



M.L. Craane, ***Spatial Patterns: The Late Medieval and Early-Modern Movement Economy of the Bailiwick of 's Hertogenbosch from an Interregional, Regional and Local Spatial Perspective*** (PhD Tilburg University 2013; Tilburg: [Marlous Craane], 2013, 230 pp., ISBN 978 90 820642 0 9).

In *Spatial Patterns*, a monograph based on her PhD research at Tilburg University (Netherlands), Marlous Craane provides an exhaustively researched and analytically rigorous account of the medieval economy of 's-Hertogenbosch, a Bailiwick in what is now the Dutch province of North Brabant. Her study investigates the relationship between urbanization and economic development at the regional scale, deploying network concepts such as accessibility to problematize the conventional hierarchy of town and hinterland that, she argues, endorses a simplistic contrast between the 'dynamic' urban and 'passive' rural domains. This conceptual emphasis allows her to draw attention to the diverse material cultures that characterized the smaller settlements of the Bailiwick beyond the principal market centre of 's-Hertogenbosch itself, which she presents as discrete components of a dynamic socio-economic system.

Craane is aware how deploying 'town' and 'country' as analytical categories risks assigning arbitrary significance to physical or administrative boundaries at a cost to acknowledging the socio-economic relationships which enable the flow of goods, people and information across boundaries. In response she proposes a 'symbiotic' relation between town and country in the Bailiwick of 's-Hertogenbosch, a hypothesis she develops by focusing on the role of spatial infrastructure, particularly road and river networks, in producing and sustaining socio-economic relationships at different geographical scales from the local to the interregional. This approach does not imply a spatially-reductive focus. On the contrary, Craane carefully guides the reader through impressively wide-ranging analyses of the topographical, economic, demographic and political histories of 's-Hertogenbosch Bailiwick, drawing on a wide range of primary and secondary sources to do so. This thorough contextualization lends credibility to the central analytical proposition of the thesis: that the economic history of 's-Hertogenbosch is best served by understanding the role of spatial infrastructure in organizing commercial activity at the regional scale of the Bailiwick, rather than privileging the town as a 'central place'.

What distinguishes Craane's study is a methodologically innovative attempt to

embrace the *complexity* of medieval commercial networks. For ‘spatial patterns’ then, read essentially ‘urban processes’ played out at a regional scale that embraced both urban and rural domains. Craane’s principal theoretical influence in developing this argument is Bill Hillier’s notion of the urban ‘movement economy’. Hillier proposes that the spatial configuration of cities (i.e. the morphology of the street network) is the primary explanatory factor in accounting for the patterning of urban land uses because of the effect the network has on distributing movement densities unequally throughout the urban grid. This ‘attraction inequality’ puts movement-rich spaces at a premium for socio-economic activities (such as retail) that rely on a high degree of accessibility to attract customers. Hillier’s space syntax methodology provides an analytical technique to explore this proposition, which has been widely deployed in urban design contexts. There are relatively few historical studies using this technique although the collection *Rome, Ostia, Pompeii: Movement and Space* edited by D. Newsome and R. Lawrence points to the wider currency of space syntax theory among archaeologists (Oxford 2014).

Craane’s study represents a serious attempt to apply the theories and methods of space syntax to a genuine problem in historical-archaeological research. On the whole she does not do so naively, i.e. as a short cut to simple answers, but rather as way of stimulating fresh interpretations of the conventional historical and archaeological sources at her disposal. Craane puts her hybrid analytical technique to particularly good work in the analysis of markets and fairs. She concludes that while ‘[a]ccessibility appears to have been a key factor in the establishment of markets and fairs [...] good accessibility did not automatically lead to the establishment of a market’ (107). This nuanced argument sets up a productive discussion of the interplay of infrastructural possibilities and local particularities in stimulating and repressing economic activity. In this context her attempt to integrate the road and the river networks to create a single regional accessibility model for ’s-Hertogenbosch represents an innovative piece of analysis. This experiment would have benefitted from rather more attention to the epistemological and methodological problems it raises – rivers and roads are clearly not equivalent systems. The analysis is well qualified, however, and appears to justify Craane’s argument that while the road network was key to economically efficient regional accessibility, the river network facilitated interregional movement.

Chapter 6 of the study focuses on the geographical distribution of occupations in the town of ’s-Hertogenbosch itself, principally using tax-register records cross-referenced with a range of other sources. Space syntax analysis is deployed to examine the extent to which occupational distributions in urban space require explanation in terms of accessibility differentials or whether geographical factors (e.g. the need to have access to water) and cultural factors (e.g. a stipulation in guild charters about where a given trade should be located) are sufficient. Craane finds that accessibility provides the best explanation overall. Whereas market spaces and trades associated with food were typically located in the most accessible areas, trades less reliant on footfall (for example, construction) tended to be on less accessible streets. The dominant pattern is one of a

mix of land-uses in a medieval urban system that tended against strict delineations of localized clustering. This analysis allows Craane to conclude that: 'As in modern times, economic space correlates with movement, and one could therefore argue that there is such a thing as a "medieval movement economy"' (162). Indeed, her principal thesis is that the economy of the medieval Bailiwick of 's-Hertogenbosch as a whole can be explained in these terms.

Craane's study makes a novel contribution in bringing formal techniques of space syntax modeling to interrogate the dynamics of the medieval economy. Inevitably, in an interdisciplinary effort of this nature there are times when the seams show. For example, the epistemology of networks tends to be disruptive of binary oppositions such as 'town and country' – which is an important reason for Craane's methodological choice to deploy space syntax. This means, however, that the dominant conceptualization of the 'medieval movement economy' of 's-Hertogenbosch in terms of an urban-rural 'symbiosis' seems rather inadequate to allow the full implications of the network analysis to be developed, not least because it leaves the underlying binary in place. It is also a rather static notion that struggles to articulate the dynamic, multi-scalar concept of networked economic space that Craane's research describes. Often the critical relationship at issue seems to be between towns and other towns or settlements rather than between town and country as such (I was reminded of Jane Jacobs' argument in the *Nature of Economies* (2001)). To a large extent this difficulty of conceptualization reflects the terms of the debate in different disciplinary domains but there is scope to address this issue in greater depth here, for example through E.A. Wrigley's theory of the urban-rural 'continuum' or Hillier's notion of 'pervasive centrality' (B. Hillier, *Spatial Sustainability in Cities: Organic patterns and Sustainable Forms*, in: D. Koch, L. Marcus and J. Steen (eds.), *Proceedings of the 7th International Space Syntax Symposium* (2009) K01-20, http://www.sss7.org/Proceedings/01%20Key-note%20Papers/K01_Hillier_Spatial_Sustainability.pdf (accessed 20.11.2014); E.A. Wrigley, (1991), 'City and Country in the Past: A Sharp Divide or a Continuum?', *Historical Research* 64: 154 (1991) (154) 107-120). A greater critical engagement with the notion of 'symbiosis' would have provided rather stronger theoretical foundations for the Craane's somewhat rhetorical claim that 's-Hertogenbosch Bailiwick was a conurbation 'avant la lettre' (89). What her research does clearly reveal is the need for better concepts to articulate the idea of 'network history'.

Craane is clearly excited by the possibilities of space syntax analysis but in places greater precision in the formal exposition of this method is needed. The mode of analysis (segment angular) she employs is rather loosely referred to as 'topological', it would have been preferable to refer to a 'configurational' layer when a generic term was required. While Craane rightly notes that syntactical analysis does not necessitate a reductive search for best-fits correlation co-efficients, it would have been useful nonetheless, for some carefully selected statistical descriptions to have accompanied the colourful visualizations of urban space that space syntax software produces. The absence of space

syntax statistics means that when Craane talks of ‘correlations’ (for example of occupational types in urban space) these appear to be based on visual comparisons alone, which is rather misleading. There are also times in the concluding chapter where Craane’s evident enthusiasm for space syntax begins to read rather like a vindication of the method used rather than of the research findings themselves – although this is the exception rather than the rule.

Overall, the bravery and innovation of Craane’s study should be applauded. By convincingly presenting the socio-economic dynamics of the Bailiwick of ’s-Hertogenbosch as a ‘medieval movement economy’ she has made a bold and ambitious statement to her own discipline to be open to the possibilities of new methodological approaches and to those working in space syntax that the potential of this technique for historical research only becomes clear when multiple sources of evidence are brought to bear on the analysis. Craane’s study creates an exciting new trajectory of interdisciplinary research in the socio-economic networks of medieval socio-economic regions, it is to be hoped that she will continue to develop this work.

Sam Griffiths, Space Syntax Laboratory, UCL Bartlett School of Architecture