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## **Morphologue: The Bartlett Urban Morphology Group Workshop, London, UK, 1 June 2015**

An international workshop, 'Morphologue', was held on 1 June 2015, at The Bartlett School of Planning, University College London. One of the key challenges facing urban morphology is to bridge the discontinuity between different research traditions (Whitehand, 2012). The workshop, organized by Ye Zhang (National University of Singapore) and Stephen Marshall (University College London), was a thought-provoking initiative to generate ideas on how to address this issue. A number of scholars of various disciplinary backgrounds were brought together to share their different approaches to studying urban form and then explore possible opportunities for collaboration and synthesis.

The first two speakers, Gareth Simons (Centre for Advanced Spatial Analysis, UCL) and Kiril Stanilov (University of Cambridge), demonstrated the possibilities for cutting-edge computational technologies to enable efficient investigations into urban fabric at a fine-grained level and with extensive amounts of detailed data. Simons experimented with different ways of quantifying Jane Jacobs's four generators of diversity to evaluate the performance of urban form. Stanilov showed that empirically cellular automata models could produce accurate predictions of the changes of spatial structure in the process of metropolitan growth and argued that this tool is potentially useful for urban growth management and infrastructure planning.

Homeira Shayesteh (The Bartlett, UCL) and Fei Chen (University of Liverpool) took the more conventional typo-morphological approach and focused their investigations respectively on the long-term processes of change in housing type in Tehran, Iran and the micromorphology of Chinese cities. Both studies examined and questioned to what extent the principle of maintaining continuity of physical form and the resultant design guidelines could convey cultural meanings and inform quality urban practice to enhance place identity and benefit place-making. Taking the discussion further, Sam Griffiths (Space Syntax Laboratory, UCL) revisited the origins of both Space Syntax and the Conzenian approach and framed a dialogue between the two research traditions. It was suggested that combining the two approaches could allow the temporality of the material elements of urban form to be more fully explored in studying the historical

development of the city.

Finally, Karl Kropf (Built Form Resource Ltd) and Stephen Marshall (Bartlett School of Planning, UCL) provided two generic approaches to articulating the structure of urban form. The shared objective was to search for a common reference point that could in principle overcome the inherent ambiguities in, and the language barriers between, different morphological traditions and allow for rigorous and coherent investigations into the diversity of urban form from different perspectives. Kropf's approach incorporates the conventionally defined built form elements, ranging from materials to buildings, plots and streets, into a conception of compositional hierarchy, which was published recently (Kropf, 2014). Marshall in contrast exploits the symbolic representation of geometry and has developed a full account of mathematical expressions of the structure of urban fabric. These two approaches are not only compatible but also can be complementary, enhancing generic description of urban form.

The presentations were followed by an extensive round-table discussion. A particular focus was how to use the generic approaches to co-ordinate and combine different morphological traditions in empirical studies. It was proposed at the end that a number of tasks need to be undertaken to promote collaboration and synthesis:

1. Investigate the interface of different morphological traditions more systematically at different scales.
2. Design a common database that allows urban form information to be smartly structured and aggregated and efficiently used by different approaches for different purposes.
3. Organize and co-ordinate researches to apply different approaches to the same case study or case studies, and compare results obtained by different methods. This could be done across different cultural areas.
4. Create morphological archives using different approaches for cities of developing countries where the historical built form is rapidly disappearing.

Some of these tasks might be carried out in the course of collaboration by individuals concerned; or some might be co-ordinated within a larger institutional context, such as ISUF.

## References

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## Urban Morphology at the Sixteenth International Conference of Historical Geographers, London, 5-10 July 2015

2015 marked both the fortieth anniversary of this triennial conference and the fortieth anniversary of the founding of the *Journal of Historical Geography*. The opening plenary (Alan Baker, Cambridge) was devoted to reviewing the progress of these 'meeting places' for historical geography across the decades. From an initial attendance of 40 in Kingston (Ontario) in 1975, the International Conference of Historical Geographers (ICHG) has grown to more than 700 delegates in London 2015. No doubt much of this exponential growth is due to the global connectivity of the digital world which we now inhabit, with the consequent ease by which individual scholars can 'plug in' to international gatherings of this kind. The same growth has happened to ISUF conferences of course. Indeed, the omniscience of multimedia in contemporary intellectual life provided the focus of the first British Academy Geography lecture at the ICHG, which should be required listening for any academic. Given by William Cronon (Wisconsin), it was on 'Who reads geography or history anymore? The challenge of audience in a digital age'. It can be downloaded as an audio file from the British Academy website (<http://www.britac.ac.uk/events/2015>).

The conference comprised a full programme over five days, including a day of field trips. Amongst the five concurrent sessions taking place on each day, urban themes were few. However, papers presented in a session on 'Centres and edges in American planning' provided some urban morphological morsels, including papers on contested development of part of the Boston waterfront (Kathryn Lasdow, Columbia); the development of the cruise liner docks in Miami (Jesse Smith, Pennsylvania); and 'productive suburbs' in the period before 1940 (Peter Ekman, Berkeley). A session on 'Heritage, modernity and practice' promised more but, after two papers (Hilda Kean, Greenwich, and Jan-Erik Steinkrüger, Bonn) on the memorialization of animals –

representative of the outpourings of 'more-than-human geography' research over the past decade – the session seemed to demonstrate that heritage research has rather lost its way. A lone paper on the Valletta city gate redevelopment by heritage-study stalwarts John Tunbridge (Carleton) and Greg Ashworth (Groningen) provided an urban heritage theme.

A session on the 'Architectures of hurry: mobilities and modernity in urban environments' provided outstanding papers from long-established urban historical geographers. Deryck Holdsworth (Penn State) introduced us to a richly-layered study of the businesses occupying the New York Produce Exchange and the streets surrounding it between the 1870s and 1920. Richard Dennis (University College, London) did likewise with the unlikely subject of the London bus, and Colin Pooley (Lancaster) used town dwellers' diaries to explore urban travel experience. There was also an excellent paper on the morphological response to traffic growth in east London in the inter-war period by David Rooney (Royal Holloway, London).

Elsewhere there were a number of papers demonstrating historical GIS mapping in urban contexts, as well as more traditional historical cartographic studies, especially from Japanese attendees, and sessions on 'Cold War urbanism', 'Historical geographies of the Chinese city' and 'Historical and cultural geographies of Shanghai'. There was also a session on 'Urban form and planning', but only a paper on Spanish urban plans of the mid-nineteenth century by C.C. Bullon and M.V. Dominguez (Madrid) lived up to the theme.

For the conference field trips there is a tradition with ICHGs to have day visits as well as a post-conference excursion. The 2015 ICHG was no exception, and both provided an opportunity for urban morphology to pervade the programme and exercise some influence on the activities of delegates. One of the day trips was to Windsor and



**Figure 1. ICHG delegates in the field with urban morphologist Keith Lilley, at Bishop's Castle, Shropshire. Photograph by Nicola Thomas.**

Eton, two historic towns that just this year featured in the latest volume of the British Historic Towns Atlas series published under the auspices of the Historic Towns Trust. The author of the volume, David Lewis, guided a small group of international delegates around the two towns using the atlas maps as a framework for interpreting the urban landscape, and tracing through the town's plan the factors shaping Windsor and Eton over time. With the focus on the towns' plans there was a distinct Conzenian flavour to the field discussions, from plots and burgages through to fringe belts and architectural styles. Even so, the emphasis was very much on the history of an urban landscape, as told through its documentary sources, yet of course

as Conzenian-inspired urban morphologists well know, the townscape is itself a record of urban evolution, an accumulation of past landscape changes.

The post-conference field excursion was, at least in part, unashamedly Conzenian in its orientation, appropriately so since its itinerary included the medieval castle town of Ludlow, long-argued over by urban morphologists, Conzen included. Indeed, one of the recurring motifs of the excursion around the Welsh Borders was interpreting the forms of Norman castle towns, including Bridgnorth, Clun, Bishop's Castle (Figure 1), Bewdley, as well as Ludlow, each of which has, over the years, featured in anglophone urban morphology. The aim of the field visits was not simply to enjoy these historic border towns but actually employ plan analysis in the field, reflecting on the legibility of the towns' past in the present-day townscape, and using large-scale town plans to understand past shaping of their urban landscapes. To this end, the closing days of the ICHG, for those who attended the post-conference excursion, indulged in plan units, metrological analysis, and conservation areas, all keeping alive the long and important association (in anglophone geography) between historical geography and urban morphology, a tradition that Conzen himself would no doubt have approved.

The Seventeenth International Conference of Historical Geographers will take place in Warsaw, Poland in 2018.

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## **Tenth International Space Syntax Symposium, London, UK, 13-17 July 2015**

As has become customary, the tenth symposium in this series covered many themes. Aspects of urban morphology were considered principally in relation to four topics: 'Urban morphology and history'; 'Urban studies, transport and mobility'; 'Land uses studies and urban economies'; and 'Space and society'. This report covers a personal selection of papers, together with the keynote address by Bill Hillier.

*Urban morphology and history.* Even within the same thematic session, the geographical scales covered varied greatly. In the case of the relationship between urban morphology and history they ranged from the scale of the large, rapidly growing metropolis of Brasília down to individual neighbourhoods. Problems of fragmentation are among the most serious issues in Brazil's capital city and were discussed by Holanda, Madeiros, and

Ribeiro and Moura in their paper *Brasília: fragmented metropolis*. However, the typical modernistic approach to design has not prevented ‘fissures’ of urbanity in an otherwise sparsely occupied townscape, as brought out by Ribeiro and Holanda in their investigation of ‘Urbanity in Brasília’s superblocs’. In this session and in a number of others there was evidence of the bringing together of, on the one hand categories and procedures from space syntax and, on the other, urban morphological approaches, for example those in the Conzenian tradition. Thus Berghauser Pont and Marcus in their paper on ‘What typology can explain that configuration cannot?’ fine tune their approach towards the scale of the plot and its buildings, and consider such attributes as plot size, dimensions and number per block, and the position and height of buildings. In the paper by Bolton on ‘The spatial character of London’s railway terminus neighbourhoods’ the deleterious effects on the areas of these huge spatial ‘islands’ were depicted. In turn, in a consideration of ‘Migration and lag of centres during city growth’, Shpuza studied the ‘dislocation of centralities’ for long periods (more than 200 years) in 40 cities.

*Urban studies, transport and mobility.* Various types of mobility were explored, ranging from walking and biking to motorized vehicles, and including flows in urban areas and networks at national scales. Choi and Koch spoke on ‘Movement and the connectivity of streets: a closer look at route distributions and pedestrian density’. They found strong correlations between pedestrian flows and configurational measures, but also interesting variations in these relationships, depending on the nature and aim of the trip. In ‘Measuring bikeability’, Nordström and Manum evaluate bicycle lanes in Oslo according to the measures of ‘directness’ and ‘route facility standards’, revealing that the closer one is to the city centre, the lower are the standards. Carvalho Filho, Ferraz de Sá, Puttini and Monteiro, in ‘The Capibaribe Park: restructuring the urban fabric of the city of Recife’ by articulating public spaces, evaluate the impact of a major new avenue in Recife along a riverbank. And in ‘Exploring countrywide spatial systems: spatio-structural correlates at the national scale’, Serra, Hillier and Karimi show that space syntax retains its value at very large territorial scales.

*Land use studies and urban economies.* Traditional studies in space syntax have challenged the assumption that land uses – major ‘magnets’ in transportation jargon – define movement, whether pedestrian or otherwise. Space syntax reveals that

the urban *grid* is the primary generator of flows, with the most topologically accessible streets attracting the most central uses. A corollary is that land values also closely follow accessibility patterns. In ‘Distances, accessibilities and attractiveness’, Heyman and Manum examine house prices in Oslo according to a number of morphological variables, using GIS techniques. Law, Karimi and Penn, in ‘An empirical study on applying community detection methods in defining spatial housing sub-markets in London’, show how housing sub-markets are similarly interconnected with their local area and embedded in the rest of the system. In a paper on ‘Social transformations, informal transformations’, Ocaranza, Holanda and Madeiros discuss gentrification processes on a site near the very core of Brasília. Here services along the edges are gentrified, whereas less accessible areas in the core of the site contain housing for lower-income people. Vaughan, Törmä, Dhanini and Griffiths provide an example that brings together space syntax and the Conzenian tradition of urban morphology in ‘An ecology of the suburban hedgerow, or how high streets foster diversity over time’. They suggest how greater variation in the types, sizes and forms of buildings is more likely to propagate patterns of co-presence over time.

*Space and society.* This theme constitutes the main thrust of space syntax theory and is perhaps the aspect for which it has become best known and respected. After all, the theory’s main axiom, which concerns relations between space and society, as explained by Bill Hillier and Julienne Hanson in *The social logic of space* (1984), is that *space is a function of forms of social solidarities*, by which it *constitutes and represents* systems of social encounters and avoidances. Donegan and Trigueiro, in ‘A tale of three beaches: profiling seaside neighbourhoods in Natal, Brazil’, once more include analysis at the minute scale of building heights and land uses, alongside mainstream syntactic global measures. They show that distinct built environments relate to varying social interfaces on beaches. On a different tack, relations between urban configurations and crime are the subject matter of Lopez, the ‘Spatial and temporal communication of burglary risk’, and of Monteiro and Cavalcanti in ‘Spatial profiles of urban segments: assessing place vulnerability to crime’: the authors show that certain relations between spatial configuration and crime cut across cultures.

Last but not least, Hillier contributed a characteristically innovative keynote paper entitled

‘What are cities for? And how does it relate to their spatial form?’ He builds upon previous ideas on *background* and *foreground* spatial structures of cities, in which cities are largely constituted of a background network of smaller streets consisting of residential areas and favouring local encounters, and a foreground of longer or more continuous street segments, favouring movement over longer distances. Based on recent archaeological findings, he now adds that the background structure has historically constituted the *spatial*, principally daily, lives of the common inhabitants by which local culture is produced and reproduced, whereas the foreground has constituted the longer, and *transpatial* links of the elite with the ‘outside’ world. This is as true for Uruk, millennia ago (with its ‘channels in the sand’, without which the city would mistakenly seem labyrinthine), as it is for Venice and its *canali* between islands, without

which the city’s global structure seems missing. However, we should await this keynote publication in full before reflecting more thoroughly on Hillier’s latest contribution. As John Peponis remarked in the debate that followed, time is needed to ‘digest’ it for the complexity that it implies.

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## Fourth Conference of the Portuguese-language Network of Urban Morphology, Brasília, Brazil, 25-26 June 2015

This was the first PNUM conference to be held in Brazil, the venues of previous conferences having been within Portugal. The interest in the theme, ‘Urban settings and the challenges of urbanity’, was evident in the submission of 317 abstracts, 24 from Portugal, 1 from Spain and 292 from Brazil. Gabriela Tenorio and Frederico de Holanda, both of the National University of Brasília, were responsible for the meticulous co-ordination and general success of the congress. The event took place on the Darcy Ribeiro University Campus in the Central Institute of Science, a complex designed by Niemeyer, and which over the years has been enhanced by the addition of generous green areas and the diversified use of its facilities.

The conference was structured around presentations by keynote speakers in the first part of the morning, followed by debates. After the opening session, Vítor Oiveira of the University of Porto spoke on ‘A comparison of the different approaches to the study of the physical form of cities’. He was followed by Frederico de Holanda on the subject of ‘Back, shoulders and faces’, which was an exploration of aspects of continuous spaces and their everyday use. Paulo Afonso Reheingantz then spoke on ‘Ontological policies, situated knowledge, and spatiality’, also addressing perceptions of urban space.

The first keynote presentation on the second day

was given by Maurício Polidori (Federal University of Pernambuco), who spoke on ‘Urban Lab: between lines, cells and nodes’, which was concerned with the research developed at his laboratory. The presentation by Romulo Krafta (Federal University of Rio Grande do Sul) was entitled ‘The physical-form-social city’. He proposed the tools needed for analysing the form of cities. The trio of presentations was concluded by Silvio Soares Macedo (University of São Paulo), who addressed the subject ‘Open space systems and urban form in the contemporary Brazilian city: derivatives from the Landscape Framework of the system of open spaces in Brazil – QUAPA-SEL a research project’.

The second part of the conference consisted of papers on the following themes:

1. Recent urban changes – new impacts, new challenges.
2. Socially unequal cities.
3. The configuration of urban and cultural heritage.
4. The legacy of the modern city.
5. Total urbanization and trends for the metropolis.
6. The public spaces of the contemporary city.
7. Theories, concepts and morphological techniques.
8. Urban landscapes and the history of cities.

156 oral presentations were given and 25 posters were selected for display.

The concluding statement included the following observations:

- Papers that describe and analyse morphological processes in Brazil are based, to a large extent, on space syntax concepts.
- The limited use of the traditional methods of the schools of urban morphology reflect terminological misconceptions. This has led to simplistic approaches rather than examinations of the interrelated triad of form, function and development.
- There are aspects of Brazil that call for different morphological instruments, notably to respond to regional and environmental challenges such as those relating to the Amazon region and the expansion of megacities.

Development of these instruments in large-scale studies could further enhance the effective contributions of PNUM to addressing major contemporary issues in Portuguese-speaking countries. It is hoped that such matters will be further explored in the next conference, which is to be held at the University of Minho, Guimarães, Portugal.

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## **PNUM Workshop, Porto, 30 June – 4 July 2015**

This First PNUM Workshop had as its theme 'Different approaches in the study of urban form'. Taking place in the Faculty of Engineering of the University of Porto, from 30 June to 4 July 2015, it attracted 30 participants, including academics, researchers and practitioners from both public and private sectors in the fields of architecture, engineering and archeology. A significant number of participants were from outside Portugal, notably from Brazil.

The main goal of the workshop was to offer insight into a set of theories, concepts and methods for the analysis and design of the physical form of cities. On the first day, the different morphological approaches were presented: the historico-geographical approach of the Conzenian School and the typomorphological approach of the Muratorian School (both co-ordinated by Vítor Oliveira, Universidade do Porto), space syntax (co-ordinated by David Viana, Escola Superior Gallaecia) and shape grammars (co-ordinated by Sara Eloy, Instituto Universitário de Lisboa). The activities of the first day were concluded with a visit to the case study area in Porto: the northern part of the Rua Costa Cabral, situated between the Via de Cintura Interna and the Estrada da Circunvalação. At the end of the day, each participant was able to choose one of the four morphological approaches for subsequent application in the case study area.

On the second day, participants were divided into nine groups (each comprised of three or four people) according to the selected approach. Each group, supervised by one of the three co-ordinators mentioned above, investigated the study area in

relation to one approach. On the last day, after the presentation of the work carried out by each of the nine groups, a comparison between the different approaches was developed, demonstrating the potential and weaknesses of each approach, as well as the fundamental complementarities between them, bearing in mind an integrated utilization.

Following the theme and spirit of the workshop – the exploration of morphological diversity – the organizers asked those participants that were working on an approach that was clearly different from those presented in the workshop, to introduce it in a 30 minute presentation. Four participants (Isabel Carvalho, Mauricio Polidori, Susana Silva and Xose Lois Suárez) accepted the challenge, sharing their experience and enriching the exchange of morphological knowledge.

In addition to the three co-ordinators, the Organizing Committee of the workshop comprised Cláudia Correia (Universidade do Porto), Cláudia Monteiro (CM Arquiteta), Marco Maretto (Università degli Studi di Parma) and Teresa Marat-Mendes (Instituto Universitário de Lisboa). The Advisory Council was composed of Giancarlo Cataldi (Università degli Studi di Firenze), Giuseppe Strappa (Sapienza Università di Roma), Frederico de Holanda (Universidade de Brasília) and Jeremy Whitehand (University of Birmingham).

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## Portuguese-language Network of Urban Morphology: President's Report

The formation of a Portuguese Network of ISUF (PNUM) was proposed in 2010, at the Seventeenth Conference of ISUF. It was at the ISUF Council meeting at that conference that a proposal for the Constitution was presented.

In my first report as President, I should like to acknowledge the work and energy invested in PNUM by my predecessor, Vítor Oliveira. This report is a résumé of the main activities of PNUM (conferences, workshops and publications) between July 2014 and July 2015, and a brief consideration of future activities.

It is most rewarding that this network has attracted so much interest, particularly from colleagues in Brazil. The recent change in the name of the network from Portuguese Network of Urban Morphology (*Rede Portuguesa de Morfologia Urbana*) to Portuguese-language Network of Urban Morphology (*Rede Lusófona de Morfologia Urbana*), as approved by the PNUM Scientific Council in July 2014, has reinforced the Portuguese-Brazilian alliance.

The Fourth PNUM Conference, 'Urban settings and the challenges of urbanity', which took place in Brasília in June, was the first outside Portugal. It attracted 250 participants, of whom 85 per cent were Brazilians: a report appears elsewhere in this issue of *Urban Morphology* (pp. 171-2).

Currently PNUM has 865 members from 15 countries (Angola, Australia, Belgium, Brazil, Cape Verde, Denmark, France, Germany, Holland, Italy, Mozambique, Portugal, Spain, Switzerland and Vietnam). Much of its rapid growth is attributable to its annual conferences, which have served as important forums for debate on urban morphology. The Fifth PNUM Conference will take place next year in Guimarães, Portugal, and is being co-ordinated by Jorge Correia and Miguel Bandeira of the University of Minho.

This year PNUM organized its first Workshop. It was on 'Different approaches to the study of urban form', and is reported on in this issue of *Urban Morphology* (p. 172). A second Workshop is being prepared for 2016.

Apart from the organization of conferences and workshops, PNUM aims to continue to promote the study of urban form in Portugal through publications. Already in its fourth issue, the journal

*Revista de Morfologia Urbana*, edited by Vítor Oliveira, is a major channel for the discussion of viewpoints and research results among PNUM members. The inclusion in *Revista* of Portuguese translations of seminal papers originally published in English in *Urban Morphology* is a notable feature.

A major publication that will become available this year is the book entitled *The study of urban form in Portugal*, edited by Vítor Oliveira, Teresa Marat-Mendes and Paulo Pinho, with a foreword by Jeremy Whitehand. This book integrates the perspectives of fourteen researchers, mostly PNUM founding members.

It is the wish of the Scientific Council of PNUM to promote our activities among all those who recognize in the study of urban form in Portugal a common *cultural character* that deserves greater attention and focus. Further investigations between different countries are welcomed: for example between Spain and Portugal, whose historical backgrounds have endowed the Iberian Peninsula with a regional system of marked individuality but also an open system of communication such as has been espoused by the notable geographer M. R. G. Conzen (2004).

I should like to invite all PNUM members and all those interested in the study of urban form in Portugal to visit our website (<http://pnun.fe.up.pt/>) and make further suggestions of activities that should be undertaken by PNUM.

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