

REGIONAL PERSPECTIVES ON URBAN MORPHOLOGY
(ISUF2023)

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C O N T E N T S

- 6-7 EDITOR IN CHIEF NOTE/ Vladan Djokić
- 8-11 REGIONAL PERSPECTIVES IN URBAN MORPHOLOGY - FOREWORD /
Ivor Samuels
- 12-23 EMERGING ISUF NETWORK: AUSTRALIA AND NEW ZEALAND URBAN
MORPHOLOGY NETWORK (ANZUMN)/ Paul Sanders, Kai Gu, Mirko
Guaralda, Milica Muminovic, Paul Osmond
- 24-29 WHAT DO WE MEAN WHEN WE TALK ABOUT CENTRAL EUROPEAN
URBAN MORPHOLOGY?/ Éva Lovra
- 30-41 CHINESE NETWORK OF URBAN MORPHOLOGY: RETROSPECT AND
PROSPECT/Wowo Ding, Kai Gu, Yinsheng Tian
- 42-57 THE NORDIC NETWORK OF URBAN MORPHOLOGY (NNUM) - URBAN
FORM RESEARCH IN SCANDINAVIA/Todor Stojanovski, Akkelies van Nes,
Jenni Partanen, Sofie Kirt Strandbygaard, Abdellah Abarkan
- 58-77 URBAN MORPHOLOGY IN NORTH AMERICA: HISTORY AND DIRECTION/
Brenda Case Scheer
- 78-95 ISUF - HISPANIC (ISUF-H). ARCHITECTS, URBANISTS AND
STUDIES ON URBAN FORM/ Javier Monclús, Carmen Díez-Medina
- 96-119 THE TRADITION AND THE NETWORK OF URBAN FORM RESEARCH
IN POLAND/ Anna Agata Kantarek
- 120-145 THE STUDY OF URBAN FORM IN BRAZIL AND PORTUGAL: FROM A
GENERAL OVERVIEW TO A FOCUS ON BELO HORIZONTE, BRASÍLIA,
AND PORTO /Vitor Oliveira, Staël Pereira Costa, Frederico de Holanda
- 146-161 RESEARCH PERSPECTIVES OF THE TURKISH NETWORK OF URBAN
MORPHOLOGY/ Ayşe Sema Kubat, Mert Akay, Ezgi Küçük Çalışkan, Burcu
Soygüzeloğlu

Editor in Chief: **Vladan Djokić**

EDITOR IN CHIEF NOTE

The year 2023 is very significant for the University of Belgrade. This year, the University is celebrating the 215th year of its long tradition, while at the same time the Faculty of Architecture, as one of its members, has the honor of hosting the 30th International Seminar on Urban Form conference (ISUF 2023). When the SAJ journal was first established in 2009, one of the initial papers focused on urban morphology (Morphology and Typology as a Unique Discourse of Research), highlighting important figures and morphological schools. Presently, I am fortunate enough to be editor in chief for two issues in which these very scholars have contributed by providing their insights on regional perspectives. Over the past fifteen years of Journal publishing, the Faculty of Architecture has diligently upheld the tradition of publishing valuable research in the field of architecture and urbanism. This longstanding practice has served as a platform for scholars and practitioners to share their insights and contribute to the advancement of knowledge in this field. However, the year of these three jubilees is a good place to reconsider and critically examine advancements and perspectives on urban morphology.

During discussions in the organizational committee meetings, we had collectively decided to focus the conference on the Praxis of urban morphology and SAJ special issue on Regional perspectives on Urban morphology, hopefully, yet unintentionally achieving a harmonious integration of these two. Consequently, the resulting journal issue serve as valuable testimonies reflecting a specific moment in time and various perspectives on urban morphology.

At the very end, it is important to mention the people who contributed substantively and procedurally during this process. Guest editor Ivor Samuels' dedicated work and extensive network of former students and colleagues worldwide greatly contributed to the valuable regional perspectives on urban morphology in this edition. Special thanks go to the ISUF2023 conference's organizational committee, particularly Aleksandra Milovanović, Mladen Pešić, and Aleksandra Djordjević, who collaborated with the SAJ editorial team in conceptualizing, preparing, and producing these two issues.

Guest Editor: **Ivor Samuels**

REGIONAL PERSPECTIVES
ON URBAN MORPHOLOGY (ISUF2023)

The decision by the University of Belgrade - Faculty of Architecture to publish a special issue of the Serbian Architecture Journal (SAJ) completely dedicated to contributions from established and emerging or potential regional networks of ISUF was certainly ambitious given the considerable work load to which it was already committed by running the ISUF annual conference. There was also a concern that the volume of contributions might be reduced because the work load of potential authors might oblige them to choose between writing for the journal or submitting a paper for the conference. This was a reason for including a number of shorter viewpoint type articles which facilitated contributions by potential or emerging networks which did not have detailed programmes to report. In the event the response was remarkable such that this issue of SAJ has to be published in two issues. This introduction has been written for and refers to both volumes. The large number of submissions was in part due to the generosity of the SAJ editorial team in accepting them, in some cases, as late as two months after the original submission date.

Twelve full length, or nearly full length, papers were submitted together with four shorter papers. They cannot all be cited in this editorial but some general points have emerged which are worthy of comment. Cover figure shows the countries from which they originated or which they include in their discussions. There is a notable clustering of submissions from Europe, partly due to those countries being relatively small and close together compared to those on other continents. We are very pleased to have a South African contribution which is unique from that continent. In general, with the exception of Australasia and parts of South America, there is a lack of involvement with ISUF from the global south, in particular Africa and South Asia, where different urban histories and now rapid urbanisation and the growth of megacities must question the predominantly European base of the origins of ISUF.

This absence is also reflected in the very useful map of the origins of participants in the ISUF 2022 Conference published by Akanta et al (2023). However there may be some reasons for optimism since that map also shows a small number of participants from Morocco and India. In comparison with Larkham's (2022) analysis of the first languages of contributors of main papers to Urban Morphology over 25 years there are some absences from these pages. Most notably they are German, Dutch, Japanese and Arabic papers.

The majority of contributions have been submitted by teams of writers but there are five from single authors. These emphasise the important role of individuals acting as catalysts in promoting collaboration across borders or cultures. In this respect Jeremy Whitehand's activity as recounted in the Chinese contribution was fundamental to the development of urban morphology among scholars' there. Similarly the contribution on the UK emphasises the dependence on him of the Urban Morphology Research Group. This, the nearest to a network in the UK, has for all practical purposes ceased to exist without him. Another individual who was responsible for incentivising the production of an African

contribution to this collection is Michelle Le Roux a member of the Urban Morphology Journal Editorial Board.

The resulting contributions in these two volumes with their extensive bibliographies, are a valuable resource for future researchers and, it is to be hoped, practitioners. They document how urban morphological techniques and concepts have been modified as they have been applied in different contexts. While they mainly relate to concepts and techniques for the analysis of urban form, the UK contribution notes the limited connections with practice while the North American contribution uses urban morphology to criticise the normative practices of New Urbanism with its claims of recovering the qualities of inherited urban forms.

There is a wide diversity in the different authors' approaches to reporting on their networks. They range from detailed carefully referenced accounts of recent activities such as the Portuguese language network contribution which carefully traces the links between that network and other ISUF activities and which is an essential and valuable reference. The Italian contribution, from a well established network with its own journal and regular conferences, preferred to submit a review of early local pioneers whose work was fundamental to the development of the network. Similarly the Russian contribution does not describe network activities but offers a very useful account of how urban morphological studies have evolved in that vast territory of different urban traditions. In contrast to established networks, the contribution on Central Europe questions the nature of national networks and examines the extent to which inherited urban form is dependent on previous regimes and shifting national boundaries.

This diversity replicates an attribute of ISUF in general which many regard as one of its strengths. In his paper on the French situation Fusco explains why the Francophone contribution which was so important in the organisation's foundation years (Larkham 2022) has been so dramatically reduced more recently. He demonstrates how this followed a questioning in a review of urban morphology by Merlin and Choay, two eminent urbanists, commissioned by central government. Because of the width of its disciplinary and cultural backgrounds and the diversity of its theoretical approaches and methods they considered urban morphology to be irrelevant.

Just as the contents of the two volumes are very diverse so the delineation of the networks varies. They include linguistic, national, cultural and regional criteria. Among the implications emerging from the different studies is that there are limits to using national narratives for examining urban form. Lovra discusses Central Europe where approaches to urban form in the nineteenth century had a wide relevance across the languages and cultures that were part of the Hapsburg empire. Similarly Polish and Serbian urban forms are located in territorial entities which changed regimes and shifted boundaries. More recently the towns of all these territories have been impacted by the policies

of socialism followed by post socialist reforms. The Serbian paper offers an intriguing metaphor for the local evolution of urban morphology which might be applied elsewhere: fertile ground, suitable climate, sprouts, and shoots. The Nordic contribution comfortably crosses national boundaries with their cultural affinities linking four countries together while Cyprus is a notable example of how the establishment of an ISUF network can work effectively across a recently contested boundary.

Linguistic narratives are proving extremely productive in linking territories of vastly different characteristics and histories. The Hispanic contribution recounts the links with South and Central America and the potential which this scale of operation offers. The Lusophone network, successfully linking Portugal with Brazil, is developing contacts with Mozambique which, although delayed by the pandemic, offer an opportunity for incorporating another African territory into ISUF.

After the first thirty years of ISUF, as its founding fathers are replaced by a new generation, urban form is confronted by new challenges which are noted in several of the papers. The Australasian paper identifies these as the use of new technologies and the problems of sustainability in relation to climate change, particularly regarding rapid urbanisation in the Southern Hemisphere but also world wide as noted in the Türkiye paper. To these can be added remote working, growing inequalities, migration and demographic change. (Goldin et al 2023) While the plot, street and block remain significant elements of concern the widely commented challenges now faced by cities will require a shift in focus to a larger scale. In his work, among the French contributions to urban morphology which, regretfully, has not yet been translated into English, Allain (2004) terms this the macroforme. This must be a major concern of the urban morphologists of the next generation.

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EMERGING ISUF NETWORK: AUSTRALIA AND NEW ZEALAND URBAN MORPHOLOGY NETWORK (ANZUMN)

ABSTRACT

While there are extensive publication accounts of Australasian planning history, little direct focus on urban morphology had occurred until the late 1990s when Arnis Siksna undertook comparative town plan analysis revealing the close relationship of block size and related form of several Australian and American city formations. Over recent decades several scholars have developed relevant studies in both Australia and New Zealand that suggest timely consolidation as a regional group. Indeed, as a counterpoint to the centric dominance of urban morphology in the northern hemisphere, the ISUF 2013 conference was hosted in Brisbane and explored the ideas of ‘urban form at the edge’ and ‘off centre areas’ that have produced innovative approaches to the study of traditional, as well as post-colonial and contemporary morphologies. This viewpoint will expand on the emerging themes within the research field.

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OVERVIEW

A brief review of the territory confirms a scarcity of research relevant to ‘classic’ urban morphology and its three schools of thought,¹ but an acceleration in the application of morphological concepts to applied research challenges across the built environment disciplines. Knowledge of the physical fabric of the city is obviously critical to an understanding of urban function in all its variety. Urban morphology provides a valuable scaffolding to underpin the application of methods from other fields of research and practice.

The first real work in the field was initiated by Arnis Sikna through his comparative town plan analysis (ground plan comprising site, streets, plots, block plans), he observed that until that point ‘The study of urban form in Australia is a relatively recent, undeveloped field and consists mainly of unco-ordinated efforts undertaken by individual researchers.’² The studies are diverse in nature and range widely in their scope and depth’.³ Sikna provided an overview of morphology studies in Australia, grouping them around: country towns, capital cities and their CBDs, residential areas and studies of more detailed urban forms.⁴ This research confirmed that few studies were systematically dealing with the evolutionary urban forms and patterns.

We can identify two main drivers of contemporary urban research: the development and diffusion of new, predominantly digital technologies; and the need to find solutions to the plethora of sustainability-related challenges linked to rapid urbanisation. Nearly two decades later, the diversity of topics, scope and depth has significantly grown, while the need for coordination of the research remains.

URBAN MORPHOLOGY IN AUSTRALIA

Urban Morphology in Queensland has been evolving since the 1980. The Queensland University of Technology (QUT) pioneered teaching and research in Urban Design led by Juris Grete who was tasked with gaining experience about urban design and urban form in Europe, before returning to Brisbane and establish the first urban design course in the state. Over the years, urban design has developed in Queensland through the example of leading experts and practitioners such as John Byrne, Peter Richards, and Malcolm Middleton. At QUT, Urban Morphology has gained momentum in the 2000s, where systematic research projects on urban form have shaped a strong cluster of researchers.

Paul Sanders’ research in urban morphology stems from his doctoral study at QUT which culminated in a thesis titled *Consonance in Urban Form; The Architectural Dimension of Urban Morphology*. The work extended the established techniques of morphological mapping into a new application of recording diachronic changes in streetscape form through a single case study in Brisbane. The key illustrated plate from this research has been published

in the journal *Urban Morphology*,⁵ and was also featured by Peter Larkham⁶ in the book *J.W.R. Whitehand and the Historico-geographical Approach to Urban Morphology*.⁷ Sanders further applied strategies to apply these research approaches as a tool to guide the form for appropriate urban architecture,⁸ thus contributing to the evolving discussion on the relationship of research to practice within urban morphology.⁹ Sanders has served as a council member of ISUF between 2012-2015.

Urban Morphology at QUT is now led by Mirko Guaralda whose specific approach to urban morphology is informed by phenomenology, social justice, and sustainability, enquiring the complex relationship between building types, user experience, and meaning of place. Cities are approached as complex and integrated ecosystems, to understand how they evolve and morph, in particular to respond to current challenges, such as climate adaptation, pandemics, deep changes in our economic paradigms, migration, or socio-cultural dynamics. The research has a dual focus, it analyses the physicality of the city, spatial relationships, recurrent building types and morphological patterns. The research also deals with intangible factors, such as culture, identity, heritage, as well as structured and unstructured interaction with the urban form, in particular public spaces. Current projects deal with the idea of adaptable urban environment. It is recognised that, especially in the Australian context, densification is strategic to produce sustainable and inclusive cities. Medium density, medium rise, mixed used developments are an underexplored morphotype in Australia, especially in regional areas. Research explores adaptability of different building types to the Australian context, their impact on urban form, lifestyle, and society.

Technologies

Regarding *technologies*, remote sensing, defined by the US Geological Survey¹⁰ as ‘the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance (typically from satellite or aircraft)’ is clearly well-suited to urban morphological investigations. See for example the special issue of the journal *Remote Sensing* (2022) on ‘Remote Sensing-Based Urban Morphology Analysis’,¹¹ edited by Carlos Bartesaghi Koc (University of Adelaide) and Paul Osmond (University of New South Wales, UNSW), which includes comparisons of various parameters between cities and between neighbourhoods within cities. Related technologies with increasing application to the study of urban form in Australia include the use of LiDAR (light detection and ranging) to generate 3D representations of urban places, and the creation of urban ‘digital twins’, virtual objects designed to accurately represent their physical counterparts.¹²

The neighbourhood or precinct – however defined, and there are many definitions – has been a consistent locus of Australian morphological research. Recent examples from local researchers (but not necessarily relating to local projects) include Sala Benites et al,¹³ He et al,¹⁴ and Deng et al.¹⁵ Morphological analysis at the scale of streets and street segments has also occupied Australian

researchers, particularly in the exploration of walkability and ‘bikeability’, matters of practical concern for Australia’s largely car-dominated cities.¹⁶

Interface typologies

The micro-spatial analysis focuses on the interface spaces between private and public domains in the city to generate a new typology and understanding of the city as urban production, exchange and innovation.¹⁷ Thwaites, Simpson, and Simkins further developed the idea of the interface as socio-spatial assemblages.¹⁸

Morphology and multiplicities

The morphology explorations in the broadest sense in Australia include tendencies of exploring the possibilities deriving from a broad discussion around assemblage theories and how they might be affecting urban morphology. Wood and Dovey discuss how and why creative industries in Australian cities are emerging within certain kinds of urban morphologies.¹⁹

Pafka and Peimani are developing a multi-scalar approach to mapping, combining micro-, meso- and macro-scales with a particular focus on the transit-orientated urban neighbourhoods in Melbourne and Chicago, observing them as assemblages.²⁰ Milica Muminovic develops a focus on intensity mapping to build a non-essentialist approach to urban morphology at the example of block sizes and clustering methods.²¹

More recently, Mancini and Glusac presented a study of Perth and questions of the continuity of identity within transformations of the inner city, referring to a need for a more integrated view of the morphological process of urban formation.²² Osmond and Fard explore the transformation of the main campus of the University of New South Wales in Sydney through space syntax.²³

Climate change / Health and Wellbeing

Australia is especially vulnerable to the effects of climate change although as a wealthy nation it is arguably better positioned than most to address these impacts.²⁴ How Australia’s city dwellers will cope with a hotter world – and what can be done to mitigate and adapt to the combination of higher baseline temperature, more, longer and hotter heatwaves and an enhanced urban heat island effect – has emerged as a major focal point for urban form-related investigation. As well as conventional academic research, this work has increasingly involved contract/consultancy projects, often conducted with industry partners, to provide planning and design advice to state and local government agencies and property developers. For example, members of the High Performance Architecture group at UNSW and Urban Management and Planning researchers at Western Sydney University have prepared urban overheating mitigation and adaptation guidance for local governments in Sydney, Melbourne, Darwin and Alice Springs, the government of the

Australian Capital Territory, as well as for state planning agencies and individual development projects in New South Wales and Victoria. Much of the evidence base for these applied projects emerged from two Cooperative Research Centres active in the 2010s, the CRC for Low Carbon Living, based in Sydney, and the CRC for Water Sensitive Cities, in Melbourne.²⁵

The capacity to disaggregate urban form into a set of morphologically defined *Local Climate Zones*²⁶ has provided the scaffolding for a number of Australian studies,²⁷ and in particular several studies by Bartesaghi Koc and co-workers to derive a complementary typology for *green infrastructure* to support urban climate research.²⁸ More generally, the expediency of integrating urban morphology and urban ecology has sparked more theoretical explorations in Australia as elsewhere.²⁹

Human health, wellbeing and overall ‘liveability’ has emerged as a significant driver of both research and practical intervention around urban form,³⁰ with an emphasis on the quantity and quality of urban green space. Topics have ranged from thermal comfort³¹ and loneliness,³² to private open space³³ and urban acoustic comfort.³⁴

URBAN MORPHOLOGY IN NEW ZEALAND

Although the study of urban form is a relatively underdeveloped field in New Zealand, in comparison with Australia, it has long been an interest in architecture, planning, history and urban geography. Studies have considered urban form in relation to urban transportation,³⁵ urban socio-economic history,³⁶ urban and architectural history,³⁷ urban conservation³⁸ and the history of surveying and mapping.³⁹ New Zealand geographer L.L. Pownall was trained in the University of Wisconsin and influenced by Richard Hartshorne.⁴⁰ His work is particularly reliant on field survey, and focuses on urban site, form and function, with particular reference to contemporary changes.

The Conzenian school of urban morphological thought has been little represented in New Zealand until recently. The early application of Conzenian ideas in New Zealand was actually undertaken by MRG Conzen himself during a visiting professorship in the University of Canterbury in 1968.⁴¹ More systematic morphological research on New Zealand towns and cities was only developed by a research group at the University of Auckland in the past 15 years led by Kai Gu, a prominent member of the ISUF community and past Secretary-General of the ISUF Council between 2010-2018.

Like many towns and cities in other countries, intensifying pressures for changes to the urban environment in New Zealand have created challenges to planning and urban design. In relation to urban conservation,⁴² land-use planning,⁴³ and urban waterfront redevelopment,⁴⁴ these research projects reveals urban morphology as a significant analytical framework that clarifies urban problems and informs

decision taking about future built environments. In the examination of the changing urban environment in Auckland, Wellington, Hamilton and Mount Maunganui, our projects particularly focus on the critique and development of methods of urban landscape characterisation and management.

Urban morphology has been integrated into the teaching of planning and urban design studios at the University of Auckland.⁴⁵ An evident advantage of the morphological approach is that it provides a clear logic for urban form analysis and the process of reasoning. Students frequently commented that ‘urban morphological theory and method are intellectually stimulating’ and that ‘the morphological field workshops have demonstrated the importance of ‘ways of seeing’ and they are particularly intriguing and inspiring.’ To strengthen the link between planning and urban design studios and other planning courses concerning policy and governance, students are expected to make sense of the morphological ‘footprints’ on the ground and proposed ‘blueprints’ based on their knowledge of local plan making and implementation processes. Urban morphology has diversified and complemented the teaching program in planning at the university.

Similar to the work of other urban morphology networks, the Auckland group strives to develop a theoretical, technical and practical basis that is expected to improve morphological research, while contributing to more effective urban planning and management. Two current research projects are noteworthy. Wang and Gu seek to relate urban morphology to planning for spatial justice.⁴⁶ The project examines the changing processes of social and physical reconfiguration of social housing areas in Tāmaki, Auckland. It is expected to contribute to the development of spatial justice through articulating how such a conception can be related to analyses of cases of uneven developments and (in)justice in planning practice.

An examination of the epistemology of the landscape concept reveals three salient aspects of landscape relevant to multiple domains of urban planning – the unifying, morphogenetic and socialised. Although landscape research has translated into urban management, its full potential has yet to be realised. Among the three landscape dimensions, morphogenesis is relatively neglected. By foregrounding morphogenesis, the three epistemological orientations of landscape can be rebalanced and reintegrated to form the basis of a new planning framework for more continuous, harmonious and sustainable urban development.⁴⁷ Our research activities are expected to complement and diversify established contributions of international urban morphologists.

TWENTIETH ISUF CONFERENCE IN BRISBANE, 2013

Despite the apparent disaggregation of research content, sufficient focus resulted in the hosting of the Twentieth ISUF Conference in Brisbane, 2013, which provided timely attention to the scale of regional interest. Urban morphology

as a field of study has developed primarily in Europe and North America, and more recently emerging as a recurrent topic in China and South America, as a counterpoint to this centric view, the ISUF 2013 conference explored aspects of ‘urban form at the edge’. In particular, the conference examined ‘off centre areas’ such as India, Africa, Middle East, Central Asia and Australasia which require innovative approaches to the study of traditional, as well as post-colonial and contemporary, morphologies. Broader interpretations of urban form at the edge stimulates a focus on minor centres and suburbia, with their developing and transilient character; edge cities and regional centres; and new technologies and approaches that are developing alongside established methods, tools and theories of urban morphology. Sub-themes for the conference were:

- Cities on the Edge – cities on edge conditions, such as natural limits or political boundaries
- Off centre – urban form in emerging economies and postcolonial countries
- On the Edge of the City – peripheral areas and urban form in suburbia
- Edge Cities – new urban conditions
- Regional centres – cities and towns with local importance, but at the edge of national or regional urban networks
- Pushing the Edge – new technologies and new techniques.

Although Australia has historically been considered at the edge of the world due to its location, the conference took advantage of its relative proximity to Africa, India and South East Asia, especially targeting the seminar to these geographical areas, and directly addressing the challenge for ISUF to develop into these continents. Two volumes of conference papers were published including full double-blind peer reviewing of submitted conference papers,⁴⁸ furthermore, the conference was reviewed in a report written by Pierre Gauthier and published in *Urban Morphology* 17(2).⁴⁹

OPPORTUNITIES FOR A REGIONAL NETWORK.

Australia has some of the fastest growing, and at the same time, fastest sprawling cities today. A discussion on the urban form of Australian cities is strategic to secure that our urban settlements are prepared to face the challenges of a changing economic, social and environmental outlook. Australian cities and regions are extremely diverse and variegated, exchange and integration of knowledge across different local research groups is necessary to build a strong urban culture and a strong awareness of the strategic role our cities have in facing the major issues of a declining industrialised society. The body of work that is represented in this paper suggests the volume and substance of urban morphological research in Australasia can be consolidated into a coherent network of ISUF.

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WHAT DO WE MEAN WHEN WE TALK ABOUT CENTRAL EUROPEAN URBAN MORPHOLOGY?

ABSTRACT

The viewpoint aims to define and summarize the efforts made in Central Europe - which has ever-changing borders - on the topic of urban morphology. The paper cannot cover all endeavours; it only talks about the main directions and their representatives, which are the same as the directions of the main schools of urban morphology. The viewpoint briefly touches on the idea of Central Europe and on the roots that connect the basis of Central European urban morphology, which then split into specific approaches and directions (place, region, perception) and continued to develop independently. Regarding trends, it deals more with Hungarian aspirations. It addresses the questions posed in the title separately and provides answers to them as a conclusion.

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KEY WORDS
CENTRAL EUROPE
URBAN MORPHOLOGY
HUNGARIAN, REGIONAL MORPHOLOGY

Does Central European Urban Morphology exist? Is it a regional or territorial phenomenon?

Central Europe as a phenomenon needs an explanation since every period (Medieval, Early Modern, Modern) had its definition of Central Europe. And in the twentieth century, we come across several interpretations that define Central Europe from a geopolitical, geographical, or possibly cultural point of view. Eve Blau calls the social, cultural, and geopolitical demarcation of the end of the nineteenth century ‘Habsburg Central Europe’¹ in the territory of the former Austria-Hungary and then identifies it as Central Europe. Central Europe is not a delimited area. It is an imaginary space, as Péter Hanák referred to it, and it was called into existence by desires and anxieties. According to Ákos Moravánszky, both the historians Péter Hanák and Jenő Szűcs formulated those factors that are dividing the three sections (East, Central, West) of Europe.² These factors could be the distinctive similarities of urbanization and modernization as well. Elements of identity creators are the economic, social structure, aesthetic concepts, universal/territorial (local, national) language of forms (architectural language and urban planning) in Central Europe at the second part of the nineteenth century and the beginning of the twentieth century until the collapse and dismantling of Austria-Hungary.

Moravánszky asks: ‘Is Central Europe an illusion, a political program, or a regionalist catchword based on the uncertain concept of *genius loci*?’³

In Habsburg Central Europe, theorists and practitioners of the time dealt with urban analyses and form analyses, including spatial aspect and spatial structures. Camillo Sitte was one of the key figures of urban planning, and his work still has an impact on contemporary urban planning, emphasizing the importance of reconstituting continuities with the past and reinstating enclosed spaces, aspects that did not remain intact in the twentieth century. Sitte created the typo-morphology of Italian plazas, which he used in his urban planning handbook.⁴ Josef

Stübgen established the practical principles of town planning in his manual, *Der Städtebau* (1890), focusing on the hierarchy of open spaces, such as streets, squares, and green areas, and classifying them according to their function. The conception and thoroughness of his work, the character of the descriptions and illustrations, and the explanation of the urban development principles were ahead of their time, anticipating the practice of urban morphology from the second half of the twentieth century. From the 1880s onwards, Antal Palóczy discussed urban planning practice (Budapest as an example) and modern urban design principles, classifying the urban spaces and squares in the manner of Stübgen.⁵

By analyzing contemporary towns in the territory of the former Habsburg Central Europe, this analysis places the types of transformations of the fabric into a historical perspective, using a common set of criteria. The complex methodology prepares the common ground for comprehensive comparative studies. One part of the methodology is an integrated urban morphology that the writer of these lines discussed in her monographic study of Central European cities.⁶ Within this method, the morphological study consists of several steps, distinguishing between types of fabrics, identifying them, and then describing their main characteristics. The urban tissue analyses of 70 towns in Habsburg Central Europe with the integrated urban morphology method revealed 11 main urban tissue types, with a total of 41 types and subtypes characteristic for the era and territory. For a more in-depth study of the neighbourhood, the method of micro-urbanism shall be applied. To define the urban types, the urban typology matrix is used. The final urban typology distinguishes nine major urban types and three subtypes.

The dismantling of Austria-Hungary in 1920 marked the beginning of national states and territorial urban morphological research in the former territories of the Empire. The analytical research of settlements became fragmented from a territorial and disciplinary point of view. Until World War II, the morphological research of settlements (villages)

was one of the most important research subjects in urban geography in Hungary. In the early endeavours of morphological research, the influence of German urban geographers is recognizable.⁷ Tibor Mendöl, in his work (Mendöl, 1936), developed functional morphology, which examines the relationship between the population's occupational structure, social situation, and the morphological appearance of the built environment. In the post-WWII period, the urban geography research of functional morphology faced a decline, but it returned to popularity in the 1970s. From the 1960s, urban morphology research with an architectural perspective also began, mainly by the lecturers of the Budapest University of Technology who focused on the art of squares and streets, architectural structure, the analytical art of architectural space, and spatial aesthetics. Tamás Meggyesi, an architect and urban planner, is one of the most influential contemporary researchers in Hungarian urban morphology. Today, several universities in Hungary have architects and urban geographers engaged in urban morphology research, exploring topics such as the morphology of contemporary cities, socialist and post-socialist periods, and open spaces. However, urban morphology is only taught as a specific course at the Faculty of Civil Engineering at the University of Debrecen.

The concept of Central European urban morphology is limited to a shorter period, characterized by intense urbanization from the nineteenth century to the early twentieth century. It is a distinct field of study within urban morphology that focuses on the unique characteristics and development patterns of cities in Central Europe. It has its own history and features, such as the legacy of Austro-Hungarian urbanism, the influence of socialist urban planning, and the challenges of post-socialist urbanization.

Although the legacy and influences are shared, the fragmentation of urban morphology research in Central Europe during the twentieth was result of the narrowed focus, country-oriented research, and differing

research priorities among different countries. It was not until the twenty-first century, when a common academic language and greater accessibility were established, that joint cross-border research and the creation of a common platform became possible once again. As a result, scholars and researchers from different countries in Central Europe are increasingly working together to create a common platform for the study of urban morphology in the region.

NOTES

1. Eve Blau and Monika Platzer, eds., *Shaping the Great City: Modern Architecture in Central Europe, 1890-1937* (Munich, London, New York: Prestel, 1999), 11.
2. Ákos Moravánszky, *Competing Visions: Aesthetic Invention and Social Imagination in Central European Architecture, 1867–1918* (Cambridge: MIT Press, 1998), 3.
3. Ibid.
4. Camillo Sitte, *The Art of Building Cities : City Building according to Its Artistic Fundamentals* (originally 1889) (Mansfield Centre, Ct.: Martino Publishing, 2013).
5. Éva Lovra, “The Forgotten Urbanist – Antal Palóczy.” *Architektúra & Urbanizmus* 53 (3–4) (2019): 212–23.
6. Éva Lovra, *Városok az Osztrák-Magyar Monarchiában. Várospolitikai és várostipológiai tanulmányok 1867–1918* (Budapest: Terc., 2019).
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CHINESE NETWORK OF URBAN MORPHOLOGY: RETROSPECT AND PROSPECT

ABSTRACT

Albeit somewhat slowly, since the early 2000s urban morphological concepts and methods have germinated interest among urban morphologists in both China and Chinese-speaking researchers internationally. Early exploratory projects have focused on the re-examination, integration and cross-cultural transferability of urban morphology in the context of China. Building on the successful organisation of the 16th International Seminar on Urban Form (ISUF) in Guangzhou in 2009, ISUF's first meeting in Asia, a group of scholars conferred at the School of Architecture and Urban Planning, Nanjing University on 31 October 2013 to inaugurate the Chinese Network of Urban Morphology (CNUM). Over the course of the past decade or so, the CNUM has become a key contributor and driving force for the development of urban morphology in China. As a reflection on the recent wave of morphological research on Chinese cities, the purpose of this article is to provide greater clarity on what has been achieved through the cross-cultural application of morphological theory. More importantly, it explores potential avenues for future research in relation to documented gaps and remaining challenges, taking forward some of the more promising but undeveloped morphological thinking.

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KEY WORDS

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PLAN ANALYSIS

PLANNING

RESEARCH ON CHINESE URBAN FORM

The study of the physical form of cities has until recently developed largely independently in China. The field of knowledge concerned with urban form has in many respects been as distinct as Chinese cities themselves were until the twentieth century. Traditional approaches to urban form research tend to emphasise the importance of historical and archival analysis that involves elements of discovery and description. Researchers often use a retrospective review of documentary records, historical paintings and gazetteers to understand the philosophical and political expressions in physical urban patterns and represent them in the form of diagrams and maps. Research on urban form in China is largely descriptive, evocative of the rich traditions in local philosophy and China's differing regional values. However, the lack of a systematic methodological framework is likely to limit opportunities for such an approach to be widely disseminated and recognised by international scholars.

Since the 1980s, there has been increasing contact between Chinese and Western scholars generally and research on Chinese urban form has grown rapidly both in China itself as well as other parts of the world. It has become apparent that research on Chinese urban form can benefit from exploring the efficacy of concepts and methods developed and applied elsewhere in the world. Alongside the ongoing traditional urban form research, the introduction and application of international urban form theory in Chinese cities has attracted considerable research attention. Notably, a large component of urban form research focuses on the quantitative analysis of urban form and urban morphometrics.

China's rapid urbanisation since the 1990s has raised new practical and theoretical questions. Urban morphology is expected to provide much-needed theory and a set of tools for addressing these questions. In 2001, a paper entitled 'Urban morphology: an introduction and evaluation of theories and methods' was published in the journal *City Planning Review*.¹ It is one of the earliest readings in urban morphology in the Chinese literature. Urban morphological studies have since undergone marked growth in China, especially since the beginning of the twenty-first century.²

THE URBAN MORPHOLOGY RESEARCH GROUP AT BIRMINGHAM UNIVERSITY, ISUF AND THE CHINESE NETWORK OF URBAN MORPHOLOGY

Jeremy and Susan Whitehand from the University of Birmingham were very instrumental in the formation and development of the Chinese Network of Urban Morphology. Since the 1990s, in an attempt to build bridges between East and West, the Urban Morphology Research Group at the University of Birmingham

has been joined by a number of Research Fellows from Japan, Korea and China. Some early Asian members of the Urban Morphology Research Group include Shigeru Satoh, Kwang-Joong Kim, Kai Gu and Yinsheng Tian, whose morphological research work has stimulated interest among international researchers.³ With the support of the British Council, the British Academy, and the Economic and Social Research Council (ESRC), a series of exploratory projects based on the cross-cultural application of morphological theory in Chinese cities was carried out. Led by Jeremy Whitehand, this new wave of morphological research highlighted fundamental differences in the historical development of urban areas in China.⁴ A number of these studies adopt an adaptive approach to the Chinese urban landscape that is closely linked to town-plan analysis.

Although ISUF already had some 300 members by the early 2000s, only a handful were from the Far East, where the challenges faced by urban planning are in many respects even greater than in Western cities. However, the dynamic research activity led by Jeremy Whitehand in China stimulated the development of a morphological group involving researchers in Beijing, Shanghai, Guangzhou, Nanjing and Wuhan. In September 2009, about 220 scholars and practitioners from 26 countries attended the Sixteenth International Seminar on Urban Form in Guangzhou. Centred on the theme of urban morphology and urban transformation, many of the conference papers presented recent developments in the study of urban landscapes that are of interest to architects, planners and geographers. The success of the conference reflected the increasing focus on spatial analysis of urban form and its significance for urban planning and design practice. The Guangzhou conference, the first organised by the International Seminar on Urban Form in Asia, reflected the growing research interest in Chinese cities at a time of unprecedented growth and change.

Urban morphological studies have undergone marked growth in China since the Guangzhou conference. Building on new research outputs, a group of scholars conferred at the School of Architecture and Urban Planning, Nanjing University on 31 October 2013 to inaugurate the Chinese Network of Urban Morphology (CNUM). Chaired by Wowo Ding, the inaugural seminar was attended by scholars from six Chinese universities (Nanjing University, Peking University, South China University of Technology, Southeast University, Tongji University and Xi'an University of Architecture and Technology) as well as Jeremy and Susan Whitehand. The members of CNUM agreed that 1) there is a need to establish urban morphology as a core theory for urban design; 2) the findings of urban morphological research need to be utilised more efficiently in practice; and 3) it is essential to build up an integrative framework of urban morphology, taking into account the multilingual international forum within which urban morphological research and practice now functions.⁵ Over the course of the past

decade or so, the CNUM has become a key contributor and driving force for the development of urban morphology in China. The number of Chinese members of ISUF has also increased significantly in the past decade, with over a quarter of participants at recent ISUF conferences being Chinese speaking researchers.

URBAN MORPHOLOGICAL RESEARCH ON CHINESE CITIES: A REVIEW

Extending the compass of morphological theory

Most studies developed by Jeremy Whitehand, Susan Whitehand and their associates examine the application of town-plan analysis in the Chinese context.⁶ Recent developments in cartographical sources have been essential for facilitating this new exploration and depiction of the changing morphological structure of the Chinese historical urban landscape. Town-plan analysis is essential to reveal the interrelationships between the basic urban form complexes of the ground plan, building form and land utilisation, in particular in a more authoritarian society characterised by major differences in the precepts influencing settlements. It provides an important method for reconstructing the fundamental aspects of urban landscapes and helps underpin an approach to their regionalisation and management. The field-based research carried out by the Whitehands and their associates extends to a number of Chinese towns and cities, including large cities such as Beijing, Shanghai, Guangzhou, and Nanjing, as well as some relatively remote settlements in Shanxi and Henan.

Their research reveals that in many Chinese cities, most components of the street plan and many from its plot pattern are products of planned schemes. These systematic form complexes act as morphological regulators, and the ground plan exerts an influence on the geographical organisation of urban life. The symbolic urban landscape and its relationship with the ordinary landscape are significant in shaping the character of Chinese cities. While the morphological periods of Chinese cities prior to the early 20th century are not clearly distinguishable, distinctive material forms have been created in the economic, social and cultural periodicities since 1911. Town-plan analysis of Chinese cities, which diversifies and complements the established body of knowledge on Chinese urban form, is novel and ground breaking.

Applied urban morphology

Applied urban morphology has been developed in several areas of planning and design practice, notably urban conservation, urban design, and urban coding and planning. Recent research work has focused on strengthening morphological research and conservation planning⁷ and this has been

achieved through the active promotion of inter-disciplinary and international cooperation. Most of all, this research offers ways of resolving the tension in China between the need for cultural continuity and physical conservation on the one hand, and accommodating the physical changes demanded by major economic growth on the other.

In recent times, particularly since the mid-twentieth century, there has been increasing attention given to conserving aspects of the character of places. Much attention has focused on what parts of urban areas should be conserved, whether that be for their local, national or international significance. However, decisions on this are far from being well informed. Investigations into what should be conserved are frequently ill-supported by basic research in relevant academic disciplines and the absence of a sound theoretical foundation is a major problem in urban conservation planning. In conjunction with urban conservation research and practice in other parts of the world, the new studies in China provide an informed understanding of the urban landscape to support the formulation of process strategies for achieving both valued spatial-temporal and representational outcomes.⁸

Towards enhancing the practicality of urban redevelopment management, Yinsheng Tian⁹ explores the idea of urban management units. He argues that the identification of property ownership units not only reveals the effects of planning decisions on landscape forms, but also helps to identify effective strategies for urban redevelopment control. Combining, or integrating, maps of character areas and property ownership units yields urban management units for the purpose of more accountable redevelopment control guidelines. The results of the subsequent projects underpin a theoretical, technical and practical basis for significant improvements in the quality of historical conservation programmes, locally, nationally and internationally.

Comparative urban morphology

Comparative urban research has been recommended as an effective approach to overcoming the problem of idiographic studies in which particular findings fail to yield useful generalisations. Recent comparative research compares traditional urban form in China and Europe. Such studies attempt to integrate analytical and illustrative comparisons and provide explanations of particular urban landscapes by recognising critical differences between similar situations and identifying salient processes that occur in different settings. Examples are studies comparing the residential morphological and typological processes of Shanghai and England,¹⁰ and the traditional urban form of Pingyao, China with that of Como, Italy.¹¹

The significance of developing a more integrated approach that combines urban morphology and architectural typology has become increasingly apparent to urban morphologists since the 1980s. Although the term of 'typo-

morphology' began to appear more frequently in the literature published in the English language in the past two to three decades, research on the way in which geographical urban morphology and architectural typology can be integrated remains very limited. Whitehand et al. focus on a cross-cultural assessment of the research ideas – the 'typological process' and 'morphological period'.¹² Based on an investigation of the evolutionary processes of residential building types in study areas in the UK and China, they seek answers to two research questions – To what extent can the concepts 'typological process' and 'morphological period' be empirically verified?; and, In what way can the concepts 'typological process' and 'morphological period' be integrated to better explain the course of changes in the urban landscape? This project can be seen as an exploration of opportunities and difficulties in integrating morphological and typological thinking. Many more comparative studies, including between East and West, are needed if the typological and morphological concepts are to provide the intellectual returns of which studies so far suggest they are capable.

The paper comparing Pingyao and Como tackles the challenges facing development control in the historic urban environment in China and Italy.¹³ Based on an understanding of the dynamics of morphological processes, the authors propose that more effective planning and design strategies are important for urban socio-cultural development. It is the first comparative examination of urban fringe belts in China and Europe, and the first detailed study of its kind in the literature. It therefore breaks new ground as a contribution to the comparative study of urban form at various spatial scales across vastly different cultural realms. The research concludes that although East and West are very different, the same ideas and methods can help inform planning in both realms.

Geospatial analysis and urban morphology

The rapid advances in geospatial technologies and their increasingly wider availability in urban management environments has led to enhanced techniques for morphological and typological research, and therefore the opportunity to fully transform intellectual ideas into operational tools for conservation planning. More articulated and integrated applications of GPS and GIS in urban morphology are increasing its practicability for regular use by city managers and planners in urban landscape management. Over the past decade, much has been gained from technological advances in remote sensing and the establishment of a GIS database in China. With advanced techniques for remote sensing and geographic information systems, geospatial technology has become pivotal to more comprehensive morphological analysis.

Supported by the Natural Science Foundation of China, Chinese urban morphologists have explored the use of geospatial technology, in particular Global Positioning Systems (GPS) and Geographical Information Systems (GIS), for morphological data collection, analysis and synthesis.¹⁴ GPS

and GIS enable precise field data to be assembled for metrological and statistical analysis. Nanjing, the capital city of Jiangsu province was selected for Xu's study. Like many historical Chinese cities, Nanjing is undergoing rapid transformation, and this presents great challenges for urban landscape management. The initial findings of the study suggest geospatial technologies have the potential to provide a new framework for researchers and professionals to leverage geographic information and prepare plans that more closely follow established systems.

The making of the Chinese urban landscape

The epistemological framework of urban morphology, which is essential for generating knowledge in the field, has not been adequately explored. In order to address the challenge of clarifying the operational aspects of urban morphology in empirical studies, especially in a cross-cultural context, and strengthening the link between urban morphology and non-Western urban theories and practices, Ye Li offers an integrated epistemological framework based in both Western and Chinese landscape traditions.¹⁵

Urban morphology has its antecedents in landscape research. The three epistemological orientations of urban morphology reflect its link to the idea of landscape as follows: 1) structural study to reveal the spatial patterns of the urban landscape, 2) morphogenetic analysis to investigate the morphogenesis and subsequent changes of the urban landscape, and 3) a unifying perspective that combines structural and morphogenetic studies for morphological research and practice. By clarifying the structural, morphogenetic and unifying perspectives of urban morphology, its epistemological framework can be extended and reintegrated to form the basis for a more culturally sensitive approach to diverse urban contexts. Understanding differences in the representation and interpretation of landscape is particularly important in the cross-cultural exploration of the morphology of Chinese cities. Instead of seeing landscape as a science, the Chinese sense of landscape is as an accumulation of collective knowledge and experiences associated with everyday life, thus germinating a system consisting of correlative, generative and holistic views of its formation and changes.

Despite the differences between the Western and Chinese landscape traditions, bridging these two knowledge systems is essential for the development of urban morphology in the study of the Chinese urban landscape. Building on the ideas discussed above, a more integrated morphological framework for Chinese cities includes three components: structural-correlative, morphogenetic-generative and integrated analyses. Its use is illustrated in an investigation of the historical urban area of Guangzhou: the structural-correlative study maps the urban growth and dominant urban-tissue types over different morphological periods; the morphogenetic-generative investigation reveals the evolutionary

process of basic urban-tissue and building types; and the integrated perspective discusses the acute challenges and opportunities facing the management of Chinese urban landscape change and the application of morphological research in planning practice. These three perspectives are inextricably intertwined in understanding the landscape in China.

Recent morphological research on Chinese cities: Retrospect and prospects

The recent advances in morphological research on Chinese cities not only make a timely contribution to the search for solutions to China's acute planning problems; they also add a much stronger Chinese dimension to international efforts to promote innovative planning. With regard to the development of a future research agenda, a number of considerations merit attention. First, the link between urban morphology and urban design remains weak. Second, the study of the relationship between urban morphogenesis and sustainability is underdeveloped. Finally, operational aspects of urban morphology in empirical studies require greater clarity, especially in the cross-cultural context.

Urban design and place-making have become important tools for driving urban development that is responsive to the needs of both local communities and tourists. They make use of existing elements and also create additional elements, as needed, for reconstructing spatial unity and continuity. The adoption of inclusive urban design and place making practices that are based on an understanding of the evolutionary process of places can strengthen the connection between people and places, and between old and new structures. More strategic, holistic urban design and place-making strategies that engage all stakeholders can enhance place identity and character and help avoid repeating the development experience of larger cities. Unfortunately, the potential of morphological urban design and place-making has not been made clear in planning. Although urban design is deemed to be diverse, a great deal of its practice is essentially concerned with the manipulation and control of the three interrelated urban form elements—the ground plan, building fabric, and land and building utilisation. The morphological study of the characteristics of urban form elements as the product of urban development processes is essential to support the formation of design control policy and development plans that contribute to urban spatial continuity and integrity.

There has been a divide between built and natural landscape research. This undermines the pursuit of sustainable development. The link between landscape ecology and urban morphology is largely overlooked, but has the potential to strengthen urban sustainability. The idea of morphogenesis in geographical urban morphology is particularly promising for bridging landscape ecology and urban morphology through disclosing the physical manifestation of the 'genesis' or 'engendering process' of landscape forms. When environments are built by morphogenesis they will, of their own accord, become sustainable.

Among strategies for dealing with issues of sustainability, morphogenesis alone can help deal with all such issues.¹⁶ This approach will reorient all our efforts, and achieve the deeper agenda of the sustainable movement, in a form that is more profoundly satisfying and more in keeping with our social and cultural aspirations. This idea that we all know of, however, requires clearer elaboration and empirical support.

The operational aspects of urban morphology in research and practice require greater clarity. Research in urban morphology is heavily reliant on both direct observation of urban forms and various representations of those forms – for example, in maps and plans. The nature of the existing sources poses constraints and opportunities for morphological research in a different cultural context. Accordingly, the pursuit of diverse purposes and variations in different levels of resolution require adaptability in morphological research and practice. Adaptability is a necessary quality in the ever-changing work environment that is urban morphology. China has very limited cartographical sources for the detailed examination of the historico-geographical development of urban landscapes. Systematic field surveys and other sources of information have therefore been particularly important in compensating for the limitation of historical and new cartographic sources.

CONCLUSION

In the 1980s, MRG Conzen noted the significance of inter-disciplinary and international co-operation to the creation of an ultimate frame of reference for the comparative studies needed to develop and further conceptual thinking in urban morphology. Albeit somewhat slowly, over the course of the past two decades or so, the new morphological exploration in China is responding to that advice. The morphological investigation of Chinese cities has diversified and complemented the established body of knowledge on Chinese urban form, and been a major source of inspiration for subsequent morphological studies.¹⁷ The amount of research to date on Chinese urban morphology is tiny relative to the extent of Chinese urbanisation. However, it provides the groundwork for future research that can potentially integrate important facets of urban form research within a wider international framework.

This new morphological research contributes to bridging particular findings and theoretical generalisations. In the words of German geographer Albrecht Penck – ‘When you see the particular, look for the general’. In other words, when you see a particular case of something, consider the more general processes and ways of thinking about the world to which it may be related. Much of the new morphological exploration demonstrates the active pursuit of theoretical conceptualisation. And in urban morphology, conceptualisation is based on comprehensive data gathering and analysis.

Jeremy and Susan Whitehand played a key role in the rapid growth of the Chinese Network of Urban Morphology. The success of the network as an academic forum for sharing new thought and action in China would not have been possible without their dedication and guidance. Jeremy and Susan Whitehand's enthusiasm and curiosity for urban morphology were infectious, and a major component of their and their colleagues' scholarship. They sowed the seeds for Chinese urban morphology. What they have planted will continue to grow.

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THE NORDIC NETWORK OF URBAN MORPHOLOGY (NNUM) - URBAN FORM RESEARCH IN SCANDINAVIA

ABSTRACT

Urban morphology is defined as research program propounding methods and tools for the analysis and design of cities. The Nordic Network of Urban Morphology (NNUM) was established in 2006 to help promotion and diffusion of urban morphology both nationally in Sweden and across the Scandinavian countries. The morphological research in Scandinavia follows three research traditions: spatial analyses, typo-morphology and Space Syntax. There is a century long research tradition associated with geographical analyses of cities and regional science in Sweden, Finland and Denmark, typo-morphology in Sweden and vibrant Space Syntax groups in Sweden and Norway linking to individual researchers spread across Scandinavia. This paper maps scholars and groups at universities that follow and mix these traditions. It reviews the latest morphological research in Scandinavia and it also reflects on the future of morphological research in Scandinavia viewed in relation to the way in which Scandinavian cities fits into the worldwide pattern of urban development and dominating planning paradigms. In Scandinavian countries tradition collides with modernism and functionalism, but history have never been totally set aside. They tend to perpetually mix.

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KEY WORDS

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Urban morphology is an interdisciplinary research field, which addresses the city as artefact and spatial form. The city is apprehended as the accumulation, integration and aggregation of human actions, as they take shape on the ground and organise the urban fabric. Urban morphologists study the evolution of cities from their formative years to their current shape. Morphological analyses are based on the main elements of the built environment: buildings, blocks, streets and open spaces (places, parks, waterfronts, etc.). These elements are considered as organisms, dynamic and closely interrelated. Buildings, streets and open spaces are the materialization of intentions, ideas and decisions; they are shaped, used, managed and transformed through time. At the ISUF fourth conference held in Prato, Italy, members of the ISUF's board acknowledged the absence or the weak representation of the Nordic countries. The idea of a "Nordic Network of Urban Morphology" (NNUM) was raised and discussed in a small group including individuals from Finland and Sweden.

NNUM was established in 2006 to help connect research projects in urban morphology and individual researchers and groups, both nationally in Sweden and across the Scandinavian countries. The idea of a Network was put forward as a Nordic organisation for the promotion and diffusion of urban morphology, which is defined as research program propounding methods and tools for the analysis and design of cities. There is a century long urban research tradition in Scandinavia associated with regional science in Sweden, Finland and Denmark, typo-morphology in Sweden and vibrant Space Syntax groups in Sweden and Norway linking to individual researchers spread across Scandinavia. However, in Scandinavian countries use of urban morphology in academic education and as a method of analysing cities is quite limited. Planning research in Scandinavia has been focusing on planning theory and dominated by critical planning process approaches (inspired by Foucauldian discourse analysis and qualitative methodologies, e.g. Bengt Flyvbjerg's research).¹ In the last decade, a placemaking paradigm² is rising drawing inspirations from Danish architect Jan Gehl, but also from Jane Jacobs. The morphological research in Scandinavia follows three traditions: spatial analyses, typo-morphology and Space Syntax. This viewpoint maps a genealogy of scholars and groups at universities that follow and mix these traditions.

THE MORPHOLOGICAL TRADITIONS

The tradition of spatial analyses (regional science, spatial interaction, urban analytics, city science, evidence-based planning or spatial planning can also be used) started in the beginning of the 20th century.

Regional science and urban analytics, spatial analyses and planning

The Geographical Institute at Stockholm's University (SU) under professor Hans Ahlmann, made extensive geographical studies of Stockholm's region³ that gave rise to Swedish regional science at SU, KTH Royal Institute of

Technology and Lund University. Torsten Hägerstrand diagrammatised the link between space and time and was world leading geographers in regional science. Fölke Snickars, Lars-Göran Mattson and Anders Karlström continued this spatial interaction tradition at KTH while Stockholm Region continuously executes regional analyses⁴ (the full text in Swedish and English summary of the regional plan RUF 2050).⁵ Vania Ceccato, a PhD student of Fölke Snickars, is the head of the Urban & Community Safety Research Group at KTH Royal Institute of Technology and the coordinator of the Safeplaces network working on the relationship between the environment and safety using Geographic Information Systems (GIS) and spatial statistical methods on the geography of crime and fear in urban and rural environments and transit safety, the impact of crime on housing markets and safety governance. Anders Wästfelt also works with spatial analyses of agriculture in Swedish regions at SU inspired by geographical studies.

Similar branch of geographical research and regional science in Denmark created the famous Finger plan, which was the result of deeper spatial analysis of Copenhagen and its region. There is also cooperation on crime and safety research that also links to Bill Hillier in the UK. Bo Grønlund is a lector emeritus in Copenhagen, Denmark, who works with spatial analyses and crime preventive design and is part of the Safeplaces network. Sofie Kirt Strandbygaard, a PhD student supervised by Bo Grønlund, have been also following on safety research in the Safeplaces network from a TOD point of view,⁶ but also touching on typomorphological research and being involved in ISUF.

In Finland urban morphology research started in early 2000s. At Tampere University of Technology, a research group led by Prof Terttu Pakarinen developed and applied spatial analyses (GIS), spatial network studies, urban simulation, and Space Syntax, including researchers e.g. Anssi Joutsiniemi (currently professor of modelling etc.) and Sanna Iltanen who both later moved to Aalto, and Jenni Partanen currently working as a research professor on spatial analytics and modelling in TalTech (still also visiting scholar in Tampere University of Technology) The group had strong connections to Mike Batty's group at Centre for Advanced Spatial Analysis (CASA) at University College London (UCL). In Aalto, professor Marketta Kyttä leads a spatial analyses research hub stressing psychological aspects, well-being and health in urban space, and developing ground-breaking "softGIS" and participatory GIS methodology. A spatial planning and regional science research at Aalto University executed by Dominic Stead (who shares the time between TU Delft and Aalto University). Currently spatial analytics and modelling are established areas of urban research in Finland, and they have been widely applied in practical urban and regional development.

Norway has a large group of researchers on planning that focus on the regional scale and urban density (density has been dominating Scandinavian spatial planning). At NTNU (Norwegian University of Science and Technology)

Tore Sager has published a lot on the communicative planning influenced by Habermas. Yet another well-known scholar in planning is professor Tor Merdalen. Jørgen and Roar Amdam from the University College Volda has published a lot in participating in planning. Norwegian University of Life Sciences (NMBU) has long traditions in planning research and education. Professor Emeritus Sigmund Asmervik has published some work on rhetoric's in planning, whereas professor Emeritus August Røstnes has published a lot about land use planning, land use administration and property and ownerships. Professor Petter Næss has done research on density and transport that is closest to the spatial planning and regional science traditions in Denmark and Finland. Deviating from the planning researchers, professor Carl Otto Ellefsen and Dag Tvilde applied morphological analyses in Bergen, Tromsø, and Trondheim in the 1990's. Professor Akkelies van Nes from Western Norway University of Applied Sciences introduced the use of Space syntax in Norway around 2000. Since then, she has contributed to develop the method further, such as developing the urban micro scale tools,⁷ theory development⁸ and to combine space syntax with Spacematrix and degree of land use mixture.⁹ Claudia Yamu at OsloMet also researches urban modelling and fractals coordinating with Space Syntax research and Mike Batty's CASA.

Typo-morphological and historic-geographical approaches

There are differences in proliferation of historic-geographical and typo-morphological approaches across Scandinavian countries. Swedish typo-morphology has a long tradition.¹⁰ Many architects, planners, architectural and urban historians, and geographers have created urban models of typical cities and typologies of buildings, streets, spaces between buildings and neighbourhoods. The geographers started the Swedish regional planning and typo-morphology tradition in the beginning of the 20th century by classifying neighbourhoods and cities. Inspired by the French, German, British and American schools of geography and sociology (particularly the Chicago school), the city was defined geographically as “agglomeration of neighbourhoods clearly differentiated by their character/type” (“bebyggelseagglomeration med tydlig inre differentiering” in Swedish).¹¹ Gregor Paulsson in cooperation with the architectural historian Elias Cornell and a group of scholars, students and professionals published a two volumes book titled Swedish city¹² (or Svensk stad) describing the development of Swedish cities and urban lifestyles. Greger Paulsson introduced the Weber's concept of “idealtyp”¹³ as (theoretical model) abstractions (Figure 1).

The Swedish geographer Lennart Améen, can be considered as the seminal instigator of an urban typology from geographical perspective, which is close to the Conzenian urban morphology. Améen's work from the 1960s, especially *Stadsbebyggelse och domänstruktur* from 1964 (Figure 2), is a study in the typology of the Swedish cities based on the land subdivision and land use, which supports his classification of cities in different classes.

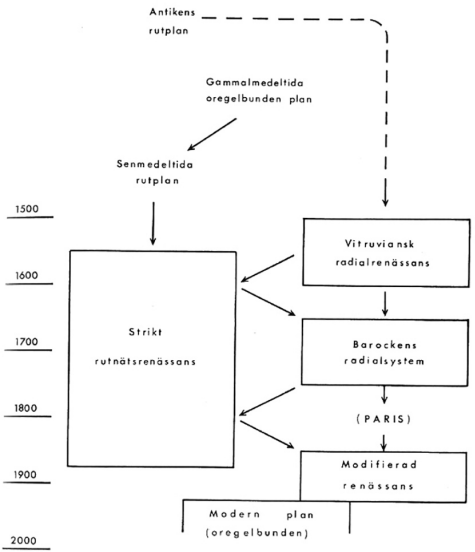
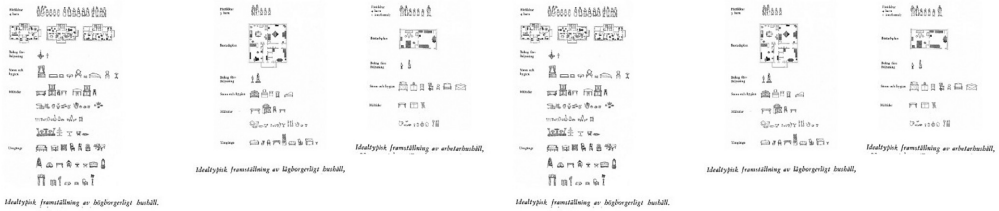


Fig. 3. Modell av den förindustriella staden.

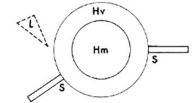


Fig. 4. Modell av stadens utveckling under industrialismen fram till 1930.

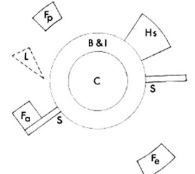
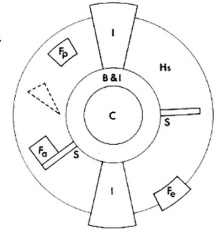


Fig. 5. Modell av stadens utveckling efter 1930. I fig. 3—5 använda beteckningar:

- Hm = Handelsmannazon
- Hv = Hantverkarzon
- S = Småfolksstråk
- L = Landeri
- C = City
- B&I = Bostads- och Industrizon
- F_A = Arbetarförstad
- F_P = Patricierförstad
- F_E = Egnahemsförstad
- Hs = Hyreshuszon
- I = Industrizon



UP: Fig. 1. A section of an ideal-typical Swedish city with ideal-typical houses and social classes (high and low bourgeoisie and working class) with ideal-typical floor plans, furniture and cutlery

DOWN: Fig. 2. Historical epochs in Swedish urbanization (source Ameén, 1964, p. 43) and a hypothetical urban model of a Swedish city (ibid, p.47)

Even if Améen didn't attract followers, which could have developed and promoted his ideas, urban morphology attracted interests among the Swedish architects and planners in the mid of the 70s especially through the Italian conservation programme for the historic centre of Bologna. But, as the Swedish architects of the time were busy with the development of new suburbs, the interest for the Bologna programme and its urban morphological principals was momentary. Linn used the term "bebyggelsemönster" (translated as "pattern of settlements") to describe a typical spatial structure in a formation of city. The spatial structure starts with a typical building, but the pattern includes relationships of the building with the surrounding spaces (Figure 3). The surrounding spaces include public streets and semi-private courtyards (such as the inner garden in a typical "storgårdkvarter"). The typical building can stand alone; it can create an open or enclosed city block assembly or can be part of a neighborhood with similar or different city blocks. Linn particularly emphasizes the relational structure between the elements of patterns (the typical building and surrounding spaces). Additionally, the pattern is recognized and experienced as spatial structure of elements (the typical building and its relations). These experiential qualities of the pattern as relational symbolism are more important than the geometry of the physical space.¹⁴

The emergence of urban morphology as a field of research can be dated to the end of the 1980s and beginning of the 1990s. Its establishment in the schools of architecture as individual research programme or research projects was soon linked to the work of urban morphologists in Europe and North America. These research projects or expressed interest in urban morphology were represented in Sweden by Johan Rådberg from the school of architecture in Lund, but now deceased; Gunilla Jivén from the school of architecture of Chalmers University of Technology; Abdellah Abarkan from the Swedish School of Planning at the Belkine Institute of Technology; In Norway the field of research is represented by Halina Dunin-Woyseth from the Oslo School of Architecture and in Finland by Terttu Pakarinen from the school of architecture of the Tampere University of Technology. The SAVE method developed in Denmark by the Ministry of Environment (through Plansstyrelsen: Building and Town Conservation) and under the leadership of Gregers Allgreen-Ussing, is based on the classification of buildings in different typologies. The method has its fundamental ground in the Italian building typology, especially the Bologna conservation plan of the 1970s. The SAVE method was developed for conservation purposes, and aiming to identify and classify the historical and cultural values in the built environment of the Danish cities. The method, which was developed in the late 1980s, has been implemented in other European countries, especially in the Baltic region.

The Swedish morphological research in the late 1980s aimed not only to contribute to urban history, but also to understand and guide urban planning and design practices. Terms such as, "typområde"¹⁵ ("typical places", "place types" or even "area types" by Carl-Johan Engström), "stadstyper" ("urban types" by Johan Rådberg),¹⁶ "stadskaraktär" ("urban character") by SSBK

(Stockholms Stadsbyggnadskontoret or Stockholm's Planning Office)¹⁷ were used to describe types of neighbourhoods and city blocks (as configurations of buildings). Since the 1980s, typologies have been developed according to building types and architecture styles specific for historical periods,¹⁸ planning and development paradigms,¹⁹ and industrialization epochs.²⁰ Todor Stojanovski and Sofie Kirt Strandbygaard have been executing typo-morphological studies of station areas and Transit-Oriented Developments (TODs) in Sweden and Denmark. Figure 4. shows a map of the comprehensive development plan for Stockholm. It presents "stadskaraktärer" ("urban characters") on the left side and street types on the bottom. The urban characters served as background and inspiration to preserve the morphological character of these neighborhoods as a part of densification effort with infill developments.

Meta Berghauer-Pont following upon the work on Uno Åhren²¹ and Johan Rådberg²² developed a Spacematrix model²³ combining typo-morphology and spatial analysis. In contrast to the previous Swedish typo-morphological research and neighborhood typologies, Berghauer-Pont proposes generic urban typology that it based on standard morphological elements in English and urban form variables (e.g. building heights, FSIs, OSIs). An urban type as "low-rise buildings" can translate to several Swedish neighborhoods with houses e.g. "villastäder" or "neighborhoods with villas" that designate late 19th and early 20th century neighborhoods with small houses or "småhusområde" or "neighborhoods with small houses" that will refer to late 20th century neighborhoods with small houses that were oriented to the automobile (the term "suburban sprawl" can also be used). As general model, Spacematrix model has been widely accepted in morphological research and used to analyze cities.²⁴

Urban typo-morphological research and education is executed by Abdallah Abarkam, former associate professor at KTH and now professor of spatial planning at BTH Blekinge Institute of Technology, Lars Marcus, a professor at KTH Royal Institute of Technology in Stockholm first and now at Chalmers University of Technology (CTH). Jennie Sjöholm also has a course in urban morphology at Luleå University of Technology. Most of educational activities of the NNUM is to promote urban morphology in teaching at the Blekinge Institute of Technology (BTH), the department of Spatial Planning, that specializes in urban design (or planarkitektur in Swedish and in contrast to the other planning programs in Sweden that emphasize critical planning process approaches). In the bachelor program a set of 3 courses distributed along the program's three years are offered to students, starting from a basic/introductory course on the concepts and convention of urban planning and urban design, followed by a course on the composition of the ground plan (urban typologies, urban fabric and urban morphology), and finally a course on the complexity of urban form, in which students test with different urban complexities related to planning, mobility, environment, climate change and urban form. In the master's "urban planning" students deepen their knowledge and experience in urban morphology in a course called "Structures" and which gives a training

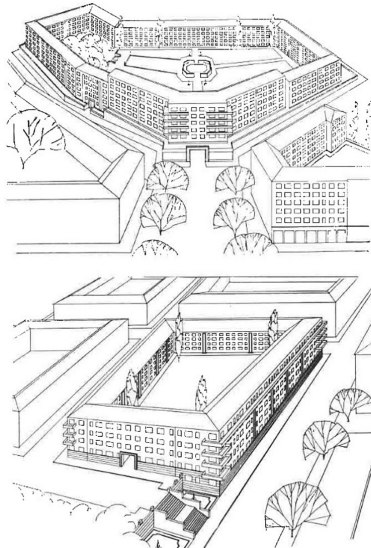
in a holistic understanding of urban structures and how they interact and/or integrate the parts to the whole. The course intends to deepen and strengthen the student's knowledge and experience of the urban morphology.

In Denmark, the typo-morphological tradition is present, but without discussions on type or typology. The Ph.D. Passengers' fear of crime at train stations: the influence of the built environment is however a resent typological analysis of the train stations' catchment area in the Copenhagen Regional area referring to the academic typological tradition²⁵ The urban typologies are compared to passengers' perception of safety in order to measure the influence of the built environment. Danish building preservation and urban planning refers to building- and settlement structures and their analysis resembles Swedish practice, however the terms typology or typo-morphology are not present. The Danish Bydelsatlas 91-96 is a detailed typological walk-through of Danish building culture and urban districts.²⁶ Danish architectural planning practice focuses on spatial analysis and user experiences and have no academic tradition for morphology or the use of Space Syntax.

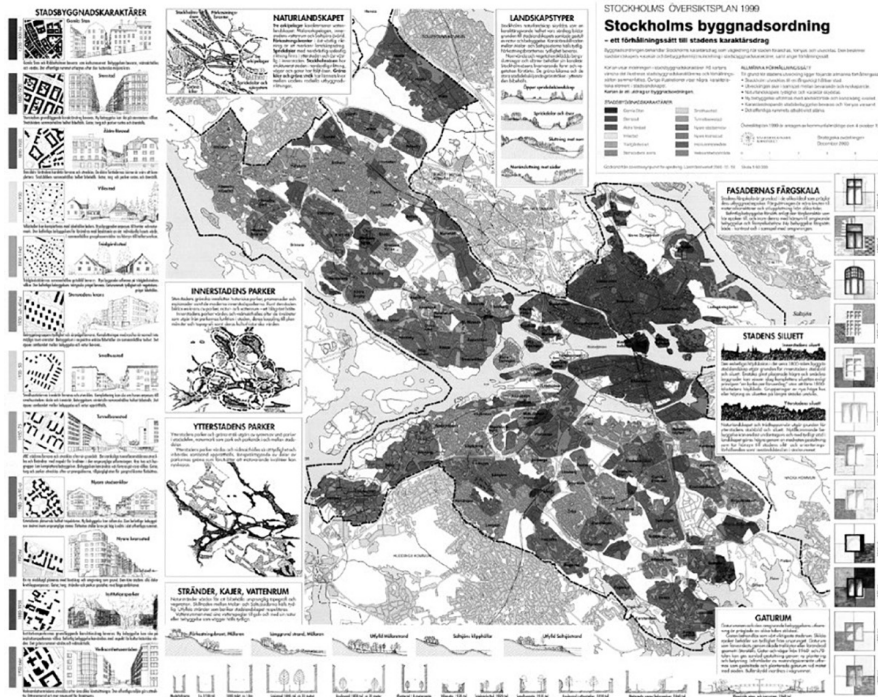
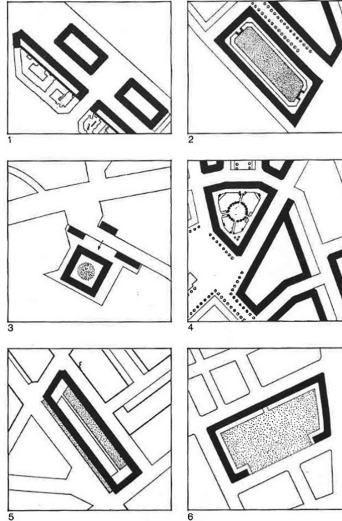
Space Syntax

In the end, there are two Space Syntax groups in Sweden and Norway. Lars Marcus led SMOG (Spatial Morphology Group) at KTH Royal Institute of Technology that coordinated Space Syntax research with Alexander Ståhle who heads the planning consultancy Spacescape AB. The Spatial Morphology Group migrated at Chalmers University of Technology (CTH) and it is the largest morphological group in Scandinavia intertwining research on typo-morphology and urban analytics with Space Syntax (including remaining sprouts at KTH where Ann Legeby's group continues within the Space Syntax research tradition). SMOG coordinates with ISUF though Meta Berghauser Pont, the research who uses spatial morphology and urban analytics (Spacematrix analysis, Figure 4 and Figure 5) to define neighbourhood typologies and link to typo-morphological approaches and research on urban density.²⁷

Professor Akkelies van Nes also leads a space syntax group at Western Norway University of Applied Sciences (HVL) Høgskulen på Vestlandet. Claudia Yamu is professor of Urban Analytics at OsloMet—Oslo Metropolitan University who is also aligned to the Space Syntax groups. At the NTNU in Trondheim, Professor Bendik Manum is also using space syntax in his research. Otherwise, the research tradition on built environment in Norway has a strong place phenomenological approach based on professor Christian Norberg-Schulz' work. Professor Thomas Thiis Evensen and Anne Marie Vagsten' work built upon Norberg-Schulz' place phenomenological work. Influenced by the Italian morphological research tradition is the work of professor Carl Otto Ellefsen and Dag Tvilde, who wrote a book entitled *Realistisk Byanalyse*. Most place analyses manuals in Norway have a strongly place phenomenological approach with some aspects taken from the morphological tradition based on Ellefsen and Tvilde's work.



København.
Storkvarter från 1920-talet.
1:5000.
Grosshofblöcke aus den
1920'er Jahren.
1. Struensegade
2. Hornbækhus
3. Vaih. Thomsens allé
4. Borups allé
5. Grønnegården
6. Ved Classens have.



UP: Fig. 3. Björn Linn sees the building as leitmotif in the “bebyggelsemönster” (translated as “pattern of settlements”) of typical “storgårdskvarter” or “enclosed urban block with a large courtyard/inner garden” translated in English. The building on a scale of a city block creates variations shown as perspective, cases in Stockholm on the left and on the city plan, illustrating cases in Copenhagen on the right.

DOWN: Fig. 4. The map of Stockholm including neighborhood types or “stadskaraktärer” (“urban characters”) on the left and street types in the bottom corner

NNUM'S STRATEGIES AND CHALLENGES

Scandinavian cities fit into the worldwide pattern of urban development and dominating planning paradigms (critical approaches and placemaking). In Scandinavian countries tradition collides with modernism and functionalism, but history have never been totally set aside. There is always place for historical research put in functionalist context. These tendencies have perpetually mixed in creative research and design and will continue mixing.

The main purpose of establishing NNUM is to constitute an organised and representative body for the promotion, coordination, development and diffusion on the Nordic urban morphology. The research in urban morphology, which is still performed in individual research projects, needs to be coordinated in order to increase exchanges between researchers and develop a common theoretical ground to focus the Nordic city in its historical development and its future extension. This viewpoint aims to loosely map groups and researchers across Scandinavia to inspire collaboration. NNUMs will continue networking, supporting and facilitating research, teaching and learning on urban morphology as an interdisciplinary field seeking to raise their scoops, theories, methodologies and founding on a Nordic and international level.

Another main strategy of the network focuses the interconnection between research and teaching activities in the undergraduate levels. The Nordic researcher and teaching staff, which apply morphological concepts and tools of analysis in their design studios, or in a theoretical context, are expected to found a working party, which focuses teaching in urban morphology. In order to increase exchange between disciplines, local or regional traditions, and to disseminate achievements from teaching in urban morphology, the working party is expected to be interdisciplinary and nationally representative.

Urban morphology is also of interest to architecture and planning professions, and to housing developers. In this context, the performance and diffusion of research with practice oriented urban morphology as its core subject, will be carried out by a working party. Both researchers and practitioners witness of a gap that disconnects their works and obstruct the exchangeability of their knowledge and experience. The mission of the working party is to find ways of bridging this gap, to make the research founding available and comprehensible to practitioners and establish canals for a constructive dialogue with the practicing architects and planners.

Urban morphology has been criticised for its traditional focus on the historical urban centres, which limited its theoretical frame and models of analysis to the historical buildings and their immediate surroundings. New urban forms are generally not considered, because of the insufficiency of the morphological theory and its tools of analysis. Urban morphologists take this critic seriously and strive to expand their field of research by considering the whole city. The

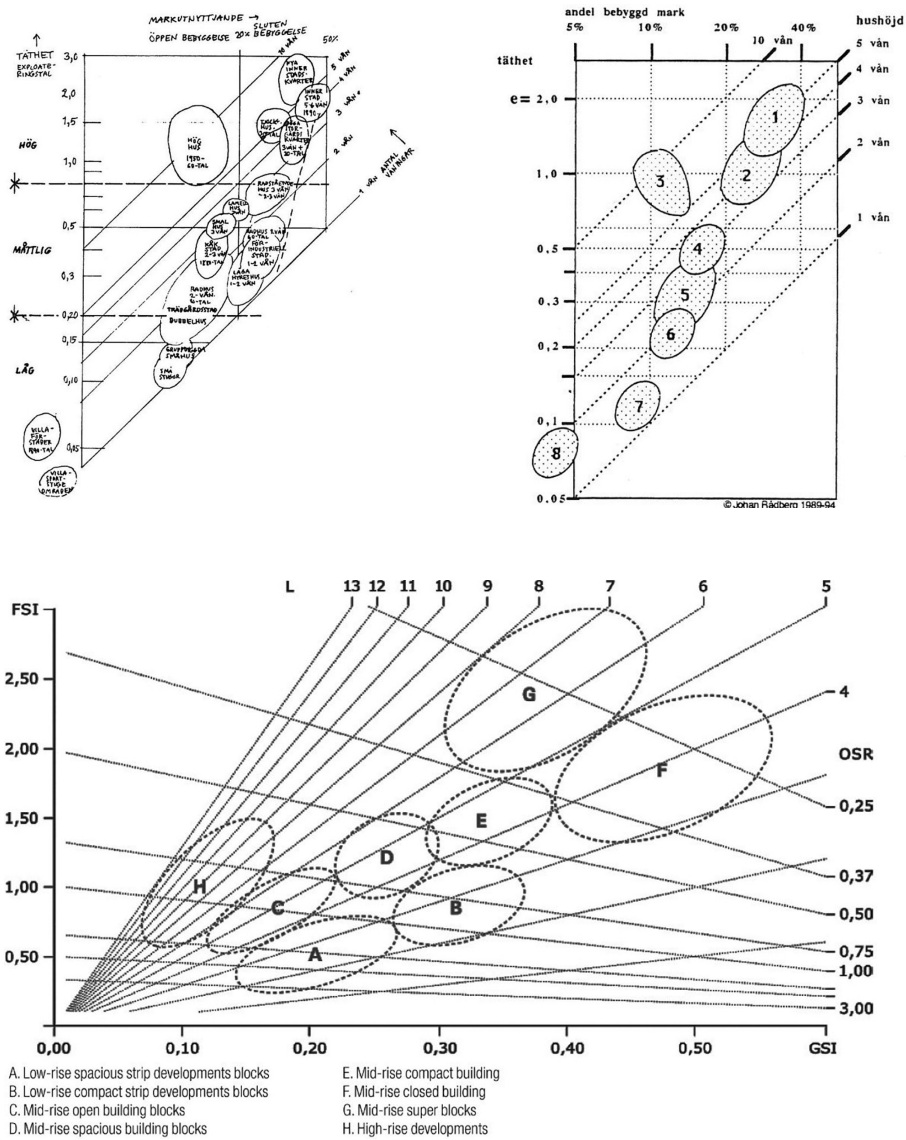
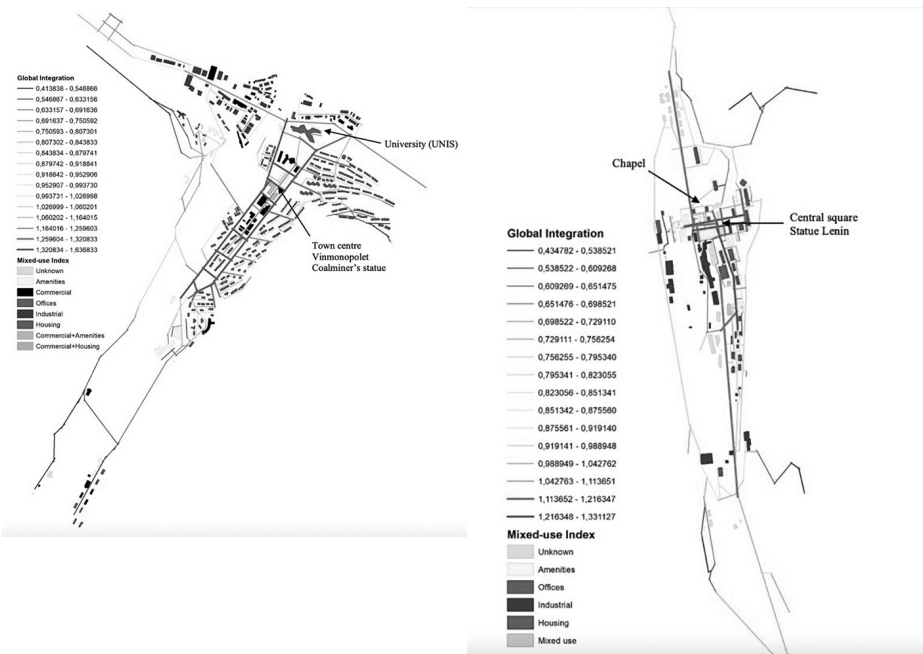
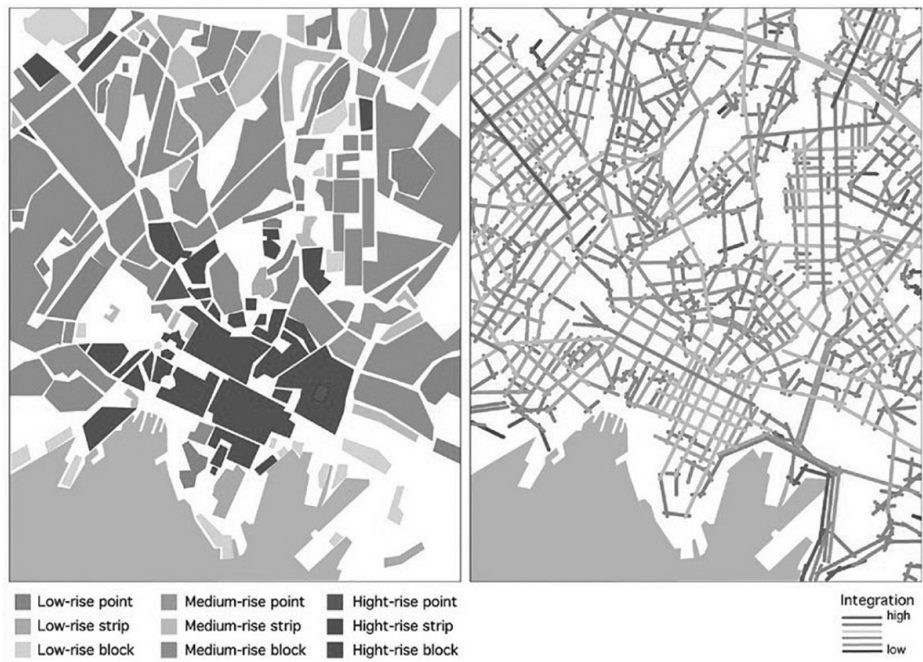


Fig. 5. Johan Rådberg's hypothesis about density: urban types emerged under specific planning doctrines are consistent in terms of density, Floor Space Indexes (FSI) and building heights (up left and right) and Spacematrix on the bottom.



UP: Fig. 6. Oslo's historic centre from 2000 investigated by Spacematrix analysis on the left and space syntax analysis of local integration on the right (from the handbook).

DOWN: Fig. 7. Space syntax analyses with the location of functions of the arctic towns Loneyarbyen (left) and Barentsburg (right) (de Koning & van Nes, 2019).

expanded field of research, and especially the awareness about modernity and modern urban fabric, has been the most attractive area of research under these last twenty years. However, despite the efforts that have been made in this area of research, urban morphology must consider this new orientation as its fundamental task. NNUM strives to make this new area of research as its main priority, and emphasise this orientation in its activities.

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URBAN MORPHOLOGY IN NORTH AMERICA: HISTORY AND DIRECTION

ABSTRACT

Urban morphology, named as such, is still undeveloped as a strategy for planning and urban design in North America. On the other hand, the New Urbanism and Smart Growth movements have much to gain from the use of urban morphology as an explicit and disciplined research method. In order to provide a clear path for adoption, this paper will exam how the application of various European-based urban morphology research data, interpretation and theories of change are different in North America. How do different conditions of form, particularly the era in which settlements were established, necessitate a different method and recognition of different types and patterns, and even different Schools?

Because North American researchers are interested with the rapid expansion of cities, the car-centric city, the need for a live-able configuration, and the disorder of most of the urban territory, a new kind of study is appropriate. This method is already arising, but not rigorously defined. The most common voices are those concerned with promoting a particular urban design solution, rather than examining the past or the existing fabrics. This leaves open a space for urban morphology to fill in.

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KEY WORDS

URBAN MORPHOLOGY
NORTH AMERICA
NEW URBANISM
SUBURBS
UNITED STATES

1. INTRODUCTION

Urban morphology isolates the form of cities in order to study how those forms and changes in forms relate to other historical and social factors. The cities of North America are adolescent forms compared to the European cities from which they derive. Largely founded in the Eighteenth and Nineteenth centuries, they are products of the Enlightenment, colonialism, and new technology. Across the vast continent, their general form hardly varies: a core that is a non-standard grid, surrounded by a vast territory of low scale residential suburbs, punctuated by highways, large scale retail, and industrial uses. The morphology of the American city is a consistent pattern that varies slightly by the age of the place, the acceleration of growth, and the initial and subsequent motivation for its location. Even North America's oldest cities (Savannah, New York, Boston, San Francisco) do not break free from this pattern. In the 20th century, the initial grid layout was dispensed with altogether in new, planned cities (e.g. Irvine, California), which are challenging to think of as cities at all. (Figure 1) Most Americans dwell in places with scattered centers, tiny remnants of a downtown, and a highway and car dominated landscape (Figure 2).

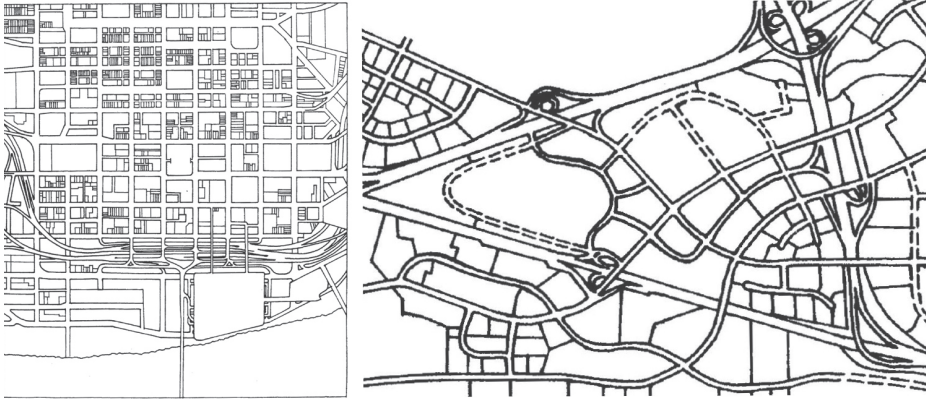
These forms have had a powerful influence on the world, where sprawling shopping malls, highways, and low scale suburban houses may even be seen as indicators of wealth and influence. Recently this hegemony of form has been challenged, with modest success, in many places. Many beautiful historic cities have protected themselves from the onslaught of “modernity”, that is, the American influence.

This paper tries to define the differences between the factors which caused the American form and those of other places with deeper histories and more complex forms. On the other hand, we can argue that the processes and theories recognized and developed by morphologists around the world can have broad applicability to the study of form in many places, just as the American form, being somewhat raw, can also enlighten morphologists.

This paper also calls for applying the standard analysis of urban form, which is data driven and relies on comparison between cities and/or the same city in a different era. It can improve and deepen the understanding of those who plan and design cities.

2. OVERVIEW OF THE DEVELOPMENT OF NORTH AMERICAN URBAN FORM

Between 1660 and about 1900, European settlers raced recklessly across the continent, decimating native populations and dragging with them an enslaved population of Africans. The seemingly endless land resources were generously distributed to the land-starved white farmers, and the small towns to serve them



UP: Fig. 1. Comparison between the scale and layout of a grid downtown Cincinnati (1819) and a portion of the commercial center of Irvine, California (1971).

DOWN: Fig. 2. A centerless area along an arterial strip in the suburbs of Phoenix, showing commercial businesses, a hospital and single-family houses.

soon followed. The most common pattern was for whole families to live on their farm allotments, with occasional forays into town to buy supplies and sell their bounty. After the public land survey (starting in 1785) the entire United States territory was eventually carved into a checkerboard, without regard to the variation in landscape. The small towns were invariably a grid, fitting into the checkerboard like a small-scale version of it. Elsewhere, in the American South and in part of Mexico, large land holdings were bequeathed or assembled, to be set up as forced labor encampments. Cities and towns were rapidly established where none had existed and a rudimentary road network gave way to the railway, which created new towns and ruthlessly divided existing ones. Although North America was initially thought of as an agrarian society, between 1790 and 1890, the US became increasingly urban, with up to 35% of the population living in small towns or cities, as noted in the United States Census.¹

Urban form at this time was the initial grid, often supplemented by extending it, sometimes with minor shifts in orientation or grid size, sometimes accommodating topography and waterways. Railroads drove a wedge through established cities, creating “the wrong side of the tracks”, or less desirable areas where the poor lived. The sharp physical division between people of different races and incomes is a fact of American urban form, which has extended into modern times. Suburban housing exacerbated this division, with many suburban areas closed to Black residents, even those with the means to pay.²

Although there were streetcars and rail service in most sizeable cities in the early Twentieth century, by 1920 the automobile became the king of transportation and the greatest influence on urban form. Leafy suburbs served only by cars proliferated, to the alarm of some urban critics. After World War II, the GI bill guaranteed a generous loan that would enable (white) veterans to buy a small home with very little money over a long period of time. Suburban sprawl ensued everywhere in the country, with the encouragement of the construction of the Interstate Highway System. The interstates were to provide for a rapid deployment in case of defense, and also to connect cities for improved traffic flow and commerce. They had the side effect of providing commuters with a rapid way to get from their jobs in the central city to their homes in the suburbs. Inner city housing was left to the urban poor, and eventually the jobs also moved to the suburbs, hollowing out the core commercial centers.

In most places around the world the growing urban population was and is accommodated with housing towers, which are often located in the suburbs or in towns attached to a larger city. In the US and Canada, this form of housing was initially popular but became associated with the urban poor, especially Blacks. Shunned by the middle class and without enough resources for maintenance, these housing “projects” became crime infested and dangerous, leading to a phasing out of their use and even dramatic dismantling. In the last 50 years, this form of compact housing has not been built in North America and it is still considered unsuitable for Americans by most planners.

Most recently there has been a return to the city core, especially by a generation of people raised in the suburbs. Dense, lively and interesting places have been restored or built anew, reviving the property values in the center and offering a lifestyle choice not known in three generations. Demand for urban housing and accessible transit is up. Nevertheless, vast areas of American cities are built up into car dominated, low density suburbs, which most still see as the “American Dream.”

3. URBAN MORPHOLOGY CONCEPTS IN NORTH AMERICAN FORMS

M. P. Conzen in 2001 reflected on the dearth of traditional, on the ground morphological study in the United States.³ In the 22 years since there have been multiple researchers who took up this question. Even in 1994, when Anne Vernez Moudon defined schools of urban morphology as groups of geographically related scholars, she could easily have included a group coalesced at the University of California at Berkeley and the University of Washington, which certainly would have included herself, and several others including Alan Jacobs, Peter Bosslemann, Doug Kelbaugh, Spiro Kostof, James Vance, Michael Southworth, and Paul Groth. To these scholars we can add their distinguished former students: Elizabeth MacDonald, Peter Owens, Eran Ben-Joseph, Paul Hess, Kiril Stanilov, and Renee Chow, to name a few.

Gilliland and Gauthier similarly call out two distinct groups of scholars working in Canada at the University of Montreal and in Université Laval in Québec.⁴

In the *Epistemology of Urban Morphology* the author identities a framework of knowledge production that is somewhat distinct for each school of urban morphology, prematurely, perhaps, proposing a North American outline. In addition to each School’s geographic, methodological and theoretical differences, there are also different “linkages to non-formal conditions”, or recurrent themes that emerge from the research in each schools.⁵ Each of these themes suggest the important urban issues that were formative in the eras of each city-building morphology, for example the importance of *agency* in British studies.

The methods used in the North America derive from or even combine some of same methods used in the British and Italian Schools. Relying partly on the distinctions identified by M.P. Conzen⁶, the author has identified four themes that structure the both the research and the morphological uniqueness of cities in North America:

1. The dynamism of urban growth. North American values and youthfulness have privileged urban forms that respond to rapid change. America seems to be a place built on the cheap, built for change, built quickly and then evolved.

2. Suburban sprawl – a different scale of development. The early and rapid build out of low scale suburbs provided a laboratory for morphological study at an entirely different scale than traditional European cities.

3. A return to traditional forms. Dissatisfaction with the suburban environment has motivated some urban morphology research, and a practice environment where urban form has become a prominent focus. Reformers have invigorated the discussion of the physical environment (as opposed to just the social factors) as they turn to historic models.

4. Fragmentation and weak control. The strong American attitude toward property rights weakens the potential of planning and gives control of actual urban form to developers. Planners use morphological study to validate the regulatory framework that is their primary mode of control.

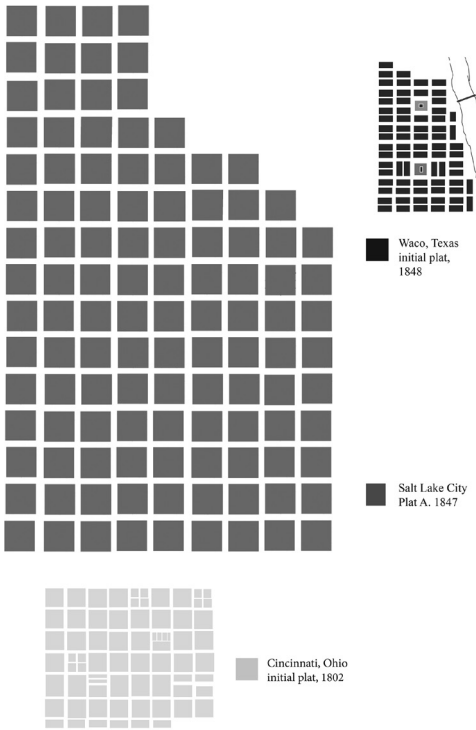
Each of these will be discussed in turn before turning to the question of where this fits into the morphology “schools” commonly embraced.

3.1 Rapid change – a different pace of development

One of the key characteristics of the North American urban form is its response to relatively rapid change. North America is like a laboratory devoted to finding specimens that quickly reproduce. Auto-oriented building types can change so rapidly that they seem accelerated lessons in typological process.⁷ The changes in structure of medium sized cities and towns, which for centuries in Europe and other established urban places has been relatively slow, in North America has exploded in size and land coverage, even without attendant huge population gain. The ability to change and adapt was an important criteria for nearly all urban settlements in North America.

North American morphologists are quick to acknowledge the flexibility and persistence of the ubiquitous Eighteenth and Nineteenth century grid, which provides a framework for orderly but very rapid growth. Pioneer settlements west of the Appalachians used the grid almost exclusively to rapidly lay out streets and lots and to sell property. For example, the Oklahoma land run in 1893 created three or four small towns that were laid out and settled in less than a month. Pierce Lewis noted the grid as a flexible framework, used nearly universally after the influence of William Penn’s 1683 plan for Philadelphia.⁸

The foundational grids in the US varied greatly in size and extent (Figure 3). Surveyors not only laid out the streets, but also divided the blocks into standard lots, which set up a rigid, standard module into which a variety of buildings and uses could be built and rebuilt over time. Figure 4 is a photo of successive building types that occupied similar lots in Cincinnati.



UP: Fig. 3. The size of initial grids in the US varied greatly, as this comparison of Salt Lake City, Utah, Cincinnati, Ohio and Waco, Texas demonstrates.

DOWN: Fig. 4. These four commercial building types represent the succession of redevelopment on a similar lot, from the earliest (second from right) to the latest (far right).

The theme of rapid morphological change in North America is illustrated most prominently with Anne Vernez Moudon's classic and groundbreaking study of the Alamo neighborhood in San Francisco.⁹ The title of the book encapsulates the idea of flexibility, **Built for Change**. She notes that not only do the streets and plots (cadaster) support change, but also several flexible building typologies. Looking at Savannah, Ga., Anderson analyzes the extraordinary, flexible city structure that allowed a sophisticated build out and subsequent redevelopment.¹⁰ Using a similar method combining both English and Italian traditions, Scheer and Ferdelman document a 100-year period of change in Cincinnati's Over-the-Rhine neighborhood.¹¹ They lament the presumed loss of flexibility as they document the partial destruction of the original grid through street closure, and the tendency to combine plots to make larger buildings. More recently, the famous grid of Manhattan has been celebrated in detail with its 200th birthday of foundation, especially noted for its persistence, its formal clarity, and its intense flexibility for adaptation to modern forms.¹²

This emphasis on the flexibility of traditional forms and their tendency to absorb change while maintaining order has also resulted in an interest in preserving and infilling the extant traditional forms (building types and the boundary matrix of plots and paths.) especially in preference to broad, modern urban redevelopment¹³.

While still served primarily by streetcar, near to town suburbs also maintained a semblance of this gridded flexibility/order. It was only the adaptation of forms to the car that led planners to abandon the grid.¹⁴

3.2 Suburban sprawl – a different scale of development

The dispersed, suburban highway-served development is an entirely new form of urbanism, despite the fact that suburbs of cities have been documented for millennia. Although created in the US, along with the invention of the auto, this form, like the patterns observed in the medieval city, has been adapted and applied around the world, constituting a frenzy of urbanization in the 20th century. The result of the auto and other contemporary conditions has been an entirely unique form, which differs from previous urban forms in flexibility, scale, building types, road patterns, road types, and regional spatial arrangement (centers, e.g.). This disruption, carried out in pockets worldwide and in the US as a ubiquitous development pattern, has broadened the applicability of earlier morphological theories and patterns that constitute the field. For example, the concept of the “fringe belt” has some applicability to the patterns in the US.

A significant amount of urban morphological study in the US has been devoted to the study of the great and disruptive suburban extensions of the city, which accelerated with the streetcar and the car, starting in the late 1920's. Southworth and Owens document and define the change in patterns of suburban

neighborhoods from modest, gridded extensions to the sprawling “loops and lollipops” of cul de sacs and curved streets.¹⁵ Moudon also identified changing suburban neighborhood patterns, along with Hess,¹⁶ but noted that this form of development easily responded to the analytical techniques developed in Italy and England. This author reported similar transformation in the Cleveland suburb of Hudson, Ohio, while reporting on the persistence of the 1790 gridded land survey cadaster in the small city.¹⁷

In addition to residential transformation, commercial transformation in the suburbs has been remarkably difficult to assess as a standard pattern (Liebs, 1985).¹⁸ Responding to the car and to globalization of commerce, the changing building types, the resistance to planning in the suburbs, and greatly expanding capacity of roads and highways as they grow farther from the city has meant that commercial form lacks almost any coherent patterning (Scheer, 2005).

Scheer studied the diachronic change in development along commercial highways as the city expands outward from its foundation grid and grid extensions, which led to the contribution of the concepts of “static, elastic, and campus tissues” to the morphology lexicon of patterns.¹⁹ Scheer and Petkov compared the size, expansion of land area, building types, and urban transport in commercial cores and ‘Edge Cities’²⁰. Gilliland and Gauthier document the rising interest in Canada of morphological research tied to affordable housing, urban sprawl and transportation systems.²¹ Pierre Gauthier, et. al., offers morphological solutions to the problem of superhighway reconstruction in Montreal.²²

3.3. A return to traditional forms

Insights in American urban form highlights the universality of most conceptions of urban morphology, but also highlight the shortcomings of a restricted world view.

In some Schools, the morphological or typological studies are specifically posed as enlightening the design response to observed problems. The story of the Italian school center on Muratori, who studied traditional city and built form in specific contrast to his colleagues who were promoting the disruptive architecture of the modern movement.²³ His student, Cannigia, went even further, decrying the devastation of modern architecture on Italian cities as a “crisis,” and posing the study of the process of city building and the evolution of building types as the obvious and universal answer.²⁴ Interestingly, the work of these architects tended to frame a dialogue with the existing city rather than to imitate traditional styles and forms, which is a contrast with the American practice.

The crisis is apparently still with us in contemporary study and practice in American morphology. One of the primary concerns of American morphologists is dissatisfaction with the form of American cities, which is a new but not completely different ‘crisis’. North American suburban form can

also be traced to the world-wide change in architecture (modernism) which so disturbed the Italian morphologists. Modernism's disconnection from the traditional, compact and flexible city also enabled the isolated typologies of the North American suburban form (e.g., big box stores, gas stations and single-family houses) while it glorified the speed and independence engendered by the automobile.

Beginning in 1990, the dispersed and disconnected suburban form was identified by the reformers as a clear crisis, in that these sprawling forms discouraged a sense of community, neglected pedestrians, increased land coverage, required long commutes, required a dominating car infrastructure, and were (for urbanists) boring and unlive-able.²⁵ Over the last two decades, the complaints about suburban form multiplied e.g., causing obesity and air pollution, while at the same time suburban typologies and plan units rapidly built out not only in North America, but all over the world.²⁶

'New Urbanism' is a movement in the US and elsewhere that responds directly to this dissatisfaction with dispersed forms. New Urbanists have tended to reify the traditional form of the early American gridded downtown, at all scales. As Conzen points out, however, these existing gridded formations are very small compared to the conurbations that surround cities of any size in North America.²⁷ New Urbanists, therefore, tend to copy and invent historical-looking forms in new suburban constructions, including aesthetic tropes that imitate the look of Nineteenth century building types, as well as the grain of the gridded block and street.

Research documenting best practices in creating these kind of imitation small towns is focused on the relationships between built form and other aspects, primarily behavioral or social, as documented in observational studies, preference studies or pedestrian counts.²⁸ Some study older neighborhoods as compared to the suburbs.

In practice, the New Urbanist designers are not interested in the evolution of actual, existing suburban places or the study of those places except as examples of what not to do. Instead New Urbanists promote generic solutions consisting of holistically planned, 'live-able' settlement areas (called transects), which provide blueprints and guidelines for 'good' city form at all scales currently present in the North American landscape.²⁹ The forms that arise from these practices are themselves subject to critique by morphologists, who note their lack of flexibility, or their lack of natural evolutionary character, and their generic solutions, which do not derive from the study of the historical form in a particular place.³⁰ A notable exception is Peter Bosselmann's work in Oakland, CA, which draws on variations of the historic grid pattern there to knit together a city partly destroyed by freeways.³¹ This kind of insight into the historic form of a place is sorely needed in the revival of American downtowns, but has only recently been widely deployed.

Still, most New Urbanist projects ignore the peculiarities and flexibilities of evolved form that can only be recognized through diachronic study of the morphology and typologies of an individual place. Neuman writes, ‘The new urbanist’s town is a static product of a developer’s marketing campaign rather than an evolving process of human development ... Compact settlements with an emphasis on density, pedestrians, and public transportation only address a few of the ills attending modern metropolises.’³²

3.4 Fragmentation and weak control

In the US, in particular, the status of property ownership is such that it is very rare that a local or regional jurisdiction makes a “plan” in the traditional sense of laying out street, open space, and property boundaries. Therefore part of the role of morphologists in North American practice is contributing to the research which validates the preferred methods of implementation, which are regulations governing the form of neighborhoods and the approved typologies. Commonly, real estate developers and their consultants independently design a proposal, which must be then approved by the local jurisdiction (usually a city or town). These places are small islands, not generally related to the function or urban design of a larger scale.

The fragmentation and weakness of development control has led planners to focus on regulations rather than plans. The regulatory system depends on a property-by-property regulatory system in zones or plan units; form-based codes, for example, rely on property subdivisions to provide the underlying grain desired for the plan unit. Because of this, development and redevelopment control in the US is based on property boundaries. Urban design is limited because streets and open spaces are haphazardly developed or tendered by land developers with different motivations than civic or public good.

Morphological studies of building types and street networks, especially in existing contexts, provide some validity to these types of regulations. In infill situations, the city will sometimes write codes or zoning that are morphologically based. This is by far the most extensive use of morphological or typological research in North America, although the prevailing methods are not comparative and tend to ignore evolved types.

4. HOW THE NORTH AMERICAN URBAN FORM FIT INTO THE “SCHOOLS” OF URBAN MORPHOLOGY

The International Seminar on Urban Form (ISUF) is an international organization of academics and practitioners who study the form and change of cities. In ISUF’s canon, there are thought to be three or four significant “schools”. These Schools were first posited by Moudon (1994, p.290) as part of her task of bringing together different worldwide practitioners of what is termed ‘urban morphology’.³³ The three schools identified by Moudon are the

British (aka Conzenian or historical-geographic), the Italian (aka Muratorian or process typology) and the French, including Jean Castex and Phillippe Panerai. Recently, there is some consensus that the Space Syntax school could be added, although that methodology, which emphasizes computation, is quite different from the other three schools.³⁴

As described by Moudon, the schools “address different disciplinary and culture issues and use different methods of inquiry.” Within ISUF these are usually thought of as different techniques of analysis—different scales, different purpose, different relationship to non-formal conditions, different disciplinary emphasis. In contrast, Moudon first described them in terms of the groups of scholars who worked together in different universities in European settings.³⁵ These somewhat isolated groups promoted and advanced each other’s work, while fostering students to carry on with the research techniques.

In addition to different frameworks and techniques for studying urban form, a clear distinguishing characteristic of the Schools is their geographic origins. After much dispersal of a variety of thought and technique across cultures, however, there is little doubt that an Italian or British idea might be usefully applied in a completely different urban and cultural landscape. Despite this dispersal, it is valid to look at the urban origins of the schools, to acknowledge that the different ideas and techniques about the study of urban form arose in particular places, and to suggest that even the scale of study could be strongly related to the context of urban history or era in urban development that are the backdrop of the dominant palimpsest in specific regions.

For example, the Conzenian, or British school is dominated by studies of urban development patterns and processes that arose as the medieval village slowly transformed into the city of the industrial revolution. Similarly, the Italian (Muratorian) School is fascinated with the physical remnants of the Roman Empire and other ancient settlements, and the traces and theoretical process of a slowly elaborated set of urban building types over time. These studies are clearly related to the observation of extant building fabric of the dominant urban landscape in each region. The scholars who took up residence in the Universities named by Moudon used their own backyard as the urban laboratory for their studies.

Given this, it is somewhat surprising that the techniques of analysis and theories of change developed in these different circumstances should prove so flexible as to be applied, with only slight modification, to conditions in cities worldwide, and that researchers in these Schools have themselves begun to branch out, bringing Conzenian concepts to China, for example, or Muratorian ideas applied to Alnwich, or an oasis in the Sahara.³⁶

These schools started out by developing an appropriate way to theorize and analyze their local urban configurations – configurations that are historical and geographical. Each of these is distinctive and reflected an important era

in city building, e.g., the Roman Empire, the Medieval, and the Industrial Revolution. Tracing urban development from an historic period to today and, critically, studying actual places not abstractions, the Schools generated new ideas about urban process and urban morphology in these specific contexts. Although observed, documented and discovered relative to a particular era, the theories and patterns identified by the Schools have inspired the establishment of theories of change used in multiple other contexts. It can also be observed that important morphological theories are often generated by looking at eras where cities are rapidly established, grow, and change.

Acknowledging the richness of ideas and techniques originating and based on different eras of city formation and growth, it follows that the analysis of contemporary settlements and configurations might offer similar enlightenment to the global urban morphology canon. North American settlements and suburbs, and the Asian mega-urban conurbations, offer two additional eras, places, and cultures where radically different urban formations can expand knowledge and theories, which may even be applied retrospectively.

These two additional geographically-related “Schools”, offer the most interesting and distinct forms of urbanization that have proceeded in the last two centuries. The North American morphologists describe the experience of rapid growth, coupled with the expansion of low-scale suburbs and highways. Even so, the concepts of evolving typologies and the presence of clear ‘plan units’ allows us to relate the American form to earlier theories. What is different is that the evolution is so rapid and it occurs at a scale unheard of in the rest of the world until recently.

The second geographically-related School must surely be an Asian one – where mega cities are rapidly erasing and dominating ancient typologies and urban meanings, as well as whole neighborhoods of slowly accreted vernacular structures. This significant erasure and astonishing, highly layered, vertical form is surely the next frontier for observing and guiding new concepts of urban form and urban process.³⁷ This paper does not discuss Asian morphology, but it is clear that it is a set of patterns that can be applied around the world. In the new world culture of cities, where states are less important or a framework of laws rather than a place, city complexity may include both ancient and mega form (Burdett, et.al. 2007, Song, et.al. 2021).³⁸

Another theme that is just opening up in American morphology has to do with the global need for a greater understanding of cities in the landscape and their sustainability. Much as morphologists have made the connection from urban form to culture and history, a newer field of research links the urban form to land and ecosystems. We know that urban form and urban design have always been shaped by local land form, water, and climate, whether recognized or not. (Both the Muratorian and the Conzenian School recognize this factor, but it does not play a large role in the methodologies.) Sustainable practices in city planning do not receive as much attention by North American morphologists

as the issues of suburban sprawl and a regulatory return to emphasizing traditional form. It is widely believed (but not yet well documented) that the general concepts of traditional development proposed by New Urbanists – compact, fine-grained form, transit oriented, infill development, higher density – provide solutions that are somewhat sustainable.³⁹ Many urban planners would want a revision of that formula to include a much greater understanding of the underlying systems – regional transportation, land sensitivity, water systems, vegetation, ecosystem services, and particularly local open space provision.⁴⁰ This is a rich area for morphologists to document and compare, especially in larger cities in North America and in the burgeoning mega cities around the world.

5. CONCLUSIONS

With the global adoption of urban morphology at least partly accomplished through ISUF, it may be time to jettison much of the construct of “Schools” as both divisive and imprecise. Researchers around the world freely combine techniques of analysis, scales, and process theories as they reveal the morphology of their own places. As a global group (ISUF), our time might be better served to examine and catalogue the theoretical positions that we can confidently confirm across place and time, and identify questions that are still subject to continuing research. It may be argued that the idea of distinct Schools, *per se*, is not serving the expansion and integration of urban morphology research, adaptation, and practice around the world, which is required for urban design and planning that is more responsive to the form of the city.

I have proposed that different Schools might actually be characterized as slightly different intellectual frameworks for studying urban form and relating form to other conditions in the city (Scheer, 2016). For some time, many others in ISUF have encouraged the adoption of a common language and methodological framework so as to impact and engage practicing planners and architects. Art McCormack has usefully noted a summary of these views.⁴¹

If we grant validity to the idea that important morphological theories are often most visible in regions where city formation was accelerated historically, there are other civilizations and city building innovations that are yet to be explored for their contribution to general urban morphology theory (for example, Andean, Indian, or Greek). Certainly, our emphasis on returning to traditional form means that the time of innovation has passed in North America, as it did in Europe 200 years ago. The world mega-cities of Asia and Africa are inventing new forms (not necessarily good ones) for a new world economy and culture.⁴² Along with the global need for sustainable ideas, these cities are the next frontier for an emerging urban morphology “school”.

NOTES

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ISUF - HISPANIC (ISUF-H). ARCHITECTS, URBANISTS AND STUDIES ON URBAN FORM

ABSTRACT

This paper aims to explore the pertinence of having an additional regional network such as the International Seminar on Urban Form-Hispanic (ISUF-H) and to reflect on the diversity of approaches in the context of the research carried out in the International Seminar on Urban Form (ISUF).

ISUF-H is a branch of ISUF, established as one of the Regional Networks for the Spanish-speaking world. In general, the diversity and vitality of Spanish-language research is confirmed by the emergence and renewal of themes and methodologies of analysis and eclectic approaches - with architects and urban planners dominating over geographers and specialists from other disciplines.

Relations with other European schools and traditions of urban form studies are considered. It also reflects on the interest and usefulness of this and other regional networks. Recent research presented at the ISUF-H conferences shows that barriers in multidisciplinary dialogue remain and continue to be a major challenge. Overcoming linguistic and cultural barriers is the other major challenge in this regard.

The article refers to the latent controversies between an “Anglophone squint” and a “Hispanic self-absorption” since the creation of the ISUF-H, underlining the specificities of each context on the one hand, and the common goals on the other.

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INTRODUCTION. ISUF-H AS REGIONAL NETWORK OR ‘BRANCH’ OF ISUF

The International Seminar on Urban Form - Hispanic (ISUF-H) was created in 2015 as a regional network of International Seminar on Urban Form (ISUF) for Spanish-speaking countries, in order to fill the lack of a common forum in Spanish for students and university professors, researchers, professionals, institutions and companies related to urban morphology. The study of urban forms in this linguistic and cultural area has been developed within the framework of different disciplinary traditions, from geography to urban history, architecture or urban planning, which makes it difficult to have a global vision of the contributions made in each of these disciplines. On the other hand, the diversity of historical, urban and academic contexts in each of these countries makes a review of the activities and publications in the broad field of urban morphology almost impossible. Therefore, the article focuses on the Spanish field, with some specific references to contributions in Latin America from a fundamentally urban planning perspective. It starts with the different traditions of urban morphology studies and then goes on to comment on the Spanish contributions to the ISUF-H congresses, as well as the common challenges facing both ISUF and ISUF-H.¹

1. ISUF-H: LANGUAGE AND DISCIPLINARY BARRIERS

As a preliminary question, it would be necessary to consider the different schools of morphology well established in the ISUF field, in order to verify the parallels and specificities in the studies on urban forms that are developed in the ISUF-H field. The self-critical view of Jeremy Whitehand, one of the fathers of contemporary morphology in the Anglo-Saxon sphere. Whitehand highlights the fundamental problems that, in his opinion, urban studies generally face, especially those approached from a morphological perspective. His main thesis was that, despite the obvious growth in studies on urban forms, some barriers between geographical areas and disciplines remain, and that, despite the use of English as a “lingua franca”, linguistic and cultural barriers are still more important than geographical and discipline-related barriers.

This is a controversial thesis, since present-day urban form researchers and scholars have easier access than ever (certainly, in terms of before and after the development of the Internet) to works produced anywhere in the world; not just to the significant part of studies that are published in English, but also to material produced in non-anglophone countries. Whitehand and other authors have encouraged what is now an increasingly wider and more mature field of study, after the founding, at the end of the 1990s, of the journal *Urban Morphology*, and after ISUF conferences began to be held, thus demonstrating the global potential of this field of study. However, the prevalence of publications in English seemed to worry Whitehand more and more, as he saw a connection with the problem of ‘anglophone squint’.² The dominance of English-language literature in an otherwise excellent although outdated compilation available on the ISUF website under the title “Consolidated Urban Morphology Reading

List” is indicative, and a similar situation occurs with the Glossary, ‘a basic glossary of technical terms common principally in English-language studies’.³ Therefore, the Anglo-Saxon bias in relation to urban morphology studies seems clear. On the other hand, just as there are important differences in the understanding of the concepts of ‘urban planning’ and ‘urbanism’, so too, the concept of ‘urban morphology’ has given rise to different interpretations in different linguistic spheres.

However, the issue is not only about linguistic barriers, but also about disciplinary ones. number of scholars have attempted to overcome these barriers from a variety of approaches. These include looking at urban forms through planning history. Although ‘few would think of Jeremy Whitehand as a planning historian’, this is the case of Jeremy Whitehand, who, although known as one of the fathers of urban morphology studies, also approached the knowledge of urban phenomena from the perspective of planning history.⁴

Language and disciplinary barriers are almost indissociable. A clear example is that differences in the understanding of the nature of ‘Urban Planning’, the term by which ‘Urbanism’ is usually translated, persist in English and Spanish (and in other languages such as French and Italian).⁵ The research and publications produced in the ISUF-H show interesting exchanges between morphologists and urban planners. Indeed, this approach has been and continues being dominant in the study of urban forms in Spanish language research over the last decades.

2. ISUF-H IN THE CONTEXT OF DIFFERENT SCHOOLS AND TRADITIONS

The convergence at the ISUF of two major schools of contemporary urban morphology, the British Conzenian school and the Italian Muratorian school, awakens interest.⁶ Despite their different origins and natures, this meeting favoured the discovery of some significant convergences, which made it possible to enhance both approaches based on well-established disciplinary traditions. In particular, the historical-geographical approaches of the British school that started with M.R.G. Conzen (or Anglo-German school, as its roots lay in the works of German-speaking geographers),⁷ continued and led by Whitehand, ‘shook hands’ with the typo-morphological and architectural Italian approaches of Saverio Muratori, which were updated and systematised by Giuseppe Caniggia.⁸ Therefore, this was a meeting of two national and disciplinary traditions: geography and architecture. In this regard, the role played by certain actors is essential in this type of confluences. Ivor Samuels himself acknowledges this when he recalls that:

while working as an architect in Milan, became aware of other approaches to urban form being formulated by Italian architects who were systematically investigating urban form in a way which was very different from the Townscape School’s neglect of underlying structures such as plot systems or street networks.⁹

These two schools, however, also coexisted with the emergence of other studies on urban forms in different countries that played a key role in various disciplines. Anne Vernez Moudon identified a third school of urban morphology: the French school of Versailles.¹⁰ In reality, this school included some concepts from the Italian school, which made it, to a certain extent, a replacement and development of said school from the 1970s onwards. However, this school, which emerged at the School of Architecture of Versailles and was led by the architects Philippe Panerai and Jean Castex and the anthropologist Jean Charles Depaule, turned out to be significantly more diverse and multifaceted thanks to the contributions of Jean-Luc Pinol, Bruno Fortier and many other architects and urban planners, and which made some question the existence of an actual French school of urban morphology.¹¹ In addition to the works of architects, the refreshing studies of urban historians and geographers, such as Marcel Roncayolo, appeared in these same years and their influence on the ‘interpretation of cities’ went beyond those traditional disciplinary spheres, leading to a significant renewal of urban history.¹² The third ISUF conference was held in Versailles in 1998 (after those in Lausanne, Switzerland, in 1996 and Birmingham, U.K., in 1997). However, the legacy of this conference and French studies on urban morphology did not translate into relevant contributions with the appropriate quantitative influence in the context of the International Seminar of Urban Form. In addition, despite the considerable renewal of research papers published in French in the 1970s and 1980s, these were not accessible in English until over 20 years later, as was the case with the influential book by Philippe Panerai, Jean Castex and Jean-Charles Depaule, *Formes urbaines: de l’îlot à la barre* (original published in French, 1977; Spanish version, 1986), which attempted to link morphological analysis with the recovery of traditional urban forms. The book was translated 27 years later into English (2004) with a more deliberate title: *Urban Forms: the Death and Life of the Urban Block* with additional material by Ivor Samuels.¹³

It is also worth noting the important Dutch tradition, which developed urban morphology studies by combining Italian approaches and enriching them with the *Stadsanalyse* tradition, and which was associated with urban renewal processes in cities in the Netherlands. In that case, the availability of the German edition of the book by Aldo Rossi (*Die Architektur der Stadt*, 1972) or the Dutch version of the aforementioned book by Panerai, Castex and Depaule (1984) resulted in a close connection between the studies of urban morphologists and urban planners.¹⁴ Again, the availability of the publications in different languages could explain the specificity of the regional schools. Therefore, there were innovative works on urban morphology as noteworthy as those that dealt with the Dutch urban block, including the important *Atlas of The Dutch Urban Block*, and other works interested in the updating potential and capacity of traditional urban forms.¹⁵ After a first meeting at the ISUF conference in Groningen in 2000, the growth of this school paved the way for other studies and for a second larger meeting at the Delft University of Technology in 2012. In this case, the dominant role of architects’ and urban

planners's interests was obvious, to the extent that some authors expressed their doubts about the drifting of the focus on urban morphology towards the field of urban planning and practice.¹⁶ However, some of the most innovative contributions were generated precisely in 'research by design', a method traditionally used in international urban planning and design culture.¹⁷

The identification of the different schools of urban morphology or, more specifically, the traditions of the study of urban form, actually depends on the disciplinary and its spatio-temporal particularities. Thus, it is obvious that, if studied in relation to the historiography of geography, the German tradition comes first, followed by the British, the Italian, the French, the American or the Dutch ones.¹⁸ All these schools and traditions have been of great importance in studying urban form in Spain, with the Italian school in particular having had a significant impact on studying urban form in Spain since the 1970s.¹⁹

3, ISUF-H AND THE SPANISH STUDIES ON URBAN FORM

In the Spanish context, it is interesting to consider a process that, to some extent, was similar to the French and Dutch cases and even more to the Italian approaches, regarding the role of architects and urbanists in the new generation of urban morphology studies from the 1970s onwards. However, studies on urban form have their roots in several disciplinary traditions, such as Anglo-Saxon urban geography, French geography and urban sociology, urban and architectural history and the morphological approaches of Italian architects. The first studies on urban form were actually connected to the emergence of modern urban planning at the turn of the 20th century. As in other countries, architects and urban planners interpreted cities from a morphological approach, following the pioneering work of the German architect Oskar Jürgens, *Ciudades Españolas: su desarrollo y configuración urbanística*.²⁰

The field of study on urban form represents an important development in the sphere of geography. Several works on cities and neighbourhoods following morphological approaches—clearly influenced by the German and French schools of geography—appeared in the middle of the 20th century, such as the articles published in the journal *Estudios Geográficos* from the 1950s onwards or other monographs such as the influential work on Granada by Joaquín Bosque.²¹ In the 1970s and 1980s, more specific works on urban forms were published, paying special attention to the processes driven by various urban agents (owners and developers, the impact of urban planning designs and projects, etc.), such as those by Rafael Mas on the *Ensanche* (city extension) of Madrid.²² From this point on, it could be said that morphological studies in the field of urban geography were consolidated during the 1980s and 1990s, and that this phenomenon shaped the development of journals such as *Historia Urbana*, where a first article by Whitehand was published in Spanish.²³

Studies addressing urban form were also developed in the field of history of urban planning, which is only partially connected to urban history, to art history and architecture. In this respect, the work by Fernando Terán on the recent history of urban planning in Spain is relevant;²⁴ it was a milestone in the field with considerable domestic impact but, as it was not translated into English, little international resonance. Some initiatives at the beginning of the 1980s attempted to promote common ground between urban planners and historians, with renewed attention on urban forms. One example would be urban planning and history symposiums, such as the one held under this title in Madrid in 1982 that brought together an elite group of scholars in order to support interdisciplinary convergence.²⁵

In the 1970s, and again in the field of architects and urban planners, renewed approaches to the study of urban forms emerged. This was, in part, a reaction to the dominant concepts of functionalist urban planning, through the absorption of morphological approaches into Italian architectural and urban planning culture, which, in turn, led to new variations of ‘morphological urban planning’.²⁶ In a second phase, there were new dialogues with the approaches of the French school, and more original contributions appeared closely linked to new urban designs.²⁷ It is therefore possible to recognise the mutual influences and the similarities of morphological approaches and ‘urban project urbanism’ (*urbanismo urbano*), especially through the Laboratorio de Urbanismo de Barcelona (LUB), founded in 1969 and led by Manuel de Solà-Morales.²⁸ Studies on ‘forms of urban growth’, the *Ensanche* of Barcelona, housing estates and informal settlement forms were important and refreshing contributions in the 1970s that were extended in later studies with broader morphological perspectives. There was also a certain closeness to the French school of Versailles, through the Spanish edition of the book *Formas Urbanas* (1986) that spread the approach of French authors. However, although theories about urban forms clearly began at the School of Architecture of Barcelona, it was in Madrid that the adoption of the morphological perspective had an important impact, with the exceptional work on the morphology of residential peripheries and the new urban plan for Madrid, which was approved in 1985.²⁹ This would be an exceptional example in which the morphological perspective was closely linked to the conception and definition of urban planning. A connection which can also be recognised in other recent publications.³⁰

Even if this is not the focus of this paper, it is important to note that regarding the contributions from Latin American countries, there was a significant shift from the final decades of the 20th century onwards, especially in the field of geography and urban history, but also in the field of architecture and urban planning. In this sense, it is not easy to distinguish the approaches in Portuguese (Portugal and Brazil)³¹ from those produced by Spanish-speaking countries in Latin America.³² Perhaps it is in the field of urban cultural history where works with a panoramic Latin American perspective, such as those by Adrian

Gorelik³³ or Arturo Almandoz,³⁴ are most thought-provoking and innovative for understanding the processes and urban forms in different cultural contexts. The latter, however, show very striking similarities in terms of the forms of modernisation that explain the change from post-colonial cities to modern metropolitan cities. In any case, lack of spaces precludes our reviewing here some important works on urban morphology publications in Latin America. As it has already announced, this paper mainly focuses on some Spanish urban morphology contributions.

In conclusion, as Vilagrasa said in his essay from 1998, urban morphology in Spain, which is also applicable to Latin America, ‘is nowhere but also everywhere’,³⁵ that is, it does not constitute a specific field, although it is present in various fields and publications in several disciplines. The question is whether a convergence between these traditions is taking place and whether multidisciplinary or transdisciplinary views in the study of urban forms are advancing. A review of the ISUF-H congresses – Toledo (2016), Zaragoza (2018), Guadalajara-Mexico (2019), Barcelona (2020), San José-Costa Rica (2021) and Madrid (2022) – shows that the views of architects and urban planners dominate, including those of historians of architecture and urbanism.

4. ISUF-H AND ISUF REGIONAL NETWORKS

Based on Whitehand’s diagnosis of the need to overcome linguistic barriers, he considered it unlikely that the creation of national or regional networks could provide clear solutions, and yet he supported the creation of regional networks.³⁶ Despite Whitehand’s prediction, a few years after his article on the ‘anglophone quint’ appeared in 2005, ‘regional networks’ started to be founded, generally, but not always, based in ‘regions’ or countries that more or less coincide with linguistic areas. The Nordic Network of Urban Morphology was established in 2006, followed, in 2007, by the Italian Network of Urban Morphology (ISUF Italy). Other networks emerged later, such as the Chinese Network of Urban Morphology (CNUM), the Cypriot Network of Urban Morphology (CyNUM), or the Polish Network of Urban Morphology (ISUF Polska), amongst others.³⁷ Some of these networks went beyond the national scope and extended to a larger linguistic and cultural area and, therefore, shared certain similarities with what had happened in the anglophone world. This was the case of the Portuguese-Language Network of Urban Morphology (PNUM), which was founded in 2010 and which covered the lusophone area, that is, basically, Portugal and Brazil.³⁸ Similarly, this was also the case with the Hispanic International Seminar on Urban Form (ISUF-H), a platform founded in 2015 for the study of urban morphology and dialogue between Spanish-speaking countries, that is to say, practically the rest of Latin America. Therefore, there is no “Iberian school” beyond possible collaborations and meetings between both networks, as was the case between ISUF Italy and ISUF-H,³⁹ and recently PNUM and ISUF-H.⁴⁰ Again, in both cases with an almost absolute dominance

of architects and urban planners. Both networks share the goal of promoting urban form studies in their respective linguistic fields, while contributing to the further internationalism of the ISUF.

The creation of ISUF-H, aimed at providing a platform for everyone interested in urban forms with a broad and eclectic morphological perspective, should be understood in this context.⁴¹ Paradoxically, the specificity of the visions of architects and urban planners is not at odds with an eclecticism in the approach to urban morphology. This could be explained by the diverse nature of urban morphological approaches in planning practice everywhere.⁴² As is the case across the general field of studies included in the ISUF's work, a wide diversity of approaches and themes is covered. It is possible to interpret and systematise lines of research in order to "map" them, as has been done by various authors from different national and cultural contexts. In the Spanish case, the lines identified for Spain by Joan Vilagrasa through the analysis of the ISUF-H conferences could be updated.⁴³ This classification could be complementary to others based on certain themes and morphological components in which excessive differences are not observed between the Spanish contributions with respect to those from other countries.⁴⁴

A review of the lines of research emerging from the ISUF-H conferences held to date reveals some thematic blocks. The most recurrent ones include contributions regarding urban processes from a historical perspective, generally from the discipline of contemporary history and art history and architecture.⁴⁵ Other more specific lines of research focus on the transformations of urban forms, considering the agents and urban policies.⁴⁶ There are also important works that deal with the architectural aspect of the city, with special attention to morpho-typological processes, but also including innovative contributions about land use, a standard field in the works of architects and urban planners. The social dimension of urban forms, that is, those that deal with socio-spatial segregation, urban vulnerability and inequality between central and peripheral areas, urban regeneration strategies, is also a common line of research, being the case of Latin American cities, the analysis of informal urbanisation phenomena particularly relevant. There is also interest in the study of urban management systems by analysing the role of urban plans and projects, and also the legislation and the determining factors of urban and regional structures connected to the increasingly complex functional and socio-economic determining factors. An emergent field of research would encompass topics related to sustainability, urban metabolism, compact cities, new suburbs and peri-urbanisation, changes to the land and the landscape, with a special focus on metropolitan phenomena, natural systems and hybridisation between urban systems and open spaces, etc. Finally, explorations using new analysis tools, in keeping with digital disruption, with advanced mapping and big data are increasing in the last years, among them configurational approaches, for example using Space Syntax as a key concept in the analysis of accessibility and other components of urban structures as well as many other 'big data

applications' that enable the qualitative and quantitative characterisation of urban structures and forms in truly innovative ways.⁴⁷

In general, with the emergence and renewal of themes and methodologies of analysis, this review confirms the diversity and vitality of research in Spanish. However, as Michael Barke stated regarding the ISUF Conference 2017 held in Valencia,⁴⁸ it is true that many contributions 'were concerned with very general morphological topics rather than with the detailed analysis of morphological components'.⁴⁹ But looking at the different ways in which the papers deal with urban forms, it is clear that a kind of planning perspective tends to dominate. Back to Barke's points, 'practical results of urban morphological research, using urban morphology as a "tool" rather than an end in itself' arouse considerable interest, and the question is whether this is a problem. On the contrary, we think it is very promising. Indeed, an enriching conceptual and methodological eclecticism, based on the use of urban morphology as a 'tool', is evident in the papers presented at successive ISUF-H conferences. No wonder, then, that the approaches of architects and town planners are more dominant than those of geographers and other professionals. Therefore, a distinctive feature of the papers at the ISUF-H conferences is their demonstration that an 'eclectic urban morphology' can be an enrichment to the field of urban morphology studies.⁵⁰

CONCLUDING REMARKS

Some conclusions can be drawn from all that has been said:

- Challenges remain in overcoming language barriers, particularly between Spanish and English research. Whitehand, who was keen to make urban morphology studies more interdisciplinary and international, said: 'Attempts to rectify Anglophone squint require efforts by both anglophones and non-anglophones'.⁵¹ This would mean avoiding both "'Hispanic self-centeredness' and 'English-speaking squint'. It seems to make sense to have a forum that facilitates communication in the same language other than English. The study of urban form is a flourishing field of convergence and multidisciplinary dialogue, but it still needs to overcome the barriers that exist. The development of ISUF and ISUF-H could and should help to intensify the dialogue between urban planners and urban form researchers in both English and Spanish speaking countries. The condition is that this dialogue takes place simultaneously in both languages. Nevertheless, it is recognised that the 'global conversation' will logically be in English.
- In the case of ISUF-H, the cultural and linguistic domains cover a very large geographical area (Spain and Spanish-speaking countries in Latin America), as in the case of PNUM for the Lusophone network (Portugal and Brazil). If in the ISUF domain, as Barke says, 'urban morphology

means different things to different people’,⁵² this diversity is multiplied in the ISUF-H domain, which is a language area comprising more than twenty countries with different cultural and disciplinary traditions.

– The regional perspective has gained ground in various fields, both in architectural historiography (Kenneth Frampton) and in planning history (Stephen Ward), against the universalism of modernist urbanism. Of course, this perspective runs the risk of ‘isolation or self-absorption’.⁵³ The paradox is that while some, such as Barke, believe that studies on urban form in Spain have suffered from a certain ‘isolation’, others, such as Samuels, have spoken of ‘transatlantic myopia’, referring to the lack of knowledge of British contributions in the US.⁵⁴

– Once the interest of a particular non-English regional perspective has been recognised, the other major challenge for both the ISUF and the regional networks is to manage the convergence of the disciplines involved in the study of urban forms with a truly international perspective.⁵⁵ This is already the case in some of the recent ISUF and ISUF-H conferences, which are a direct reflection of both the increasing presence of advanced analytical tools and the growing awareness of environmental and social challenges. The 28th International Seminar on Urban Form, recently held in Glasgow (June 2021), with the general theme “Urban Form and the Sustainable Prosperous City”, is a clear example of this. An analogous example would be a recent publication by the ISUF-H network entitled “Urban Form and Sustainable Development Goals”.⁵⁶

– The need to develop the relationship between research and practice in urban morphology has been emphasised by several authors.⁵⁷ One of the recommendations of the ISUF Task Force, chaired by Ivor Samuels, was that “the most valuable contribution urban morphology can make is to an objective understanding of urban form and how it has evolved”.⁵⁸ Further interdisciplinary convergence may be encouraged by this characteristic approach of many morphological studies in the ISUF-H.

Even if there is no consolidated school with a tradition of the study of urban forms in the Spanish-speaking world, the morphological perspective has been a constant since the very beginning of ‘urbanism’ as a discipline. As in the field of urban planning, urban morphology could be seen as a kind of ‘urban knowledge’, which, as Bernardo Secchi said, is ‘probably less elegant than a science’, but perhaps more effective and realistic. In any case, as Larkham says ‘Urban morphology as a “discipline” will have to change in the “post-Whitehand era”, and in the near future, or it will stagnate, lose its relevance, wither and die’.⁵⁹ Ultimately, Lewis Mumford’s ambiguous yet useful ‘urban perspective’ might be a good way to address this need for change in the study of urban form.

NOTES

1. This paper builds on some of the arguments set out in a previous article: Monclús, Javier, “The Hispanic International Seminar on Urban Form (ISUF-H). A Platform for Dialogue between Urban Planners and Urban Form Researchers in Spanish-Speaking Countries,” *Planning Perspectives* Volume 37, Issue 3 (2022).
2. Jeremy W. R. Whitehand, “The Problem of Anglophone Squint,” *Area* 37 (2005): 228–230. María Dolors García-Ramón, “The Differences that Place Makes. A Critical View on Anglo-American Hegemony in Geography,” *Documents d’Analisi Geogràfica* 58 (no. 2) (2012): 307–319.
3. As the author, Peter Larkham, acknowledges, it ‘focuses particularly—although not exclusively—on English-language literature and on the Conzenian tradition’. *Consolidated Urban Morphology Reading List*. <http://www.urbanform.org/bibliography.html> (1990) (accessed on 03.12.2022).
4. Peter Larkham, “Planning History and Everyday Urban Change: An Appreciation of J.W.R. Whitehand (1938–2021),” *Planning Perspectives* 37 (no. 1) (2022): 205–209.
5. Hebbert, “Town Planning versus Urbanismo”; Monclús and Díez-Medina, “Urbanisme, Urbanismo, Urbanistica: Latin European Urbanism”.
6. As Giancarlo Cataldi said on the coincidence with Whitehand priorities in urban morphology research which “spurred representatives of the Conzenian geographical and Muratorian/ Caniggian architectural schools to pursue experiments involving their respective methodologies”. See Cataldi, “Translating ‘Alnwick’ into Italian: a tribute to M. R. G. Conzen”.
7. An historico-geographical research tradition that is distinguishable from the design-focused architectural and urban design traditions of other ‘schools’.
8. Regarding the “Italian school”, although the influence of the line of analysis on urban fabrics is unarguable, the wide array of approaches by architects and historians such as A. Rossi and C. Aymonino, among others, are also worth noting. Marzot, “The Study of Urban Form in Italy”.
9. “These included Saverio Muratori in Venice and Pier Luigi Cervellati in Bologna and such eminent practitioners as Ernesto N. Rogers and Aldo Rossi. They were part of a general questioning of the tenets of Modernism and the rediscovery of the virtues of inherited urban forms. It was at the Joint Centre for Urban Design (JCUD) at Oxford Polytechnic, working with Latin American postgraduates whose linguistic skills also enabled them to refer to Italian sources, that a geographer colleague pointed out a similar approach was being led by Jeremy Whitehand in the School of Geography at the University of Birmingham. Contact was made and he organised a seminar in Birmingham in 1982 which for the first time brought together the work of the Italian and British schools of urban morphology. Around the same time Gianfranco Caniggia made a great impact when he spent a month in Oxford in the same year that he went to Seattle, invited by Anne Vernez Moudon. See Ivor Samuels, “Towards an Eclectic Urban Morphology,” in *Morphological Research in Planning, Urban Design and Architecture*, ed. Vitor Oliveira (Cham: Springer International Publishing, 2021), 71–96.
10. Anne Vernez Moudon, “Urban Morphology as an Emerging Interdisciplinary Field,” *Urban Morphology* 1 (no. 1) (1997): 3–10.
11. Michaël Darin, “The Study of Urban Form in France,” *Urban Morphology* 2 (no. 2) (1998): 63–76.
12. His ideas on forms, functions and times of the city are of particular interest: ‘...

- elles ne procèdent pas de la fonction : formes et fonctions ont une autonomie relative* (forms do not come from functions: forms and functions own relative autonomy). Isabelle Chesneau (interviewer) and Marcel Roncayolo, *L'abécédaire de Marcel Roncayolo: Entretiens* (Paris: Infolio, 2011). See also: Marcel Roncayolo, *Lectures de villes. Formes et temps* (Marseille: Editions Parenthèses, 2002).
13. Philippe Panerai, Jean Castex and Jean-Charles Depaule, *Formes Urbaines: de l'îlot à la barre* (Paris: Dunod, 1977). Spanish edition: *Formas urbanas. De la manzana al bloque* (Barcelona: Gustavo Gili, 1986). English edition and additional material by Ivor Samuels: *Urban Forms: the Death and Life of the Urban Block*. (London: Routledge, 2004). See also Javier Monclús, "De la 'ciudad de bloques' a la recuperación de la manzana. Formas urbanas. De la manzana al bloque, revisitado (From the "city of blocks" to the recovery of the urban block). (Formes urbaines. De l'îlot a la barre revisited)," *Actas IV Congreso ISUF-H: 2020* (Barcelona: DUOT, 2020). For a more general overview of the issue see: Carmen Díez Medina and Javier Monclús, *Ciudad de bloques: Reflexiones retrospectivas y prospectivas sobre los polígonos de vivienda 'modernos'* (Madrid: Abada, 2020). (book review in *Planning Perspectives*, 36 21 4 2021).
 14. Nicola Marzot, Roberto Cavallo and Susanne Komossa, "The Study of Urban Form in the Netherlands," *Urban Morphology* 20 (no. 1) (2016): 35–43.
 15. Susanne Komossa, ed., *Atlas of The Dutch Urban Block* (Bussum: Thooth, 2005).
 16. "Disappointingly, much of the conference dialogue drifted away from a focus on urban morphology and more directly into the realms of urban design and practice". Wendy R. McClure, "Nineteenth International Seminar on Urban Form, Delft, The Netherlands," *Urban Morphology* 17, no. 1 (2013): 35–44.
 17. Paola Viganò, *The Territories of Urbanism. The Project as Knowledge Producer* (Lausanne: EPFL Press, 2016).
 18. According to Horacio Capel, *Morfología de las Ciudades* (vol. I) (Barcelona: Ediciones del Serbal 2002), 23-30.
 19. Nicola Marzot, "The Study of Urban Form in Italy," *Urban Morphology* 6 (no. 2) (2002): 59–73.
 20. Jürgens, *Ciudades Españolas: su Desarrollo y Configuración Urbanística*. (first published in German: *Spanische Stadte: Ihre Bauliche Entwicklung Und Ausgestaltung*, 1926).
 21. Joaquín Bosque, *Geografía Urbana de Granada* (Zaragoza: CSIC, 1962).
 22. Rafael Mas, *El Barrio de Salamanca: planeamiento y propiedad inmobiliaria en el ensanche de Madrid* (Madrid: IEAL, 1982).
 23. Joan Vilgrasa, "The Study of Urban Form in Spain," *Urban Morphology* 2, no. 1 (1998): 35–44. Joan Vilgrasa, "Interview to Whitehand," *Revista Catalana de Geografia* (no 8) (1989): 21 -28. See also Jeremy Whitehand, "Formas de renovación urbana en Gran Bretaña. Una perspectiva históricogeográfica," *Historia Urbana* 2 (1993): 59–68.
 24. Fernando Terán, *Planeamiento Urbano en la España Contemporánea* (Barcelona: Gustavo Gili, 1978).

25. Antonio Bonet, ed., *Urbanismo e Historia Urbana en el Mundo Hispano* (Madrid: Universidad Complutense de Madrid, 1982/1985).
26. Victoriano Sainz, *El Proyecto Urbano en España: Génesis y Desarrollo de un Urbanismo de los Arquitectos* (Sevilla: Universidad de Sevilla, 2006).
27. José Ignacio Linazasoro Rodríguez, *Permanencias y arquitectura urbana: las ciudades vascas de la época romana a la Ilustración* (Barcelona: Gustavo Gili, 1978).
28. Manuel De Solà-Morales, *De Solà-Morales, Manuel, Las Formas de Crecimiento Urbano*, (Barcelona: ETSAB, 1974, new ed. 1997). Manuel De Solà-Morales, *Miradas sobre la ciudad*, edited by Oriol Clos (Madrid: Acantilado, 2021). See also, Javier Monclús, “Manuel de Solà-Morales y el urbanismo proyectual de los años ochenta,” in *La cultura arquitectónica en la España de la Transición*, ed. Carlos Sambricio (Sevilla: Universidad de Sevilla, 2021), 315-330. María Rubert, “Un laboratorio urbano: investigaciones, experimentos y ensayos. LUB 1970-1980,” in *La cultura arquitectónica en la España de la Transición*, ed. Carlos Sambricio (Sevilla: Universidad de Sevilla, 2021), 299-314.
29. Juan Carlos García Pablos, “Morfología Urbana (o la Ordenación de la Ciudad),” in *El Urbanismo de la Transición. El Plan General de Ordenación Urbana de Madrid de 1985*, eds. C. Sambricio and P. Ramos (Madrid: Ayuntamiento de Madrid, 2019), 180–208. See also: Laboratorio de Urbanismo de Barcelona, *Readings on Cerdà and the Extension Plan of Barcelona: Ajuntament de Barcelona* (Madrid: MOPU, 1992).
30. María José Rodríguez Tarduchy, *Forma y ciudad: en los límites de la arquitectura y el urbanismo* (Madrid: Cinter, 2011).
31. Vítor Oliveira, ed., *Diferentes abordagens em morfologia urbana. Contributos luso brasileiros* (2018). vitoroliveira.fe.up.pt/uf books (accessed on 03.12.2022).
32. As can be seen, for example, in the networks led by Horacio Capel, including contributions from both sides of the Atlantic. *Geo Crítica* (1976-1994): <https://raco.cat/index.php/GeoCritica/issue/archive>. *Biblio3W Revista Bibliográfica de Geografía y Ciencias Sociales* (2007-2021) (accessed on 03.12.2022).
33. Adrian Gorelik, *La ciudad latinoamericana. Una figura de la imaginación social del siglo XX* (Buenos Aires: Siglo XXI Editora Iberoamericana, 2022).
34. Arturo Almandoz, *Modernización Urbana en América Latina* (Santiago de Chile: Instituto de Estudios Urbanos y Territoriales, 2013). See also Arturo Almandoz, ed., *Planning Latin America's Capital Cities 1850-1950* (London: Routledge, 2002).
35. Vilagrasa, “The Study of Urban Form in Spain”.
36. “A major part of the solution is unlikely to be provided by nationally-based organizations and their journals, controlled as they are by members and interest groups from their respective countries”. Whitehand, “The Problem of Anglophone Squint”. Whitehand, *Urban morphology: how interdisciplinary? how international?* At the same time, he supported independent forums of conventional organisations (such as the International Geographical Union), which would promote the more or less spontaneous development of international groups of researchers and professionals, founding the Birmingham’s Urban Morphology Research Group (UMRG).
37. <http://www.urbanform.org/regional.html> (accessed on 03.12.2022).
38. Vitor Oliveira et al., “The Study of Urban Form in Portugal,” *Urban Morphology* (2011) 15(1), 55-66, International Seminar on Urban Form, 2011.

39. A Conference was organized in Artimino (Florence, Italy) in 2016. See Paolo Carloti, Alessandro Camiz, and Carmen Díez Medina (eds.), *Urban Morphology and Design Joint research perspectives and methodological comparison: Italy, Spain* (Rome: U+D edition, 2016).
40. See Carles Llop Torné, ed., *Las ciudades y sus tesis 1970-2020* (vol. 1) (Valencia: Universitat Politècnica de Valencia, 2023).
41. The term ‘Hispanic’, according to the Oxford Dictionary, means “‘Relating to Spain or to Spanish-speaking countries. Belonging to or relating to Spain and Spanish-speaking countries and cultures, especially those of Central and South America’. However, according to the Real Academia Española, it means ‘Belonging to or relating to ancient Hispania or the peoples who were part of it. Belonging to or relating to Spain and Spanish-speaking countries and cultures’.
42. Ivor Samuels, “Towards an Eclectic Morphology”.
43. Using this method, large thematic blocks may appear covering approaches as varying as those included by Pierre Gauthier and Jason Gilliland in an original mapping project that distinguishes between ‘cognitive’ and ‘normative’ studies, and also between those that consider the urban form as a “product” or as an ‘independent variable’. See Pierre Gauthier, and Jason Gulliland, “Mapping Urban Morphology: A Classification Scheme for Interpreting Contributions to the Study of Urban Form,” *Urban Morphology* 10 (no. 1) (2006): 41–50.
44. Michael Barke, “An End to Spain’s Urban Morphological Isolation?,” *Urban Morphology* 23 (no. 1) (2019): 45–57.
45. This block appears in ISUF-H conferences under the name “History of urban form”, although it is often linked to the theories and the history of urban planning.
46. This confirms the relevance of urban geography perspectives, although historical geography tends to converge and be confused with urban history.
47. See Mar Santamaría-Varas, Pablo Martínez-Díez, Sergio García-Pérez, eds., *ZARCH, Journal of Interdisciplinary Studies in Architecture and Urban Form* 19. Forma y comportamiento: modelar la urbanidad, 2023.
48. The proceedings of four of the conferences held (Toledo 2016; ISUF-H Zaragoza 2018; ISUF-H Guadalajara 2019; ISUF-H Barcelona 2020) are available at the ISUF-H website: <https://isufh.org/>. Reports on the conferences can be found in *Urban Morphology* 2017 21.1; 2019 23.1; 2021 25.2.
49. Barke, “An End to Spain’s Urban Morphological Isolation?”. The practical applications of urban morphological research and using urban morphology as a ‘tool’ rather than as an end in itself, as it was dominant at that time Michael Barke, “Forward,” in *Morphological Research In Planning, Urban Design And Architecture*, edited by Vitor Oliveira (Cham: Springer International Publishing, 2021).
50. Samuels, “Towards an Eclectic Urban Morphology”.
51. Whitehand, The problem of Anglophone Squint”.
52. Barke, Michael, “Why Study Urban Morphology? The View of ISUF Members,” *Urban Morphology* 23 (no. 2) (2019): 105–114.
53. Barke, “An End to Spain’s Urban Morphological Isolation?”
54. See also: Samuels, “Anglophone squint and transatlantic myopia”,

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55. Jeremy W. R. Whitehand, “Urban Morphology: How Interdisciplinary? How International?,” *Urban Morphology* 22 (no. 1) (2018): 3–4.
 56. Monclús and Ruíz-Apilánez, eds., “Forma urbana y objetivos de desarrollo sostenible”, Editorial comment in *Ciudad y Territorio.Estudios Territoriales*, 54 M (2022).
 57. Oliveira, *Morphological Research in Planning, Urban Design and Architecture*
 58. Ivor Samuels, “ISUF Task Force on Research and Practice in Urban Morphology: An Interim Report,” *Urban Morphology* 17 (no. 1) (2013): 40–43.
 59. Peter Larkham, “The need for change in the study of urban form,” Editorial comment in *Urban Morphology* (2022) 26(1), 3–4.

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THE TRADITION AND THE NETWORK OF URBAN FORM RESEARCH IN POLAND

ABSTRACT

This article presents an overview of research on urban form in Poland. Within historical geography this tradition is continued today by geographers from the University of Łódź where for years professors Mark Koter and Mariusz Kulesza have been implementing the research methodology of the English school. This research presents a descriptive approach, while research in the field of architecture and urban planning tends to be prescriptive. They have been, and continue to be, conducted at various architectural universities both in the fields of history and monuments conservation, urban planning, spatial planning, and landscape architecture.

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KEY WORDS

POLAND

URBAN MORPHOLOGY

URBAN COMPOSITION

URBAN DESIGN

1. INTRODUCTION

The study of urban form has a long tradition in Poland. In Koter and Kulesza, 2010 the authors present this tradition going back to research from the early 20th century¹. This was mostly research done by geographers.

If we consider the classification introduced by A. V. Moudon² we could look at the Polish tradition through the perspective of three separate trends of thinking about urban form: descriptive, prescriptive for urban design and historical – directed towards formulation of historical theories of city building:

1. “The study of urban form for *descriptive* and *explanatory* purposes, with the aim of developing a *theory of city building* (...) Such studies are concentrated on how cities are built and why.”
2. “The study of urban form for *prescriptive* purposes, with the aim of developing a *theory of city design*. Such study concentrates on how cities should be built.”
3. “The study of urban form to assess the *impact of past design theories on city building*. This is in the realm of design criticism, which makes the sophisticated distinction between the *theory of design “as idea”* and the *theory of design “as practiced”*.”³

The research presented below mostly follows the first two approaches which are carried out by two professional circles – geographers and architects engaged in the problems of urban design, urban planning, or historic monument conservation.

2. METHODS

The paper presents an overview of the state of the work of Polish urban planning thought on urban form. The temporal scope of the study is defined from the interwar period in Poland⁴, when the first significant works dealing with urban form were created, to the contemporary studies. The work makes use of bibliographical sources mainly from geographical, architectural, urban and planning studies. The work presents both the achievements of individual authors and attempts to present some selected theoretical themes.

3. THE TRADITION OF MORPHOLOGICAL STUDY IN THE FIELD OF HISTORICAL GEOGRAPHY

M. Kulesza⁵ considers K. Dziewoński⁶ and S. Golachowski to be the pioneers of morphological study in Poland after WW II. M. Koter and M. Kulesza in *The Study of Urban Form in Poland*⁷ discuss in more detail the achievements of Polish morphological thought in historical geography.

Contemporary urban morphology related to historical geography is being developed in the circle of geographers based at the University of Lodz. For years, Professors Mariusz Kulesza and Marek Koter have been collaborating with the International Seminar of Urban Form and they are authors of papers published in *Urban Morphology*⁸, and of research works implementing the methodology of the English school.

In his work on Lodz⁹, the author makes reference to the methodology developed by M. R. G. Conzen. A. Araszkievicz and M. Sobczyński write: “*He has pioneered in Poland comprehensive studies on the genesis of industrial urban layout, using both town - plan analysis and the Conzenian burgage cycle method, adapted for this purpose. He has also introduced some new theoretical and methodological notions e.g. urban stratigraphy, index monuments and urbomorphology.*”¹⁰

M. Kulesza also presents the significance of M. Koter’s work for the formulation of theoretical and methodological premises for the historical geography of the city: “M. Koter’s formulation of theoretical and methodological premises of the morphology of cities (or urbomorphology) as an independent sub-discipline of science, although functioning within the field of the geography of cities, is of great importance for the historical geography of cities. The first work in the series was the article *Fizjonomia, morfologia i morfogeneza miasta. Przegląd rozwoju oraz próba uściślenia pojęć*¹¹ (*Physiognomy, morphology and morphogenesis of the city. A Review of the Development and an Attempt to Clarify the Terminology*). The author reviewed the development of city morphology, starting from its theoretical premises, and clarified the meaning of the basic terms for this field of study and their hierarchy, he also offered his own definitions of the said terms. It must be emphasized that his findings introduced a fundamental terminological order into the field of city morphology in Poland. Another work of the above series, discussing morphogenesis of a great city on the example of Łódź (Koter, 1974), expands the earlier findings by determining the aim, subject, objects, elements, scope, and methods of morphogenetic study.

The latest work by M. Koter¹² of this series – *Od fizjonomii do morfogenezy i morfologii porównawczej. Podstawowe zagadnienia teoretyczne morfologii miast /From Physiognomy to Morphogenesis and Comparative Morphology. Basic Theoretical Problems of City Morphology/* - is a summary of the theoretical aspects of this discipline. It contains explanations of the following terms: physiognomy, morphology, morphological stratigraphy, development morphology, evolution morphology, comparative morphology as well as morphology *sensu stricto* and *sensu largo*, and also presents their mutual relations. Moreover, the author offers a schematic presentation of the hierarchic system of the city’s constituent parts as well as of a network of cities and discusses the changes taking place within these systems. It must be emphasized that introducing such order into the problems of terminology and into city morphology research problems promotes both systematization and further development of this discipline, not only in Poland.”¹³

4. THE TRADITION OF URBAN FORM STUDY IN THE FIELD OF ARCHITECTURE AND URBAN DESIGN

Oskar Sosnowski, - mentioned in review¹⁴ – was a professor of the Faculty of Architecture at Warsaw University of Technology, and very active in many areas of scientific study, being also a practicing architect and urban planner. He designed many churches and urban complexes (the garden-city Sadyba), and was also engaged in monument conservation, theory of urban design (the design of the so-called *okolnica – rundling*). In 1923 he was one of the initiators of establishing the Society of Polish Town Planners. In 1929 he founded the Chair of Polish Architecture at the Faculty of Architecture, Warsaw University of Technology. He was killed in the first days of the war (September 1939) trying to rescue the archives of the Chair.

His contribution to the development of urban morphology is primarily the work discussing the street network of Warsaw – published in 1930 *Powstanie, układ i cechy charakterystyczne sieci ulicznej na obszarze Wielkiej Warszawy / Emergence, layout and characteristic features of the street network in the area of Greater Warsaw*, dealing with its morphogenesis and typology (Fig. 1.).

4.1. Tradition of research in the field of history and conservation of monuments of architecture and urban design

History determined the choice of pragmatic approach to the research tasks in the field of urban morphology in Poland. The damage brought on by the WW II in Poland was as high as 2/5 of the whole cultural property of the country, and the country itself shifted its territory – a half of the area was lost to the USSR, whereas areas were regained in the west.

Challenges posed by the task of rebuilding the country were related both to the housing stock and industrial infrastructure, and also to the reconstruction of whole urban organisms. Warsaw, Gdansk and many other Polish cities were in complete ruin.

The research on the preserved urban fabric and the existing documentation of the material infrastructure was the foundation for reconstructing not only single buildings but also whole urban complexes. It was thanks to the efforts of extraordinarily talented Polish architects and monument conservationists that the reconstruction of many historic urban complexes was made possible.

The example of Warsaw is the most important here, and its reconstruction is also a symbol of the nation's perseverance and the continuity of its culture. Given the enormity of the damage and the countless amounts of other needs, the reconstruction of the Old Town in Warsaw was by no means an obvious decision. It took a lot of effort and diplomacy for the decision to rebuild the Warsaw Old Town to be finally undertaken.¹⁵

The decisive voice on the matter of rebuilding the Old Town was that of prof. Jan Zachwatowicz, a student of Oskar Sosnowski, who supervised the reconstruction from 1946 onwards. The inventory and conservation works were also started in that year. The architects even used the inventory works carried out by students before the war which managed to survive. The land use plan came into legal force in 1948, and in 1949 the rebuilding began in practice.

The way the city infrastructure was to be reconstructed stirred up some controversy. The plan took inspiration from 18th century Warsaw – the period of the city’s greatest grandeur, yet preserving the spatial layout given to it in the 14th century. The reconstruction plan of the appearance of the buildings was developed by architects and art historians using the priceless images of Warsaw painted by Canaletto (Bernardo Bellotto).

And thus “the Polish school of monument conservation” took shape in the years 1946 – 1950. It developed from the need to respond to the challenge of raising the centre of the capital from complete ruin. The symbolic reconstruction aimed to recreate the ideal historical form of the city and at the same time to adjust it to the needs of contemporary users. Hence the decisions to reconstruct only the façades of whole city blocks, whereas the functional layout of flats and the infrastructure were to be built according to modern functional and technical standards.

Prof. J. Zachwatowicz, who decided to choose this reconstruction approach, realised that the situation required rational reconciliation of two legitimate needs – the need to reconstruct the historical urban complex and the need to deliver the architectural fabric meeting the modern standards of use. In this aspect, the reconstruction of Warsaw was unique in the whole world also because this is exactly the approach that is adopted now – in many different scales – to the restoration of individual historic monuments and their complexes.

What is interesting, prof. J. Zachwatowicz was one of the signatories of the Venice Charter (1964)¹⁶, which opposes reconstruction of historic monuments, and the Old Town in Warsaw, although raised from ruin against the prevailing doctrines of monuments conservation, has gained recognition and has been entered onto the UNESCO List of World Heritage (1980)¹⁷.

“The Polish school of monument conservation” is an extensive tradition encompassing numerous trends and a great many projects. The field of urban design, which is the subject of interest for us here, has been developing in response to the enormous needs related to reconstruction of historic urban complexes. It is impossible to mention all the achievements of archaeologists, art historians, architects, conservationists, urban designers, and spatial planners. Their works, initially directed primarily towards reconstruction of the infrastructure lost during the war, with time started to become more open to the possibilities of exploring the past purely for the sake of expanding knowledge. At present, numerous research projects, also frequently carried out

in response to some contemporary need, lead to new discoveries and reform our knowledge on the way cities were built in the past.

It is worth mentioning at this point, as an example, the enormous body of work done by researchers engaged in the study of Krakow and Małopolska urban development history¹⁸. The scale of the research area may be easier to perceive if we realise that until the 17th century there were 284 town locations in Małopolska¹⁹, 217 of which have survived until today. Although based on detailed study of individual places, the works are comprehensive and complete with theoretical conclusions at the urban scale. We cannot fail to mention here, either the Krakow Charter²⁰ formulated in 2000, which presents the concerns of the Polish conservationists in the face of contemporary challenges related to protection and development of urban spaces.

4.2. The tradition of research in the field of urban design and spatial planning

Polish post-war urban design was developing in response to the enormous needs of rebuilding the country. Shortages of flats, infrastructure, work, and manufacturing places required a great effort both in design and construction. The period of social realism and later the modernist ideals promoted the creation of bold and daring visions of development. The political system gradually nationalized both the land and buildings including businesses. Cities were able to expand freely on the newly absorbed areas, and the method of building with prefabricated elements, introduced step by step, gave hope for a fast completion of new urban complexes.

In most of the historic urban complexes, their fabric was protected, and reconstruction aimed to save whole urban blocks. In new development areas, however, the planners broke with the traditional urban design and, following the modernist trends, opted for the “play of masses brought together in light.” There are two most important concepts which are the contribution of Polish urban design theory to the study of urban morphology. These are – an *urban enclosure* and an *urban composition*²¹.

4.2.1 Urban enclosure

K. Wejchert has presented the definition of an urban enclosure: “All types of limitations create a kind of “enclosure” around the observer who has stopped at a certain point, regardless of the absolute dimensions of the perceived fragment of the environment.”²² The theory of landscape enclosure is also related to the Polish tradition. Enclosure has been defined by J. Bogdanowski, M. Łuczyńska-Bruzda and Z. Novák,²³ who wrote about its role:

“We get to know a landscape by exploring its individual enclosures. An enclosure here are the whole physiognomic surroundings of the place from which we are looking at the landscape. Obviously, there may be an infinite number of such

places. Nevertheless, it is possible to limit their number, while exploring an area, to the series of the ones which most fully characterize the individual types and forms of the landscape, and thus usually constitute its key points.”²⁴

An enclosure is a spatial unit which offers the opportunity of learning a landscape. It presents this cognition as a sum of individual elements and is based on the account given by the senses. Such enclosure may be defined as “a starting point for learning and forming landscape architecture.”²⁵

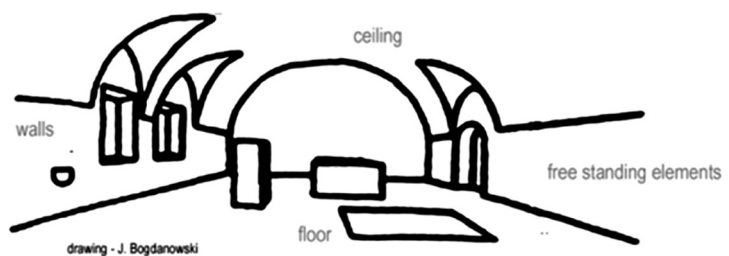
Both the Krakow School of Landscape Architecture (Fig.2.) and K. Wejchert’s theory²⁶ understand the enclosure as a material whole, which makes their approach different from the one of K. Lynch, G. Cullen, or Y. Ashihara²⁷, who emphasize the manner of perception of space by a human.

4.2.2 *Urban composition*

The fundamental concept ordering the thinking about city morphology after the II WW is the concept of urban composition.

First, we must emphasize at this point the differences between architectural and urban composition. It is not only the question of their scope or the different perception of the objects to which they pertain. Urban composition is predominantly a resultant of the composition (coordination) of all the other aspects related to the city. It was most aptly formulated by Tadeusz Tołwiński²⁸, Polish architect and urban planner, theoretician, and practitioner, while defining the role of urban factors: “Simultaneously with the five urban factors²⁹ (...), a factor of different nature also operates – the factor of intentional creation. It encompasses the whole structure and form of the city, whatever their origin. Based on the foundation derived from the permanent and concrete data provided by all the above-mentioned factors and on the whole living system of the city, created in the areas represented by these factors, the factor of composition creates the idea encompassing all of the phenomena occurring in the city. It coordinates, harmonizes, and creates – of all the individual factors and parts – one uniform organism, simple in its structure and clear in its unified form. Periods of its domination and calm control over the other five factors are the periods of high urban design quality in the organization of the city. Periods of its downfall, chaotic and helpless subordination to the prevailing forces of the other factors accompany the downfall of the city culture and sometimes reflect the general chaos reigning in the culture and civilization of a given country and certain historic era. Its contribution to the development of an urban organism, or absence of such contribution, may be seen from the plan and appearance of a city or its parts almost at the first glance (...). There is no way to create it artificially, upon request, when it is needed. It is a creative emanation of human spirit; it is a profound phenomenon of culture.”³⁰

Urban composition is a concept which characterizes accurately the views of some scholars.³¹ Bolesław Malisz, creator of threshold theory, views composition³² as assembling a whole from parts. “The whole is governed by



UP: Fig. 1. Sosnowski, Streets of Warsaw before 1881 – typology. (Sosnowski, Oskar, Powstanie, układ i cechy charakterystyczne sieci ulicznej na obszarze Wielkiej Warszawy, Wydawnictwo Zakładu Architektury Polskiej Politechniki Warszawskiej, Warsaw, 1930)

DOWN: Fig. 2. Bogdanowski's idea of urban enclosure based on room elements (Bogdanowski, Janusz, Kompozycja i planowanie w architekturze krajobrazu, Ossolineum/PAN, Wrocław–Warsaw–Kraków–Gdansk, 1976)

its own rules, which cannot be derived from the rules governing the parts. The broadly understood process of composing operates simultaneously from more general formulations to details and in the opposite direction. The method of composition must therefore necessarily follow the pathway of subsequent close-ups and gaining more distance. This difficult path will lead us in the right direction only if we comply with certain criteria collected in one system.³³ The composition gives the model a more crystallised form: "... we try to combine a sum of premises in one whole and "fit" it harmoniously into the natural environment."³⁴ Composition, as seen by the aforementioned school of landscaping, is based on enclosures, and "Creating the enclosure is the foundation of composing a landscape."³⁵

W. Ostrowski³⁶ defines the city by the order in its structure, composed hierarchically of units characterised by different features. K. Wejchert³⁷ points out the comprehensive character of a city composition, encompassing all its parts and scales. "The subject of urban composition are all urban complexes, regardless of their content or scale: it affects the smallest groups of houses, housing estates, social centres and huge complexes of city central areas, industrial complexes, sports and recreational areas." He also emphasises the role of beauty in urban reality: "The main objective of urban composition is to elicit or create beauty in the environment surrounding human beings."

W. Cęckiewicz deems the correct hierarchy of spatial scales to be the foundation of urban composition. It starts from the scale of the country, regions, cities, and agglomerations all the way down to small towns and villages. In the scale of the city, the fact whether there is order in it or not is decided by the relation between the central historic complexes and the new complexes of housing estates.³⁸ Nevertheless, the foundation for spatial order is the harmony between culture and nature: "... only between these two creations may our daily life go on in an orderly fashion – between the wildlife, which is the creation of nature, and culture, which is the creation of human race."³⁹

4.3 The tradition of research in the field of landscape architecture

The Polish school of landscape architecture, whose achievements have already been mentioned above, developed in Krakow as an independent discipline of science based on the tradition of research in the fields of architecture and urban design. Its pioneers were professors associated with many academic centres in Poland.⁴⁰ Nevertheless, it is Janusz Bogdanowski who must be recognised as its main founder.

In 1973, in collaboration with Zygmunt Novák and Maria Łuczyńska-Bruzda, Bogdanowski published the work entitled *Architektura Krajobrazu (Landscape Architecture)*, reprinted many times since its first publication, and in 1976 – *Kompozycja i planowanie w architekturze krajobrazu (Planning and Composition in Landscape Architecture)*.

In 1963, prof. Bogdanowski developed his own original method of research on the landscape through enclosures and architectural-landscaping units (in Polish: JARK-WAK). It was described in the work *Studium wartości krajobrazowych Sandomierza i okolic (Study of the Landscape Values of Sandomierz and Its Surroundings)* and given a more comprehensive formulation in the studies of the Jurassic castles of Mirów and Ogródzieniec in 1964. It features three spatial scales:⁴¹

- architectural-landscaping units, called JARKs (at the scale of urban planning),
- complexes of architectural-landscaping enclosures, called ZWAKs (at the urban scale),
- architectural-landscaping enclosures, called WAKs (at the architectural scale).

The factors considered while defining the units are land configuration, its cover and also the level of development and historical transformations. The research is to serve the purpose of evaluation and drafting the correct plan.

5. BETWEEN THE TRADITION AND *ISUFPOLSKA*

The academic and practical achievements presented in the chapters on the tradition of the study of urban form in Poland have continued in subsequent years. It is impossible to list all these activities.

In the field of historical geography

In addition to the research carried out in the University of Lodz scientific community by M. Koter and M. Kulesza we have to mention works done by Marek Sobczyński on Polish borders⁴² and note the scientific community of the University of Wrocław with Barbara Miszewska, who has been researching the morphology of Wrocław's urban structure⁴³.

In the field of history and conservation of monuments of architecture and urban design

Andrzej Kadłuczka devotes his works to the important issues of the relationship between the historic substance and contemporary functional requirements. He is also the initiator of the so-called *Charter of Krakow* on the Protection of Architectural Cultural Heritage, which was signed in Krakow in 2000⁴⁴.

The figure of Krzysztof Pawłowski should be also mentioned, who worked on historic towns in southern France and was the discoverer of circulades⁴⁵ - a particular form of medieval round towns⁴⁶.

In the field of urban design and spatial planning

K. Wejchert's work is continued by Sławomir Gzell, author of many works on urban planning and promoter of the idea of harmonising activities in urban design⁴⁷. An important theoretical position is the work of Jacek Gyurkovich on *powerful form*⁴⁸ in the urban landscape. The author explains the idea of *powerful form* as follows:

“The quest to exist in the urban space and in the consciousness and memory of users has always involved the search for individual, distinctive features of (...) buildings - powerful forms (...).

The surrounding space is perceived, remembered and recognised through characteristic sequences. Powerful forms play an important role in the crystallisation of these sequences, co-creating their atmosphere and constituting legible signs, allowing for an unambiguous identification of places and spaces. Therefore, the singling out of signs, special features, constituting points of reference, is a process accompanying the entire history of the development of civilisation and culture. These signs are defined here as powerful forms. Thanks to their characteristic features, such as being different from other structural elements and expressive power, they play an important role in the visual information system. These characteristics, achieved by means of special shaping, saturation of detailing, textural or colour solutions, allow them to achieve expressiveness through contrast with their surroundings.”⁴⁹

In the field of landscape architecture

Janusz Bogdanowski has published works up to the first years of the 21st century⁵⁰. They concern specific cultural landscape issues as well as theoretical issues and didactics. His successors include Aleksander Böhm⁵¹, author of, inter alia, works on the synergy of urban interiors⁵² and methodological issues related to landscape architecture, and Wojciech Kosiński, whose research focuses on issues related to tourism, urban theory, and landscape architecture theory⁵³.

Agata Zachariasz, in turn, focuses her research interests on urban and park greenery⁵⁴. It should also be noted the direction of research in which computer techniques are used to study landscape visibility⁵⁵.

URBAN MORPHOLOGY - POLISH NETWORK

The Polish MU network was formalised in 2019 and operates as *ISUFPOLSKA*⁵⁶. The following is a summary of the work directions presented by those involved in the Polish urban morphology network. As has been stated above, at present, the issues of urban morphology in the field of historical geography are the

subject of research carried out by scholars of the Lodz school of geographers founded by prof. M. Koter and associated with the Conzenian tradition. Another important research centre is in Wrocław, in Institute of Geography and Regional Development, University of Wrocław. Tomasz Figlus⁵⁷, Łukasz Musiaka⁵⁸, Magdalena Deptuła⁵⁹ present the Faculty of Geographical Sciences, University of Lodz and Robert Szmytkie⁶⁰ - University of Wrocław.

As regards the research in the field of architecture and urban design – their history, theory and planning as well as building practice – an enormous body of research work must be ascribed to trends no 2 and 3, defined by A. V. Moudon (Moudon, 1997) as the trends of viewing urban form: “for prescriptive purposes, with the aim of developing a theory of city design” and “to assess the impact of past design theories on city building”. This rich tradition has been accumulated independently of the theoretical achievements of the classic schools of urban morphology and has been both the basis and inspiration for contemporary research.

Authors working in the field represent different schools – Cracow University of Technology (A.A. Kantarek, M. Motak, K. Dudzic-Gyurkovich⁶¹), Lodz University of Technology (M. Hanzl⁶²) and Opole University of Technology (M. Adamska⁶³).

In Krakow, research based on J. Bogdanowski’s theory of landscape enclosures are being continued, inter alia, by Zbigniew Myczkowski⁶⁴.

In the years 2017-2020 Polish Network of Urban Morphology ISUF POLSKA together with Serbian Network of Urban Morphology realised Grant financed by International Seminar on Urban Form, University of Belgrade, and Cracow University of Technology - ISUF Small-scale Projects: Research and Practice, Plot by plot urbanism”. Mapping post-socialist changes in urban tissues. Case of Krakow and Belgrade. A Comparative Study. It was done by teams from Cracow University of Technology (Anna Agata Kantarek, Krzysztof Kwiatkowski, Wojciech Korbel) University of Belgrade (Vladan Đokić, Ana Niković, Aleksandra Đorđević) and Urban Morphology Research Group University of Birmingham (Ivor Samulels) and concerned the state of urban design and planning in the post-socialist era⁶⁵.

In September 2022, ISUF POLSKA organised the XXIX ISUF Conference in Lodz and Cracow, Poland. It was focused on: *Urban Redevelopment and Revitalisation: A multidisciplinary perspective* with main conference topics:

- Classical and innovative theoretical concepts of the redevelopment and revitalisation of spatial structures.
- Methods of research of the transformation processes of settlement spatial structures and their application.
- Decision-making factors and political, legal and administrative conditions for redevelopment and renewal of the urban tissue.
- Social and cultural determinants of spatial redevelopment and regeneration.

- Economical, functional and infrastructural changes and their impact on the renewal processes.
- Directions of change in the historic urban structures.
- Practical architectural and urban solution

The conference gathered over 300 participants from 36 countries, in face-to-face and online format.

CONCLUSIONS

The outline of the development of thought and research on urban morphology in Poland presented above is only an introduction to a broader and more in-depth study. It is impossible to present all researchers and conducted research in a short study. In particular, there is a need for a detailed extension of the search to include studies conducted in various academic centres throughout Poland and also for a broader view through fields of science other than those represented here.

It seems essential to realise that morphological research carried out today is one of the important ways of looking at contemporary developments in built-up environment. Many of them promote spatial and meaningful chaos, posing a threat to the proper development of the human being. It is necessary to see the efforts of researchers also in this perspective - in the perspective of the danger to the integrity of Euclid's three dimensions, time and the infinite number of psychic and spiritual dimensions of the human being. "... urban morphology – based on the three-dimensional form developed in time – is a synthesis of other aspects of a city's existence, and the research into its essence – carried out in many aspects and from many perspectives – is given its fullest form here⁶⁶.

NOTES

1. Marek Koter, Mariusz Kulesza, "The Study of Urban Form in Poland", in *Urban Morphology* 2010, 14(2), (2010):111-120
2. Anne Vernez Moudon, "Urban morphology as an emerging interdisciplinary field", in *Urban Morphology* (1997) 1, pp. 3-10
3. Ibidem, p. 8
4. Marek Koter, Mariusz Kulesza, "The Study of Urban Form in Poland", in *Urban Morphology* 2010, 14(2), (2010), pp. 111-120
5. Mariusz Kulesza, *Morfogeneza miast na obszarze Polski Środkowej w okresie przedrozbiorowym: dawne województwo łęczyckie i sieradzkie*, [*Morphogenesis of urban settlements in Central Poland in the pre-partition period: the former łęczyckie and sieradzkie voivodeship*], (Wyd. UŁ, Łódź, 2001), pp. 13-16

6. Mostly the following works: Kazimierz Dziewoński, „Przeobrażenia osadnictwa miejskiego w Polsce”, in *Czasopismo Geograficzne*, 1947, 18 (1-4), pp. 202-231 and Kazimierz Dziewoński, „Zagadnienie typologii morfologicznej miast w Polsce”, in *Czasopismo Geograficzne*, 1962, 33 (4), pp. 441-457
7. Marek Koter, Mariusz Kulesza, “The Study of Urban Form in Poland”, in *Urban Morphology* 2010, 14(2), (2010), pp. 111-120
8. Marek Koter, Mariusz Kulesza, “The Plans of Medieval Polish Towns”, in *Urban Morphology* (1999) 3(2), pp. 63 – 78; Marek Koter, Mariusz Kulesza, “The Study of Urban Form in Poland”, in *Urban Morphology* (2010) 14(2), pp. 111 – 121
9. Marek Koter, *Geneza układu przestrzennego Łodzi przemysłowej*, (PWN, Warszawa, 1969), publication of his doctoral dissertation.
10. Anna Araszkiewicz, Marek Sobczyński, “Professor Marek Koter Scientific way from cartography to political geography”, in *Region and regionalism* no 8/1/2007, University of Łódź, Governmental Research Institute Silesian Institute Society, Łódź, Opole, 2007, p.8
11. Marek Koter, „Fizjonomia, morfologia i morfogeneza miasta. Przegląd rozwoju oraz próba uściślenia pojęć”, *Zeszyty Naukowe UŁ, Nauki Matematyczno-Przyrodnicze*, seria II, (1974) z. 55, pp. 3–16, Łódź,
12. Marek Koter, „Od fizjonomii do morfogenezy i morfologii porównawczej. Podstawowe zagadnienia teoretyczne morfologii miast”, Zagadnienia geografii historycznej osadnictwa w Polsce, Koter M., Tkocz J. (Eds.), Toruń–Łódź, (1994), pp. 23–32
13. Mariusz Kulesza, *Morfogeneza miast na obszarze Polski Środkowej w okresie przedrozbiorowym: dawne województwo łęczyckie i sieradzkie*, [Morphogenesis of urban settlements in Central Poland in the pre-partition period: the former łęczyckie and sieradzkie voivodeship], (Wyd. UŁ, Łódź, 2001), pp. 18 – 19.
14. Marek Koter, Mariusz Kulesza, “The Study of Urban Form in Poland”, *Urban Morphology* 2010, 14(2), (2010). See also Brykowska, Maria (Ed.) *Oskara Sosnowskiego świat architektury*, (Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2004)
15. Other options which were also considered included leaving the ruins as they were permanently or building up the area of the Old Town with a modern housing estate.
16. Venice Charter, 1964, <https://www.icomos.org/en/participer/179-articles-en-francais/ressources/charters-and-standards/157-the-venice-charter> (accessed on 12.06.2023)
17. Warsaw on UNESCO List of World Heritage <https://whc.unesco.org/en/list/?search=warsaw&order=country> (accessed on 12.06.2023)

18. It is impossible to describe the whole body of work done by these researchers. Just as an example, a few publications related to the problems of the location of Krakow in 1257: Maria Borowiejska-Birkenmajerowa, *Kształt średniowiecznego Krakowa*, (Wydawnictwo Literackie, Krakow 1975), ; Maria Borowiejska-Birkenmajerowa, Kazimierz Kuśnierz, Maciej Motak, *Rekonstrukcja rozplanowania krakowskiego zespołu miejskiego u schyłku XIV wieku*, typescript, (Muzeum Początków Państwa Polskiego w Gnieźnie, Krakow, 1991); Jamroz, Józef, Stanisław, *Mieszczkańska kamienica krakowska*, (Wydawnictwo Literackie, Krakow, 1983), ; Bogusław Krasnowolski, *Lokacyjne układy urbanistyczne na obszarze ziemi Krakowskiej w XIII i XIV wieku*, (Wydawnictwo Naukowe Akademii Pedagogicznej, Krakow, 2004), Marek Łukacz, *Przemiany przestrzenne krakowskiej działki lokacyjnej do połowy XVII wieku*, PhD thesis, typescript, 1992; Marek Łukacz, „Przemiany układu funkcjonalno-przestrzennego krakowskich domów mieszczańskich w okresie gotyku i początku renesansu: Międzynarodowa Konferencja Konserwatorska Krakow 2000. Conference papers, Krakow, 2002; Marek Łukacz, „Geneza ukształtowania się najczęściej realizowanego typu kamienicy krakowskiej”, *Wiadomości Konserwatorskie* (2003) 14.; Marek Łukacz, „Średniowieczne domy lokacyjnego Krakowa”, *Technical Transactions 7-A/2011*.
19. Feliks Kiryk, *Miasta Małopolskie w średniowieczu i czasach nowożytnych*, (Avalon, Krakow, 2013), pp. 18 – 19 - Małopolska means here the Krakow, Sandomierz and Lublin voivodships of that time.
20. *Karta Krakowska 2000a*, *Wiadomości Konserwatorskie* 7,8/2000:10-13 *Karta Krakowska 2000b* <https://www.triestecontemporanea.it/pag5-e.htm> (accessed on 17.01.2023)
21. These problems have been presented more extensively in Kantarek, Anna Agata, *On Orientation in The Space of The City*, (Lambert Academic Publishing, Saarbrücken, 2013), pp. 32 – 35.
22. Kazimierz Wejchert, *Elementy kompozycji urbanistycznej*, Arkady, Warsaw, 1974, p. 25)
23. Janusz Bogdanowski, Maria Łuczyńska-Bruzda, Zygmunt Novák, *Architektura krajobrazu*, (PWN, Krakow, 1973),
24. Ibidem, p. 19
25. Ibidem, p. 19
26. Kazimierz Wejchert in Kazimierz Wejchert, *Elementy kompozycji urbanistycznej*, (Arkady, Warsaw, 1974), presented the main elements of urban fabric defining its structure. The classification remained clearly under the influence of K. Lynch, yet it refers to the structure of the city itself, not only to the perception of the city. Wejchert lists the following elements: streets, districts, edges, nodes, dominants, outstanding landscape elements, characteristic features. He also introduces the general concept of *elements crystallising the city plan*, which relies on

- the perceivable principle or major structural element which we remember: “Elements crystallising the city plan are its components which constitute its main features, clearly visible and easy to remember. (...) Their characteristic spatial features symbolise the whole city in the eyes of its inhabitants; clearly visible in the space are absorbed by all users, regardless of their background.”
27. Kevin Lynch, *The Image of the City*, (The M.I.T. Press, Cambridge-Massachusetts-London, 1966); Gordon Cullen, *The Concise Townscape*, (Architectural Press, London, 1971); Yoshinobu Ashihara, *Exterior Design in Architecture*, (Van Nostrand Reinhold Company, IInd ed., 1981),
 28. Stanisław Łoza, *Architekci i Budowniczy w Polsce*, (Budownictwo i Architektura, Warszawa, 1954),
 29. These factors are the factors of natural conditions, fortification (safety), transportation, the economic factor, and the moral/legal factor.
 30. Tadeusz Tołwiński, *Urbanistyka, Tom I. Budowa miasta w przeszłości*, (Wyd. Ministerstwa Odbudowy, Warsaw, 1948), pp. 26 – 27
 31. Anna Agata Kantarek, *On Orientation in The Space of The City*, (Lambert Academic Publishing, Saarbrücken, 2013), pp. 32 – 35
 32. Bolesław Malisz, „Planowanie miast. Podstawy teoretyczne”, *Polska urbanistyka współczesna*. część 1. Opracowania z lat 1959–1969 (1975), 21-50, Arkady, Warsaw, 1975, pp. 21 – 50 and Malisz, Bolesław, *Zarys teorii kształtowania układów osadniczych*, (Arkady, Warsaw, 1981), pp. 226 – 227
 33. Bolesław Malisz, „Planowanie miast. Podstawy teoretyczne”, *Polska urbanistyka współczesna*. część 1. Opracowania z lat 1959–1969 (1975), 21-50, Arkady, Warsaw, 1975, p. 43
 34. Bolesław Malisz, *Zarys teorii kształtowania układów osadniczych*, (Arkady, Warsaw, 1981), p.226
 35. Janusz Bogdanowski, *Kompozycja i planowanie w architekturze krajobrazu*, (Ossolineum/PAN, Wrocław–Warsaw–Krakow–Gdansk, 1976), p. 64
 36. Wacław Ostrowski, *Urbanistyka współczesna*, (Arkady, Warsaw, 1975), pp. 146 – 150
 37. Kazimierz Wejchert, *Elementy kompozycji urbanistycznej*, (Arkady, Warsaw, 1974), p. 84
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57. A geographer and historian (the Faculty of Geographical Sciences, University of Lodz). His scientific achievements mainly concern the issues of spatial structures of settlement and cultural heritage in geographical and historical perspective, with particular emphasis on the origin and changes in rural settlement patterns. Some new work uses graph methods to analyse the variability of planning over time. He devotes much attention to the morphological transformation of city centres in Poland and villages incorporated into the cities or located in suburban zones (Łukasz Musiaka, Tomasz Figlus, Robert Szymtykie, “Models of morphological transformations of centres of the largest Polish cities after World War II”, *European Planning Studies*, 2021, 29 (3), pp. 511-535). He recently participated in a research project aimed at a historical and urban study of Łódź and its rural components.
58. A geographer with postgraduate studies in the field of GIS (the Faculty of Geographical Sciences, University of Lodz). In his scientific work, he combines urban geography, historical geography and cultural heritage studies, particularly concentrating on urban morphology. He focuses on the spatial layout analyses of historical cities and socio-spatial-economic role of cultural heritage. At present, he is mainly focused on the spatial transformations of post-war landscape, post-war recovery, and revitalisation (Łukasz Musiaka, Tomasz Figlus, Robert Szymtykie, “Models of morphological transformations of centres of the largest Polish cities after World War II”, *European Planning Studies*, 2021, 29 (3), pp. 511-535). Currently, he is leading a grant entitled ‘Models of morphological transformations of the large cities of the former Recovered Territories after 1945 in the context of challenges of contemporary urban spatial policy.
59. A geographer, (the Faculty of Geographical Sciences, University of Lodz), the author of PhD thesis: Magdalena Deptuła, *Proces kształtowania się zjawiska fringe belt w miastach polskich na wybranych przykładach*, [*The Process of*

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62. Małgorzata Hanzl is an architect and associate professor at Lodz University of Technology, Visiting scholar at Warsaw University of Technology, Architecture for the Society of Knowledge March Program with a Fulbright Senior Award in Massachusetts University of Technology, SENSEable City Laboratory in 2014. Her research focuses on urban morphology in relations to cultural and anthropological studies. Her recent book addresses Jewish Culture and Urban Form in Central Poland before the Holocaust as a case study (Małgorzata Hanzl, *Jewish Culture and Urban Form. A Case Study of Central Poland before the Holocaust*, (Routledge, 2022)). Moreover, she deals with the normative issues of urban design in the context of postindustrial and Modernist fabric. In her research she explores topics of urban health, walkability and public space design from both qualitative and quantitative perspective (Małgorzata Hanzl, "Culture as a Determinant of City Form. The Case of the Former Jewish District in Lodz", *Cities in Transformation Research & Design: Ideas, Methods, Techniques, Tools, Case Studies*, Bovati M., Caja M., Floridi G., Landsberger M. (Eds.), vol.1,

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63. Monika Ewa Adamska is an architect and associate professor at Opole University of Technology and head of the Architecture and Urban Planning Department. She has received research grants from the Herder Institute in Marburg (2015, 2016) and the Prussian Cultural Heritage Foundation in Berlin (2017, 2022). In her research, she focuses on urban morphology and spatial transformations of historical structures, in particular the issues of the post-war rebuilding of historic towns in the Silesia region and contemporary revitalisation processes, with a special attention paid to the market squares (Monika Adamska, *Transformacje rynków średniowiecznych miast Śląska Opolskiego od XVIII wieku do czasów współczesnych. Przerwane tradycje, zachowane dziedzictwo, nowe narracje*, (Oficyna Wydawnicza Politechniki Opolskiej, Opole, 2019)). She also reconstructs the image of Silesian towns on the basis of the 18th century topographic maps. Her research also covers the issues of spatial structure and morphogenesis of Frederician rural settlement patterns, with particular emphasis on the origin and changes of radially planned layouts.
64. Zbigniew Myczkowski, professor at Cracow University of Technology, is the author of the landscape documentation of the Cultural Park of the Old Town areas in Krakow (together with team: A. Böhm, K. Pawłowska, A. Mitkowska, K. Dąbrowska-BudziŃo, P. Patoczka, A. Zachariasz) – *Uchwała nr XLIII/544/12 Rady Miasta Krakowa z dnia 4 kwietnia 2012 r. w sprawie zatwierdzenia „Planu ochrony Parku Kulturowego Stare Miasto w Krakowie”*, 2012 https://www.bip.krakow.pl/?dok_id=167&sub_dok_id=167&sub=uchwała&query=id%3D19115%26typ%3Du (accessed on 05.03.2023) and the old centre of Nowa Huta (together with team: K. Wielgus, U. Forczek-Brataniec, K. Latusek, K. Chajdys, P. Nosalska, W. Rymza-Mazur, O. Zapolska) - *Uchwała nr XXIX/757/19 Rady Miasta Krakowa, z dnia 20 listopada 2019 roku w sprawie utworzenia „parku kulturowego pod nazwą Park Kulturowy Nowa Huta”*, 2019.
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THE STUDY OF URBAN FORM IN BRAZIL AND PORTUGAL: FROM A GENERAL OVERVIEW TO A FOCUS ON BELO HORIZONTE, BRASILIA, AND PORTO

ABSTRACT

In 2010, the Portuguese-language Network of Urban Morphology (PNUM) was created under the umbrella of the International Seminar on Urban Form (ISUF). Over the last 12 years PNUM has been contributing towards the promotion of urban morphology in Brazil and Portugal, fostering collaboration between different researchers in both countries. This paper is in four parts. The first part has an institutional nature, addressing PNUM's origins, main developments, and fundamental characteristics. The second part identifies seminal morphological studies carried out by Portuguese-language researchers, making evident the influence of this intellectual heritage in the creation of PNUM. The wide diversity of present morphological research in Portugal and Brazil (with significant differences between the North, Northeast, Centre-West, Southeast and South regions) is explored in the third part. Finally, the paper addresses some fundamental issues that are being explored by the authors of this paper: i. the definition of urban morphology as a field of knowledge; ii. the relationships between the physical and social dimensions of human settlements; iii. the challenges of teaching urban morphology as an interdisciplinary field; iv. the innovative contributions to the development of dominant approaches in the field; and, finally, v. the relationships between scientific research and professional practice.

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KEY WORDS

URBAN MORPHOLOGY

URBAN FORM

PNUM

ISUF

THE PORTUGUESE-LANGUAGE NETWORK OF URBAN MORPHOLOGY

In 1994 a group of twenty academics and practitioners, from France, Great Britain, Italy, Switzerland, and the United States, met in Lausanne for two days to discuss the physical form of settlements and how this is shaped by different agents and processes over time. In the next two years, the group met again in Lausanne, but in 1997 it hosted a first open conference, in Birmingham, attracting many researchers. The conferences of Cincinnati, Ouro Preto (convened by Stael Pereira Costa), Guangzhou and Brisbane in the following decade or so consolidated ISUF as a truly worldwide scientific network.

In the Glasgow/Newcastle and London conferences, in 2004 and 2005, ISUF discussed the appointment of regional representatives for establishing its presence in various continents and regions. The Stockholm conference, in 2006, was decisive for the creation of regional networks. It was the launching event promoted by the first ISUF regional network, the Nordic Network of Urban Morphology (NNUM). In that period an Italian network emerged, benefiting from its relationship with the Centro Internazionale per lo Studio dei Processi Urbani e Territoriali (CISPUT). Throughout the 2010s, seven networks were created. Their formation enabled the development of intermediate structures that, in collaboration with ISUF, are closer to the many researchers and practitioners working on the physical form of cities in different parts of the world. As ISUF itself, most networks have been organizing their own conferences. In addition, almost all have organized an ISUF conference since the Stockholm event.

PNUM (by then a 'Portuguese' Network) was established in ISUF's Hamburg conference in 2010. Since then, PNUM has expanded from a 'Portuguese' to a 'Portuguese-language' network, embracing Brazil, promoting the study of urban form in the two countries, and strengthening the relation of Portuguese-language urban morphologists with members of ISUF and other regional networks.

One of PNUM's main activities over the last twelve years has been the organization of annual conferences. Ten conferences, six in Portugal and four in Brazil, have been realized since the first gathering in Porto, back in 2011 (Table 1). The second conference, coordinated by Teresa Marat-Mendes was particularly relevant as it attracted a significant number of Brazilian colleagues (Figure 1), leading to the formalization of PNUM as a 'Portuguese-language' Network. The last conference 'Challenges for the urban forms of the twenty-first century' took place in Rio de Janeiro in 2022, November 29 to December 1, coordinated by Vera Tângari. One of the most successful aspects of the conference was the dialogue between urban morphology and related fields of knowledge, notably expressed in four roundtables.

Another fundamental element of PNUM is the *Revista de Morfologia Urbana* (RMU). The *Revista* began publication in 2013 (see Table 2 for the contents of the first issue), edited by Vítor Oliveira, and associate editors Frederico

de Holanda and Paulo Pinho, with close links with ISUF journal's Urban Morphology edited by Jeremy Whitehand. RMU is published in Portuguese, two issues per year. After early 2022 it has been edited by Renato Leão Rego, Gislaine Beloto and Karin Meneguetti. The last issue has fourteen papers, including ten articles emerging from the first symposium of Syntax Brazil (coordinated by Frederico de Holanda, Valério Medeiros and Vânia Loureiro) and the translation of one of the most influential papers published in Urban Morphology – 'Aspects of urban form'.¹

2. EARLY MORPHOLOGICAL STUDIES

Table 1. PNUM Conferences 2011-2023

YEAR	PLACE	MAIN CONVENER	THEME
2011	Porto	Mário Fernandes	Urban morphology in Portugal: approaches and perspectives
2012	Lisbon	Teresa Marat-Mendes	Urban morphology in Portuguese-speaking countries
2013	Coimbra	Nuno Norte Pinto	Urban form in territories of Portuguese heritage: analysis, design, quantification
2015	Brasilia	Gabriela Tenorio	Urban configuration and the challenges of urbanity
2016	Guimarães	Jorge Correia Miguel Bandeira	The spaces of urban morphology
2017	Vitória	Eneida Mendonça	Urban morphology: territory, landscape and planning
2018	Porto	Teresa Calix	The making of the territory: forms, processes and purposes
2019	Maringá	Renato Leão Rego	Urban form and nature
2021	Lisbon	António Costa	Identities and dynamics of urban reconfiguration in the digital era
2022	Rio de Janeiro	Vera Tângari	Challenges for the urban forms of the 21st century
2023	Sintra	Teresa Marat-Mendes	Urban morphology: planning, recovery and resilience

Table 2. RMU first issue, December 2013

EDITORIAL	
V. Oliveira	Urban morphology
PAPERS	
S. Pinto	Regular = planned versus irregular = spontaneous
D. Viana, J. Sanz, A. Natálio	Learning with the urban form of (in)formal Maputo
V. Oliveira, M. Silva	Morpho: urban morphological research and planning practice
J. Whitehand	British urban morphology: the Conzenian tradition
VIEWPOINTS	
A. Perdicoulis	Visual dominance
J. Mourão	The global offer of urban land and housing as subversion of urbanism
N. Pinto	Cellular automata models as tools for urban form analysis



Fig. 1. PNUM Conference 2012, field trip in Lisbon castle led by Teresa Marat-Mendes and Mafalda Sampayo.

Over the last years, some books, journal special issues and papers have partially reviewed urban morphology in Portugal² and Brazil.³ These are fundamental references for this paper, particularly for the organization of second and third sections. Yet, this paper doesn't have the pretention of offering a complete panorama, but rather, a view of the field through selected examples.

One of the fundamental elements to consider when addressing the antecedents of urban morphology in Portugal and Brazil is the Age of Discovery and the advances it drove in the field of cartography. This would be a key source of information for morphological research – mostly in the historical and geographical traditions – over the next centuries. Increasingly accurate maps have been prepared to navigate and to guide and register the construction of military structures and the foundation of settlements in various parts of the world.

2.1. Portugal

Systematic urban morphological research in Portugal started in the first half of the twentieth century, mainly under four disciplinary backgrounds – geography, history, architecture, and planning. Amorim Girão, Orlando Ribeiro and Pereira de Oliveira are some of the pioneers and most influential geographers in the study of settlement form over the twentieth century. Their investigation encompasses a diversity of interests, from 'particular' analysis of the evolution

of one city⁴ to ‘general’ methodological debate on the study of Portuguese towns⁵ (for more information of early research works developed under this geographical approach see Fernandes, M. G. “O estudo da forma urbana em Portugal, entre os geógrafos.”). The mid-twentieth century was particularly rich for Portuguese urban history. Three fundamental works have been developed in less than ten years: Teixeira da Mota and Armando Cortesão published an extensive collection of early manuscript charts, Luis Silveira gathered a series of fundamental iconographic elements of Portuguese colonial towns around the world, and Mário Chico assessed the influence of Renaissance models in Portuguese settlements in India.⁶

One of the main references of morphological research with an architectural perspective is a survey of regional architecture carried out by the National Union of Architects, between 1955 and 1960.⁷ Confronted by the oppressive censorship of the Portuguese dictatorship and by a radical international style, Portuguese architects felt the need to look for roots in vernacular architecture, leading to this comprehensive analysis of the national territory. Early morphological research work with a planning perspective was mainly carried out in the Laboratório Nacional de Engenharia Civil / LNEC by researchers such as Luz Valente Pereira and Nuno Portas. In his research work between 1962 and 1974, Nuno Portas went from typological research, on collective housing, to the analysis of the city.⁸ Pereira (1982) addresses the role of urban form in planning practice, introducing the concept of ‘urban space’ as an object linking the building and city scales.⁹

2.2. Brazil

Like Portugal, the systematic study of urban form in Brazil started in the first half of the twentieth century. The first works addressed economic, social and political aspects of Brazilian urban forms, and were undertaken by historians, like Buarque de Holanda (1936), and sociologists, such as Freire (1933). Soon, an architectural perspective on urban form started to be developed.

By that time, there was a hegemony of modernist thinking in architecture, urban design and planning: the Ministry of Education, designed by Oscar Niemeyer, Lucio Costa and colleagues in 1936 in Rio de Janeiro, was a landmark in modern architecture by any worldwide standard.¹⁰ Not only did it materialised the Corbusean ‘five principles of modern architecture’ in a unprecedented large building complex, as it expressed a new concept of urban space, by the abandonment of the traditional street block, leaving the building complex standing free in its plot with setbacks on all sides, likewise accessible from all of them. Modernism was launching deep roots in architectural thinking and practice in Brazil.

In the second half of the twentieth century four lines of morphological research were particularly relevant. The first was a continuing concern with settlement

history. The key proposal was a broader view of urban and cultural heritage, comprehensively addressing the development of historical sites.¹¹ The second line included the analysis of population evolution and functional aspects of cities, (addressed in relation to politics and social problems). It included contributions from other disciplines, such as sociology and economics.¹² A very different line of thought was developed by the group initially coordinated by Carlos Nelson dos Santos (1984), highlighting the importance of plot subdivision on urban form analysis, and the development of spontaneous settlements – arguing for planning policies that could protect the maintenance of certain social groups on their settlements (this has been expanded by Melgaço, Libânio and Pereira Costa.¹³ A fourth line of research was concerned with new urban forms, and especially with their impact on the natural landscape. The remarkable work promoted the National Network of Research QUAPÁ-SEL, focusing on private and public open spaces, must be highlighted.¹⁴

3. RECENT MORPHOLOGICAL RESEARCH IN PORTUGAL AND BRAZIL

3.1. Portugal

After PNUM foundation in 2010, the study of urban form in Portugal has been mainly active in four nuclei – Lisbon, Porto (hosting two conferences each), Braga/Guimarães, and Coimbra (holding one conference each). In Lisbon, architectural and historical perspectives have been dominant. The work of Manuel Teixeira is noteworthy, establishing a strong architectural core at Instituto Universitario de Lisboa (IUL), funding the journal *Urbanismo de Origem Portuguesa*, and publishing influential research on the evolution of Portuguese cities¹⁵ and on some particular building types.¹⁶ This architectural core at IUL has attracted many relevant researchers, like Alexandra Paio, Rosália Guerreiro, Sara Eloy, and Teresa Marat-Mendes. Marat-Mendes has been a central figure of PNUM since its inception, being its president between 2014 and 2017, and organizing two conferences in 2012 and 2023. She has been addressing urban form at different scales from an historical perspective, and exploring the relationship between urban morphology and other fields of knowledge.¹⁷ Another important core, combining the architectural and historical perspectives, based on the legacy of José Lamas,¹⁸ has been coordinated by Carlos Dias Coelho. Dias Coelho and his colleagues in the Universidade de Lisboa have been publishing a set of didactic books in urban morphology, exploring the different elements of urban form¹⁹ and the relevance of time.²⁰ Within architecture, a quantitative approach has been consolidated in the last years. One of its central researchers is Teresa Heitor. Heitor has been fundamental in the dissemination of Space Syntax Theory in Portugal – from her PhD thesis on the vulnerability of a Lisbon neighbourhood,²¹ to the understanding of complex buildings, and the organization of the International Space Syntax Symposium in 2017. José Pinto Duarte, José Beirão and Jorge

Gil have been contributing to this quantitative approach, using parametric design, quantitative urban typology²² and shape grammars.²³

The study of urban form in Porto has been mainly developed in the Universidade do Porto in its faculties of architecture (FAUP), arts and humanities (FLUP), and engineering (FEUP) – the latter will be expanded in the next section. Research at FAUP has been mainly adopting a planning perspective (despite the existence of other important studies like Ferreira (1995) and Barata (1996)), organized around Nuno Portas, a key reference who combined in a unique way research, teaching and practice, both at the local and central governments. Similarly, Pereira de Oliveira has framed the development of morphological research at FLUP, supervising some notable thesis like Mário Fernandes' analysis of urban form and planning in the north of Portugal, between 1852 and 1926.²⁴ Fernandes has been developing this geographical approach, and was actively involved in the early years of PNUM organizing its first conference in 2011. In addition, the work of David Viana should be mentioned, in particular his activity both in morphological research and planning practice, and his focus on Mozambique.²⁵

Geography and history have been dominant perspectives in the Universidade do Minho. Miguel Bandeira (another former student of Pereira de Oliveira) had a two-fold activity in Braga – investigating the evolution of its urban form²⁶ and serving as city councillor. Jorge Correia has been working on the physical form of Portuguese settlements in North Africa.²⁷ Bandeira and Correia have organized the PNUM conference in 2016.

Finally, the faculty of sciences and technology in the Universidade de Coimbra has been another key driver of morphological research in Portugal. Particularly relevant is the work of Walter Rossa and Mário Krüger: the former addressing the history of Portuguese urbanism,²⁸ with a particular interest on Lisbon,²⁹ the later contributing to the dissemination of space syntax, after the publication of some fundamental papers in the late 1970s, and recently revisiting the work of Alberti.³⁰

3.2. Brazil

There are research groups organised in various Brazilian state capitals, distributed through all regions – North, Northeast, Centre-West, Southeast and South. Some examples of research in urban morphology, both concerning structured groups and research networks, and individual academics, are presented in the next paragraphs.

North region

In the North region, Ana Cláudia Cardoso coordinates, together with Miguel Monteiro, the research network UrbisAmazônia. They have studied the peri-urban schemes, or what they call the *counter-cartography* of traditional people's settlements. On the other hand, her colleague at the same institution

(Universidade Federal do Pará) José Júlio Lima has been researching urban configuration in expansion areas in this region. Both have completed graduate studies at Oxford Brookes University, with a strong tradition in urban design: Lima has completed the master programme, and Cardoso the doctoral programme. Over the last two decades they have been applying the historico-geographical and process-typological approaches, and space syntax, in the analysis of the particular context of Amazonas and Pará states – see, for example, Lima (2001) and Cardoso and Lima (2006).

Northeast region

In the Northeast region academics in various capitals have been contributing to the field. In Fortaleza, Antônio Cavalcante (Universidade Federal do Ceará) is a former PhD student of the graduate program in Brasília (supervised by Holanda). He is an active member of the research group Morphological Dimensions of the Urbanization Process – DIMPU, coordinated by Frederico de Holanda. His work builds an interface with transports issues, analysing the relationships between urban structure and mobility modes. Cavalcante and Holanda have been examining Brazilian municipalities addressing relations between three kinds of *urban centres*, as defined by Holanda: i. the *functional centre*, minimizing distance to jobs; ii. the *demographic centre*, minimizing distance to inhabitants; and iii. the *morphological centre*, minimizing distance to all street segments. They use space syntax and apply geo-processing techniques to deal with census data and governmental agencies' data on distribution of jobs.

In Natal, Edja Trigueiro (Universidade Federal do Rio Grande do Norte) is a former PhD student of Bill Hillier and coordinates the research group Morphology and Uses in Architecture / MUsA. The group investigates the configuration of residential modern houses vis-à-vis traditional housing, and, at the urban scale, the relations between urban schemes and social diversity, vitality and urbanity.

In Recife, Luiz Amorim (Universidade Federal de Pernambuco / UFPE) has been focusing on the configuration of university campi. He has also been dealing with the obsolescence of urban centres, and the possibility of revitalising such areas, both with housing and with spaces for knowledge, considering the possibility of urban renovation in the decaying Recife's urban centre. Also, in UFPE, Norma Lacerda has been exploring the concept of urban tissue – and representative basic types – to support proposals for legislation on land use and occupation.³¹

Centre-West region

Brazil's capital is in the Centre-West region. Its federal university – Universidade de Brasília (UnB) – was conceived, from its inception, as an institution which would: i. attract top academics from all over the country and abroad; and ii. constitute a centre of production of innovative knowledge, thus prioritising the excellency of research and graduate programs. While the next section amplifies this specific research endeavour, the following paragraphs offer an overall view of the knowledge produced in the region.

The conditions under which a strong tradition in urban morphological studies has developed was mentioned in the last section. The residents of Brasília were part of a major 'experiment' in city design, as inhabitants of the modernistic event *par excellence*. Then, it is not by chance that architecture was one of the first bachelor degree courses offered by the university; that the first class in the nascent campus, in 1961, in the open air gardens, was a theory class in architecture delivered by Edgar Graeff; and that the first graduate program in architecture in Brazil was founded, in the same year, closed by the military dictatorship three years later, to be re-opened only in 1976, as a program in urban planning. It took another ten years (1986) for the course in *urban design* to be offered.

From the mid-1980s onwards, four editions (1984, 1986, 1988, 1991) of a conference brought architecture at the city scale to the frontstage: the Seminars on Urban Design in Brazil, initially conceived by Benamy Turkienicz (then based at UnB). Participants had the privilege to engage with prominent researchers from various countries, and, likewise, from several research trends. Philippe Panerai (France), Stanford Anderson (USA), Bill Hillier (UK) and Carlos Nelson dos Santos (Brazil), among others, offered keynote lectures which presented their particular stances, but which, at the same time, had in common an effort to re-valorise a *disciplinary look* toward the urban phenomenon – a *morphological* viewpoint on cities, against the generalist and ill-conceived 'interdisciplinary' approaches of late-1960's and 1970's. Brasília's realisation helped surfacing both a critique on how modernist thinkers and practitioners considered urban morphology in the past, and a fresh look on how cities should be configured in the future.

This approach to urban configuration demanded a widening of evidence in two directions: i. a broader approach to *contemporary* evidence, by which a wider vocabulary in urban form was considered, and its underlying logic revealed: self-produced settlements such as *favelas*, the urban tissue produced by commercial builders, settlements designed by professionals, from smaller to larger scales (from a university campus or a Brasília superblock to a new state capital, such as Palmas); and ii. a broader approach to *historical* evidence, by which relations were established between a 'modern' city like Brasília and truly ancient settlements, like a Classic Maya pre-Columbian ceremonial centre. By this token, it was revealed how what seemed 'old', as 'traditional' urban forms (i.e., pre-modern ones), carried with them precious lessons to be applied today; and what seemed 'new', as a contemporary city designed *ex nihilo*, was actually deeply rooted in history.

Southeast region

As mentioned above, the constant and growing presence of Brazilian researchers in the International Seminar on Urban Form led the ISUF council to decide to locate the 2007 conference in Ouro Preto, Minas Gerais. The realization of this conference, coordinated by Stael Pereira Costa and the Landscape Laboratory (Universidade Federal de Minas Gerais / UFMG), gave high visibility to the work of the professors involved, who were then invited to integrate research networks in several areas, in particular the group QUAPÁ-SEL led by Silvio Soares Macedo. The work developed in the Landscape Laboratory will be expanded in the next section.

In addition to the work carried out by Pereira Costa and her colleagues in Minas Gerais, the research activity developed in the other states of the Southeast region has been particularly dynamic. In Espírito Santo, Eneida Mendonça has organized the PNUM conference in 2017, making it part of a successful process of morphological dissemination, including the realization of workshops and the development of PhD and MSc thesis.

In São Paulo the work of Silvio Soares Macedo (and his colleagues, notably Eugenio Queiroga) is a fundamental reference. In the mid-1980s Macedo started editing the journal *Paisagem e Ambiente*, in the 1990s he created a new research centre and launched a series of projects on the so-called *Quadro do Paisagismo no Brasil / QUAPÁ*,³² and in the 2000s Macedo created the national network QUAPÁ-SEL including more than 20 universities, widening the focus from isolated spaces to systems of public open spaces. In addition to morphological work in São Paulo, research developed in Campinas by Evandro Monteiro and Jonathas Silva should also be stressed.

In Rio de Janeiro, strongly related to Macedo and QUAPÁ-SEL, Vera Tângari has been developing research on public open spaces, relating urban forms and natural landscapes – contributing to a national review of this theme.³³ As mentioned earlier, Tângari has organized the PNUM conference in 2022. Finally, Vinicius Netto's books 'City and society' and 'The social fabric of cities'³⁴ aim at moving from form to information, relating minds, society (individual and social cognitions) and city. Since early 2022, and somehow illustrating the relation between Portuguese and Brazilian researchers fostered by PNUM, Netto is based in the Universidade do Porto.

South region

Morphological research in the South region has been mostly carried out in four cities: Maringá (Paraná), Florianópolis (Santa Catarina), Pelotas and Porto Alegre (Rio Grande do Sul). In Maringá, research has been driven by Renato Leão Rego, Karin Meneguetti and Gislaine Beloto. They have addressed the main characteristics of urban morphology and have applied the theories, concepts and methods of this field of knowledge (with particular interest on

the historico-geographical and process-typological approaches) in the analysis of Paraná's planned cities of British influence,³⁵ and in the study of Maringá's environmental dimension.³⁶ Rego, Meneguetti and Beloto have organized PNUM's annual conference in 2019 and are, since early 2022, the RMU editors.

The study of urban form in Florianópolis is mainly developed by a former RMU editor – Renato Saboya (together with Júlio Vargas and Vinicius Netto, between 2019 and 2021). Using space syntax, Saboya and his colleagues have been exploring the influence of physical form on urban vitality, with a particular focus on co-presence and socioeconomic activities.³⁷

In Porto Alegre, Romulo Krafta develops another quantitative line of morphological investigation. Krafta developed his master and doctoral theses in the UK, in Oxford and Cambridge (as well as post-doctoral work in London, with Michael Batty). At that time, Krafta proposed a set of urban and intra-urban models based on configurational readings.³⁸

Finally, Mauricio Polidori has been developing his urban modelling activity at the Urbanism Laboratory (Universidade Federal de Pelotas). From the urban growth simulation model proposed in his PhD thesis,³⁹ to the UrbanMetrics and CityCell software, and the PeopleGrid platform, his research has been addressing the formulation of instruments devoted to the analysis of existing forms and the evaluation of future urban forms.

4. A FOCUS ON BELO HORIZONTE, BRASÍLIA, AND PORTO

4.1. Belo Horizonte: Landscape Laboratory (LaP)

The origins of morphological studies at the school of architecture in UFMG, and its Landscape Laboratory, can be found in the research carried out by Sylvio de Vasconcellos on Minas Gerais' colonial cities after 1960.⁴⁰

Stagnant for a long time, research related to practice and the community re-emerged in 2007, bringing teachers and students together in projects for six master plans in Minas Gerais' cities. The morphological contribution made evident the flexibility of application of zoning policies and expansion perimeters using urban evolution techniques. Moreover, contributions to these plans included typo-morphological studies for the establishment of land use and occupation models, allied to environmental well-being. These interdisciplinary studies brought innovations to morphology work, expanding the scale and incorporating the 'natural landscape', encompassing concepts of urban landscape, landscape ecology and territorial structuring on a large-scale framework. The morphological theories prompted students from the landscape and environment research branch of the Graduate Program in Built Environment and Sustainable Heritage (PACPS) to investigate the conceptual

bases and their application in Brazil.

Three professors, Staél Pereira Costa, Marieta Maciel and Maria Cristina Teixeira coordinated the Research Centre for Environmental Design of the Directory of Research Groups of the National Council of Scientific and Technological Development (CNPq), created in 1997, and the Landscape Laboratory linked to PACPS.

This laboratory aims at building a conceptual and methodological framework for the landscape of sustainable development, developing research in urban morphology of Brazilian cities, and improving the research work on housing development plans and regional planning, with repercussions on undergraduate and graduate education. Over the years, LaP has brought together undergraduate and graduate students who have been awarded research grants by different entities.

The open space research aimed at supporting QUAPÁ-SEL, regarding the characterization of Belo Horizonte. During the analysis, the existence of open spaces was observed interspersed with residential areas that resembled the morphological characteristics entitled by M.R.G. Conzen (1960) as fringe belts. The possibility of using them as a connection between the elements defined by Forman (2014) like matrix, corridors and paths was envisioned and, thus, they were structured by LaP as an ecologically sustainable mosaic, which was an innovation in the proposed approach. Due to its relevance and innovation, the theme was also the subject of Simão's master's dissertation (2011), focusing on the central areas of Belo Horizonte. These were also developed simultaneously by Meneguetti and Pereira Costa (2015) in Maringá, and Coccozza and Libera (2013) in Uberlândia. During the open space system research, a subtopic relevant to the global theme, acknowledged the open spaces in housings schemes. This research, which received grants from CNPq, investigated the projects of housing complexes constructed from 1996 to 2010 and their respective transformations resulting from human actions.⁴¹

Regarding studies on urban morphology, there is a constant flow of investigations. As professors who present the concepts of urban morphology in postgraduate courses in Brazil, it has become a compulsory duty to develop comparisons between the English and Italian schools to carry out a complete morphological analysis, such as the morphological study in Brazil.⁴² The book 'Fundamentals of urban morphology', published in 2015, brought together concepts from the two traditional schools in the study of Ouro Preto's urban landscape. The theoretical and practical perspective of the historico-geographical approach and the deepening of the process-typological approaches awakened the interest of new researchers for the analysis of building types and landscape transformations. The number of morphological works developed after the book launch was significant, and its second edition in 2017, has been widely adopted by Brazilian teachers and students.

New contributions arose from the need to rescue the typo-morphological characteristics of an urban nucleus, Bento Rodrigues, destroyed by the rupture of an iron ore tailings dam, in 2015. Research made evident the typological elements to be preserved as part of the memory of the village.⁴³

The Landscape Laboratory promotes theoretical and methodological approaches, inspiring new investigations, bringing together different scholars on the subject in which geographical, historical, cultural, environmental, economic, social and urban aspects cross-cut, and finally, promoting new possibilities to contemplate urban landscapes.

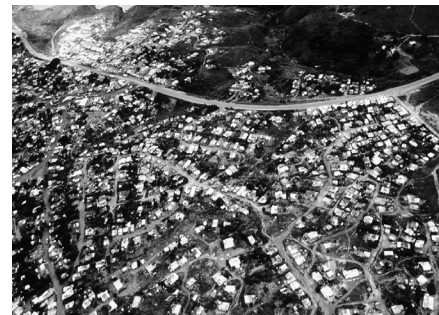
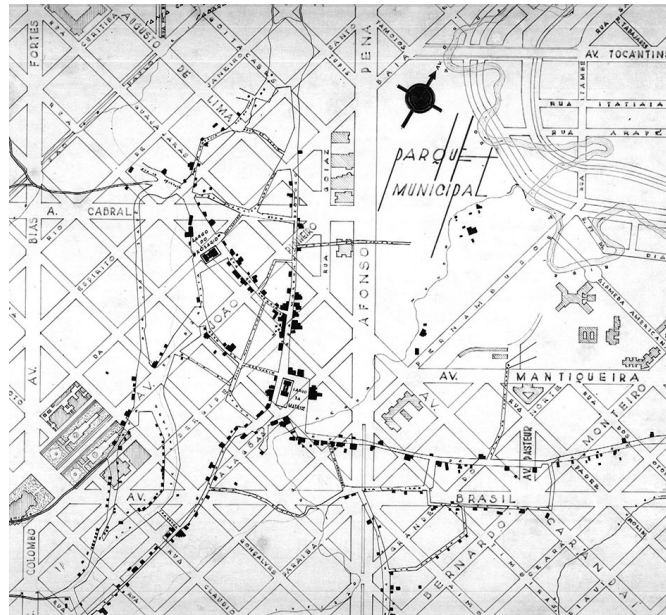
4.2. Brasília: Morphological Dimensions of the Urbanization Process (DIMPU)

Brasília was designed by Lucio Costa in 1957, after winning a national competition for the new city – the Pilot Plan. The city is thus born with the signature of one of the most respected Brazilian modern architects and has been since considered one of the most important realisations of twentieth century architecture at the urban scale on Earth – or perhaps *the* most important one.

Naturally, the capital became one of the main foci of attention among teachers and researchers at the faculty of architecture and urbanism in UnB. Academics gathered in research teams, including the already mentioned group DIMPU, founded in 1986. DIMPU aimed at understanding the performance of the city's architecture in several aspects. In other words, how the capital's configuration affected people living there, thus considering architecture as an independent variable which impinges upon modes of having, acting, feeling, and thinking – in a nutshell, modes of life.

DIMPU's research program has attempted to leave behind two common stances found in the literature: i. the 'dictatorship of form', by which a one-to-one relationship is established between configuration and behaviour; and ii. the 'neutrality of form', by which 'free-will' come to the fore and no influence of architecture in daily lives may be accounted for. And yet, it seems obvious that architecture does affect our daily lives, both practically and expressively, but that, at the same time, its 'determination' concerns the setting of both: i. limits to behaviour that may, or may not, be overcome depending on the capacity or the will of people to do so, and ii. possibilities to behaviour, which may, or may not, be explored, in accordance, again, to the will and the capacity of people. Understanding issues as socio-spatial stratification in cities depends, therefore, on acknowledging the faster transformation of modes of life in its relation to the greater inertia of built space in which these modes of life take place, and to which, in the short run, they must be adapted and 'pay a price' to unfold – and this happens while the physical configuration of places is not transformed to catch up with behavioural changes.

Within this framework several works have been produced – articles, books, MSc and PhD theses, and urban design projects. The most ambitious is truly



UP: Fig. 2. Belo Horizonte: overlap of Arraial de Belo Horizonte and the new capital (a), formal and informal settlements (b) (source: Fundação João Pinheiro, Macedo 2001).

DOWN: Fig. 3. Brasília, two extreme morphic types: the Esplanade of Ministries (a) and the Paranoá favela (b) (source: Frederico de Holanda, Gunter Kohlsdorf).

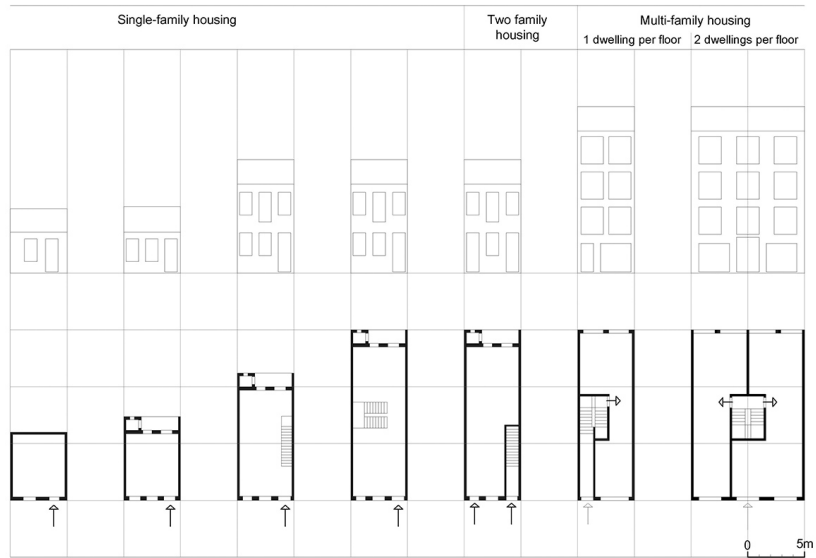
a treatise on architectural performance: the book ‘Morphological performance of places’, by Gunter Kohlsdorf and Maria Elaine Kohlsdorf, which explores architecture as a ‘relational situation’ between space-form and human expectations of all kinds. On the other hand, Frederico de Holanda has focussed on the *longue durée*⁴⁴ precedents of Brasília, exploring historical instances which constitute, in his terms, *exceptional spaces*,⁴⁵ i.e., isolated settlements (or bits of settlements) which house only superstructural dimensions of social order – namely politics and ideology, Brasília as a paradigmatic example. Widening the evidence, Valério de Medeiros, in his PhD dissertation, has analysed 164 cities around the world, to identify the specificities of Brazilian urban formations in such a broad panorama, particulars which present labyrinthine schemes overall, but with a clearly defined urban historical core: the ‘oasis in the labyrinth’.⁴⁶ On the other hand, research has also investigated public life in public spaces in Brasília. A good example is Gabriela Tenorio’s doctoral thesis ‘To the idle subject on the bridge’.⁴⁷ As to design practice, research findings have inspired the project for a Brasília ‘superblock’, now under implementation, by Frederico de Holanda (2021), in which the challenge to innovate within very strict norms has been pursued.

Finally, Brasília developed into a morphological ‘mosaic’ over time: on one extreme of the spectrum, the monumental spaces of the Centre of State (Esplanade of Ministries, Square of the Three Powers); on the other, the Paranoá favela, self-built by workers who flocked to the capital in its early days (Figure 3). In between, some other types, such as the residential ‘superblocks’ of the Pilot Plan, the ‘modernism of poor resources’ of the satellite cities, the gated communities, or the remains of contractors’ camps – all constituting the subject matter of ongoing research.

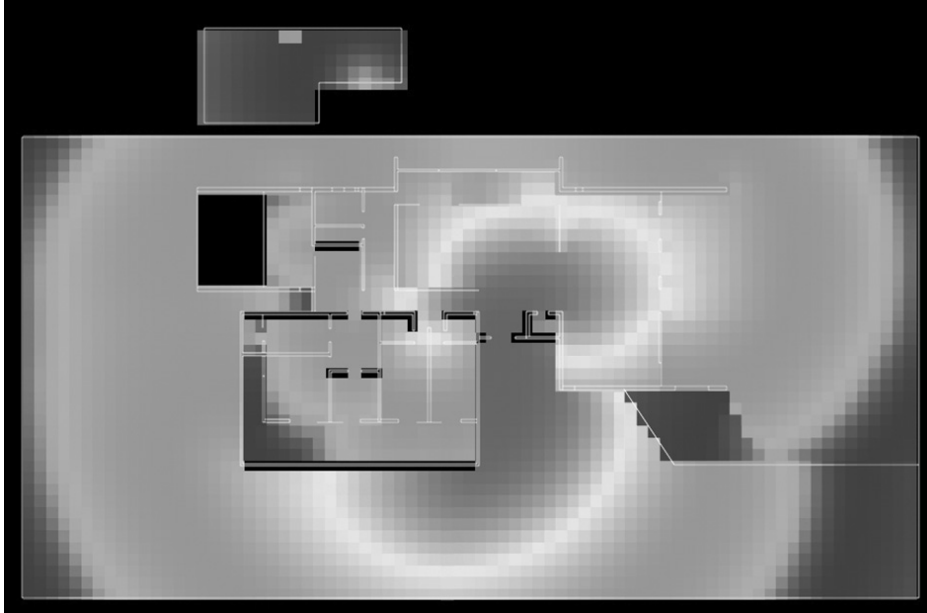
4.3. Porto: Research Centre for Territory, Transports and Environment (CITTA)

In the 2009, Vítor Oliveira and Teresa Marat-Mendes started to conceive the creation of PNUM. Based on the review paper ‘The study of urban form in Portugal’, then submitted to *Urban Morphology*,⁴⁸ some key Portuguese researchers were invited for a meeting at CITTA on May 2010. In the meeting, the group designed the strategy – funding members, goals, processes, and Constitution – to present the network to the ISUF Council in August 2010, at Hamburg. The meeting took place in the same day of CITTA’s third conference, which included keynote speeches by Bill Hillier, Mário Krüger and Manuel Teixeira. The conference title, ‘Bringing city form back into planning’, reflected a purpose of CITTA Director, Paulo Pinho, to promote urban morphology in this planning centre. This support was expressed by Pinho’s supervision of PhD theses in urban morphology by Vítor Oliveira, Miguel Serra, and Cláudia Monteiro. In 2014, CITTA, and the faculty of engineering, hosted the 21st ISUF conference.

Since 2010, morphological research developed at CITTA obtained an



UP: Fig. 5. Morphological research in architecture – analysis (typological process) and design by Oliveira and Monteiro (photograph source: José Campos).



UP and DOWN: Fig. 6. Morphological research in architecture – analysis (accessibility integration) and design by Holanda (photograph source: Frederico de Holanda).

increasingly international recognition. The book ‘Urban morphology: an introduction to the study of the physical form of cities’ offers a comprehensive discussion of what urban morphology is. It provides a direct look at *human settlements*, encompassing the different elements of urban form and the processes and agents of change, considering both the evolution of settlements in history and the main challenges of contemporary cities. In addition, the book looks at *research* on human settlements, including the dominant morphological approaches, how these are translated into action on urban landscape, and how urban form influences ordinary aspects of life in cities.⁴⁹

The pedagogic aspects of the field, present in that book, are highlighted in a subsequent publication, ‘Teaching urban morphology’.⁵⁰ This second book brings together contributions from some of the foremost international experts in urban morphology (including Frederico de Holanda, Michael Conzen, Giancarlo Cataldi, to name just a few) and addresses major questions such as: i. why teaching urban morphology in different courses?; ii. what contents should be taught in an urban morphology course?; and iii. how can it be taught most effectively?

CITTA has provided innovative contributions to the development of dominant approaches in the field, notably the historico-geographical approach and space syntax. In relation to the historico-geographical, three contributions should be highlighted: i. making evident the role of Jeremy Whitehand in structuring this school of thought;⁵¹ ii. developing the concept of morphological region in three different perspectives – strengthening its methodological dimension,⁵² exploring its automation,⁵³ and enabling its complementarity with other concepts,⁵⁴ and, finally, iii. exploring the use of the fringe-belt concept to understand the main dynamics of informal settlements.⁵⁵ Miguel Serra has developed a consistent line of research in quantitative morphology, and particularly in space syntax. He has addressed the structure of metropolitan forms and national contexts with a focus on street networks and through comparison between angular and metric distances,⁵⁶ and he has explored the definition of quantitative typologies for streets.⁵⁷ The combination of space syntax, historico-geographical and process-typological into a methodology applicable in planning practice, particularly in the design of plan regulations and zoning maps, was proposed by Monteiro and Pinho.⁵⁸

This relationship between scientific research and professional practice has been further explored in ‘Morphological research in planning, urban design and architecture’.⁵⁹ The book, again with collaboration of Holanda, gathers significant examples of how to move from research to practice. The collected cases were developed in the last years in different contexts, from Latin America to Eastern Asia. Each case is presented in one chapter. The first part of each chapter presents the morphological view of his author on the process of city building; the second part exemplifies how the author moves from reading to design of policies, plans or buildings (Figures 4 and 5).

CONCLUSION

This bird's eye review of urban morphology in Brazil and Portugal illustrates the wide spectrum of approaches in the field, which in fact mimics what happens at the wider international scale, as shown in ISUF conferences and journal. The first and perhaps the broadest bifurcation is between the inquiry into morphic types and the application of research findings in practice: in other words, between the approach of the *world-as-is* (science) and that of the *world-as-should-be* (ethics). There are many examples at both micro- and macro-scales. A second bifurcation might be characterised as between urban configurations *as a process* and *as a product*: i. firstly, the practice of diverse social subjects in participating in, and acting upon the unfolding of new realities in time; and ii. the implications of configurations thus accomplished in people's life and towards natural environments. And, finally, a third – and now *multimodal* – development in various research trends, concerning *dimensions*, or *aspects*, or diverse social *expectations* – and their fulfilment or otherwise – concerning cities' configuration. Such variation concerns trends well established in literature and others of more recent development. PNUM offers all these a stage for open morphological debate.

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RESEARCH PERSPECTIVES OF THE TURKISH NETWORK OF URBAN MORPHOLOGY

ABSTRACT

For the last decades, interest in urban morphology studies has increased in Türkiye. Urban morphology has become a widespread study field within the quantitative and qualitative track of urbanism to investigate further the character of Turkish cities and their urban fabric. Aiming to make urban morphology an independent and interdisciplinary research field, the Turkish Network of Urban Morphology (TNUM) was founded in 2014 as a remarkable development. The main objective of TNUM is to create a common platform for urban morphology studies and to develop national/international collaborations. For this purpose, TNUM held several academic events to increase the impact of the discipline of urban morphology. In this context, TNUM organised three national urban morphology symposiums; Mersin (2015), Istanbul (2018), and Ankara (2021), and the next event will be held in Konya in May 2023. Within this perspective, the primary intention of this research is to analyse the urban morphology studies in Türkiye contextually through the specified themes of the past three symposiums. It also aims to present the activities of TNUM for the last decade to propound the current morphology discussions in Türkiye. Eventually, the research will provide a comprehensive evaluation of the morphology studies by discussing possible further directions.

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INTRODUCTION

Similar to other countries, the study of urban form in Türkiye has been explored through various disciplines such as archaeology, architecture, urban design, urban planning, geography and urban history. Before establishing the Turkish Network of Urban Morphology (TNUM), a literature review shows that significant research on urban form was conducted by architects and planners who mainly used a typo-morphological approach. Meanwhile, urban geographers and historians focused on the examination of urban form in relation to its underlying evolutionary factors. However, until recently, it was not the primary focus of these disciplines. Only now, urban morphology is emerging as a distinct research field acknowledged and recognised by the broader academic community in Türkiye.

With the establishment of TNUM as one of the regional networks of the International Seminar on Urban Form (ISUF) in 2014, there have been significant contributions in acknowledging the importance of urban morphology as a discipline and research area, as well as the dissemination of urban morphology courses in universities. The Urban Morphology course was first given as a compulsory course in the Interdisciplinary Urban Design Master's Programme at Istanbul Technical University in 2003. Since then, urban morphology courses have become part of the curricula in the architecture and urban planning departments of several universities in Türkiye at both the undergraduate and postgraduate levels.¹ Academic events and organisations of TNUM have resulted in interest in morphological studies, including graduate and postgraduate studies and research projects, and the changing dynamics and morphological characteristics of Turkish cities have further intensified this interest by offering potential case areas.

From this perspective, the primary purpose of this article is to exhibit a contextual analysis of urban morphology studies, explicitly focusing on specified sub-themes of the past three National Urban Morphology Symposiums in Mersin, Istanbul and Ankara, respectively. In addition, the article aims to present the recent progress in the field of urban morphology through the activities of TNUM and to open up a new discussion on the future of urban morphology research in Türkiye.

This research is composed of five consecutive parts. In the Introduction, we identify the frame of the research as well as propounding the objectives and scope of the study. In the second part, TNUM: roots, objectives and activities, we explain the general characteristics of TNUM and its activities and organisation. In the following section, A Synopsis of National Urban Morphology Symposiums, we detail the local morphology symposiums by touching upon symposium activities and themes. In the fourth part, Analysis of Urban Morphology Studies in TNUM Symposiums, we present the contextual analyses of local symposiums and provide general evaluations of urban morphology studies in Türkiye. As a last part, in conclusion, we make

generalised comments on the process by referring to the future directions of urban morphology research in Türkiye.

2. TNUM: ROOTS, OBJECTIVES AND ACTIVITIES

2.1. Establishment of TNUM as a common platform for urban morphology studies

There has been an increase in research and thesis studies on urban morphology in Türkiye in recent years, leading to a growing interest in the subject as a field of study. In this framework, TNUM, which is one of the regional networks of ISUF,² was established to create a common platform for sharing and deepening the pioneering studies conducted and developing national/ international collaborations in urban morphology.

The establishing workshop of TNUM was held at the Faculty of Architecture at Mersin University on April 11, 2014, and hosted by the Mediterranean Urban Studies Center, with the participation of 16 researchers and academicians from 7 universities in Türkiye. As a result of the workshop, the Board of Directors for TNUM was formed by the researchers who participated in the establishment workshop under the chairmanship of Ayşe Sema Kubat from the Department of City and Regional Planning at Istanbul Technical University with the assistance of Tolga Ünlü, the director of Mediterranean Urban Studies Center at Mersin University. Since its foundation, TNUM has played a crucial role in the growth of research and publications on urban morphology and encouraged researchers to explore the morphological transformations in cities from Türkiye and other countries, utilising diverse methods and approaches.

2.2. Research and Publications

After the establishment of TNUM, as well as the papers with Turkish authors in the Urban Morphology journal, various kinds of research on urban morphology also published in other national and international cited journals, such as the special issue of the Built Environment³ and ICONARP⁴ in which there were contributions from all over the world.

In the graduate programs of universities, historical, cultural, social, ecological, and spatial changes and transformations in the urban form are being studied through various perspectives and methods in which the focus is on parcel, building, and street configurations in general, such as space syntax, Conzenian concepts namely fringe belts and morphological regions, and Muratorian and typo-morphological approaches at the architectural scale.

2.3. National and International Visibility

2.3.1. National Urban Morphology Symposiums

TNUM has held several academic events with the aim of enhancing the potential collaboration among researchers with different backgrounds, increasing the national and international visibility of the research network, and contributing to the local literature. In this respect, three national urban morphology symposiums, as the primary events of TNUM and the focus of this article, started to be regularly organised in several universities and cities; Mersin (2015), Istanbul (2018), and Ankara (2021), respectively, following the establishment of the network in 2014. The next symposium of TNUM will be held in the Department of City and Regional Planning at the Faculty of Architecture and Design at Konya Technical University in May 2023.

2.3.2. *Urban Morphology Talks*

Since 2022, Urban Morphology Talks, also known as “*Kentsel Morfoloji Konuşmaları*” in Turkish, have been organised as a monthly virtual event, primarily aiming to allow young researchers who study in the field of urban morphology to share their work to encourage new researchers, and to discuss different morphological research approaches. In the event, five contributions have been held so far, where local and international researchers have presented their work based on various morphological elements and methods. Urban Morphology Talks are also available on TNUM’s YouTube channel.⁵

2.3.3. *International Seminar on Urban Form (ISUF)*

Although the participation of Turkish researchers in ISUF conferences, which have been hosted by universities from different countries since 1994, was few until the establishment of TNUM, especially beginning with the conference held in Porto in 2014, there has been considerable participation of Turkish researchers in the conferences. According to the Interim Report on the Membership Structure of ISUF 2022, nearly 80 Turkish researchers presented papers at conferences between 2014 and 2021.

2.3.4. *Contribution to Marmara Urban Forum (MARUF)*

As well as ISUF conferences, since 2019, TNUM also plays a role in the Marmara Urban Forum (MARUF),⁶ which organises an Istanbul-based international biennial on urban issues and is also supported by several international organisations such as UN-Habitat. In 2021, TNUM held a special session entitled “*Cities: resolved – urban morphology for better planning and architectural practices*” with the contribution of speakers from ISUF and TNUM.

2.3.5. *Urban Morphology Glossary*

One of the latest focuses of TNUM is the translation of the Urban Morphology Glossary created by Larkham and Jones⁷ and published by ISUF into Turkish for strengthening the knowledge contributions of local researchers in the urban morphology literature in terms of concept and terminology. The glossary translation aims to present both the definitions of the concepts in the current

literature and suggestions for how the terms should be used in Turkish. Also, the Glossary Space Syntax⁸ and local concepts related to the city form are planned to be added to enrich the Turkish glossary.

3.A SYNOPSIS OF NATIONAL URBAN MORPHOLOGY SYMPOSIUMS

3.1. Mersin (2015) | I. Local Conference of the Turkish Network of Urban Morphology - “Fundamental Approaches and Techniques”

Within approximately a year following the Foundation Workshop, the first symposium of TNUM was organised by the Centre for Mediterranean Urban Studies at Mersin University. The symposium, which was held on 22-23 October 2015, provided a basis for bringing urban morphology research and practices in the fields of urban planning and urban and architectural design together with the theme of “Fundamental Approaches and Techniques”. The symposium allowed room for the presentation of 35 research projects carried out by 56 participants from 19 different universities. The research enhanced the content of the symposium by offering diversity with varying sub-themes, including different methods and techniques in urban morphology, urban growth and fringe belts, the history of urban form, public space and spatial perception, morphological agencies, typo-morphology and space syntax.

Prior to the presentation of the participants on the first day of the symposium, special sessions were held by different professors on significant research in order to make a start on further discussions. The first session was carried out with the aim of presenting the transformation of the urban development, plot and building patterns of Mersin, the host city of the symposium. Within this session, the fringe-belt formation and modification processes and development cycles of Mersin, which was analysed through the historico-geographical approach and morphogenetic method was revealed. The second session, which embodied two different approaches to urban form studies, started with a discussion on the use of the space syntax method. The discussion was developed further by pointing out how to examine the relationship between the spatial organisation and social structures over wide-ranging sample cities from Türkiye. On the other hand, the combination of urban morphology studies with urban historical research from an international perspective was elaborated by exemplifying the cases of France and Britain.

Due to the special sessions and further discussions through the research presented by the participants, the first symposium of TNUM revealed how urban morphology is addressed in existing research and practices in Türkiye and gave clues about the potential of urban form studies as the subject of different disciplines. In addition to this, the symposium led to the decision-making processes regarding the prospective events and organisations which advanced the institutionalisation of TNUM and had a place in possible collaborations of researchers within TNUM and with other international networks as well.

3.2. Istanbul (2018) | II. Local Conference of the Turkish Network of Urban Morphology - “MetamorphoCity” | Changing City, Space and Form

The second symposium, which Ayşe Sema Kubat chaired on behalf of TNUM, was carried out at the Faculty of Architecture at Istanbul Technical University on 31 November - 02 December 2018. In order to emphasise remark on the radical morphological changes in the characteristics of cities, the theme of the conference was specified as “MetamorphoCity: Changing City, Space and Form”. The symposium was comprised of 13 sub-themes: Changing the morphological structure: Theory and techniques, urban morphology and planning/architecture/design, historical changes in urban form, macro-scale changes in the urban structure, urban growth and fringe belts, rural typology and its changing morphological structure, urban transformation and renewal, change and society, actors and administration, public space and social use of space, urban morphology and spatial perception, schools of urban morphology, methods of morphological analysis and quantitative analysis.

According to statistics, the second symposium in Istanbul received 118 abstracts from national and international institutions by expanding its participant audience after the first symposium in Mersin. Within the symposium, 56 approved research projects categorised under the above sub-themes were presented in two parallel sessions, and approximately 80 attendees joined the sessions.

Apart from the presentations of the participants, there were special sessions in which keynote presentations were carried out on each day of the symposium. In the opening session, the multi-layered structure and unique characteristics of Istanbul was identified by pointing it out as a potential and challenging case area for the application of the different methods of comparative analysis. In the second keynote speech, the regeneration process of Paris was clarified by putting emphasis on the Versailles Morphological School. On the following day of the symposium, two keynote speakers successively revealed the effect of morphological structure on the transformation process of the urban space. The last speech considered how urban tissue evolved from its origin till the design process with a focus on the effect of the Muratorian School on the field of urban morphology.

As an outcome of all the sessions, this symposium featured the development of a discussion on the morphological structures of cities that have undergone a process of change in line with different dynamics and enhancing the impact of TNUM in a broader perspective.

3.3. Ankara (2021) | III. Local Conference of the Turkish Network of Urban Morphology - “Urban Morphologies” - Multidimensional Perspectives to the Studies of Urban Form

Twenty-five years after the establishment of ISUF, the third symposium, which Cana Bilsel and Olgu Çalışkan chaired as representatives of TNUM, was

organised between 3-5 May 2021 with the collaboration of the Department of Architecture and the Department of City and Regional Planning at Middle East Technical University. The symposium with the theme of “Urban morphologies: multi-dimensional perspectives to the studies of urban forms” was carried out online with the purpose of emphasising the methodological, thematic, disciplinary and epistemological attributions of the field of urban morphology during the global pandemic of COVID-19. The attributions in question were discussed under the following five sub-themes: (1) diversity in urban morphology approaches, (2) interdisciplinary diversity and interaction, (3) methodological diversity, (4) contextual and problematic dimensions, and (5) pedagogical diversity. In this context, 69 papers were presented by 135 researchers from different backgrounds. Despite the limitations brought by the pandemic, the symposium successfully attracted a significant audience, a total of 462 individuals from Türkiye and abroad, who registered for the event via Zoom and watched the live broadcast on Youtube, which had over 6000 views.

In order to enlarge the main theme of the symposium, multiple keynote speeches were given as special sessions prior to the participant researchers by Ayşe Sema Kubat, Giuseppe Strappa, Peter Larkham, and Tolga Ünlü. At the beginning of the symposium, a comprehensive historico-geographical analysis of the urban development of Istanbul, from its early emergence as a Byzantine city to its rapid growth as a modern metropolis in the mid-twentieth century and beyond was provided. In the session, the necessity to plan for the fragile morphological characteristics of the city’s peripheries in its fast-paced urbanisation was emphasized, highlighting the importance of a planning perspective in this regard. The idea of a clear distinction between nature and architecture was challenged, and how design can consciously transform matter into the material was explored. During the third day of the symposium, an in-depth evaluation of interdisciplinary and comparative approaches in urban morphology was provided by highlighting the potential and shortcomings for the further progress of this field. In the closing keynote speech, a framework for analysing the transformation of Turkish cities was offered with a focus on the effects of the actors involved in driving urban growth and the transformation processes.

In addition to speeches and presentations on the multi-dimensional approaches in urban morphology, the importance of collaboration among researchers from diverse backgrounds on enhancing the progress of TNUM was emphasised with a highlight on contributions to the local literature through the research within the symposium.

3.4. Upcoming symposium in Konya (May 2023) | IV. Local Conference of the Turkish Network of Urban Morphology - The Evolution of Urban Morphology: Past to Future, Theory to Practice

The upcoming symposium, which will be hosted by the Department of City and Regional Planning at the Faculty of Architecture and Design at Konya Technical

University, will take place between 31 May and 2 June 2023. The symposium, with the main theme of “The Evolution of Urban Morphology: Past to Future, Theory to Practise”, will focus on the transformation of urban morphology from a historical and theoretical framework to practical applications. To this end, the symposium is expected to discuss the past, present, and future of morphology studies with the following six sub-themes: (1) the Evolution of urban morphology research: theory, technique, method and practice, (2) interdisciplinary relations and education in urban morphology, (3) the social context in urban morphology: public space, spatial perception, social use of space and actors, (4) the evolution of form and space at regional, urban and architectural scales, (5) the evolution of morphology in the face of changing conditions: economy, technology, climate change, natural disasters, war, pandemic etc., and (6) conservation of cultural heritage, historical cities and contemporary design.

4. ANALYSIS OF URBAN MORPHOLOGY STUDIES IN TNUM SYMPOSIUMS

In this section, we conducted several analyses to reveal the contextual fingerprints of TNUM local symposiums. To frame the analyses from the morphological perspective, we utilised Kropf’s taxonomy of approaches in urban morphology: typo-morphological approach, configurational approach, historico-geographical approach and spatial-analytical approach.⁹ Correspondingly, there are two levels of analyses: (1) integrated analyses of all symposiums and (2) particular analyses of each symposium. We also mapped the spatial distribution of conference papers based on the location of case studies.

4.1. Contextual analysis of symposiums

Up to now, TNUM has organised three national symposiums. By analysing each conference, we visualised the distribution of conference papers based on the themes and sub-themes (Figure 1). Accordingly, there are 160 papers in total, and each conference has a different weight on it respectively: I. National Symposium Fundamental Approaches and Techniques has 35 papers, II. National Symposium “MetamorphoCity” | Changing City, Space and Form has 56 papers and III. National Symposium Urban Morphologies - Multidimensional Perspectives to the Studies of Urban Form has 69 papers. One could argue that, with the increasing visibility of the TNUM, the number of papers in conferences has consistently increased from 2015 to 2021.

In addition to the general analyses of three TNUM National symposiums, we also classified all papers from a morphological perspective to represent the characteristics of each symposium as well as the overall distribution (Figure 2). In conducting this taxonomy, we utilised typo-morphological, configurational, historico-geographical, and spatial-analytical approaches to conducting this taxonomy. In this sense, 48% of all papers in three symposiums are in the

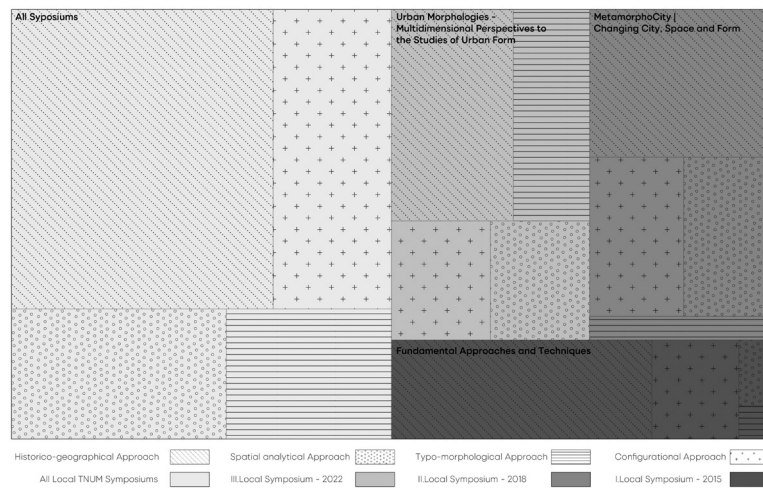
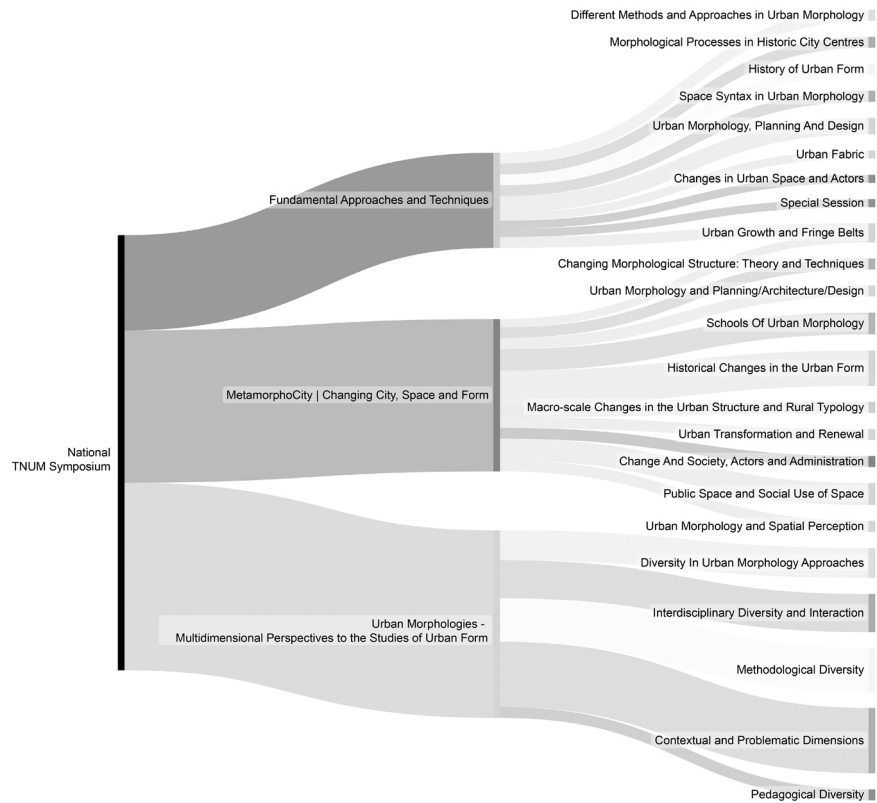
category of historico-geographical process. The configurational method has the second highest rank, comprising 22% of articles. The spatial analytical approach has 17% of all papers, whereas the typo-morphological process has 13%.

We also made the same analysis for each symposium. In this sense, at the First National Symposium, 69% of the papers are from the historico-geographical approach. The configurational approach follows with 23% of studies. The typo-morphological and spatial analytical approach constitute only 9% of all papers. Similarly, in the Second National Symposium, the historico-geographical approach has the largest share, with 45%, and the configurational approach is the second most popular category, with 25%. There is a remarkable increase in the spatial analytical approach comprising 23% of papers. On the other hand, the Typo-morphological approach has the least number of studies, with 7%. For the Third National Symposium, the historico-geographical approach has the most significant portion among all approaches, with 39%, although there is a sharp decrease. Surprisingly, the typo-morphological approach is second in popularity by leaping forward with 25% of studies. The spatial analytical approach and configurational approach share the same ratio by having 18% of papers.

To understand the spatial distribution of papers in all symposiums, we mapped a hotspot analysis based on the location of case studies in Türkiye. In this sense, we observed that most studies are concentrated in the central, western and southern parts of Türkiye (Figure 3). Among all papers, Istanbul stands out as the most preferred case area, with 39 studies. Ankara, with 12 papers, and Izmir, with ten papers, are the second most popular study areas, respectively. Adana, Konya, Mersin and Bursa followed these popular cities, while other cities were the subject of relatively few studies.

In particular, at the I. National Symposium Fundamental Approaches and Techniques, there were nine sub-themes, as indicated in the previous section. In this sense, a total of 35 pieces of research were allocated as follows among the sub-themes: Different Methods and Approaches in Urban Morphology - 4 papers, Morphological Processes in Historic City Centres - 4 papers, Urban Growth and Fringe Belts - 4 papers, History of Urban Form - 4 papers, Space Syntax in Urban Morphology - 4 papers, Urban Morphology, Planning and Design - 6 papers, Urban Fabric - 3 papers, Changes in Urban Space and Actors - 3 papers and Special Session - 3 papers.

II. National Symposium “MetamorphoCity” | Changing City, Space and Form has relatively more participants, with 56 papers total. Accordingly, sub-themes of papers were: Changing Morphological Structure: Theory and Techniques - 4 papers, Urban Morphology and Planning/Architecture/Design - 4 papers, Schools Of Urban Morphology, Methods of Morphological Analysis and Quantitative Analysis - 8 papers, Historical Changes in the Urban Form - 13 papers, Macro-scale Changes in the Urban Structure and Rural Typology - 4 papers, Urban Growth and Fringe Belts - 3 papers, Urban Transformation and Renewal - 4 papers, Change And Society, Actors and Administration



UP: Fig. 1. General analysis of three symposiums based on symposium themes.

DOWN: Fig. 2. Analysis of three symposiums based on different approaches in urban morphology

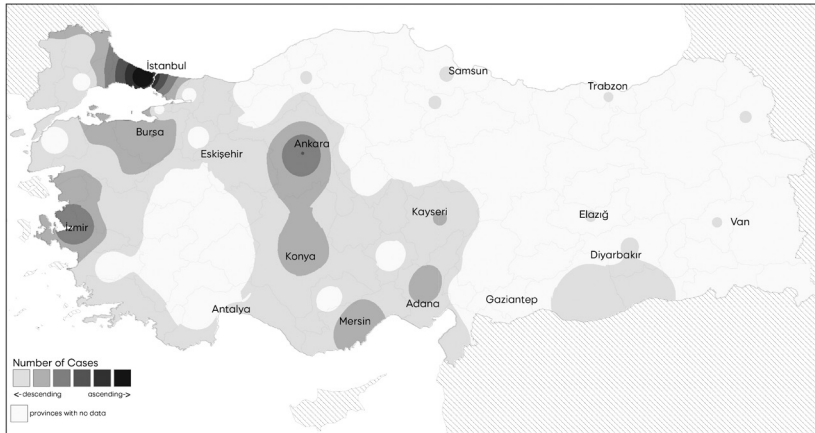


Fig. 3. Spatial distribution of conference papers based on the location of case studies

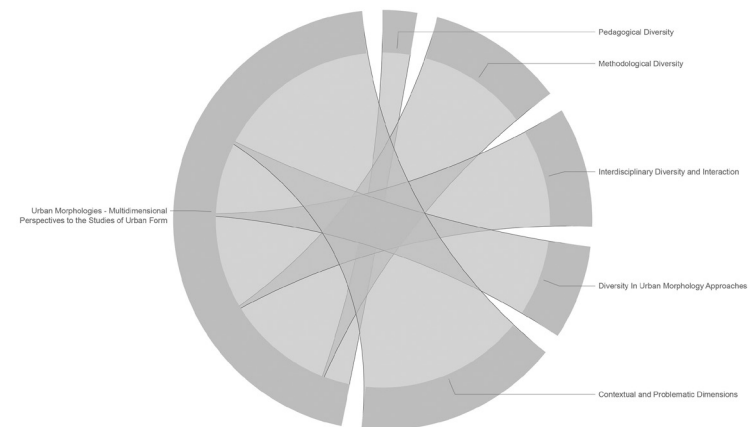
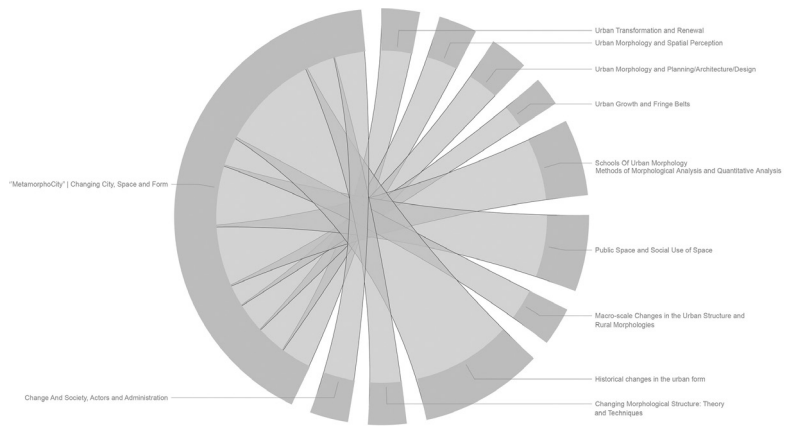
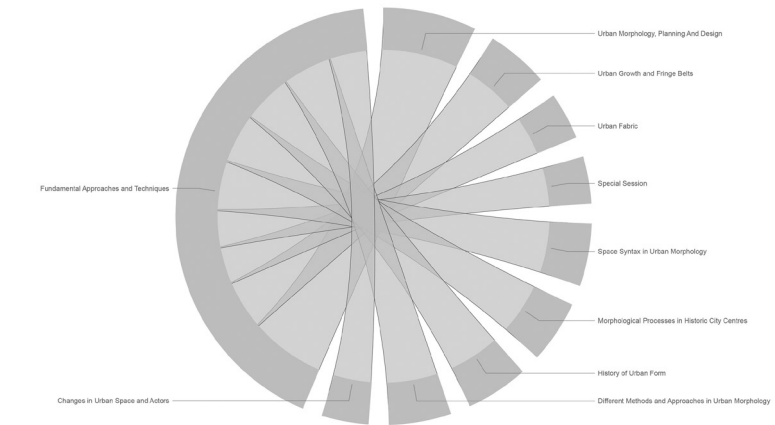
- 4 papers, Public Space and Social Use of Space - 8 papers and Urban Morphology and Spatial Perception - 4 papers.

As the last symposium of the TNUM, III. National Symposium Urban Morphologies - Multidimensional Perspectives to the Studies of Urban Form has the most significant number of studies, with 69 papers. Five sub-themes are quantified as follows: Diversity in Urban Morphology Approaches - 11 papers, Interdisciplinary Diversity and Interaction - 14 papers, Methodological Diversity - 16 papers, Contextual and Problematic Dimensions - 24 papers and Pedagogical Diversity - 4 papers.

4.2. Evaluation of current morphology discussions in Türkiye

With a rapidly increasing interest in the urban morphology agenda, it has evolved from Western-centred literature to a research field that includes developing countries and grows towards socio-culturally multiple and rich perspectives. In this sense, it is located within the urban morphology of a broad spectrum of subjects ranging from the historical architectural and spatial production processes to the functional, social and ecological character and shaping of the urban fabric. Furthermore, Geographical Information Systems (GIS) and the development of computational design methods make morphology a generative research field in addition to its' analytical basis. Such new developments allow the knowledge domain of urban morphology to extend from actual urban forms and structures to the rule-based and algorithmic world of abstract geometry and increase the strength of the methodical basis of spatial research for the future.

This trend is also paralleled when the studies participating in the three local symposiums organised by the TNUM are analysed. Additionally, it should be noted that this diversity of focus observed at the international level has found its counterpart among researchers in the field of urban morphology in Turkey in the national context. The thematic diversity revealed by the studies in the symposiums indicates the existence of problematic areas that the field of urban



UP: Fig. 4. Analysis of I. National Symposium based on symposium themes

MIDDLE: Fig. 5. Analysis of II. National Symposium based on symposium themes

DOWN: Fig. 6. Analysis of III. National Symposium based on symposium themes

morphology will open up with new research in the near future. The research findings, which have been opened to discussion in different urban and rural contexts, will be supported by further study, will increase the accumulation of knowledge on the shaping of historical and contemporary settlements in Turkey, and will provide a holistic perspective in this direction.

5. CONCLUSION

5.1. Recap of TNUM's objectives, activities and future research directions

TNUM has organised several academic events and initiatives, including Urban Morphology Talks, Urban Morphology Glossary, and National Urban Morphology Symposiums, to provide a collaborative platform for researchers to share and exchange ideas on urban morphology, contribute to local literature, and develop the field of urban morphology at both local and international levels. The activities of TNUM are aimed at consolidating the research network through collaboration and emphasising the prominence of promoting local literature as equally crucial as sharing local studies with the global community.

As analysed in this article with a particular focus, the various studies presented at TNUM Symposiums indicate that urban morphology cannot be limited to a single field due to its diverse nature and context. In light of the necessity of interdisciplinarity, researchers from different fields, including urban planning and design, architecture, geography, archaeology, heritage and conservation, should address the morphological issues of contemporary Turkish cities at different scales and contexts.

5.2. Future of urban morphology research agenda in Türkiye

We expect that TNUM's activities will focus on relations between disasters, especially earthquakes, and urban form in Türkiye as well as climate change, sustainability, rural landscape and smart cities, which are also on the primary agenda of the world primarily. It will be possible to reveal the side of an urban morphology that speaks to other disciplines by addressing the relationship of the urban form with different tools and data, with various studies that will be discussed from an ecological perspective, from carbon footprint to heat islands. On the subject of smart cities, which has become a prevalent approach as an effect of the rapidly increasing population in recent years, TNUM is attempting in the context of urban morphology to make cities resilient and sustainable in terms of the built environment, cultural, social and digital context.

Based on the analyses, one could argue also that quantitative methods in urban morphology studies have been handled more in recent years. When the trend of this tendency over the years, mathematical and statistical methods can be used more widely in future studies and current methods, such as machine learning models and artificial intelligence algorithms, can be associated with

urban morphology studies. Furthermore, since this will pave the way for interdisciplinary studies, we believe that new interdisciplinary cooperation will be bridged in the near future.

We also plan to examine the current concepts and methodologies in urban morphology, such as fringe belt formations in various cities of Türkiye, primarily to conduct research on the DNA or Urban CODEs of multi-layered historical urban patterns covering all of Anatolia. The devastating earthquake that affected 11 big cities in the south-eastern region of Turkey on 6 February 2023 and resulted in significant destruction has caused crucial losses in the unique cultures of cities which have existed since ancient times. A sub-group will also carry out a particular study on the urban form of victim cities to record and revive the disappearing urban memory of these cities in terms of socio-cultural, planning and environmental aspects by considering them morphologically. TNUM's work will continue to support more young researchers and experts from different disciplines to collaborate and produce on the axis of urban morphology.

NOTES

59. V. Oliveira, ed., *Morphological research in planning, urban design and architecture* (Cham: Springer, 2021)
1. Hoşkara et al. (2022) conducted an extensive analysis of the contemporary curriculum of the Architecture and City and Regional Planning Departments in Turkey regarding urban morphology courses.
2. Website of the ISUF can be reached at <https://www.urbanform.org/regional.html>
3. Special issue of the Journal of the Built Environment can be reached at <https://www.ingentaconnect.com/content/alex/benv/2022/00000048/00000003>
4. Special issue of the ICONARP can be reached at <https://iconarp.ktun.edu.tr/index.php/iconarp/issue/view/18>
5. The YouTube channel of the TNUM can be reached at https://www.youtube.com/@tnum_tr
6. marmaraurbanforum.org
7. Peter J. Larkham and Andrew N. Jones. *A Glossary Of Urban Form* (Cheltenham: Historical Geography Research Series 26, 1991).
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A B S T R A C T S : S E R B I A N

NASTAJANJE ISUF REGIONALNE MREŽE URBANE MORFOLOGIJE: AUSTRALIJA I NOVI ZELAND (ANZUMN)

Paul Sanders, Kai Gu, Mirko Guaralda, Milica Muminovic, Paul Osmond

Za razliku od velikog broja publikacija na temu Australazijske istorije planiranja, fokus na urbanoj morfologiji je bio gotovo nezastupljen do kasnih devedesetih godina kada je Arnis Siksna sproveo komparativnu analizu planova grada otkrivajući blisku vezu veličine bloka i pripadajućeg oblika nekoliko australijskih i američkih gradskih obrazaca. Tokom poslednjih decenija, nekoliko istraživača je sproveo relevantna istraživanja kako u Australiji, tako i u Novom Zelandu koje sugerišu na blagovremeno formiranje regionalne grupe. Naime, kao kontrapunkt centralnoj dominaciji urbane morfologije na severnoj hemisferi, ISUF konferencija 2013. godine je bila organizovana u Brizbejnu i sa temom “Urbane forme na ivici” i “van centralnih područja” koje su proizvele inovativne pristupe proučavanju tradicionalne, kao i post-kolonijalne i savremene morfologije. Ovaj rad će proširiti teme razvijene unutar ovog istraživačkog polja.

KLJUČNE REČI: URBAN MORFOLOGIJA, AUSTRALAZIJA, ISUF REGIONALNE MREŽE, URBANA FORMA

WHAT DO WE MEAN WHEN WE TALK ABOUT CENTRAL EUROPEAN URBAN MORPHOLOGY?

Éva Lovra

Pregled ima za cilj da definiše i objedini napore u Centralnoj Evropi - koja ima stalno promenljive granice - na temu urbane morfologije. Namera nije da se obuhvate svi poduhvati; već da se naznače glavni pravci i njihovi predstavnici koji prate glavne škole urbane morfologije. Rad se ukratko dotiče ideje Centralne Evrope i korena koji povezuju osnovu srednjoevropske urbane morfologije, koja se potom podelila na specifične pristupe i pravce (mesto, region, percepcija) i nastavila da se samostalno razvija. Što se tiče trendova, više se bavi mađarskim aspiracijama. Pojedinačno se bavi pitanjima postavljenim u naslovu i daje odgovore na njih u formi zaključka.

KLJUČNE REČI: CENTRALNA EVROPA; URBANA MORFOLOGIJA; MAĐARSKA, REGIONALNA MORFOLOGIJA

KINESKA MREŽA URBANE MORFOLOGIJE: RETROSPEKTIVA I IZGLEDI

Wowo Ding, Kai Gu, Yinsheng Tian

Iako pomalo sporo, od ranih 2000-ih, urbano-morfološki koncepti i metode su izazvali interesovanje urbanih morfologa kako u Kini, tako i među istraživačima koji govore kineski jezik. Rani istraživački projekti su se fokusirali na preispitivanje, integraciju i međukulturalnu prenosivost urbane morfologije u kontekstu Kine. Nadovezujući se na uspešnu organizaciju 16. međunarodne konferencije o urbanoj formi (ISUF) u Guangdžou 2009. godine, prvog skupa ISUF-a u Aziji, grupa naučnika se sastala na Školi za arhitekturu i urbanizam Univerziteta Nanjing 31. oktobra 2013. kako bi oformila Kinesku mrežu urbane morfologije (CNUM). Tokom protekle decenije, CNUM je postao ključni akter i pokretačka snaga za razvoj urbane morfologije u Kini. Kao refleksija na nedavni talas morfoloških istraživanja kineskih gradova, svrha ovog rada je da pruži veću jasnoću o tome šta je postignuto kroz međukulturalnu primenu morfološke teorije. Što je još važnije, rad istražuje potencijalne pravce budućih istraživanja u vezi sa dokumentovanim nedostacima i preostalim izazovima, podstičući neka od obećavajućih, ali nerazvijenih morfoloških razmišljanja.

KLJUČNE REČI: URBANA MORFOLOGIJA; KINA; MEĐUKULTURALNO POREĐENJE, ANALIZA PLANA, PLANIRANJE

NORDIJSKA MREŽA URBANE MORFOLOGIJE (NNUM) – ISTRAŽIVANJE

URBANE FORME U SKANDINAVIJI

Todor Stojanovski, Akkelies van Nes, Jenni Partanen, Sofie Kirt Strandbygaard, Abdallah Abarkan

Urbana morfologija se definiše kao istraživačka oblast koji predlaže metode i alate za analizu i projektovanje gradova. Nordijska mreža urbane morfologije (NNUM) je osnovana 2006. godine kako bi doprinela promociji i širenju urbane morfologije kako na nacionalnom nivou u Švedskoj tako i u ostalim skandinavskim zemaljama. Morfološka istraživanja u Skandinaviji prate tri istraživačke tradicije: prostornu analizu, tipomorfologiju i prostornu sintaksu (space syntax). Postoji vekovna istraživačka tradicija povezana sa geografskim analizama gradova i regionalne nauke u Švedskoj, Finskoj i Danskoj, tipomorfologijom u Švedskoj i aktivnim space syntax grupama u Švedskoj i Norveškoj koje se povezuju sa pojedinačnim istraživačima širom Skandinavije. Ovaj rad mapira naučnike i grupe na univerzitetima koji slede i integrišu ove tradicije. U radu se razmatraju najnovija morfološka istraživanja u Skandinaviji i takođe se reflektuje na budućnost morfoloških istraživanja u Skandinaviji posmatrano u odnosu na način na koji se skandinavski gradovi uklapaju u svetski obrazac urbanog razvoja i dominantne paradigme planiranja. U skandinavskim zemljama tradicija se sukobljava sa modernizmom i funkcionalizmom, ali istorija nikada nije bila potpuno ostavljena po strani. Oni imaju tendenciju da se neprestano mešaju.

KLJUČNE REČI: URBANA MORFOLOGIJA; URBANA FORMA; SKANDINAVIJA; ISTRAŽIVAČKA MREŽA, MORFOLOŠKE ŠKOLE

A B S T R A C T S : S E R B I A N

URBANA MORFOLOGIJA U SEVERNOJ AMERICI: ISTORIJA I PRAVCI **Brenda Case Scheer**

Urbana morfologija, nazvana kao takva, još uvek nije razvijena kao strategija planiranja i urbanog dizajna u Severnoj Americi. S druge strane, pokreti *Novi urbanizam* (New urbanism) i *Pametni rast* (Smart Growth) mogu da dobiju mnogo korišćenjem urbane morfologije kao jasnog i striktnog istraživačkog metoda. Da bi se obezbedio jasan put za usvajanje, ovaj rad ispituje kako se primena različitih podataka istraživanja urbane morfologije zasnovanih na evropskim osnovama, tumačenja i teorija promene razlikuju u Severnoj Americi. Kako različiti uslovi forme, posebno vreme u kojem su naselja nastala, zahtevaju drugačiji metod i prepoznavanje različitih tipova i obrazaca, pa čak i različitih škola?

Budući da su severnoamerički istraživači zainteresovani za brzu ekspanziju gradova, grad usredsređen na automobile, potrebu za konfiguracijom u kojoj se može živeti i neuređenost većine urbane teritorije, nova vrsta studija je prikladna. Ovaj metod se već pojavljuje, ali nije rigorozno definisan. Najčešći glasovi su oni koji se bave promovisanjem određenog rešenja urbanog dizajna, a ne ispitivanjem prošlosti ili postojećih urbanih tkiva. Ovo ostavlja prostor urbanoj morfologiji da dopuni prazninu.

KLJUČNE REČI: URBANA MORFOLOGIJA; SEVERNA AMERIKA; NOVI URBANIZAM; PREDGRAĐE, SAD

ISUF - ŠPANSKI JEZIK (ISUF-H). ARHITEKTE, URBANISTI I STUDIJE URBANE FORME **Javier Monclús, Carmen Díez-Medina**

Ovaj rad ima za cilj da istraži važnost postojanja dodatne regionalne mreže kao što je International Seminar on Urban Form-Hispanic (ISUF-H) i da razmisli o raznolikosti pristupa u kontekstu istraživanja sprovedenog u okviru ISUF-a. ISUF-H je ogranak ISUF-a, osnovan kao jedna od regionalnih mreža formirana na španskom govornom području. Uopšteno govoreći, raznovrsnost i vitalnost istraživanja na španskom jeziku potvrđena je pojavom i obnavljanjem tema i metodologija analize i eklektičnih pristupa – pri čemu su arhitekta i urbanisti dominirali nad geografima i ekspertima iz drugih disciplina.

Razmatraju se odnosi sa drugim evropskim školama i tradicija studija urbane forme. To se takođe odražava na interes i korisnost ove i drugih regionalnih mreža. Nedavna istraživanja predstavljena na konferencijama ISUF-H pokazuju da prepreke u multidisciplinarnom dijalogu ostaju i da su i dalje veliki izazov. Prevazilaženje jezičkih i kulturnih barijera je drugi veliki izazov u ovom pogledu.

Članak se odnosi na latentne kontroverze između „anglofonskog škiljenja“ i „hispanse samozadubljenja“ od stvaranja ISUF-H, podvlačeći specifičnosti svakog konteksta s jedne strane, i zajedničke ciljeve s druge strane.

KLJUČNE REČI: REGIONALNE MREŽE, JEZIČKE BARIJERE, BARIJERE DISCIPLINE, REGIONALNE PERSPEKTIVE, PERSPEKTIVE URBANOG PLANIRANJA, ISUF-H

TRADICIJA I MREŽA ISTRAŽIVANJA URBANE FORME U POLJSKOJ

Anna Agata Kantarek

Ovaj članak nudi pregled istraživanja urbane forme u Poljskoj. U okviru istorijske geografije ovu tradiciju danas nastavljaju geografi sa Univerziteta u Lođu gde godinama profesori Mark Koter i Mariuš Kuleša primenjuju metodologiju istraživanja engleske škole. Ovo istraživanje predstavlja deskriptivan pristup, dok istraživanja u oblasti arhitekture i urbanizma imaju tendenciju da budu preskriptivna. Sprovode se, i nastavljaju da se sprovode na raznim arhitektonskim univerzitetima, kako u oblastima istorije i zaštite i konzervacije spomenika, urbanizma, prostornog planiranja, tako i pejzažne arhitekture.

KLJUČNE REČI: POLJSKA, URBANA MORFOLOGIJA, URBANISTIČKA KOMPOZICIJA, URBANI DIZAJN

ISTRAŽIVANJA URBANE FORME U BRAZILU I PORTUGALIJI: OD OŠTEG PREGLEDA DO FOKUSA NA BELO HORIZONTE, BRAZILU I PORTO

Vitor Oliveira, Staël Pereira Costa, Frederico de Holanda

Godine 2010. osnovana je Mreža urbane morfologije na portugalskom jeziku (PNUM) pod okriljem Međunarodnog seminara o urbanoj formi (ISUF). Tokom poslednjih 12 godina, PNUM je dao doprinos promociji urbane morfologije u Brazilu i Portugalu, podstičući saradnju između različitih istraživača u obe zemlje. Ovaj rad se sastoji iz četiri dela. Prvi deo ima institucionalnu prirodu, bavi se poreklom PNUM-a, glavnim razvojem i osnovnim karakteristikama. Drugi deo identifikuje osnovne morfološke studije koje su sproveli istraživači na portugalskom jeziku, čineći evidentnim uticaj ovog intelektualnog nasleđa u stvaranju PNUM-a. Široka raznolikost sadašnjih morfoloških istraživanja u Portugalu i Brazilu (sa značajnim razlikama između regiona sever, severoistok, centar-zapad, jugoistok i jug) istražuje se u trećem delu. Konačno, rad se bavi nekim fundamentalnim pitanjima koja istražuju autori ovog rada: i. definicijom urbane morfologije kao oblasti znanja; ii. odnosima između fizičkih i društvenih dimenzija naselja; iii. izazovima nastave o urbanoj morfologiji kao interdisciplinarnoj oblasti; iv. inovativnim doprinosima razvoju dominantnih pristupa u ovoj oblasti; i, konačno, v. odnosima između naučnog istraživanja i prakse.

KLJUČNE REČI: URBANA MORFOLOGIJA, URBANA FORMA, PNUM, ISUF, INTEKTUALNO NASLEĐE

A B S T R A C T S : S E R B I A N

ISTRAŽIVAČKE PERSPEKTIVE TURSKE MREŽE URBANE MORFOLOGIJE

Ayşe Sema Kubat, Mert Akay, Ezgi Küçük Çalışkan, Burcu Soygüzelöglü

Poslednjih decenija u Turskoj je poraslo interesovanje za studije urbane morfologije. Urbana morfologija je postala široko rasprostranjeno polje proučavanja unutar kvantitativnog i kvalitativnog polja urbanizma kako bi se dublje istražio karakter turskih gradova i njihovo urbano tkivo. Sa ciljem da urbana morfologija postane nezavisna i interdisciplinarna istraživačka oblast u Turskoj, Turska mreža urbane morfologije (TNUM) osnovana je 2014. godine. Glavni cilj TNUM-a je stvaranje zajedničke platforme za studije urbane morfologije i razvoj nacionalne/međunarodne saradnje. U tu svrhu, TNUM je održao nekoliko akademskih događaja kako bi povećao uticaj discipline urbane morfologije. U tom kontekstu, TNUM je organizovao tri nacionalna simpozijuma o urbanoj morfologiji u Turskoj; Mersin (2015), Istanbul (2018) i Ankara (2021), a sledeći događaj će se održati u Konji u maju 2023. U okviru ove perspektive, primarna namera ovog istraživanja je da analizira studije urbane morfologije u Turskoj kontekstualno kroz navedene teme prethodna tri simpozijuma. Takođe ima za cilj da predstavi aktivnosti TNUM-a u poslednjoj deceniji kako bi se predstavile aktuelne morfološke diskusije u Turskoj. Na kraju, istraživanje pruža sveobuhvatni pregled morfoloških studija u Turskoj kroz diskusiju o mogućim daljim pravcima.

KLJUČNE REČI: TNUM, TNUM LOKALNI SIMPOZIJUM, REGIONALNE MREŽE, ISUF, URBANA MORFOLOGIJA

PRIVACY STATEMENT

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72

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