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What is *Urban Morphology* made of?

Vítor Oliveira, CITTA – Centro de Investigação do Território, Transportes e Ambiente, Faculdade de Engenharia, Universidade do Porto, Rua Roberto Frias 4200-465 Porto, Portugal. E-mail: vitorm@fe.up.pt and **Cláudia Monteiro** CM Arquiteta, Rua Santos Pousada 1185-1ºEsq, Porto, Portugal. E-mail: aclaudiamonteiro@inbox.com

What are the main approaches, theories, concepts and methods being debated in *Urban Morphology*? Which countries are participating in the debates? Which ones are poorly represented? Which disciplines are prominent? To what extent are authors referring to one another's work? Are the debates attracting the participation of professional practitioners? How widely recognized is urban morphology as a coherent field of knowledge?

In search of the answers to these questions, we analyse 229 contributions to the journal over almost 2 decades – 80 full-length articles, 14 national reviews (the series on the study of urban form in various countries), 11 review articles and 124 'viewpoints'. The findings complement a recent article that reflects on the series of reviews of the study of urban form (Oliveira, 2013).

The analysis is based on four aspects: the contents of the contributions; the geography of their authorship; the disciplinary backgrounds of the authors; and finally, the impact of the contributions. Analysis of the keywords provided in the full-length articles and national reviews reveals that 316 different keywords are used, each keyword being repeated on average only 1.5 times. Does this suggest that the different authors publishing in *Urban Morphology* are not using a common

language? Perhaps efforts should be made in future to choose keywords that are shared by wider audiences. The most used keywords are 'urban morphology', 'urban design' and 'urban form', together accounting for over 10 per cent of the keywords used. The use of 'urban design' as a recurrent keyword may be taken as an encouragement to those seeking to explore the borderland between urban morphology and design (Marshall and Çalışkan, 2011). The other most cited words are 'architecture', 'planning', 'history' and 'geography', comprising 7 per cent of the keywords used. Individually these four disciplines have similar weights. Two concepts are among the most used keywords. The first is 'fringe belt'. The significance of this concept to the journal readership is well expressed in a set of papers exploring international comparisons, the national and local dimensions of the concept and particular types of fringe belt within a city (such as the Edwardian fringe belt). The second concept is that of the 'morphological region'. Some variations on the original formulation of the concept are included, such as 'urban landscape region', 'landscape unit' and 'urban structural unit'. Space syntax is another highly cited keyword. Half of the papers using this keyword aim at exploring the

design of frameworks and methods that combine space syntax with other morphological approaches. Finally, Italy also emerges as a highly cited word. The use of the last four keywords (fringe belt, morphological region, space syntax and Italy) tends to reinforce the argument of Oliveira (2013) that there are four prominent approaches within *Urban Morphology*: the German morphogenetic approach, the Conzenian school, space syntax and the Muratorian school.

Turning to the provenance of authors (limiting attention to the first author of each contribution), the analysis reveals that 66 per cent of the contributions are written by authors based in Europe, 18 per cent in North America, 10 per cent in Asia, 4 per cent in Oceania, and 2 per cent in South America. No contributions emanated from Africa. This continent is also poorly represented in ISUF conferences. The most represented countries are the United Kingdom, Italy, Germany, France and The Netherlands, in Europe (these five countries provide more than half of the contributions to the journal); and the United States and Canada, in North America. Portugal, Australia and China complete the list of the ten most represented countries. Finally, at the city level, Birmingham, UK has the highest number of authors (14 per cent) which is indicative of the invaluable contribution of the Urban Morphology Research Group. It is followed, in Europe, by Florence (4 per cent), London, Porto and Paris (all with 3 per cent), and in North America, by Chicago (3 per cent).

The third aspect of this analysis is the disciplinary backgrounds of the authors, again limiting attention to the first author of each contribution. We were not able to trace the backgrounds of all authors (10 per cent of the whole set were not considered). One half of the authors hold an architectural degree. Geographers account for one-quarter of the whole set, followed by history (8 per cent), planning (6 per cent), landscape architecture (6 per cent) and engineering (2 per cent). The other disciplines represented were archaeology, biology, economics, physics, political science and sociology. Despite the dominance of the practice-oriented discipline of architecture, 93 per cent of authors have an academic affiliation, and only 7 per cent are engaged in professional practice.

Finally, what has been the impact so far of these various contributions? *Scopus*, accessed in April 2013, was the main source for this analysis. Cited by 49 publications, 'Urban morphology as an emerging interdisciplinary field' (Moudon, 1997) is so far the most cited article published in *Urban Morphology*. The article by Whitehand (2001) on

the Conzenian school is cited by 36 publications, reflecting again the importance of this school of thought internationally. The importance of the concepts of the morphological region and the fringe belt is suggested by the number of citations received by Whitehand (2009) and Conzen (2009) – 16 and 15. Levy (1999) discusses the implications of the modern urban fabric for urban morphological research, and Lilley *et al.* (2005) focus on the methodological aspects of GIS and GPS. These are the fifth and sixth most cited contributions to the journal. The seventh is the exploration by Whitehand and Gu (2007) of a particular method, town-plan analysis, in China. The other contributions completing the list of the ten most cited articles in the journal (with 13 citations each) are a comparative study on different morphological approaches (Kropf, 2009), an analysis of a particular element of urban form, the urban block (Siksna, 1997), and a national review of the study of urban form in the United States (Conzen, 2001). Overall, one-half of the citing articles were published in *Urban Morphology*, the other half being published in such journals as *Environment and Planning B: Planning and Design*, *Urban Design International* and *Built Environment*, to name but a few.

The first issue of *Urban Morphology* was published in 1997. Over recent years, different approaches to the study of urban form have been proposed and applied in a growing number of countries. While Europe and North America are still dominant, new countries have been emerging. The journal has been able to attract not only academics from different backgrounds (including from practice-oriented disciplines), but also professional practitioners. Much remains to be done, but urban morphology is steadily becoming a widely recognized discipline. In a remarkable paper, Whitehand (2012) has established the fundamental challenges that urban morphology should address in the coming years.

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Urban design needs urban morphology: a practitioner's viewpoint

Wowo Ding, School of Architecture and Urban Planning, Nanjing University, Hankou Road 22, Nanjing 210093, China. E-mail: dww@nju.edu.cn

Since its first publication in 1997, *Urban Morphology* has clearly defined its mission as the study of the city as human habitat, focusing not only on the tangible results of social and economic forces, but also on bringing together researchers from a variety of disciplines, including architecture, geography, history and planning (Moudon, 1997). Since then urban morphology has played a significant role as an interdisciplinary research platform underpinning the dialogue between those disciplines. However, the weak communication between disciplines has remained conspicuously evident in the case of the relationship between architecture and geography. More than a decade after Whitehand (2001) drew attention to the problem, the situation has not changed much at the world scale, notwithstanding the growing links between architects of the Muratorian school and Conzenian geographers. At the same time attention has been drawn to the need for wider practical application of urban morphology and in particular the need to bridge the gap between urban morphology and urban planning and design (Hall, 2008; Whitehand, 2007). A number of researchers and practitioners have commented on this problem (Kropf, 2001, 2011; McGlynn and Samuels, 2000; Samuels, 2008) and the recent issue of the journal has highlighted it once again (Hall, 2013; McCormack, 2013; Nasser, 2013; O'Connell, 2013; Scheer, 2013). As McCormack (2013, p. 45) argued, 'although urban morphology is funda-

mentally concerned with the what, how and why of the constitution of the urban fabric, there is little or no knowledge of this essential reality among practitioners of urbanism'. Taking the perspective of an urban designer, my question is how can we expect to build better cities if we have little or no knowledge of built environments? I suggest that urban design needs urban morphology as a platform on which to renew its theoretical foundations. To this end we need to look again at the meaning of urban design and its theories.

Understanding urban design

What is urban design? Looking back in history we see striking exemplifications from the nineteenth century: Haussmann's grand project for Paris (Panerai, 2004) and Cerdà's extension project for Barcelona (Aibar and Bijker, 1997) are cases in point. Both cities can be seen as instances of so-called 'civic design'. The former is usually regarded as a model of aesthetically-oriented three-dimensional city design; while the latter is the practical application of Cerdà's theory of urbanization. In both cases 'civic design' considered not only the urban fabric but also the spatial form of the city. The term 'urban design' came into currency in North America in the late 1950s, replacing the more traditional and somewhat outmoded term 'civic design' (Carmona and