no one is likely to come to their assistance. It is an unsafe place to be because the normal social controls are absent.

3. Affordances

I entitled this paper Affordances in the Construction of the City's Language(s), because I think affordances play a critical role in giving voice to the city and suggest how we can play an active role in that communication process.

Affordances are the properties of an environment or the physical qualities of a place that are perceived to have the potential to facilitate people's physical and social activities. They are the resources a place offers that enables action (Clark & Uzzell, 2006; Gibson, 2011). In perceiving affordances, an individual sees opportunities or barriers to carrying out their intended goals. An example of this might be a table. For adults, it can be used for a meeting, sharing a meal, placing objects. For children, cover the table with a cloth and it can become a

cave by climbing in between the legs. Or by standing on it and jumping off, if it can become a springboard.

Most research which has been undertaken on affordances in environmental psychology has sought to identify the physical affordances that the environment offers in support of children's activities (Kytä, 2004). But it has relevance to all groups of people in all sorts of environments. I would like to finish by giving you an example which continues the theme of crime and the environment.

3.1. The Environmental Affordances of Crime

Criminal activity tends to be concentrated in particular places at particular times which suggests that there are characteristics about the place which facilitates that activity. In other words, there are aspects of the physical environment that afford criminal opportunity. Transport hubs (e.g., railway stations) are often centres of criminal activity. They are frequented by people – passengers – who may not be familiar with the place, and they reveal this to everyone around them; they stand looking at maps, looking in all directions for signs, and waiting for their train or someone to meet them. A criminal is able to take advantage of this.

We carried out research at three international railway station: London Waterloo, La Gare du Nord (Paris), and Rome Termini. I will focus on London Waterloo. Just under 100 million people pass through this central London station every year.

How can we plan, design and manage the station environment in order to reduce risk and vulnerability? Where do we start to look in order to develop a methodology for identifying the affordances that the environment offers criminal activity? One potential starting point is collecting statistics on the ecology of crime, i.e., where and when does crime occur – are some places and times more frequent than others? Having gathered this evidence, we might then be in a position to identify through observation what precisely it is about the physical environment that affords criminal opportunities.

It is evident that crimes are not evenly distributed within the station. Some parts of Waterloo Station are more prone to criminal activity than others. For example, the station concourse which lies immediately in front of the platforms, where passengers congregate before boarding their trains and where the principal source of information about train departures can be found (e.g., electronic indicator boards, timetable posters) records the highest number of crimes. This is the place where people, waiting for their train, are often distracted and therefore easily prone to be a victim of theft. Other places such as the platforms, ticket barriers, the ticket

booking hall, the subway, corridors and stairs experience considerably lower levels of crime against the person. These are places where travellers are engaged in more purposeful activity. We can look at the environment and see and think about the way it is used.

Crime tends to be concentrated in particular places and at particular times which suggests that there is something about the place rather than the specific activity which occurs there which may account for this (Brantingham & Brantingham, 2013; Brantingham & Brantingham, 1993; Crow & Bull, 1975; Sherman, Gartin, & Buerger, 1989). These places are considered to be good crime targets and will attract prospective criminals who will formulate detailed mental maps of where the best places are to select possible targets – vulnerable people in vulnerable places - to perpetrate their actions.

In designing spaces, we need to think about how risk and vulnerability to criminal activity can be reduced. But there is a thin line between designing out crime, and the ethics of creating more sociable and pleasing spaces and manipulating places to meet the goals and desires of certain groups at the expense of other groups.

For example, CityRail, the operator of the Sydney urban/interurban passenger network in Australia, installed blue fluorescent tubes in station lavatories in order to make it more difficult for intravenous drug users to find a vein to inject heroin or other drugs.

However, over the past thirty years in the UK, Canada and the United States, classical music has come to function not just as entertainment but as a sonic weapon. It is used as a means of deterring ‘loiterers’ in particular social spaces – be they shopping malls, train and bus stations, fast food outlets or car parks.

Weaponising classical music was first deployed in the UK in the North East of England in 1997 when the Tyne and Wear metro began broadcasting music by the composer Fredrick Delius. Metro operators claimed that damage to the company’s ticket machines, which costs around £10,000 a year, dropped significantly since the scheme was introduced. Likewise, Transport for London began broadcasting operatic and instrumental music at forty stations after a trial period in 2003. During the 18-month trial, it was reported that there was a 33% decrease in robberies, a 25% decrease in assaults on staff, and a 37% decrease in vandalism (Duchen, 2008).

What is not acceptable, surely, is the playing of high frequency noise that only babies, children and young people can hear which causes pain and distress.

But the concept of affordances can be applied to all sorts of environments. I would like to finish on a positive note and give some examples of how public spaces can be designed

with affordances in mind, so that the city will provide more rewarding, useful and stimulating experiences – a city that speaks to them about belonging, attachment, identity, ownership, social interaction and the value of conservation.

William H. Whyte was an organisational analyst, urban critic and people watcher. He started what was called the “Street Life Project” some 50 years ago, which was a study of pedestrian behaviour and city dynamics (Whyte, 2010). As part of this project he filmed people actually using the city – the film and subsequent book was called *The Social Life of Small Urban Spaces* (1980). Whyte argued that urban designers need to create physical places that facilitate civic engagement and community interaction, and that this would be best achieved by designing public spaces from the bottom-up, not top-down. Design should start with a thorough understanding of the way people use spaces, and the way they would like to use spaces. Why Whyte’s study was important was because he was observing people actually using urban spaces; he could immediately see how the designed environment provided affordances that facilitated or frustrated people’s preferences and intentions. And where they frustrated them, how people tried to adapt the environment so the environment met their needs. But people are resourceful – where possible they will adapt the environment to meet their needs. Too often benches are not for sitting on. They are there simply to look good on architectural drawings. This is a space that does encourage people to sit and socially interact.

The principles that Whyte identified forty years ago are no less relevant today, and are being put into practice across the world. There are some great design teams now who are seeking to make our city spaces more liveable by enhancing their affordances so that urban spaces can cater for as wide a range of people as possible. Jan Gehl (2010, 2011) in Denmark is probably one of the most famous. But this is some of the work of one of my environmental psychology students Daniel Iacofano and his company MIG (Goltsman & Iacofano, 2007) who for the last 30 years has been bringing these concepts of affordances, flexible streets, inclusive design into reality.

Conclusions

This paper has tried to provide a more challenging and conceptual way of thinking about people-environment relationships, and a deeper understanding of the interaction between people and their physical and social surroundings.

At the beginning of this paper I offered several simple models of people-environment relationships. Although they were simple in design, they illustrate well how the urban environment speaks to us. The city speaks to us all the time.

Do we listen?

What do we hear?

How do we interpret what we hear?

How can designers design our urban spaces so that these spaces speak to us in ways that do not make feel powerless and alienated, helpless and victims, but in ways such that we feel we have control over urban spaces, that urban spaces meet our needs and enable us to live fulfilling, healthy and social lives. We should be designing for affordances rather than designing for behaviours. We might conclude that the best designed environments are those that enable the widest range of activities for the widest range of groups. Ultimately this will lead to a more inclusive environment and more inclusive society.

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