

Morphology, Morphogenesis, Metamorphosis. The need of a lexicon

Original

Morphology, Morphogenesis, Metamorphosis. The need of a lexicon / Trisciuglio, M; Vercellone, Federico. -
ELETTRONICO. - unico:(2024), pp. 964-970. (6th ISUFItaly International Conference | Bologna, 8-10 June 2022
MORPHOLOGY AND URBAN DESIGN new strategies for a changing society Bologna (ITA) 8-10 june 2022).

Availability:

This version is available at: 11583/2996040 since: 2024-12-31T11:16:59Z

Publisher:

ISUF Italy

Published

DOI:

Terms of use:

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

Publisher copyright

(Article begins on next page)

Since the beginning of the third millennium, the rapid changes that contemporary societies are facing are radically transforming the perception and the structures of our cities. New topics seem to dictate the political agenda, suggesting alternative options to manage the emerging urban mutations.

An increasingly "data driven society" is forcing the migration into an almost immaterial world, prompting Information and Communication Technology together with the Smart City.

The crisis of the traditional real estate industry, propelled by the global finance system, is contributing to re-evaluate the theme of Public Space as a "space of encounter, sharing, experience and inclusivity", mapping the everyday life to discover unexpected Urbanities, through the application of innovative strategies and tools.

As an immediate consequence, new "forms" of cities are strongly brought to our attention: the "city of sharing", the "city of temporariness", the "city of Life between buildings", giving an unexpected impulse to incremental Urbanism of evolving cities.

In such a way, the very idea of the city is radically under discussion. We are then required to answer these numerous questions in order to define the scientific coordinates for the City of the 21st century.

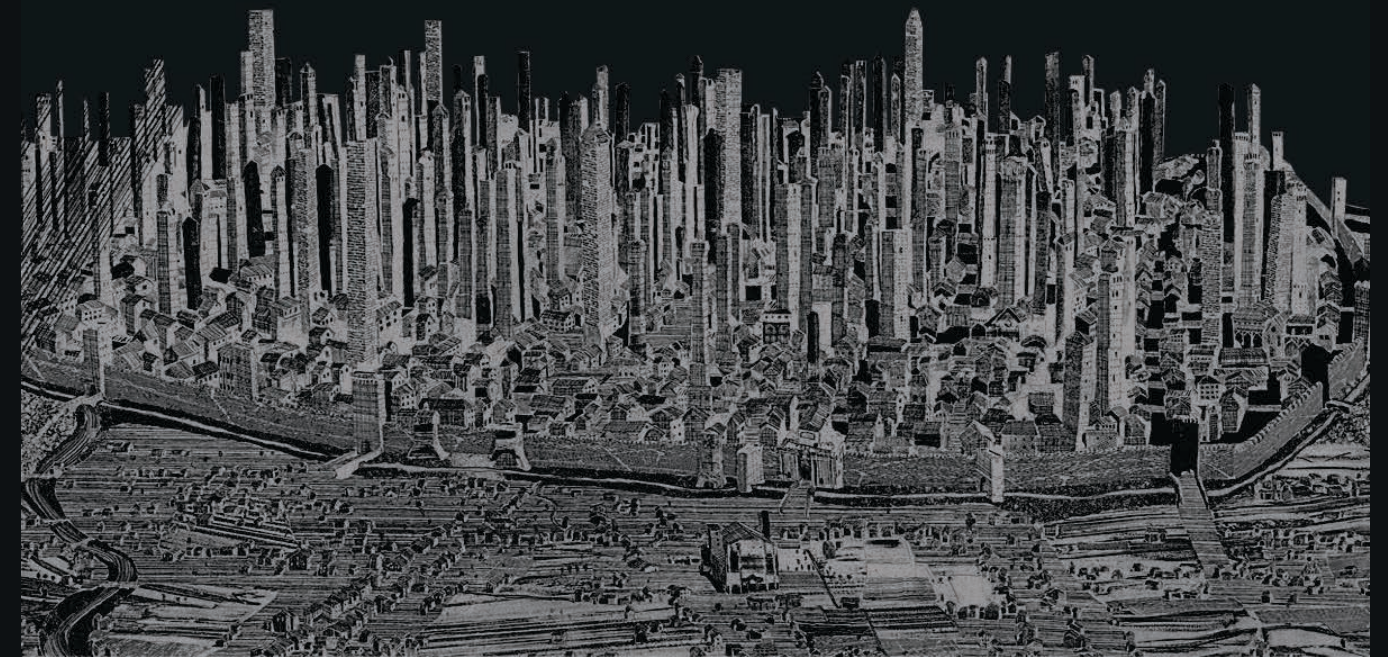
Morphology and Urban Design - new strategies for a changing society. 6th ISUFitaly International Conference | Bologna, 8-10 June 2022. Book of Papers.
ISBN: 978-88-941188-9-6



Book of Proceedings

MORPHOLOGY AND URBAN DESIGN 6th ISUFitaly International Conference | Bologna, 8-10 June 2022

Marco Maretto, Nicola Marzot, Annarita Ferrante



6th ISUFitaly International Conference | Bologna, 8-10 June 2022
MORPHOLOGY AND URBAN DESIGN
new strategies for a changing society

Marco Maretto, Nicola Marzot, Annarita Ferrante

ISBN 978-88-941188-9-6



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DEPARTMENT OF ARCHITECTURE



**Università
degli Studi
di Ferrara**



**UNIVERSITÀ
DI PARMA**

urbanform and design

U+D

U+D urbanform and design
online journal
<http://www.urbanform.it/>



**Researches in Architecture and Urban
Morphology**
<https://www.r-a-m.it/>



Ordine degli ingegneri della provincia
di Bologna
<https://www.ordingbo.it/>

architettibologna 

Ordine degli architetti di Bologna
<https://www.archibo.it/>

ISUFitaly

International Seminar on Urban Form
Italian Network
<http://www.isufitaly.com/>

Contacts

Phone: +0668878832

Fax: +0668878832

Graphic design and layout by Francesco Scattino



6th ISUFitaly International Conference | Bologna, 8-10 June 2022

MORPHOLOGY AND URBAN DESIGN

new strategies for a changing society

PROCEEDINGS

edited by

Marco Maretto, Nicola Marzot, Annarita Ferrante

with the collaboration of

Silvia Tagliazucchi, Francesco Scattino, Greta Pitanti

ISBN 978-88-941188-9-6

Contents

| | |
|-------------------|-----|
| Organization | 9. |
| Presentation | 13. |
| Foreword | 17. |
| Plenary Sessions | 22. |
| Conference Themes | 59. |
| Index | 60. |

Organization

Curators

Marco Maretto - *University of Parma, Italy*
Nicola Marzot - *University of Ferrara, Italy*
Annarita Ferrante - *University of Bologna, Italy*

Keynotes

Orazio Carpenzano - *'Sapienza' University of Rome, Italy*
Helena Coch - *Polytechnic University of Catalonia, Spain*
Alberto Ferlenga - *IUAV University of Venice, Italy*
Luigi Franciosini - *'Roma 3' University, Italy*
Kayvan Karimi - *The Bartlett School of Architecture, United Kingdom*
Raffaele Laudani - *University of Bologna, Italy*
Gino Malacarne - *University of Bologna, Italy*
Alessandro Melis - *New York Institute of Technologies, USA*
Bruno Messina - *University of Catania, Italy*
Vitor Oliveira - *ISUF International President, Portugal*
Franco Purini - *'Sapienza' University of Rome, Italy*
Carlo Quintelli - *University of Parma, Italy*

Scientific Committee

Alessandro Camiz - *Özyeğin University, Turkey*
Renato Capozzi - *'Federico II' University of Naples, Italy*
Alessandra Capuano - *'Sapienza' University of Rome, Italy*
Paolo Carlotti - *'Sapienza' University of Rome, Italy*
Orazio Carpenzano - *'Sapienza' University of Rome, Italy*
Giancarlo Cataldi - *University of Florence, Italy*
Nadia Charalambous - *University of Cyprus, Cyprus*
Domenico Chizzoniti - *Polytechnic University of Milan, Italy*
Vincente Colomer Sendra - *Polytechnic University of Valencia, Spain*
Armando dal Fabbro - *IUAV University of Venice, Italy*
Carlos Dias Coelho - *University of Lisbon, Portugal*
Wowo Ding - *University of Nanjing, China*
Alberto Ferlenga - *IUAV University of Venice, Italy*
Annarita Ferrante - *University of Bologna, Italy*
Loredana Ficarelli - *Polytechnic University of Bari, Italy*
Luigi Franciosini - *'Roma 3' University, Italy*
Pierre Gauthier - *Concordia University Montreal, Canada*
Jörg H. Gleiter - *Technische Universität Berlin, Deutschland*
Matteo Ieva - *Polytechnic University of Bari, Italy*
Hidenobu Jinnai - *Hosei University, Japan*
Anna Agata Kantarek - *Kraców University of Technology, Poland*
Kayvan Karimi - *The Bartlett School of Architecture, United Kingdom*
Aise Sema Kubat - *Istanbul Technical University, Turkey*
Gino Malacarne - *University of Bologna, Italy*
Teresa Marat-Mendes - *University of Oporto, Portugal*
Marco Maretto - *University of Parma, Italy*
Sara Marini - *IUAV University of Venice, Italy*
Nicola Marzot - *University of Ferrara, Italy*
Alessandro Merlo - *University of Florence, Italy*
Carlo Moccia - *Polytechnic University of Bari, Italy*
Gianpiero Moretti - *University of Laval, Canada*
Dina Nencini - *'Sapienza' University of Rome, Italy*
Vitor Oliveira - *ISUF International President, Portugal*
Stael Alveira Pereira Costa - *Federal University of Minas Gerais, Brazil*

Attilio Petruccioli - *'Sapienza' University of Rome, Italy*
Sergio Porta - *University of Strathclyde Glasgow, Scotland*
Franco Purini - *'Sapienza' University of Rome, Italy*
Carlo Quintelli - *University of Parma, Italy*
Ivor Samuels - *University of Birmingham, United Kingdom*
Brenda Scheer - *University of Utah, USA*
Giuseppe Strappa - *'Sapienza' University of Rome, Italy*
Fabrizio Toppetti - *'Sapienza' University of Rome, Italy*
Annalisa Trentin - *University of Bologna, Italy*
Marco Trisciuglio - *Polytechnic University of Turin, Italy*
Tolga Ünlü - *Çukurova University, Turkey*
Giorgio Verdiani - *University of Florence, Italy*
Anne Vernez Moudon - *University of Washington, USA*
Federica Visconti - *'Federico II' University of Naples, Italy*
Michele Zampilli - *'Roma 3' University, Italy*

Organizing Committee

Marco Maretto - *University of Parma*
Nicola Marzot - *University of Ferrara*
Annarita Ferrante - *University of Bologna*
Paolo Carlotti - *'Sapienza' University of Rome*
Silvia Tagliazucchi - *University of Ferrara*
Chiara Finizza - *University of Parma*
Antonio Licchetta - *University of Parma*
Alice Monacelli - *'Sapienza' University of Rome*
Greta Pitanti - *'Sapienza' University of Rome*
Francesco Scattino - *'Sapienza' University of Rome*

Sixth ISUfItaly Conference Presentation

We open today the sixth conference organized by the Isufitaly Association, the Italian network of the International Seminar on Urban Form that we founded 38 years ago with the contribution of the English school of geographers which followed the scientific tradition of the researches of M.R.G Conzen (which had, in turn, roots in the tradition of German cultural geography) and the school of Italian architects referred to the studies of Gianfranco Caniggia and Saverio Muratori, with its roots in the studies on urban form conducted between the wars by innovators such as Gustavo Giovannoni, Arnaldo Foschini, Giovan Battista Milani.

From the beginning it seemed clear to all of us how useful the disciplinary differences and how fertile integration between the two groups were.

Geography is a fundamentally descriptive discipline. However, it was interpreted by the Conzenian school with great attention to the shape of the city, and after all the Muratorian school considered reading, in turn, intended as a critical study of the built reality, an integral part of the architectural design itself. Indeed it considered the very form of the territory as architecture. This explains why our Association, made up mainly of architects, had the project as the central object of our studies.

Isufitaly was founded much later, in March 2007, with the aim of promoting above all those studies in urban morphology having the architectural design as their goal.

In these sixteen years, during which I had the honour of being its president, the Association has grown a lot, gaining a significant role in the context of urban morphology scholars.

I think a good job has been done, despite few inevitable mistakes. Above all we remained consistently in our cultural area of interests, within the sphere of what can be rationally verifiable and didactically transmittable. This in a cultural context in which the disciplinary boundaries of the architectural design seemed increasingly uncertain. Today each of us knows well that beyond those boundaries other important questions arise, of different nature, linked to languages and meanings, to new investigation techniques, to perception and to the artistic component of our work. But we also know that it is crucial to preserve and develop in contemporary terms a nucleus of knowledge and methods which allows any aesthetic synthesis to be based on sharable foundations, as required by the civil responsibility of our work.

In this spirit, since its foundation, the Association has organized conferences and communicated its activities. As president, I have also considered vital the parallel activities in which the members of Isufitaly participate, such as the organization of meetings, university courses and publications.

It seems to me that, over time, even in these specific activities, our Association has earned the esteem of similar organizations which, in the wake of Isufitaly, have been founded all over the world.

It would take too long just to list the activities carried out by all of us in these years.

I will only mention the two most recent, linked to each other, which, I believe, have had particular success and international echo. The first arises from the idea of transforming Isufitaly, from a structure that only plays an aggregative role and disseminates the themes of urban morphology, into an active subject, which carries out research and manages its organization. The occasion was the Kaebup project, (Knowledge Alliance for Evidence-Based Urban Practices) coordinated by Nadia Karalambous of the University of Cyprus with the aim of studying the relationship between urban morphology and design. Unlike the other participating academic partners, who reorganized the research within the university structures, I chose to involve Isufitaly which was supposed to represent, symmetrically to other departments, the Italian referent in research management. It should have been a first experiment: other members could have brought other projects and funding, contributing, while their autonomy would be respected, to strengthening the scientific credibility of the Association.

As part of the research, some of us organized the ISSUM, International Summer School in Urban Morphology, which we will discuss in a future session in this conference. I think it could be a useful experiment not only for Isufitaly but also for all the Isuf regional networks and could have interesting developments.

As president of Isufitaly let me therefore say that the outgoing Isufitaly Board has not only taken care of the administrative aspect of the Association, but of an organic structural project that includes communication (conventions, conferences, website) research (participation in financed projects) and, finally, teaching (with the Summer School).

Let me also make a brief consideration on the future of Isufitaly.

As it should be, within Isufitaly the interests of each of us, our beliefs, even our own values, have differentiated, and are increasingly differentiating, over time. The reasons are several (scientific, professional, academic) and all valid, but we must not hide the fact that, for this reason, we are going through a phase of crisis completely new in the story of our common work.

Change, however, is the salt of any structure aimed at experimentation. If it is likely that this condition leads to difficulties in organizing common work, also implying a risk of losing our identity, it is also true that the differences that have arisen could constitute, if well used, not a reason for division, but a resource. And since I consider that my duty, under the new conditions, has been exhausted, I believe that whoever will take my place, will have to place this consideration at the centre of future projects.

A mention to the specificity of this conference.

This sixth Isufitaly meeting has a particular character for several reasons, all linked to the fact that it takes place in Bologna. For the

first time it is not organized within an architecture faculty but an engineering one, opening up, in my opinion, a new field of interests for Isufitaly. I recall that the Bologna Faculty of Engineering boasts an illustrious tradition in the field of urban studies, and that a well-known representative of it, Adolfo Dell'Acqua, participated in our first conferences proposing important reflections on the integration between morphology and design. This tradition continues today, in contemporary terms, with the work of Annarita Ferrante (co-chair of this conference) on the existing building heritage.

Bologna was also the seat of some of the most interesting urban experiments in Italy.

I recall, among others, the innovative ideas of Pier Luigi Cervellati on the function of the historic centre organically understood in the context of the entire urban and territorial organism.

Furthermore, Bologna has a particular interest for us as well for the tradition of studies and experiments on the relationship between governance and the city development process. Not surprisingly, the city has had, over time, administrations that have sometimes been an example of a virtuous management in the transformations of the building fabric.

For this reason, some of the central themes of the conference are precisely the problems of urban policy, governance, urban communities and public space as a laboratory for transformation.

Another relevant theme is that of the renewal of the analysis and design tools of the urban space, the study of new technologies dedicated to new environmental strategies.

Of course, ample space will be given to traditional themes of our conferences such as the reading and design of the existing city integrated with the ever-current theme of urban regeneration, I believe that the organizers of the conference and their collaborators have done a generous and intelligent job. I thank them all on behalf the Board of the Association and I wish everyone a good job for the next few days.

*Giuseppe Strappa
President of ISUFITALY*

Foreword

Since the beginning of the third millennium, the rapid changes that contemporary societies are facing are radically transforming the perception and the structures of our cities. New topics seem to dictate the political agenda, suggesting alternative options to manage the emerging urban mutations.

An increasingly "data-driven society" is forcing the migration into an almost immaterial world, prompting Information and Communication Technology together with the Smart City .

The crisis of the traditional real estate industry, propelled by the global finance system, is contributing to a renewed consideration of the Public Space as a "space of encounter, sharing, experience and inclusivity", mapping the everyday life to discover unexpected urbanities , through the application of GPS to record pedestrian movement flows.

Most of the deficiencies in the governance methods are addressing us with new social, economic, cultural roles, inviting human beings to perform as strategic Agents of Change. As an immediate consequence, new "forms" of cities are strongly brought to our attention: the "city of sharing", the "city of temporariness", the "city of Life between buildings ", giving an unexpected impulse to the so-called incremental Urbanism processes.

In such a way, the very idea of the city is radically under discussion. We are then required to answer these numerous questions in order to define the scientific coordinates for the city of the 21st century. In that respect, the conference has been calling experts in the field of Urban Studies in order to reflect upon the following main topic:

1. Communities and Governance

The role of Communities and Neighborhoods, conceptually framed within urban policies based on new participatory concepts, sustainable oriented principles and supported by the idea of "proximity" and multi-layer strategies of land management, are one of the test beds of new approaches in Urban Morphology.

Research approaches, as well as design strategies, must be able to read these phenomena, to understand them and translate them into tools for supporting decision makers, stakeholders, citizens, in the transformation process of the city.

2. New methods and Technologies for the urban analysis

The society of the 21st century, being "data-driven", will be highly technological. Urban Morphology should be able to deal with these issues and learn to play an active role in their development, so as to consist in a mediation tool between environmental strategies and the city. It should also experiment with new technological means by developing new analytical methodologies capable of grasping the ongoing transformations.

3. Reading the changing Urban Form

A Classic in Urban Morphology, urban analyzes and the theories underlying them constitute its very foundations, the greatest legacy, of the International Seminar on Urban Form. A legacy that must be fed and implemented in new research and new studies, demonstrating the capacity to deal with the new emerging challenges of evolving cities. If unsuccessful, in that respect, the meaning of the urban morphological discipline will be lost.

4. Designing the sustainable Urban Form

Urban Morphology is also the basis for Urban Design. The city of the 21st century has to be sustainable, to react the ever-changing conditions of existence. The complexity of urban phenomena requires, therefore, a scientific awareness capable of catalyzing different disciplines and expertise, different needs, different themes, within the urban fabrics. Fabrics that will, in turn, be an expression of this complexity, giving "form" to it.

Under those circumstances, Urban Morphology can claim again a disciplinary status.

It is not simply a matter of broadening the disciplinary horizon of Urban Morphology. It is a question of defining a new theoretical and methodological framework, a new "horizon of meaning", and new analytical tools, to understand the complexity of the city's transformation processes. In other words, it is a matter of building a renewed morphological discipline able of intercepting the needs of the globalized society and translate them into physical forms.

*Marco Maretto, Nicola Marzot and Annarita Ferrante
Conference Chairs*

Conference Themes

C | *Communities and Governance*

N | *New Methods & Technologies for the Urban Analysis*

R | *Reading the Changing Urban Form*

D | *Design a Sustainable Urban Form*

UD | *Reading U+D Prize*

Communities and Governance

- 68 Type, rule and exception.
Michela Barosio, Martina Crapolicchio
- 80 Città Giardino Aniene. A persistent experience of quality in urban design.
Michele Bianchi, Elena Ogliani
- 92 Ethics, Resilience and Legacy. Some observations on the concept of territory defined by Saverio Muratori.
Pina Giusi Ciotoli
- 102 The definition of borders as a possibility to shape the open space of the city.
Ermelinda di Chiara
- 112 Mapping a genealogy of the in-between the buildings starting from post-war CIAM reflections.
Elena Giaccone
- 124 In)forms of empowerment. The role of the project in inclusive urban transformation processes.
Santiago Gomes
- 136 The concept of "Venustas" in the current design practices.
Andrea Guidotti
- 146 Self-organized peripheries in Mediterranean cities. Examples from Rome and Jerusalem.
Munir Khader, Giovanni Fusco
- 160 Notes for a morphological critique of the notion of territory: The 'archipelago' as a paradigm of the contemporary urban condition.
Nicola Marzot
- 174 São Paulo - the changing city.
Solange Moura Lima de Aragão
- 180 Urban morphology in urbanism: towards a more holistic paradigm.
Lucia Nucci
- 186 Bologna and the Porticoes, the form of a shared space.
Valentina Orioli
- 192 Tourism as impulse of urban and social transformation - Local frames of a global phenomenon.
Christina Papadopoulou
- 198 The School as the City: Rewriting and Collaging an Urban Morphology. Vimercate Schools Campus' Design.
Laura Anna Pezzetti, Helen Khanamiryan

- 212 A strategic-multidisciplinary approach to reduce the seismic risk. Ongoing activities within the Adriseismic project.
Giorgia Predari, Lorenzo Stefanini, Angela Santangelo, Giulia Marzani
- 224 CONF.I.A.N.Ç.A. | a moment of stillness, self-reflection and connection in the ever-moving reality of modern societies.
Vicky Simitopoulou
- 234 Smart Façades for resilient cities.
Ilaria Spasari
- 242 From urban morphology to collective intelligence: co-designing public walks for a new neighborhood narrative.
Silvia Tagliazucchi
- 254 Architects' roles in community regeneration with 'Residents Deep Participation'.
Han Wang, Li Bao

New Methods & Technologies for the Urban Analysis

- 264 Exploring how Amman's Abdali redevelopment project is considered state-led gentrification through text mining techniques.
Ruba Alomary, Javis Eboa Otia
- 278 The new form of the old city. The case of les Halles, urban reasons and project's choices.
Claudia Angarano
- 290 GIS-based procedure for urban fabrics characterisation. The case study of Bologna.
Anna Chiara Benedetti, Carlo Costantino, Riccardo Gulli
- 304 Overwrite the real.
Alessandro Gaiani
- 314 METYS: METropolitan CarTographyY for Sustainability. Modeling Metropolitan Landscapes through maps for Urban-Rural Morphotypes Projects.
Valentina Galiulo, Antonella Contin
- 324 Climatic Performance of urban texture: public spaces in Venice Fabric.
Barbara Gherri, Marco Maretto, Daniela Maiullari, Chiara Finizza, Alice Monacelli
- 334 Reading morphology through diagrams. Exploring methodology.
Rossella Gugliotta

- 344 Typological process of the historical courtyard houses in Yazd, Iran.
Nahal Khorrami, Alessandro Camiz, Alessandra de Cesaris
- 360 Morphogenetics of small size towns. The analysis of urban fringes in internal Ligurian centers.
Giampiero Lombardini
- 372 Parametric analysis of urban form, from geometrical to topological.
Luca Maricchiolo
- 386 Parametric Architecture and Operational Research: an attempt to apply Luigi Moretti's theory on today's urban design analysis.
Martina Meulli
- 392 Learning from Monasteries. New Collective Spaces for Naples Ancient City
Salvatore Pesarino, Ferruccio Izzo, Luigiemanuele Amabile, Lorenzo Giordano
- 402 New methods and Technologies in Urban Analysis: How Dynamic Morphology influences the transformation of Public Space.
Greta Pitanti, Marco Mareto
- 412 A Systematic Approach to Urban Block: Defining Automatic Tool for Urban Form.
Didem Turk
- 422 The role of the urban project in the transition from city to smart city. Case studies in Umbria.
Paolo Verducci, Valerio Palini
- 430 Exploring the evolution process of the urban form model of Xiaoxihu Block in Nanjing from the perspective of topological networks.
Xiao Xiao, Zidong Liu

Reading the Changing Urban Form

- 440 Street space as contact space; a comparative analysis of street regeneration projects between Rome and Barcelona.
Francesca Ambrosio, Sophia Arbara
- 454 Mapping Time. Structures for the Imagination.
Lamberto Amistadi
- 464 Reading the changing Urban Form of Siberian Cities.
Daria Aleksandrovna Belova

- 476 The formation process the Regio quartadecima Constantinopolitana. Relocating Constantine's walls.
Alessandro Camiz
- 486 Novi sed antiqui methods and techniques for urban analysis and project. Knowledge and design for the Vkhutemas museum in Moscow.
Renato Capozzi, Federica Visconti
- 496 The typology of the "Sandal Bedestan" in the Grand Bazaar, Istanbul.
Irem Ezgi Çiftçi, Alessandro Camiz
- 508 The dissent city's urban form.
Maria Fierro
- 520 Programmatic and paradigmatic components. Iconology in the relationship between Architecture and Urban Morphology.
Tommaso Lolli
- 530 Reading the ancient city: projects for the archaeological area of Tyndaris. The form of the nature, the form of the city, the value of the monument.
Oreste Lubrano
- 542 A lesson about the form. Dissonances and complementarities in Luisa Anversa Ferretti's and Giuseppe Samonà's projects for the extension of the University of Cagliari.
Andrea Manca, Giovanni Battista Cocco
- 550 Alternative models for city-density: the city built on itself.
Elisa Maruelli
- 558 The built form and urban morphology in the historic city of Korça, Albania.
Ledita Mezini, Jona Muçollari
- 570 Historical urban renewal as a preface to current city changes. The case of Ciutat Vella, Valencia.
César Damián Mifsut García
- 578 Reading the urban form through the green-grey armature as a tool for spatial regeneration: the case of Piacenza.
Federico Mistò, Carles Crosas Armengol, Antonella Contin, Julián Galindo González
- 590 The concept of porosity in the Japanese reality.
Alice Monacelli, Marco Maretto
- 600 Mapping the evolution of urban form in Tirana
Jonila Prifti
- 610 In-formal settlements: recurrent patterns and permutations. Mapping the changing morphology of informal settlements.
Ana Ricchiardi

- 624 Diachronic urban morphology: The formation process of Ait Ben Haddou, Morocco.
Imane Saidi, Alessandro Camiz
- 636 Character and applications of Historical Judgement in architectural and urban design.
Francesco Scattino, Marco Maretto
- 644 The Trullo dwelling type in historical core of Alberobello. Survey on relationship between urban morphology and building typology.
Raffaele Tarallo
- 654 The urban morphology of cities in the future: Évora and Setúbal – Portugal.
Maria Céu Simões Tereno, Manuela Justino Tomé, Maria Filomena Mourato Monteiro
- 666 Architecture and culture in cities with a gender perspective. Complex evaluation from antiquity to the present.
Maria Guadalupe Valiñas Varela
- 678 The city of the dead: an in-vitro city. Rethinking Liège starting from cemeteries.
Giovangiuseppe Vannelli, Marc Goossens
- 692 Drawing as a multidisciplinary tool. A semantic experimentation in Venice.
Chiara Vernizzi, Chiara Finizza
- 702 Three flyovers in the city of Lisbon.
Pablo Villalonga Munar

Design a Sustainable Urban Form

- 712 Piazza dei Cinquecento Alberi. Interweaving Uses and Spaces for Rome's Central Station.
Luigiemanuele Amabile, Marianna Ascolese, Alberto Calderoni, Vanna Cestarello
- 722 Patterns of Intention Project hypothesis for San Siro district, Milan.
Francesca Belloni, Francesco Bruno
- 736 A modern and ancient way of making a square.
Nicola Campanile
- 748 Urban regeneration. From the edge of the city walls to the proposal for a square at Porta Maggiore in Rome.
Paolo Carlotti

- 758 The city between nature and artifice. Space and form of Prague river's settlements.
Domenico Chizzoniti, Yuliia Batkova
- 768 Urban morphology and anthropogenic heat flux. Case studies in Barcelona.
Helena Coch, Agnese Salvati, Antonio Isalgue
- 778 Saverio Muratori. Architecture and reality.
Francesca Delia De Rosa
- 786 Salerno in the making: sustainable urban regeneration proposals for the disused railway area of ex scalo merci.
Felice De Silva
- 798 A sustainable and social-orientated re-shaping of the urban building blocks.
Annarita Ferrante, Rachele Corticelli, Cecilia Mazzoli
- 810 Cities and earth's shape
Luigi Franciosini
- 822 Searching for the sustainable "form" of the city.
Andrea Iacomoni
- 828 Before and Beyond adaptation. An integral review on local perspectives for morphological transformability.
Diego Reinaldo Moya, Diego Andrés Sepúlveda Carmona
- 840 Designing a sustainable urban landscape. Between urban and rural morphologies.
Giulia Annalinda Neglia
- 852 Urban Form Balance in Landscape's Folds.
Rita Occhiuto
- 864 New centralities in the widespread city
Camillo Orfeo
- 876 Continuing to Write in Small Historic Cores. A Design-Led Strategy for Meda's urban blight.
Laura Pezzetti, Helen Khanamiryan, Maria Giulia Atzeni
- 888 Recovering a lost identity. The ancient river village at the origin of Noventa Padovana.
Enrico Pietrogrande, Alessandro Dalla Caneva, Massimo Mucci
- 896 From Mastercampus to Mastertown: forms of a self-reflective urban community.
Carlo Quintelli

- 906 Formal / informal / syncretic. Towards a different notion of sustainable city.
Antonio Vito Riondino
- 918 Margins in contrast: the former Palomba quarry in Matera.
Giuseppe Francesco Rociola
- 930 Sustainable land reading.
Jlenia Ruggiero
- 944 Shaping the ecological transition: addressing technical strategies from a design point of view.
Kevin Santus
- 952 Prolegomena to a theoretical course in urban morphology based upon the relationships between the shape of the city and the shape of the map.
Marco Trisciuglio
- 964 Morphology, Morphogenesis, Metamorphosis. The need of a lexicon.
Marco Trisciuglio, Federico Vercellone

Reading U+D Prize

- 972 Piecemeal Planning. Survey on San Gimignano.
Marco Marino
- 978 Architecture, urban form and landscape: the work of Bruno Violi in Bogotá.
Serena Orlandi
- 990 The city of macroisolato. A tool per the urban regeneration project of the medium-size city.
Giuseppe Verterame

Morphology, Morphogenesis, Metamorphosis. The need of a lexicon

Marco Trisciuglio¹, Federico Vercellone²

¹Politecnico di Torino (Dipartimento di Architettura e Design), Viale Mattioli 39, 10129, Torino, Italy

²Università di Torino (Dipartimento di Filosofia e Scienze dell'Educazione), Via S. Ottavio, 20, 10124 Torino, Italy

E-mail: ¹marco.trisciuglio@polito.it, ²federico.vercellone@unito.it

Keywords: *glossary, metamorphosis, morphogenesis*

Conference theme: *Design a Sustainable Urban Form*

Abstract. *30 years are the temporal distance between the Peter J. Larkham and Andrew N. Jones' work A Glossary of Urban Form (1991) and the new Glossary of Morphology (2020) by Federico Vercellone and Salvatore Tedesco (editors). Even if the two works are different in setting, in consistency and above all in the field of knowledge to which each refers (urban morphology on the one hand and aesthetic philosophy on the other), the two glossaries show many similarities in their attempt to construct a taxonomy of concepts relating to form (including the city).*

The purpose of the paper is the comparison between two disciplines especially on three concepts: "morphology", "morphogenesis" and "metamorphosis". The consideration of morphology from the point of view of the evolution / corruption of the form and above all of its original constitution (archetypal and / or also as an anthropological datum) is of particular interest here.

The proposed contribution, as preliminary reflections on an interdisciplinary study to be carried out, will take the form of a dialogue around the same object from two different points of view.

Introduction

This paper arises from a specific and little question, linked to a specific and little experience we did in China: how to translate in English, for a lecture, the title of the 1959 book by Saverio Muratori, *Studi per una operante storia urbana di Venezia*, never translated in English until now. We know how much the adjective «operante» used in that title was important in the Italian debates on urban morphology and on historical urban centers, but the English translation of the term is not so shared by everyone.

The Wiley-Blackwell Encyclopedia of Urban and Regional Studies, edited by Anthony M. Orum (2019) translates it as «operational». Many other Authors preferred «operational», while Giancarlo Cataldi (in a speech hold in 2014, at ISUF Conference in Porto) used the adjective present participle «working». Some colleagues in China proposed to translate «operante» with 操作 (cāozuò) that is something like «to be operative», but coming back from the Chinese culture to the European one (and specifically to English language), something can be lost and something can be added that can be also misleading in some way.

It is clear that we need a new generation of lexicons dedicated to the subject of urban morphology.

The books we call lexicons can be of two main different genders: specialized vocabularies (able to explain the words of specialist languages and -according to their size- they can be a shorter work, called glossary, or a wider fruit of a greater challenge, called encyclopedia) or dictionaries (able to translate the same words from the language of one culture to the language of another culture). Since languages and cultures are not neutral and precise in their mechanisms of development, much often the semantic field of a word changes in the passage from one language to the other and so the more advanced specialist lexicons play the role both of the specialized vocabularies and the dictionaries.

State of the Art

We must recognize that the 1568 pages of *L'Aventure des mots de la ville*. À travers le temps, les langues, les sociétés opened in 2010 a new season in studies about words related to urban form. Driven by a team including a sociologist (Christian Topalov, CNRS and EHESS, main editor of the research project), a geographer (Laurent Coudroy de Lille, Université de Paris-Est), an urban anthropologist (Jean-Charles Depaule, CNRS), and a historian (Brigitte Marin, Université de Provence), the work investigates on the words ordinary used nowadays to talk about cities in seven European languages (English, French, German, Italian, Portuguese, Russian, Spanish) and in Arabian (because of its interplay with the other European cultures). 160 authors have been involved in writing 260 essays/entries during the 15 years of the project (started in 1995). Ten years later, in 2020, another European network (coordinated by TU Delft within the COST – European Cooperation in Science and Technology, called “Writing Urban Places”) published the glossary *Vademecum. 77 Minor Terms for Writing Urban Places*, edited by Klaske Havik, Kris Pint, Svava Riesto and Henriette Steiner and above all devoted to the new terms of the current debate on urban spaces and places.

If the aim of the first book is organizing the words about the cities in a historical and genealogic perspective, the main goal of the second one is showing that new terms are entering, year by year, in the debate on the uses and thoughts upon the city as an anthropologic product.

What about the words related to urban morphology? They are not so evident in the two works of 2010 and 2020 above described, even if, obviously, the urban form seems to maintain its role of general background of societies behaves.

In order to find more specific term related to urban morphology, other works should be

consulted.

Already in 1988, when the Topalov's challenge towards a genealogic dictionary of urban terms just started, a *Dictionnaire de l'urbanisme et de l'aménagement* has been published by Pierre Merlin and Françoise Choay as the outcome of a national investigation «about urban morphologies» (conducted in France, Italy, UK and USA) by the *Laboratoire Theories des Mutations Urbaines en Pays Développés*.

Furthermore, the collection of papers by M.R.G. Conzen *Thinking about urban form. Papers on Urban Morphology, 1932-1998* (2004, edited by Michael P. Conzen) contains a chapter entitled «A Glossary of Technical Terms». It is derived from the second edition of the famous book on Alnwick by Conzen (*Alnwick, Northumberland: a study in town-plan analysis*, published by the Institute of British Geographers Pin 1960). In a well-known comment on it, Ivor Samuels wrote: "It is one of the attractions of the nexus of concepts, ideas and approaches that occupy the field of urban morphology that they are capable of being appropriated for use by different professions in different contexts who seek to use them for their own purposes. Choay and Merlin (1986) complain about this. Everyone seemed to be discussing something different and there was very little common ground or methodological base, quite apart from language problems. This, however, is one of the strengths of morphology. It is open to approach by various disciplines with their own methods and any attempts to restrict or strait-jacket the discourse could stifle it" (*The Built Form of Western Cities*, 1990, by T. S. Slater, pp. 433-434).

Between the evocation of richness of a specialistic language (the one "spoken" by urban morphologists) and the real and always lurking risk of a new Tower of Babel, another case can be here described: the translation in English (from the original Italian language) of two strictly linked books. The first one was written by Gianfranco Caniggia and Gian Luigi Maffei about the interpretation of basic buildings (originally published 1979) and the second one was written by Gian Luigi Maffei and Mattia Maffei about the interpretation of specialized buildings (originally published in 2011). The challenge faced by Nicola Marzot to transfer the works and ideas of the Caniggian School from the Italian field of debate to an international one required the compilation of two rich glossaries, probably also necessary for that sort of "newspeak" of Italian urban morphology that Gianfranco Caniggia had the merit (and perhaps also the fault) of establishing. The two glossaries by Marzot collect 86 terms, 62 for the first book and 24 for the second book, from "building plot" to "elementary cell", from "polarity" to "typological process", from "nodality" to "specialization".

Comparing two lexicons on Morphology

However, faced with the semantic uncertainty of the terms of urban morphology, instead of increasingly closing the circle of those who speak (and understand) the same language, with the risk of no longer being understood outside that circle, it seems today necessary to further widen the meshes of the "morphological discourse" so as to break the strict disciplinary logic and open reflections on the shape of the city to new and different scientific contributions.

For this reason, we tried to compare two different lexicons, both admittedly presented as glossaries: the first is *A Glossary of Urban Form*, edited by Peter J. Larkham and Andrew Jones in 1991 and the second one is *Glossary of Morphology*, edited by Federico Vercellone and Salvatore Tedesco in 2020.

First of all, it must be said that a glossary is usually built on selected terms, it does not have the exhaustive nature of a dictionary. However, precisely through the choice of lemmas, specific critical attitudes and implicit field choices can be read.

The glossary by Larkham and Jones has been published as the issue nr. 26 of the "Historical

Geography Research Series" in June 1991, under the responsibility of the Urban Morphology Research Group within the School of Geography of The University of Birmingham (among whose members are also Jeremy Whitehand and the same T.S. Slater). The introduction to the glossary, signed by Larkham, is an excellent synthesis of the history of urban morphology in the British context over an entire century (and in the German context, too, at least in its origins). Although the field in which the glossary is drawn up is that of British-born geographers and planners, the glossary appears to acquire terms from a varied panorama of disciplines.

The actual glossary fills about seventy pages, in which it is recognized that each of the lemmas belongs to one of these subjects' fields: Agents of change, Architectural style, Architectural terms, Building types, Caniggian terminology, Conzenian terminology, Data sources, Fabric change, Interest in land, Methods of analysis, Planning terminology, Settlement type, Street type.

The glossary by Vercellone and Tedesco has been published by the international publishing company Springer. The main background of both the editors is the Aesthetic Philosophy in the Italian context of Italian academic humanistic studies, but the aim of the glossary is becoming a reference point for multidisciplinary studies about "morphology". Published in the Spring Series "Lecture Notes in Morphogenesis" (directed by a Mathematician, Alessandro Sarti, Directeur de Recherche CNRS at the EHESS in Paris) the work opens with a programmatic introduction, that starts with these words:

"Currently, there exists no discipline whose specific boundaries could be defined as morphology. Nevertheless, it is possible to trace out its history in ample terms and to define its scope the work opens with a programmatic introduction broadly by understanding it as the place where the semantics of forms are defined and where they are connected to a reference image. The central link in the field of morphology is form-image, and it refers to those dynamics of the form and to the dynamic systems that have taken hold in late modernity and that continue to grow today".

The Glossary of Morphology in the end is the result of a broad and articulated reconstruction of morphology as a study of form, to which different and even very distant knowledge is applied. The glossary itself (about 500 pages containing 123 lemmas) is composed of short essays focused on each lemma, with authors coming from different backgrounds.

The best way to compare the two works, that of Larkham and Jones and that of Vercellone and Tedesco, both in their general setting and in the different historical periods in which they were written and published, is to compare the reference to three words that on the one hand they appear to be emblematic of the specialized language of urban morphologists and on the other to be used sufficiently broadly to fall within the multidisciplinary context of the more recent work of the two. These are morphology, morphogenesis and metamorphosis, three lemmas that all contain the root of μορφή (morphé), forma: MORPHO-logy, MORPHO-genesis, meta-MORPHO-sis.

Morphology, Morphogenesis, Metamorphosis

For Larkham and Jones, "MORPHO-logy" is intended as urban morphology and the definition is short and clear: "the study of form". They remember that for Oxford English Dictionary "morphology" is "the history of variation in form" (first used in 1885) and that the term has been used by Johann Wolfgang Goethe. Moving to the term "urban morphology", the editors try to mix the definition of British geographers ("the study of the physical fabric of urban form and the people and processes shaping it") together with the definition of urban designers ("methods of analysis finding out principles or rules of urban design"): saying that "morphology is the study of

the physical and spatial characteristics of the whole urban structure”.

Within the glossary compiled by Vercellone and Tedesco, “Morphology” is of course the main term to be defined. Considering any keywords (Phenomenology and ontology, Forms, functions, attractors, “Crisis” of Morphology, Historical developments, Aesthetics, theory and history), the two editors wrote a long essay that retraces the ideal route of birth and development of the concept of morphology using philosophical and scientific references, showing the fruitful potentiality of the idea of “morphologie” as it was proposed by Goethe (quoted here in a more explicit way).

With respect to the term “meta-MORPHO-sis”, for Larkham and Jones it is not faced in itself, but as the adjective “metamorphic”, used to qualify the “plot pattern” in the Conzenian terminology. Thus, adopting the words (and also a specific picture) by M.R.G. Conzen (1969 and 1978), a “metamorphic plot pattern” shows “secondary changes caused by amalgamation, division and truncation of plots”.

On the contrary, in the context of the collection of short essays that constitutes the glossary of Vercellone and Tedesco, Valeria Maggiore describes the meaning of metamorphosis in ancient mythology (between Homer, Ovid and Apuleius) as well as in biology (above all in zoology), highlighting the interplay between transformation (what changes) and permutation (what remains as the same).

And what about “MORPHO-genesis”? for Larkham and Jones, following the thought by Jeremy Whitehand in some written of early Eighties, “Morphogenesis” is “the creation of physical forms viewed as a developmental or evolutionary process”.

“Morphogenesis” is absent as a specific term in the glossary by Vercellone and Tedesco, but the word is relevant in the name of the Springer series in which the book is published (“Lecture Notes in Morphogenesis”). The explanation of the contents of the series is clear as a glossary definition and passes through an essential question: “How can form emerge from the constant, chaotic flow? How can a sequence of purely informational elements -an a-signifying combination of chemical substances organized in the DNA molecule- evolve into the highly complex and structured forms of the living organism? A similar question can be asked when we deal with the morphogenesis of vision in neural systems and with the creation of evolving synthetic images, since digital technology makes possible the simulation of emergent processes both of living bodies and of visual forms”.

Conclusion

30 years are the temporal distance between the Peter J. Larkham and Andrew N. Jones’ work *A Glossary of Urban Form* (1991) and the new *Glossary of Morphology* (2020) by Federico Vercellone and Salvatore Tedesco (editors). Even if the two works are different in setting, in consistency and above all in the field of knowledge to which each refers (urban morphology on the one hand and aesthetic philosophy on the other), the two glossaries show many similarities in their attempt to construct a taxonomy of concepts relating to form (including the city).

The older glossary investigates the field of urban morphology from within, trying to remain specific to the sciences (and languages) that strictly deal with the shape of the city. The more recent one completes (at least for the interpretation that urban morphologists can make of it) the reverse path, allowing other reasoning on the form to invade the field of urban morphology and ultimately freeing it from perhaps sclerotic terms of debate.

Now that the taxonomy of words on morphology seems to be able to be enriched from the point of view of the Anglo-Saxon matrix lexicon, a new and further phase of research is offered

to our initiative as scholars.

The intersection between settlement cultures and spoken languages could be the new horizon of research to come. For example, extreme Asia, so far from the Mediterranean and Anglo-Saxon cultures, can become an important field of experimentation. If we are able to “read”, in settlement cultures far from our own, the interrelationship between words and figures of the city, we will then be able, as in a mirror, to understand more and better our own settlement culture. That means that we must avoid to remain in the realm of words without any connection with the realm of objects: the real great challenge in our contemporary world (globalized by one hand and full of different and precious regional cultural identities by the other hand) is watching the apparently similar urban facts and considering the different ways to nominate them, in order to understand how the urban facts themselves are different in functions, uses and symbolic values for different cultures.

However, there is a second corollary of what has been said up to now. Just as there is a multidisciplinary character in the very nature and history of morphology studies (already evident in the glossary of Larkham and Jones), the discourse on urban morphology also deserves to look at the common place of comparison of the other disciplines. As this is explained by Alessandro Sarti himself, when he presents the Springer series on morphogenesis: we must provide ourselves of “suitable theoretical and practical tools for describing evolutionary phenomena at the level of Free boundary problems in Mathematics, Embryogenesis, Image Evolution in Visual Perception, Visual Models of Morphogenesis, Neuro-mathematics, Autonomy and Self-Organization, Morphogenetic Emergence and Individuation, Theoretical Biology, Cognitive Morpho-dynamics, Cities Evolution, Semiotics, Subjectivation processes, Social movements as well as new frontiers of Aesthetics”. Out of the specific boundaries of urban morphology, a new and trans-disciplinary interest towards the idea of form is needed, even considering how many subjects (in technics, arts, humanities, sciences) are using today the idea of Morphologie as it was used initially by Johann Wolfgang Goethe.

References

- Caniggia, G., Maffei, G. L. (2006), *Interpreting basic building*, (Altralinea, Firenze), Marzot, N. (ed.), or.ed. 1979
- Havik, Kalske et al. (2020), *Vademecum. 77 Minor Terms for Writing Urban Places* (nai010, Rotterdam)
- Larkham, P.J. and Jones A. N. (1991), *A Glossary of Urban Form*, Historical Geography Research Series Number 26, Cheltenham
- Maffei, G. L., Maffei, M. (2018), *Interpreting Specialised Buildings*, (Altralinea, Firenze), Marzot, N. (ed.), or.ed. 2011
- Marat-Mendes, T. (2011) *Glossaries and dictionaries of urban morphology*, “Urban Morphology”, Volume 15.2
- Merlin, P. and Choay F. (1988), *Dictionnaire de l’urbanisme et de l’aménagement* (PUF, Paris)
- Vercellone, F. and Tedesco, S. (2020), *Glossary of Morphology*, *Lecture Notes in Morphogenesis*, (Springer, Berlin)
- Trisciuglio, M., Barosio, M., Ricchiardi, A., Tulumen, Z., Crapolicchio, M. and Gugliotta, R. (2021), “Transitional Morphologies and Urban Forms: Generation and Regeneration Processes—An Agenda”, *Sustainability* 13, no. 11: 6233. <https://doi.org/10.3390/su13116233>

Illustrations and tables

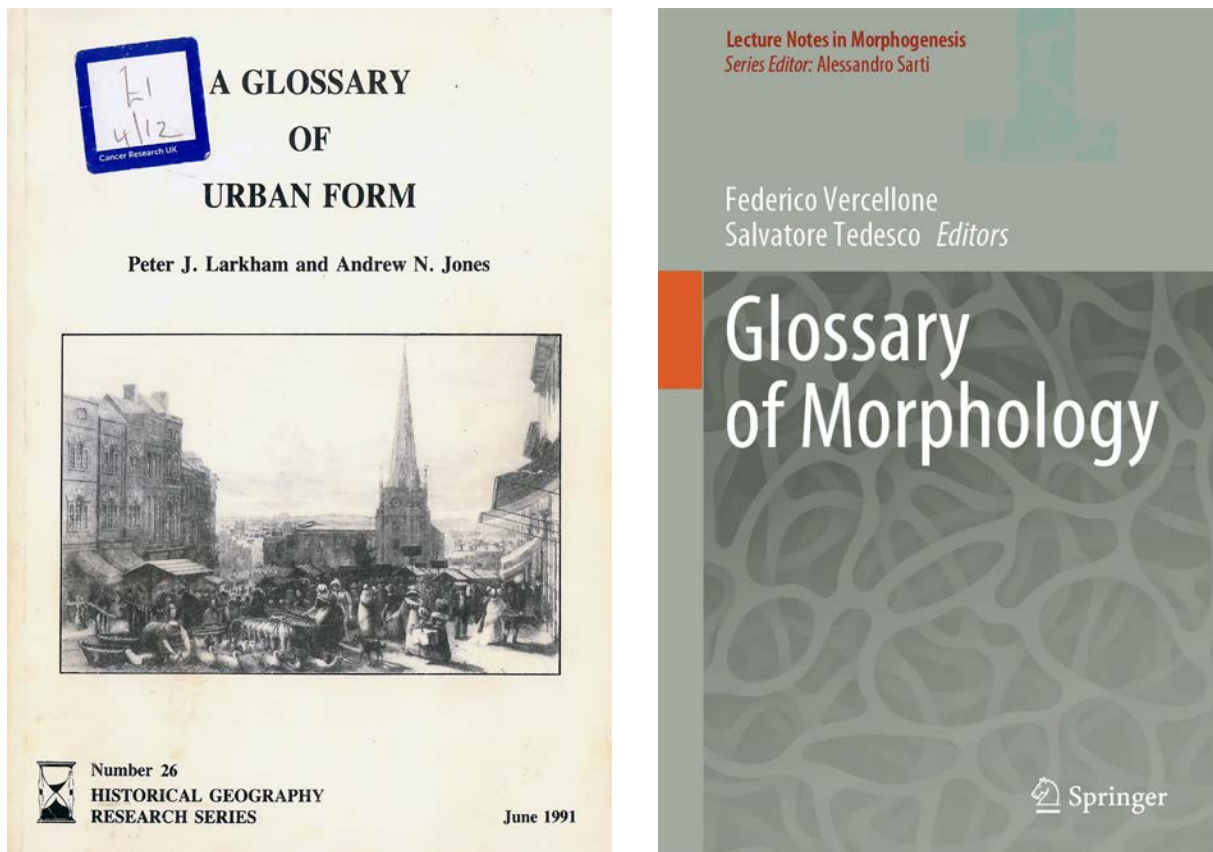


Figure 1. (Cover of the book by Peter J. Larkham and Andrew N. Jones, *A Glossary of Urban Form*, "Historical Geography Research Series" Number 26, Cheltenham, 1991)

Figure 2. (Cover of the book by Federico Vercellone and Salvatore Tedesco, *Glossary of Morphology*, "Lecture Notes in Morphogenesis" series, Springer, Berlin, 2020)