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Reflections on 'How we view cities: a green-space enigma?'

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In his thought-provoking editorial, Whitehand (2017) mentions two particular omissions that are highlighted when the position of green space in studies of urban areas is considered. The first is the focus by many urban morphologists, particularly Western urban morphologists, on the form of buildings at the expense of the spaces that they occupy. The second is the often limited way in which different types of green space are distinguished in studies of urban areas based in the bio-sciences. To these could be added a third: the very infrequent consideration of green spaces and vegetation, particularly trees, as contributors to urban landscape character. Identifying and addressing these omissions could provide opportunities for deepening urban morphological studies, developing interdisciplinary communication and bridging the gap between research and practice.

One possible means of tackling these omissions could be to develop links between the historical framework of study provided by urban morphology and the functional, planning framework provided by the concept of green infrastructure. Green infrastructure has been defined as a 'network of high quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings' (European Commission, 2013). This conceptualization of green spaces is, therefore, linked to the idea of ecosystem services, that is that green spaces are valuable for providing a wide range of benefits, including flood alleviation, carbon storage, enhanced tourism potential, human health and wellbeing, and maintaining local distinctiveness, to which an economic value

could be attached (European Commission, 2013). In the United Kingdom a focus on green infrastructure has also been an important element in current Government policy and sponsored projects to develop a new generation of garden cities, towns and villages (Smith and Pratt, 2017; Town and Country Planning Association, 2017).

While Whitehand and Gu (2010) and Whitehand and Morton (2004) identify real barriers to this type of integration, there are causes for optimism. There are already examples that could be expanded upon of components of urban green infrastructure, such as boulevards and walks, being the subject of morphological study (Darin, 2000; Larkham, 2000). It is, for example, interesting to note the examples of tree-lined streets that are central to the identity of European capital cities: Unter den Linden in Berlin (with trees referred to in its name), the Champs-Élysées in Paris, and the Mall in London. Urban morphologists have also made a number of studies of earlier attempts at idealistic town planning, see for example Hall (2005), Kirjakka (2003) and Rego (2014), which could inform the current debate.

An approach informed by urban morphology would gain insights into the causes of the current distribution of green space in an urban area. First, an historico-geographical approach to understanding the wider historical landscape (Conzen, 1988; Whitehand and Gu, 2010) would identify, for example, the importance of embedded fringe belts as a location of green space. Secondly, an awareness of the effect that legislative, economic and individual forces have on the form of development (Larkham and Conzen, 2014) would help in explaining the density of residential development

and consequently the amount of green space to be found in domestic gardens at different times and in different places.

There are also opportunities to incorporate green spaces and vegetation into urban morphological analysis. One particularly fruitful area of study could be the extent to which the trees and hedges that form part of the landscape prior to urban development are incorporated into the new urban landscape, and more generally how vegetation is retained, removed or replaced when development or redevelopment takes place. A second area of study could be to consider the pattern of urban vegetation as an aggregate feature in relation to the town plan. From aerial photographs of residential areas it may initially be difficult to distinguish between the vegetation cover that is provided by street trees and that which is provided by trees and shrubs within the curtilage of domestic gardens. Further analysis of the age and species of this vegetation may identify differences between street trees and garden trees or highlight their similarity. Such studies could inform a morphological understanding of the relationship between the streets and the plots in terms of their layout and their design. It could also enable hypotheses to be developed regarding how vegetation contributes to urban landscape character: for example, is it the quantity of vegetation or its mix of species that most distinguishes one area from another?

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Urban landscapes of deception

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In the UK, architect planners of an earlier generation became aware of urban form particularly through the work of Cullen and the Townscape school. Following their town planning instruction, they sought to influence urban form through land-use allocations and quantitative means, such as density and floor-space ratios. As an architect

planner, the work of the Caniggian school of architects and the Conzenian school of geographers was to me a revelation. It offered deeper approaches that explored underlying structures at different levels of resolution. It also emphasized the long life of built forms when compared to the transience of the uses within the buildings.