

THE NOW AND FUTURE OF SPACE SYNTAX: From structures and models to theory

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Abstract

*In order to talk about the future of space syntax, this paper looks first at its origins, and the experiences, concepts and influences that brought it into being as a **theory of description** for architectural and urban space. I discuss what this concept means, why it was necessary in this field, and why it is still an appropriate characterisation of space syntax. I argue that there are four stages to space syntax as a theory of description: **representations**, which are the different ways in which we represent space as elements, depending on the purposes of our research or design; **analyses** and **structures**, where we explore the relations between elements and discover structures, for example as patterns of mathematical values made visible by substituting colours for numbers; **models**, which are regularities in the relation between spatial structures and functioning, for example, movement, land use patterns, centres and sub-centres, crime, domestic space inequality genotypes, and characteristic models of the dimension of variability in building types such as museums or offices; and finally **theory**, which is the common conceptual content of models, and would amount to a theory of society and space.*

*I will argue that in the past space syntax has been for the most part pre-occupied with the first three. There have been many great successes, and there remain many outstanding questions, such as the problem of typing the new family of city structures which have been brought to light by the new normalised measures of choice and integration. But I will also argue that in the future we must be more and more explicitly concerned with the fourth: **theory**. My argument is this. Leading the way in the 'now' of space syntax, we have a powerful model of the city, one which links intuition to science, and can be used for designing and planning the city as well as for research. So what is missing? The answer, I suggest, is theory. We may be able to explain cities, but we can't answer the key contemporary questions about cities: Do we still need cities? Have they outlived their usefulness? Are we on our way to another kind of spatial existence, in which the material integration of the contemporary city does not have a meaning? Or are we at the start of a new age of cities, perhaps the next golden age? For this we need a theory of the city and that means we must be able to compare cities with other ways in which societies might be organised in space. In effect, to **explain** cities, we need a theory of society and space.*

Until quite recently, it was possible to assert that there was no significant relation between cities and society, and so no non-trivial relation between society and space, but this has become much more difficult recently, particularly in the light of recent work on the comparative economic performance of different sizes of city, and socio-economic consequences of different forms of settlement, suggesting that from an economic point of view, big cities are beautiful, and that from a social point of view, sprawl is not. So a priority for space syntax would be to understand if cities in general, and large cities in particular, have spatial properties that aid creativity and economic growth, over and above the sheer factor of size, and if 'non-sprawl', or integrated, city

forms have social advantages. **'Are there optimal ways in which we can organise a large city spatially?'** has become a critical question for the future of space syntax.

So where do we begin? I suggest there are two critical priorities. The first is comparative studies of the social and economic effects of different forms and scales of spatial aggregation and dispersal. Are spatial factors involved, for example, in the differences that are found in the economic and social performance of different areas, or cities, or settlement patterns? The economic and social data to makes such studies possible is increasingly available across the world, and what is missing is a spatial model which combines very large scale with great local accuracy about spatial form. Space syntax can now provide such a model, and a key aspect of the future of space syntax is to scale models up from the city level to the regional, national and even international level, so that spatial variables of all kinds can be brought into the analysis of social and economic data. The computational demands of this will of course, be formidable, and we will need to access super-computers. But even with current technologies some progress can be made. I will suggest, for example, how our syntax model of South-east England allows us to identify the UK version of 'sprawl', and suggest it has structural consequences in terms of spatial discontinuity, and a consequent failure to develop multi-scale co-presence through movement which is a critical effect of the large scale continuity of a city like London. This suggests that large cities are not simply scaled up small towns, but different spatial entities.

*The second priority is the theoretical and practical linking of spatial and social networks. At first sight this seems unpromising, since social networks in cities seem in general to downplay spatial relations and focus on non-local interest group relations, so there seems unlikely to be any non-trivial relation between the street segment level of analysis and social networks. However, I will suggest that the more the social sciences bring to light the structural properties of social networks, the more space syntax allows us to see not cause and effect relations between the two types of network, but **structural similarities and dynamics** between the two which suggest both that they work together to create different kinds of socio-spatial outcomes, and also that space can play a critical role in how large cities become knowledge machines.*