Space Syntax and Geography
A question of logic and dialectics
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Geographical studies and architectural research have much in common. On the face of it, their aims are identical: both traditions have at their base a quest for knowledge about the relation between the physical environment, on the one hand, and social processes, on the other. 'From the outset, the founders of modern geography sought to understand the interrelationships between human activity and the physical environment' (Beaujeu-Garnier, 1976, p. 9). One might say that this is also what the theory of space syntax aims to do. 'By far the most interesting and difficult questions about [cities] are about how the two connect: exactly how is the physical city linked to the human city?' (Hillier, 2005, p. 3.)

Why then, we might ask ourselves, has space syntax been given relatively little attention from geographers? Answering this question would take more than two pages, but I will try to give a clue. As argued elsewhere (Westin, forthcoming) Henri Lefebvre and Bill Hillier - each a representative of the two traditions - started off at the same place; namely in the curious question of how a built environment that looks so good in photographs and blueprints can make one feel so uneasy. The practice of urban planning and architectural design in the twentieth century, the conclusion went, has produced alienating environments and thus - to borrow Lars Marcus' (2008, p. 135) expression - 'failed to deliver on its claims'. In 1968 Lefebvre (1996, p. 103) held that there is 'cause and reason to distinguish between material and social morphologies', i.e. between the city and the urban. If we accept this distinction, he continued, and agree to look upon the city as made up by two different systems - social and mater¬ial - we have to carefully examine the relations between them. But, as Hillier points out (Westin, forthcoming), 'Lefebvre never went beyond that; he kept on repeating that; he stayed at the level of philosophy and feelings'. Why was this the case?

If we look carefully at Lefebvre's argument, he gives a warning: If one adopts the terminology of the urban and the city, 'the relations … will have to be determined with the greatest care, by avoiding separation as well as confusion' (1996, p. 103, italics added). Here, in these words, lies a key to our problem. Because while Lefebvre, as well as most of his followers, first and foremost seeks to avoid separation, Hillier and researchers of space syntax, do what they can to thwart confusion.
Space syntax is an analytic, i.e. scientific, theory (Hillier, 1996) and the scientist's aim 'is to say one thing, and only one thing, at a time' (Huxley, 1963, p. 14). His or her way of reasoning is set within the realm of conventional logic, whose chief objective is to separate the sheep from the goats. Scientists 'feed on a diet of certainty and … get upset by ambiguity' (Olsson, 1980, p. 198b). '[I]t [is] only by extracting space from its embedding and treating it as a thing in itself that we are able to … link space back to society' (Hillier and Netto, 2002, p. 13.6).

The geographer, on the other hand, whose frame of thought since the 1970s has been the dialectical paradigm (by Hillier (2008) called the spatiality paradigm) knows no 'either-or' - to him or her everything is 'both this/that' (Ollman, 1976, p. 56). This antiparadigm, to use Martin Albrow's term (1974, p. 192), developed out of the critique of the quantitative revolution - whose aim had been to move the discipline 'from the dark ages of its ideographic past to the dazzling promise of a nomothetic future' (Barnes, 2006, p. 34). During this time, positivism was seen as 'the light that would guide us ever onwards' (Scott, cited in Barnes, 2004, pp. 583). By the late 1960s, with the discovery of the inference problem, this optimism had faded; '[R]eality was more evasive than our naïve minds had been taught to believe' (Olsson, 1984, p. 82). In the aftermath of this discovery Lefebvre (1991, p. 83) argues that space 'is not a thing but rather a set of relations between things'. Therefore he defines urban space as a 'thing/not-thing' - neither a substantial reality nor a mental reality (Lefebvre, 1991, p. 402). The tie that binds the social to the material is a necessary and essential one; it is an internal relation. If there is one thing that distinguishes dialectics from other ways of reasoning it is its embeddedness in the philosophy of internal relations (Ollman, 2003). Thus, questions of how the built environment affects social processes and vice versa, as well as of whether space or society 'comes first' (see Hillier, 2008, p. 218), cannot in principle, according to this philosophy, even be formulated since they presuppose causality and thus separation.

In contrast, the kind of relation the logician sees is external - his or her compass is the philosophy of external relations. Two things that are externally tied to one another are what they are, even if the relation changes. This is the commonsense view and it maintains that 'there are things and there are relations and that neither can be subsumed in the other' (Ollman, 2003, p. 69). Space syntax treats space as 'an objective entity in itself' (Hillier, 1993, p. 15) - a necessary step when studying how space is linked to society. 'For bridges to connect, there must first be a separation' (Olsson, 1984, p. 75). Given that many social scientists hold a dialectical view of space and hence are not keen on separation, efforts in building bridges are rare - at least when it comes to stable ones. Again, from the viewpoint of the dialectician it is hard to say that anything - neither space nor society - 'comes first', since reciprocal effect predominates and has priority over causality. There is no such thing as space and society, the argument goes - rather, space is 'folded into' social relations through practical activities (Gregory, 2000, p. 769). 'There is no static and stabilized space … [E]very space is in constant motion' (Thrift, 2006, pp. 140).
In light of this, Hillier is more than accurate when he says that the spatiality paradigm 'does not want to engage with the physical world ... it is afraid of determinism, of the ideas of mechanisms' (Westin, forthcoming). Fuelled by the presumption that even scientific knowledge is socially constructed - the dialectical paradigm has developed what can be called a contact anxiety. From a constructionist perspective, the truck never comes down the road, 'though we may find ourselves talking endlessly about the grounds for the possibility of our knowledge that it is coming' (Megill, 1986, p. 83). However, we all know that if we walk across the street and a bus is coming, we get hit by it - and it is hard not to take Hillier's (2008, p. 223) question seriously: 'Is space completely amorphous, and so nothing, until given shape by social agency[?]'

As a junior geographer, I anticipate a growing frustration with the inability of the constructionist approach to take into account the 'real world' and to make universal claims. Although dialectics played a central role in providing the theoretical terrain for a post-positivist geography (Smith, 1979), its practitioners generally 'eschew any attempt to set up a body of general principles in theory and method' (Albrow, 1974, p. 192). Sooner or later the pendulum changes direction; perhaps the time has come to take the advances made in the last decades and - to use Paul Rabinow's (1985, p. 12) words - 'move back to the world'? In this attempt, space syntax can play a crucial role. To cite Hillier (2008, p. 229): 'Space syntax is not the inverse of the spatiality paradigm, but its “other half”'.

However, and this is my main argument, one does well in taking into account the reasoning rules that underlie the different traditions. Because the other might well be talking about apples even though we think s/he is talking about oranges. This implies apprehending exactly what it is that our perspective gives rise to: separation or confusion, certainty or ambiguity? Once this is recognized we can go on to investigate 'what has ... been temporarily set aside for the sake of analysis' (Lefebvre, 1991, p. 105) and - possibly - acknowledge the significance of alternating between both viewpoints. Dialectical thinking 'welcomes the indeterminate, the ambiguous, the open-ended' (Dixon, et al., 2008, p. 2551) - all of which makes it an essential ingredient in any science that deals with aspects of the social world. But when used for predictions - an essential ingredient in all planning and design activity - 'the dialectic can never be shown wrong, only foolish and worthless' (Ollman, 1976, p. 59). The geographer Marcus Doel (2003, p. 140) has pointed out that 'every device that has been used to express the co-relation of social space breaks down'. True as these words may be, we ought not forget Aristotle's insight that what one cannot do perfectly, one must do as well as one can (Olsson, 2007, p. xii).

Notes

1. Although formally a philosopher and a sociologist, Lefebvre has been - and still is - a major theoretical influence for human geographers. Both David Harvey and Edward Soja are indebted to his theory of space, formulated in La production de l'espace from 1974, translated in 1991.

2. Summarized by Olsson (2002, p. 252; also 1974, p. 52): 'Although it is sometimes possible to reason from process to form, moving in the opposite direction is never appropriate; even though two plus two normally equals four, four can equal anything, including two plus two.'
References