Habitat International 50 (2015) 180–194

Contents lists available at ScienceDirect

Habitat International

journal homepage: www.elsevier.com/locate/habitatint

Territory, politics of power, and physical spatial networks: The case of Baghdad, Iraq

Mahbub Rashid [a, *], Dhirgham Alobaydi [b]

[a] School of Architecture, Design, & Planning, University of Kansas, 1465 Jayhawk Boulevard, Lawrence, Kansas, 66045, USA
[b] Department of Architecture, University of Kansas, 1465 Jayhawk Boulevard, Lawrence, Kansas, 66045, USA

ARTICLE INFO

Article history:
Received 22 February 2015
Received in revised form
5 August 2015
Accepted 26 August 2015
Available online 4 September 2015

Keywords:
Territory
Networks
Physical space
Political power
Space syntax

ABSTRACT

Despite our commonsense understanding of territory as a bounded region, some political aspects of territory can be better described as effects of physical spatial networks. To illustrate the point, we study territorial practices of power in Baghdad before and during the Iraq War that started in 2003. We use various techniques and measures of spatial networks provided by 'space syntax', because they have proven useful for describing the spatiality of social processes. We use Baghdad as a case study, because the territorial practices of power by the Ba'th regime favoring a Sunni minority and undermining a Shiite majority had existed in this city for decades before the Iraq war. These practices were upset and significant territorial changes occurred during the sectarian war in 2006 and 2007 at the time of US-led occupation of Iraq. We study the relationships between territorial practices and physical spatial networks before the war and during the war. Based on our findings, we conclude that spatial network dependency of territory and territoriality may exist under a dominant political system or even during a war when a dominant political system remains unclear. However, more studies are needed to generalize the findings of our study.

1. Introduction

Despite the growing importance of the porosity and fluidity of boundaries in the late 20th century (Bingham & Thrift, 2000; Castells, 1996, 2011; Massey, 2004), territory as a politically salient spatial concept remains significant in various forms of social practices (e.g., Cowen & Gilbert, 2008; Grosby, 1995; Martin, 1999; Rapoport, 1996). To explain the significance of territory, in this paper our aim is to show that the political significance of territory is not limited to a bounded region but is also dependent on the network effects of social and spatial practices. Following Mitchell (1991), we argue that the geographies of networks may differ across time and space depending on social practices, but territory continues to exist as an important political dimension partly because of the network effects of physical spaces. Our argument is based on the fact that physical space possesses a degree of autonomy concerning territorial practices. Foucault (1980) acknowledges this autonomy when he suggests that any study of power relations should not be overly concerned with ideologies, but rather with social practices and concrete outcomes. Therefore, we start this paper by examining political power in relation to territorial practices.

2. Territory and power

There are several forms of political power, but we use the distinction between 'power to' and 'power over' given by Dovey (1999) in our study here. While 'power to' refers to power as capacity, 'power over' refers to power as a relationship between individuals, agents, and groups. Among the two, 'power over' is more obvious since it clearly identifies actors in power relations, and 'power to' is more subtle since actors are not identified. For example, X may believe that Y does not have 'power over' her without realizing that Y has 'power to' control her through 'Z'. 'Z' in this case may be a territory. Therefore, in most cases of social practices, 'power to' is more pervasive than 'power over'. Yet, spatial practices involving 'power to' remain less visible than those involving 'power over'.

Dovey (1999) identifies five specific forms of 'power over'—*force*, *coercion*, *seduction*, *manipulation* and *segregation*—relevant to territory. Force makes a subordinate, which can be an individual or a

* Corresponding author.
E-mail addresses: mrashid@ku.edu (M. Rashid), dalobaydi@ku.edu (D. Alobaydi).

http://dx.doi.org/10.1016/j.habitatint.2015.08.031
0197-3975/

group, comply with the will of the dominant without choice. It may occur through confinement in a territory. Coercion threatens the use of force but does not quite use it to influence, control, or dominate the subordinate. Coercion in a territory may occur though surveillance. Seduction uses propaganda to influence the subordinate. Territorial boundaries themselves may be an instrument of propaganda when not used coercively. Manipulation keeps the subject ignorant, and often gives the subordinate an illusion of having a privileged relation with the dominant. In terms of territory, a more direct access to the dominant territory may give the subordinate territory as illusion of favoritism, while for the dominant this may be a way to control or influence the subordinate. Finally, segregation isolates the subordinate. This is probably the most potent as well the easiest form of 'power over' to exercise using territory. When the dominant cannot force, coerce, seduce, or manipulate the subordinate, then keeping the subordinate isolated may be the best way to exercise power.

The literature provides many studies concerning how power relations could result from territory as a bounded region. In fact, most literature on the politics of power in colonial cities may fall in this category (e.g., Home, 1996; Myers, 2003; Njoh, 2007), where power relations among disjoint territories are discussed in terms haves and have-nots. However, studies emphasizing the effects of the 'invisible' networks of physical spaces on power relations have been rare. One reason for this is that until recently theories, methods, and measures, such as those offered by 'space syntax', to study physical spatial networks were not available. Therefore, using 'space syntax' theories, techniques and measures, which are introduced in the next section, we try to fill-in the gap that exist in the literature on the relationships between physical spatial networks and the territorial practices of power.

3. Space syntax

Space syntax provides a set of theories, techniques, and measures used for studying the syntactic structure of physical spatial networks. The theoretical foundations of space syntax were first provided by Hillier and Hanson in *The Social Logic of Space* (Hillier & Hanson, 1984), and were later elaborated by Hillier in *Space is the Machine* (Hillier, 1996/2007) and in several other articles that followed (example, Hillier, 2005, 2008).

Examples of space syntax techniques include the linear map analyses, the convex map analyses, and the visibility graph analyses. Most space syntax studies of urban areas and cities, however, use the techniques of linear map analyses that include the axial map analysis and the more recent segment map analysis (Hillier & Iida, 2005). Both these analyses involve representing the urban layout as a linear map, which is a network of the fewest number of lines needed to cover every street and complete every circulation ring of the layout. So defined, a linear map is more commonly known as the axial map. When needed, a segment map can be generated by breaking the lines of a linear map into segments at their intersections.

One key syntactic measure of space syntax is integration. The integration value (or the closeness value) of an axial line in an axial map is an algebraic function of the mean depth (MD) value of the line, defined as the sum of the shortest distances between the line and all the other lines in the map divided by the number of lines or segments in the map less 1 (Hillier & Hanson, 1984). In contrast, the integration value of a segment in a segment map is the mean of all the angles of all the shortest paths on the segment (Turner, 2007). The integration value of a line or segment indicates how well the line is connected to all other lines in a linear map, or how close the line is to all other lines in the map. A higher integration value of a line indicates stronger connection of the line to the network. The integration value is also relativized to allow direct comparison between networks of different sizes (Hillier & Hanson, 1984). The integration value of the system as a whole is given by the mean of the integration values of the lines in the system. Again, the higher the integration value of a system the more connected the lines are within the system.

The other key syntactic measure of space syntax is choice. While integration is about closeness, choice is about betweenness. Unlike integration, choice gives the degree to which a line lies on simplest paths from one line to another line in the network. While the choice value of a given axial line is determined by dividing the number of the shortest paths between any two lines in the axial map containing the given line by the number of all the shortest paths between any two lines in the map, the choice value of a segment is calculated by replacing shortest paths with paths that have the lowest angular cost for each possible origin and destination pair of segments on the given segment (Turner, 2007).

In simple words, integration measures how easy is it to go one line to all other lines of a network, thus indicating the potential of a line for to-movement. In contrast, choice measures how likely is it for a line to be chosen on paths from one line to another in a network indicating its potential for through-movement (Hillier, 2005). Clearly, what is implied here is that in to-movements people want to maximize their accessibility to all physical spaces and in through-movements people use a space to get to another space with minimum efforts.

One reason why we use space syntax theories and techniques here is that, in numerous urban studies the closeness and betweenness values of space syntax show strong correlations with traffic movements (example, Hillier, 1996/2007, 2005; Hillier & Iida, 2005; Hillier, Penn, Hanson, Grajewski, & Xu, 1993; Peponis, Ross, & Rashid, 1997). If we agree that traffic movements are often related to flow of resources in cities, then concerning our study of the network effects of space on territory we may want to know where the physical spaces with most movement potentials are located, who controls these spaces, and how they are related to the political geography of a city.

Another reason why we use space syntax theories and techniques here is that, they allow us to study physical spatial networks within territories, the differences of physical spatial networks among territories, and the relationships between physical spatial networks of a territory and that of the whole within which the territory is located. For example, a territory with higher closeness may provide better to-movement potential allowing more opportunities for the community within to develop close ties. In contrast, a territory with higher betweenness may provide more through-movement potential allowing resources to flow easily from one territory to another through it while affecting its own integrity negatively. Conversely, a territory with lower betweenness may provide less through-movement potential; therefore, may become more isolated. An extreme case of this is an enclave, which provides no opportunities for through-movements due to discontinuities in spatial networks.

Yet another reason why we use space syntax theories and techniques here is that, ideas relevant to the relationships between spatial networks and territory already exist in space syntax concepts such as "the dual city" (Hillier, 2005). According to this particular concept, public processes including micro-economic factors determining the generative role of space tend to follow similar logic in cities and manifest themselves in similar global structures of spatial network in cities. Most often these structures take a shape that brings closer the center and the periphery of the city. In contrast, local processes including cultural factors determining the conservative role of space tend to vary not only from one city to another but also from one part to another part of a city, and manifest themselves in different local structures. For example, like many other cities, Hillier's linear map analysis of Nicosia, Cyprus (Hillier, 2005) picks up a global deformed-wheel syntactic structure reflecting the more consistent nature of public processes.