Issues in urban morphology

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Revised version received 12 October 2011

Abstract. A number of challenges facing urban morphology are examined. Several of these relate to the multidisciplinary character of research on urban form and the tendency for relevant disciplines to be poorly connected. The issues discussed, a number of which are prominent more widely within the social sciences and humanities, include poor communication between different linguistic areas; underrepresentation of research on non-Western cities; the tendency for studies to be place specific; and the poor relationship between research and practice. ISUF is having some success in leading attempts to meet these challenges.

Key Words: multidisciplinarity, language barriers, synergies, comparative studies, Euro-American myopia, morphological classics

As a field of knowledge and practice, urban morphology faces major challenges. A number of these are briefly reflected upon in this paper. They stem in part from the nature of the field and its relationship to various disciplines and fields of practice. But many of the issues addressed are particular aspects of problems occurring in a range of disciplines, particularly within the social sciences and humanities.

The term 'urban morphology' is used in a number of ways. Probably its most literal and widely accepted definition is 'the study of urban form'. For many it is the study of the urban landscape or townscape (Smailes, 1955). As a field of knowledge it has existed for over 100 years, but it is not a widely recognized discipline. It lacks a range of journals devoted exclusively to it. It largely lacks national organizational bodies. Formal degree courses in urban morphology are rare and text books are few. The international body for urban morphology, ISUF, came into existence only as recently as 1994.

Nevertheless, the subject matter dealt with

in urban morphology has for a long time had a place within a number of disciplines, if not a major place in any of them. These include archaeology, architecture, architectural history, geography, history, landscape architecture and planning. Urban morphology occupies more of a multidisciplinary position than most fields of knowledge. It is at a meeting place of the arts, humanities, social sciences and, to a much lesser extent, the natural sciences. Partly as a consequence, it has been subject to many influences. Over the course of the twentieth century influences from geography and architecture were particularly evident, though varying in their strength from one part of the world to another. Urban morphology was strong within German geography during the first 30 years of the twentieth century (Heineberg, 2007, pp. 5-6). Since the Second World War its significance has grown within Italian architecture (Marzot, 2002).

The diverse character of urban morphology, especially its multidisciplinarity, is a logical starting point for consideration of a range of matters that urban morphologists need to

consider more energetically than hitherto. Most of the issues considered here are shared to varying degree by a number of the disciplines to which urban morphology is connected. They include poor communication both between disciplines and across language barriers; the tendency for research to be predominantly about European and North American cities; the frequent failure of studies of particular urban areas and particular facets of urban areas to be placed within a more general comparative context; the weak relationship between research and practice; and the considerable influence of a few frequently referenced publications within a wider body of relevant literature of which the majority of researchers have a low level of awareness.

Multidisciplinarity

Early researchers working within the field that in the twentieth century became increasingly known as 'urban morphology' were less constrained than present-day researchers by the existence of separate disciplines. They read widely across a range of scholarly literature concerned with settlements, albeit that it was a tiny literature compared with that of today. The works of Fritz (1894), Schlüter (1899) and Giovannoni (1931) illustrate this breadth of perspective from the standpoints of history, geography and architecture respectively. During the second half of the twentieth century, however, disciplines became more tightly bounded. Each discipline tended to strengthen its own organizational structures and publications: cross-referencing to other relevant fields was often minimal.

In recent decades the need for interdisciplinary research has been espoused in practically all fields of knowledge (Braun and Schubert, 2007). Yet at the same time new specialisms in terms of subject matter or approach or both have developed. Within the field of urban morphology this has maintained, if not exacerbated, a more fragmented knowledge than that contributed by our predecessors of the first half of the twentieth century. The opening of gaps requiring exploration has occurred both within and between disciplines. Kropf (2009) has considered four of the different approaches that have emerged within urban morphology. He terms them spatial analytical, configurational (or space syntax), process typological and historico-geographical. These are additional to a variety of other approaches or communities of interest, most of them deriving from older-established disciplines, such as archaeology, architectural history, geography and history. Both the approaches identified by Kropf and wider disciplinary distinctions are associated with distinct patterns of communication. These are revealed most obviously in authors' citation patterns. For example, the publications cited in architectural historians' articles that consider urban form are almost invariably very different from those cited in articles on urban form by geographers.

Lack of cross-disciplinary awareness of relevant research is sometimes evidenced in stark ways. Two statements in the announcement of one of the sessions at the Tenth International Conference on Urban History held in Ghent in 2010 are examples (European Association for Urban History, 2010). One claims that the physical form of the city has rarely been analysed 'to throw light on how and why cities grow and evolve' - a subject that has in fact for long been central to geographical research in urban morphology. Another, to the astonishment of members of the Caniggian architectural school, asserts that in architectural studies 'seldom have buildings and landscapes been examined with a view to contributing to understanding the changing nature of towns and cities'.

Ignorance of relevant research in other disciplines is related to various factors. One is the propensity, understandable on practical grounds, for researchers to investigate urban form within their own country. This tends to militate against communication between countries. It is compounded by language barriers. In this respect urban morphology, like the social sciences and humanities generally, suffers more than the natural sciences. In the natural sciences the adoption

of English as the universal language of communication is virtually complete. In urban morphology, although English is by far the most important single language, there are many other languages extensively employed. Rather than English being the standard means of communication, there is what has been dubbed an anglophone squint: the limited attention given by English-speaking researchers to the literature in other languages (Whitehand, 2005).

The problem of anglophone squint

The tendency in the course of the twentieth century for citations of research to be increasingly dominated by those of publications in English has been well documented in geography (Harris, 2001; Whitehand and Edmondson, 1977). There has undoubtedly been a related tendency across the social sciences, including urban morphology. Many journals in the English language, including a number that publish papers on urban form, claim to be 'international', sometimes explicitly in their title or sub-title, when in reality they are international only within the anglophone world (see, for example, Short et al., 2001). In most cases the majority of the articles they contain are by authors emanating from the country in which the journal is published. And in the case of the wider-circulated journals that generally means one of the anglophone countries.

Anglophone squint has been compounded by the emphasis that the widely-available indexes have given to journals published in English. From its inception the Institute for Scientific Information (ISI), now part of Thomson Reuters, concentrated largely on journals in the English language. Consequently citations of non-anglophone authors have been greatly under-represented in these indexes.

To what extent and with what degree of success are attempts being made to overcome anglophone squint within urban morphology? The most concerted attempt has been made by ISUF, notably in the form of *Urban Morphology*. When this journal was launched

by ISUF the intention was that it should be truly international: that it should be a vehicle of communication for researchers and practitioners worldwide, irrespective of their nationality or native language. The task of fully reflecting work in non-anglophone countries, however, was considerable. That the journal should be published in English was not seriously questioned by those involved in its foundation. Only a minority of countries represented in ISUF were then, and are today, predominantly English-speaking, but English was, and still is, by far the most widely spoken language among members, albeit as a second language for many. It has from the outset been accepted as the main working language of ISUF conferences, though it has generally been the first language of only a minority of conference participants. It followed naturally that the journal should be in English.

From this decision have stemmed a number of problems. One of the most obvious is that for most of those for whom English is not their first language, writing an article in English is a major undertaking, even if they are accustomed to speaking and reading English. Nor is a professional translation a complete solution, unless by someone with detailed knowledge of the subject matter. In addition, in many cases there may be the difficulty of satisfying referees from different cultural areas, who may be accustomed to different styles of writing and different ways of structuring articles.

To help overcome these problems it is important that the editors and editorial board of *Urban Morphology* possess between them a working knowledge of the main languages. However, the advantages of having native English speakers editing a journal published in English are hard to gainsay, given that the work of clarifying the English of nonanglophone authors is so important. Access to potential referees who between them have first-hand knowledge of the relevant literature in the main languages is vital. In practice, nearly all articles submitted to Urban Morphology are in English. Inevitably. therefore, some referees are receiving articles to referee that are not in their first language.

Fortunately, ISUF has members in many countries whose reading ability in English as a second language is good.

A key question is how successful has Urban Morphology been in communicating work undertaken in the various language areas? So far the domination of authorship by native English speakers has been avoided: 63 per cent of full-length articles published between the journal's first issue in 1997 and the end of 2011 have been by authors whose first language is not English. However, there has been a preponderance of authors based in Europe and North America: over the same period the corresponding proportion of authors from those two continents has so far been 86 per cent. Thus, though progress seems to have been made in reducing anglophone squint, there remains the matter of the extent to which there is a related problem of articles being concerned with Europe and North America to the neglect of the rest of the world.

Euro-American myopia

The tendency to overlook cities outside Europe and North America (that is, broadly speaking outside Western countries) is an aspect of what might be dubbed the problem of Euro-American myopia. To what extent is this a problem in urban morphology? Owing to the number and diversity of publication outlets, extensive examination of the literature would be necessary to provide a fully convincing answer, but ISUF data, including again those for its journal, 1997-2011, are suggestive. If the papers in Urban Morphology that are specific to particular countries are considered, then there have been more than four times as many full-length articles on Europe and North America as on the rest of the world. There is no doubt that most urban morphological research, judged by publications, is about Western cities. Yet by any reasonable measure the urban areas of non-Western countries comprise a much larger proportion of the world's total urban area, and that proportion is increasing rapidly. One factor that needs to be taken into account is the number of potential

authors in various parts of the world. Fiftynine per cent of ISUF members (as at April 2011) are located in Europe and North America. Of the hits on ISUF's website (1 January to 15 May 2011), 66 per cent are from those parts of the world. So it is not just a matter of cities elsewhere being underrepresented relative to their proportion of the world's urban area. They are also underrepresented relative to their share of both ISUF's members and usage of its website.

The case for a more balanced geographical coverage of the world's urban areas, notably the inclusion of more in Asia, South America and Africa, would seem hard to refute. As Kim (2007) has reminded us, prescient thinkers were long ago foretelling the twentyfirst century as the century of the East. Few would now question that foresight, at least in so far as it referred to economic development. The important contribution of Eastern Asia in history is widely acknowledged, albeit not well understood in the West. Yet articles about Eastern urban form have hitherto been relatively few in Western journals. A major reason is the strength of the language divides between Eastern Asia and the West, especially between China and the West. A related factor is the difficulty of access by researchers in the West to Eastern sources of information, and to some extent vice versa.

Part of the problem across a wide range of humanities and social sciences is the domination by Western-run, Western-orientated journals and bibliographies whose effective sphere of communication is quite limited beyond the anglophone world. Even when editors, editorial boards and referees are well disposed towards crossing cultural divides, practical problems loom large. In addition to the language problems, not least when the language differences are as great as those between Western languages and Chinese, Japanese and Korean, there are challenges at all stages, from research through to published article, relating to differences between cultures. These include not only those inherent in the subject matter of articles, but also relating to the way in which research and scholarship are undertaken and the results

communicated.

Despite these problems there has been some progress in reducing the Euro-American emphasis. ISUF has held successful conferences in 2007 in Brazil and 2009 in China, and Urban Morphology has recently carried several articles on Brazilian and East Asian cities. In a number of cases there has been evidence of intellectual bridge-building between different cultural regions (see, for example, Satoh, 2008). However, as countries such as China follow Japan and South Korea in explosive economic development, keenly aware of Western precedents, it is important that cultural differences are not obscured. A distinction needs to be recognized between beneficial borrowing from the West and the subordination of other cultures to Western culture. To what extent are ideas developed in the West applicable in the East? How applicable are Western methods? Within urban morphology answers to these questions are only beginning to be drafted.

In addressing such matters there is a need to keep in view the major role of urban morphologists in elucidating traditional urban forms as embodiments of different cultures and in communicating their findings on this subject to an international readership. This concerns both the intrinsic importance of the findings and the basis they provide for such important subjects as urban conservation, urban landscape management and the creation of new urban landscapes. In rapidly developing parts of the world, where economic needs tend to be overwhelmingly powerful influences, it is especially important that societies remain connected to their roots. Research on the historical development and future roles of inherited urban landscapes has an important place in maintaining and enhancing consciousness of the cultural foundations of societies.

The particular and the general

The contribution of urban morphologists to such work raises questions about how the research itself should be pursued. The search for answers to these questions leads into what is arguably an even bigger issue than the relationships between disciplines, language areas and cultures that have so far been discussed. It might be succinctly described as the relationship between the particular and the general.

One of the perceptive pieces of advice that Albrecht Penck gave his students in the University of Berlin nearly 100 years ago was 'when you see the particular, always look for the general' (M. R. G. Conzen, personal communication). The general purport of this guidance would seem clear – when a specific observation is made, the more general aspects to which it may be related should be considered. What is similarly clear to the editors of Urban Morphology is that many aspiring authors fail to heed this advice. This is not to suggest that urban morphology is alone in having this problem, but it is sufficiently prevalent within the field to merit attention. Too much research is of purely local significance, failing to relate the particulars of individual places to a wider framework of thinking.

Long ago researchers in many fields were following the sort of advice that Penck was giving. Some of the closest parallels to urban morphology were in aspects of nineteenthcentury biology. The remarkable feats of detailed observation and classification by Darwin are renowned for the way in which he used them to shed light on ideas of wide significance. Inconspicuous by comparison, urban morphology also had its nineteenthcentury pioneers. As early as 1841, the German geographer J. G. Kohl developed models of pre-industrial European cities (Ehlers, 2011, pp. 97-8). His schemas of city structure were providing frameworks to which particular observations about urban form could be linked.

That an approach that espouses concepts of wide significance has fallen well short of attaining widespread support in studies of urban form reflects a number of difficulties, some of which relate to the multidisciplinary character of the field. A major problem relates to the disparate nature of much that is written.

Though certain conceptual frameworks recur, some contributions to the body of literature on urban form are individualistic to the point of being practically impossible to connect with one another or with such frameworks. They fail to be conceived, implemented and concluded with a purpose that extends beyond the particularities of the area studied. They largely lack reference to shared theoretical frameworks and shared terminologies that would enable them to be connected so as to form the basis for a wider, integrated body of knowledge.

Fundamental to this problem is the fact that urban morphologists collectively have been slow to establish internationally a widely acknowledged set of terms and principles pertaining to the composition of urban form. This is both a symptom and a cause of an intellectual climate that is insufficiently conducive of conceptual thinking. There is still a great deal of research that fails to be cast in sufficiently general terms to allow effective links to be made to a wider literature. This is a major reason why comparative studies are relatively few.

The need for comparative studies

Comparison of the findings of different research projects is a major aspect of relating the particular to the general. It is a major issue in most fields. In the social sciences, and especially in the humanities, projects are frequently designed with insufficient thought being given to how their findings may be related to those of other studies. In urban morphology, comparative research is faced with a plethora of case studies that use different, or sometimes unspecified, definitions. Problems of comparison are made more difficult by the fact that research is undertaken within several disciplines and published in a great many languages. To some researchers, especially those working primarily within the humanities, it is inherent in urban form that the frames of reference are very diverse. However, many strive for an approach closer to the model provided by the natural sciences: an approach closer to a hypothesis-testing model.

In relation to such a model the major problems of comparing the findings of the different types of study are insufficiently acknowledged, let alone addressed. Only in the case of a relatively small number of studies of a given type that adopt the same definitions, methods and concepts is there a reasonable prospect that reliable comparisons of findings can be made. What can be done to alleviate this problem?

There is a case for expending more effort in seeking common bases for wider comparisons, not just among studies of the same general type, but also to seek ground shared by what are currently for the most part regarded as discrete types of study. Kropf (2009) addresses this task in relation to the four types of study referred to previously (spatialanalytical, configurational, process-typological and historico-geographical). After initially identifying the phenomena that are the object of urban morphological enquiry, he seeks an aspect common to all four approaches that can be used to co-ordinate different views. His ultimate goal is to establish a composite view in which the different approaches support each other.

addition to problems of noncomparability of definitions, methods and concepts, differences between the sources of information employed need to be overcome. These are particularly an obstacle in the case of cross-cultural comparisons. Nevertheless, some progress is being made, at least in the case of studies of the same general type. For example, there are the beginnings of a world distribution of broadly comparable urban morphological regionalizations (Whitehand, 2009), including studies specifically of fringe belts (Conzen, 2009). These include studies in parts of the world that have hitherto not featured prominently in urban morphological research, notably China, Latin America and Africa, using a conceptual framework and method largely developed in Europe and North America (Conzen, 1960, 1975).

The need for an integrated approach

Closely related to the need for comparative studies is the need for an integrated approach. Urban form is made up of so many different components that it is not surprising that some research focuses on one or a limited number of these. Architects, for example, frequently divorce buildings from the ground plan of the city. An even narrower view is to focus on particular types of building in isolation or even on a particular building in isolation. Samuels (2005, p. 139) has criticized the preoccupation of much of the architectural literature with special buildings - the few that stand out, rather than the many that make up the majority of the environments in which most people live. This criticism accords with Habraken's view. According to Habraken (2009, p. 132), 'we should emulate the biologist who studies all plants with equal zeal'.

What is at issue here is by no means only a matter of narrow vision among architects. An undue focus on the particularities of the urban landscape is evident in other ways and among other fields and professions. The tendency to treat features in the urban landscape – buildings, streets, open spaces – as individual objects, rather than parts of an integrated entity, is widespread. Within built-environment studies and professions, appreciation of the objects under consideration, though commonly grounded in a functional or formal typology, frequently lacks appreciation of how they fit together. There is a need for greater attention to urban landscapes as ensembles.

The problem of compartmentalized thinking needs to be seen in much wider terms than the urban morphologist's segment of knowledge. As Hägerstrand (1991) reminded us, science is primarily concerned with what is invariant throughout the universe. Its purviews are necessarily specialized rather than concerned with how the various phenomena on the Earth's surface connect with one another to create the environments in which people live. Urban morphologists can claim no such absolution. For analytical purposes a particular category of phenomena in the landscape may be focused on. It might for

example be the street pattern, architectural form or building materials. But it is necessary to keep in view the entire urban landscape as an integrated entity.

This perspective is pertinent, for example, to the growing field of heritage studies. Though a major part of this field is concerned with historic features in the landscape, the focus hitherto has been much more on those features as discrete entities rather than as parts of a wider historical landscape. This problem has been acknowledged by UNESCO World Heritage Centre, notably in its preparation of recommendations on the historic urban landscape (Bandarin, 2006). The potential of an integrated approach to urban morphological research is evident, for example, in relation to the appraisal and designation of World Heritage sites (Whitehand, 2009a, pp. 21-3). It also needs greater consideration than hitherto in relation to other fields of practice.

Research and practice

The weak relationship between research and practice is an acknowledged problem in a number of fields. There is a tendency, particularly in the social sciences and humanities, for academic research and policy to exist in largely separate worlds. This is evident at all scales – local, national and supra-The problem is to some extent institutionalized in that organizations are often either concerned largely with research and scholarship (predominantly learned or scientific societies) or with public or private practice. This is so in fields to which urban morphology is relevant. For example, the European Association for Urban History is mainly composed of academics, whereas most of the members of the International Council on Monuments and Sites (ICOMOS) are from outside academe. In relation to the work of the latter, relevant research by academics on the historico-geographical context of monuments and sites is rarely referenced. A similar neglect of relevant research is evident in the publications of heritage organizations in the UK and the Netherlands (Bienstman, 2011; Samuels, 2010). The focus on individual sites and monuments by ICOMOS and many archaeologists and architectural historians engaged in applied projects parallels the emphasis of many architects on individual structures. Sometimes these two tunnel visions combine with lamentable consequences for the urban landscape. Far too often conspicuous 'iconic' architectural structures have had seriously detrimental effects on sites designated with similar inattention to context for their special heritage value.

ISUF aims to bridge the divide between academic and applied. It seeks to advance research *and* practice. But the number of its members who are primarily academics is much greater than the number who have a major commitment to practice, and the practitioners are predominantly from the Latin world and the discipline of architecture.

Attempts to bring the worlds of research and policy closer have been numerous. They have taken various forms. The enlisting of academics in advisory roles is one. Government-sponsored reviews of research, such as that in the mid-1980s for the French government in the case of urban morphology (Choay and Merlin, 1986), is another. In the UK, government funding of research through research councils has been accompanied by increasing emphasis on the need to communicate research findings to potential non-academic users. For example, a report to the Economic and Social Research Council on a cross-cultural application of urban morphological theory reflected the requirement by that body that the names and contact details be listed of non-academics with whom the research was discussed or to whom its results were disseminated (Whitehand, 2007). Subsequently links to users have been further emphasized by UK research councils. Yet the gap between research and practice remains pronounced in urban morphology.

That is not to suggest that there is an absence of successful boundary crossings (see, for example, Kropf, 1996; Samuels and Pattacini, 1997). Hall's accomplishments at a local level in the UK have been published as a book (Hall, 2007). He was elected as chair of

his local planning committee and was able to put his urban morphological research directly into practice. Such breakthroughs warrant examination in the search for ways of breaking down barriers. Indeed there is merit in reflecting more generally on the influence of research in urban morphology. Consideration of the reception accorded to research in the past can usefully inform efforts to aid the impact of future work, not just in applied fields but more widely.

Classics in urban morphology

Reflection on the impact of research is for the most part a chastening experience. In most fields of knowledge much of what is published achieves almost immediate oblivion, at least if judged by the minimal citation of it in other publications (see, for example, Hamilton, 1991; Whitehand, 1985, p. 224). In many cases it is not just that research is quickly forgotten: frequently it is scarcely known about in the first place. However, at the other extreme, just a very few publications have remarkable longevity: they live on in the citations of succeeding generations of authors, sometimes even receiving an increased number of citations over time (Meadows, 2004, p. 605; Whitehand, 2009b). Which are these exceptional works in urban morphology?

As a step towards answering this question it is helpful to consider information compiled by Merlin (1988). He provided a snapshot of the views in 1985 of twelve 'international experts' on contributions to urban morphology, broadly defined. He tabulated the number of times these experts cited some 50 authors. Many of the cited authors published key works in the 1950s and 1960s. It is enlightening to look back at some of the key publications of authors who were identified in the mid-1980s and check their previous and more recent citation histories in the ISI Web of Knowledge.

Four of these authors published the first editions of what are probably their best-known works at much the same time (Conzen, 1960; Lynch, 1960; Muratori, 1959; Rossi, 1966). Substantially more citations of each of these

works were made in the first decade of the twenty-first century than in any previous decade since their publication. This increase is partly a function of the considerable general growth in the number of citing publications over the period being considered. It also reflects changes in the visibility of the works in question associated with the issuing of revised versions and the publication of translations into other languages. However, comparison of their citation histories with those of roughly contemporaneous works does suggest they have exceptional longevity. Over the same period that their citations were increasing substantially, those of three other publications also noted in their day (Bobek and Lichtenberger, 1966; Dickinson, 1951; Dyos, 1961) were decreasing. Of course, comparison of individual works in different languages in terms of absolute numbers of citations, as distinct from the comparison of trends being made here, would be misleading owing notably to the fact that the citations compiled in the ISI Web of Knowledge are overwhelmingly in journals published in English.

This glimpse of what might be termed 'classics' of urban morphology prompts the question as to why just a very tiny minority of publications become more referred to over time. Although this question and similar questions have been addressed in other fields (see, for example, Ahmed et al., 2004), documenting an answer for urban morphology awaits further investigation. However, there is little doubt that the generality of the findings reported in a publication is a relevant factor. In this regard it is tempting to reflect again on Penck's advice of long ago. In the present context, research is not just about a particular place. More importantly, it is about what the work done on that place reveals about places more generally and, in the case of urban morphology, the form taken by those places. That urban morphological publications containing more general messages are more likely to have long lives as measured by the citations they receive seems at least highly plausible.

Conclusion

This paper touches on a few of the topics that currently merit the attention and reflection of urban morphologists. To consider in depth each issue raised or enlarge significantly the sample of issues considered would be a much larger task than can be attempted here. More obviously than most fields of knowledge, urban morphology faces the challenge of sharing boundaries of many kinds disciplinary, linguistic and geographical; between the particular and the general; between West and East; and between research and practice. It suffers from an acute problem of sectional thinking that relates to the fact that its subject matter is widely strewn over a variety of disciplines and many language areas. The scope for synergy is considerable, but so is the task of making effective use of opportunities that this scope provides. Comparative studies, particularly across cultures, are difficult to construct and implement, and the diversity of urban landscape form and of the terminologies invented to comprehend it tends to deter integrated approaches. The urban landscape as an ensemble needs to be more prominent in research and practice than it has been hitherto.

ISUF has sought to meet these challenges, especially in its conferences and journal. Indeed its origin was above all in the coming together of different disciplinary and linguistic groups. Its most recent major conference, in Montréal, gave considerable attention to crossdisciplinary relationships, for example between urban morphology and climatology. Much remains to be done in that regard, but there is evidence of progress. It is noteworthy, for example, that Hopkins (2012) has uncovered spatial relationships between ecology and an urban morphological concept - the fringe belt – introduced by Louis (1936) and developed in what has proved to be one of those urban morphological classics referred to earlier (Conzen, 1960). That ISUF has now set up task forces to address the field's problems in its terminology and relating to the weak inter-relationship of research and practice reflects organizational recognition of the need to tackle a number of key issues. The major advances, however, are likely to remain the task of individual researchers and research groups.

Note

 This paper is based on a keynote address to the Eighteenth International Seminar on Urban Form held in Montréal, Canada, 26-29 August 2011. It draws heavily on a number of Editorial Comments by the author in *Urban Morphology*.

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Urban morphology and design

Built Environment 37 (4), December 2011 is devoted to 'Urban morphology and design'. The editors, Stephen Marshall and Olgu Çalişkan and their contributors explore ways of better linking urban morphology and design. They do this not only theoretically, but also in relation to how this understanding can be applied in practice, and so lead to better place making. They address a range of questions. How can a stronger approach to physical form be established in relation to spatial planning through better morphological understanding? How can the morphological way of thinking about the urban fabric - including its spatial context and temporal dynamic – be used to influence acts of design? On which methodological and conceptual bases can a morphology-led planning and design approach be constructed?

The issue's contents are:

Olgu Çalişkan and Stephen Marshall: Urban morphology and design – introduction

- Karl Kropf: Morphological investigations cutting into the substance of urban form
- Stephen Marshall and Olgu Çalişkan: A joint framework for urban morphology and design
- Tony Hall and Paul Sanders: Morphological design control for large-scale city development a new proposal
- Tolgu Ünlü: Towards the conceptualization of piecemeal urban transformation the case of Mersin, Turkey
- Peter Bosselmann: Metropolitan landscape morphology
- Michael W. Mehaffy: A city is not a rhinoceros on the aims and opportunities of morphogenetic urban design

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