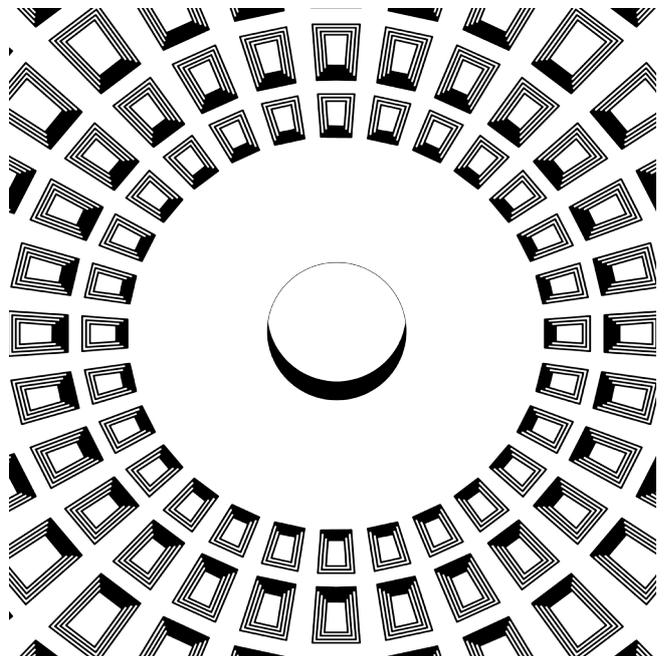


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BOOK OF ABSTRACTS

city as organism
new visions for urban life



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DI ARCHITETTURA E PROGETTO

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SAPIENZA
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The Twenty-Second International Seminar on Urban Form (ISUF Rome 2015) will be held for the first time in the Faculty of Architecture of Rome 'Sapienza' University, from the 22nd to 26th September 2015. The Conference examines the theme "City as organism. New visions for urban life" and discusses changes and continuity in urban form, within the current global debate on the possibility of restoring the organicity of urban form to be found in historical cities.

This volume contains the abstracts submitted to the Conference.

The Conference opens with two introductory plenary sessions: 1: Rome as organism, 2: Urban morphology: state of the art; then 32 parallel sessions follow, organized around four main themes: Heritage and Historical Fabric (34 papers), Landscape and Territory (23 papers), Sustainable Design and Urban Regeneration (35 papers), Urban Form Reading and Design (42 papers); Urban Morphology Theories and Methods (46 papers). A special session is also dedicated to New Researchers' Forum. The other two plenary sessions are in the second and third day programme, 3: Architectural approaches in designing urban form, 4: ISUF local networks forum.

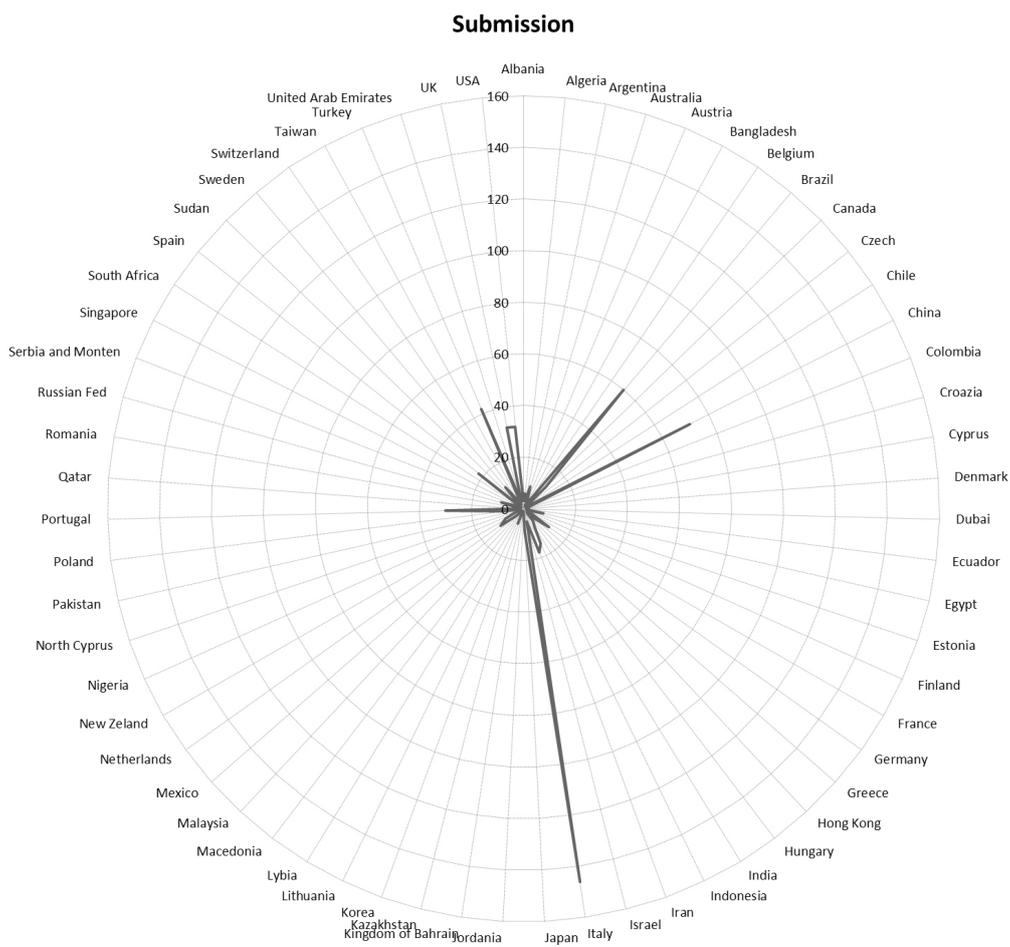
Internationally regarded as the major reference point for studies and debate on urban form, ISUF, alongside its affiliated national networks, has witnessed the recent founding of local journals. In 2014 ISUFITALY was "refunded" and launched by an annual conference together with a new journal, U+D Urbanform and Design (www.urbanform.it) which has already reached its third issue.

A significant number of abstracts were submitted to ISUF Rome 2015, around 700 from 250 different university institutions and more than 750 registrations on the web site. The abstracts submitted were sent from Italy (168), China (93), Brazil (72), Turkey (49), UK (43), Portugal (36), USA (34), Spain (28), Iran (23), Sweden (18), Indonesia (15), Cyprus (14), Australia (13), Canada (12), Germany (11), India (10), Japan (10), Netherlands (10), Poland (9), Russian Federation (9), Belgium (8), Egypt (8), New Zealand (8), Algeria (6), Greece (6), Serbia and Montenegro (6), Hungary (5), Korea (5), Mexico (5), Austria (4), Nigeria (4), Albania (3), Argentina (3), France (3), Malaysia (3), North Cyprus (3), and South Africa (3). The 245 abstracts were selected from the 677 submitted; 180 participants were chosen from the 245 officially registered for the Conference. The large number of participants from interesting and emerging countries such as China, Brazil, Turkey, South Africa and Iran is particularly significant.

Among the Conference themes there are a number of theoretical and methodological contributions based on the traditional and historical schools of urban morphology: the Conzenian school, the Muratorian school and the German morphogenetic school. There is significant participation on such themes as the legacy of Modern architecture, Public Space, Modern and Contemporary Design in Historical Cities, Historical Urban Fabric, Architectural Heritage, Conflicts and Contested Areas, Informal Settlements, Urban Regeneration, Urban Landscape and Metropolitan Infrastructure. There are also contributions on more recent ICT applications in urban contexts and their theoretical framework, such as space syntax, spatial analysis and digital devices. Several relevant and consistent case-studies and theories are collected in a group of sessions discussing Urban form, Urban Design, Urban Knots, Urban Form and Meanings, Urban Morphology Methods, Landscapes and Territories, Reading Contemporary Landscape, Sustainable Design Technology, Sustainable Design, Typological Process, Urban Growth and Fringe Belt Analysis.

The Conference discussions therefore deal with a variety of topics that are cross-scale and cross-

disciplinary oriented: from the city to the individual building, from territory to sustainable design. Both in the abstracts submitted and in those selected, the specific problems related to different urban contexts are of prime importance. In China, for example, we have keywords like eco-city, evolution, clusters, city life and heritage are recurrent; in Brazil, keywords such as court-yard houses, city life, informal settlements, housing, sustainability, utopia; in Turkey keywords include urban morphology, heritage, historical city, housing; in Sweden, density, urban form, landscape and space syntax. All these data help us to diagnose the state of the art in Urban Morphology research and practice within different global urban and cultural contexts. We fully expect that the ISUF Rome 2015 Conference will greatly enrich our knowledge on cities.





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 Université Saad Dahleb Bllida (1)

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Universidad Nacional de Lanus, Buenos Aires, Argentina (1)

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 Universidade Federal Fluminense (4)
 Universidade Federal do Espírito Santo (4)

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Plenary session 1 | Rome as organism

Rome: the city that lived twice.

Giancarlo Cataldi

University of Florence, Italy

- 32 What distinguishes Rome from every other city is the double life cycle of its long history. In this lecture I have highlighted the “permanent substratum structures” that ensured the “continuity in change” during the transition from Antiquity to Middle Ages: for our school this is the basic principle of “cyclic law”, that regulates the life and the history of the city. In Rome this phenomenon of rebirth is particularly clear: the basic buildings of the medieval city, attracted by the new religious center of the Vatican, settle spontaneously in the planned fabric of the imperial special buildings in Campo Marzio. On an urban scale, this implements the “medievalization process” theorized by Gianfranco Caniggia, following Saverio Muratori's studies on Rome's urban history.

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City as a process. Rome urban form in transformation.

Giuseppe Strappa

Sapienza, University of Rome, Italy

Rome is a vivid example of urban organism where each part is tied to another by a relationship of "necessity" and all contribute to the same end.

In its consolidated part, the city is the result of an organic process. Like any organism, to live, Rome needed continuous transformations in buildings and aggregates. These transformations are all different from each other and the resulting architectural multiplicity provides the beauty and the fascination of the urban form of Rome. The forming process, however, can be understood only if we can also comprehend their common characters.

The paper intends to propose a reading of Rome urban form, to the scale of the buildings and fabrics, based on the notion of "process" (Strappa, 2014).

This term indicates the vital sequence that generates and transforms buildings and aggregates by marking, too, their inevitable decay and ruin.

A Reading of four phases of transformation process will be proposed:

Consumption of the ancient substratum and formation of basic types;

Formation of urban fabric;

Merging the basic buildings to form new housing and palazzo specialized types,

Restructuring urban frame to form a new organicity.

To these four phases, completing a whole cycle, follows the long phase of crisis, a process in itself (Muratori, 1966) that, since the mid-nineteenth century, comes down to our days.

The reading of the transformations will be made through examples.

The aim is to provide a brief morphological guide to Roman buildings and fabric.

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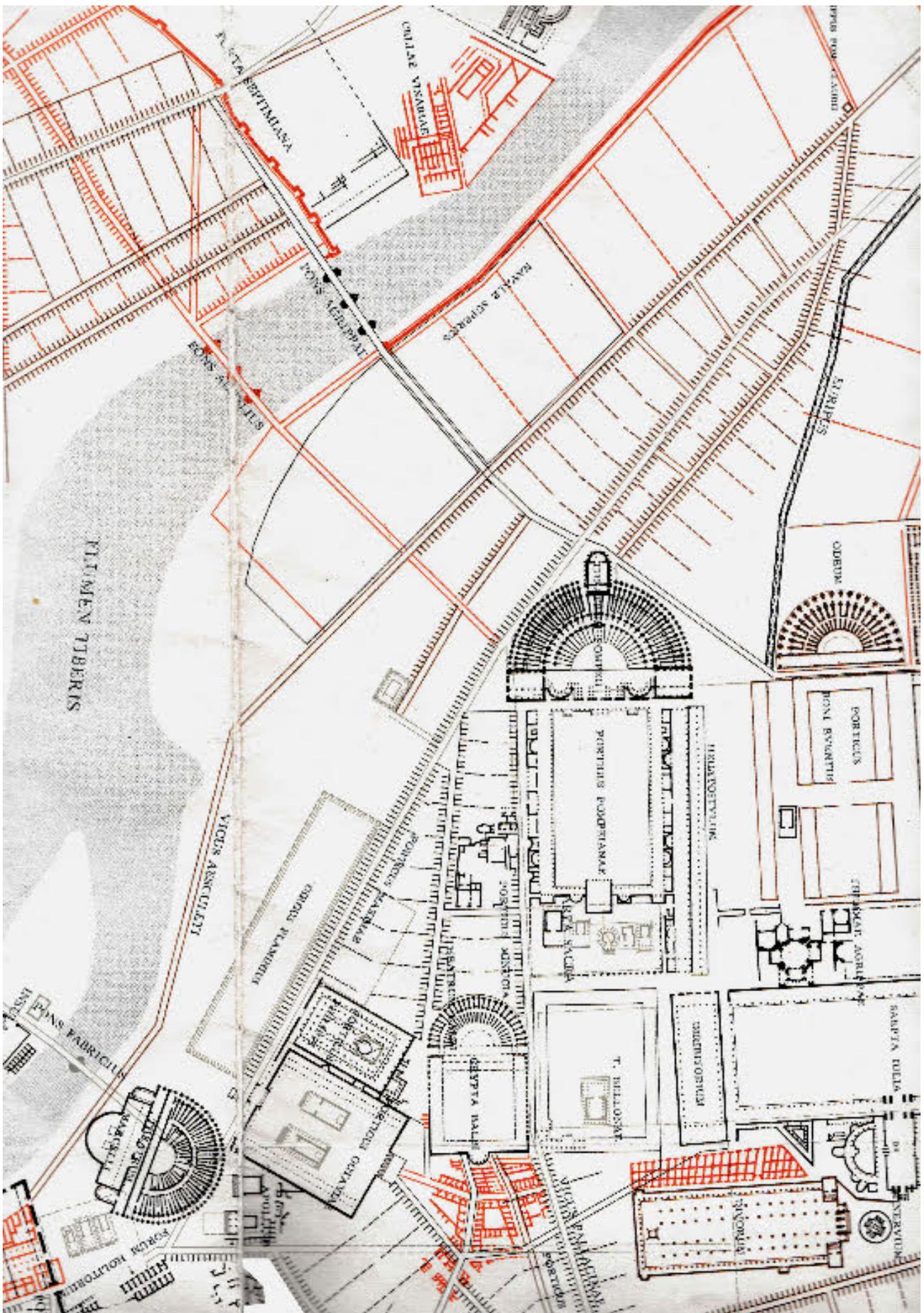
Plenary session 2 | Urban Morphology state of the art

Urban Morphology: taking stock.

Jeremy Whitehand

University of Birmingham, United Kingdom

- 34 The organizational environment within which the study of urban form is undertaken is reviewed, focusing on the international dimension. Strengths and weaknesses in the ways in which research is conducted are examined, particularly within ISUF. Analysis of the contents of Urban Morphology over the past 20 years provides a major part of the basis for discussion. Issues addressed include the poor international awareness of publications in languages other than English and the difficulties of comparing the results of research employing different methods and undertaken in different cultural regions. Suggestions are made about improvements that are needed, especially concerning the approaches and methods adopted in research and the dissemination of findings.



Guido Marinucci - Pianta di Roma - secondo periodo, città imperiale, secoli IA.C. - IV D.C., Particolare dell'area monumentale (in S. Muratori, R. e S. Bollati, G. Marinucci, Studi per una operante storia urbana di Roma, Roma 1963).

Plenary session 3 | Architectural approaches in designing urban form

Terra.

João Luís Carrilho da Graça

University of Évora, Portugal

- 36 In the late 70's, when I first started teaching architecture, I would always propose to my students a preliminary process of analyzing the city of Lisbon and its construction upon the territory. From the city plan collection, of the Instituto Geográfico Cadastral, at the scale 1:10 000, we would take on the first task: photocopying in tracing paper the contour lines — and only the contour lines — printed in the back of these maps.
- The whole of the contour lines represents the topography over which the city of Lisbon is built. It could however, if we wanted to, represent the topography of some other city imagined from it. If we start looking carefully to the contour lines we can also, little by little, rebuild the city we remember. It is build aside the Tagus estuary — we were told that once the river mouth was further south, the alluvial areas are more recent and unpredictable — the castle's promontory is clearly the dominant site over land and water.
- The mere observation of the imagined bare topography, unveiled by the contour lines, allows us to construct an interval for contemplation. It allows us to conceive the territory as skeletal initial supporting structure, the evidence of the city upon it, in its construction as becoming, allows us to think of the transfiguration of that same territory into city.
- In a latter phase, we would overlay the contour lines to the city plan and begin the recognition of the coincidences. The way the territory's noteworthy spots match the ones of the city: walls, convents, palaces, viewpoints, grids over the lowlands and the uplands, and mostly the limits' obviousness and its architectonic intensity.
- The comparison with several ancient city maps, evidencing intermediate development phases, clarifies and highlights what was formerly perceived.
- The analysis we would then do was a decoding process, "the radiograph invention", identification of rules.
- The construction rules of any territory are as clear, one might almost say, as evident they become in a city like Lisbon, with such a clear and suggestive topography. There is an intense entanglement between the topography and the city it upholds, with brilliantly staged events. The most permanent fixture of a city is its geographical and territorial structure. But even this sometimes quakes!

Density.

Max Dudler

Density is an urban planning concept for coping with growth. But the term density does not just describe the ratio of quantity to volume in a city. To me, density is not so much about closeness and deficiency but more about multiple layers, mixing, complexity and a meeting of extremes in a compact space. From this perspective, density turns into a metaphor for urbanity as such. In fact, urban culture is always a culture of density. It is the condition of density that actually causes urban life in the city. The concept of density teaches us to shape these urban spaces with care: The quality of this type of city is closely related to the quality of its public spaces and its streets, lanes and squares. Density plays an important role in my work. It's fair to say that the term has turned into a benchmark of our research on cities. And it doesn't make a difference in this case if we are building in a historic city centre, on the outskirts or outside a city in the countryside. The lecture will use a range of our buildings to demonstrate how the term density is relevant to a contemporary urban culture.

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Plenary session 4 | local networks forum

the ISUF LOCAL NETWORKS. Local Networks/ Global network.

Marco Maretto

University of Parma, Italy

- 38 The International Seminar on Urban Form (ISUF) can be considered, without any doubt, the most important international scientific association dealing with urban morphology. Where morphology is interpreted in all its disciplinary facets, in all its possible approaches, in all its potential applications. It must be said that over the last twenty years of work urban morphology has come to be developing as a rich and complex discipline with great features. It is no coincidence that it is now studied and appreciated by schools, research groups and even some public interlocutors, often very far apart for needs, cultures and goals.
- With this in mind, a few years ago, a number of "schools" have felt the need to organize themselves in "local groups" in order to improve their identity and enrich their contribution to ISUF International. These groups have started organizing conferences, workshops and scientific publications, giving a major contribution to the spread of urban morphology both from a geographical and a disciplinary point of view: a system of local networks gathered to constitute a real, effective and active, global network able to enhance the many identities that animate the International Seminar on Urban Form in the strength and potential offered by a truly global association. This is, in my opinion, the future of ISUF. Much work is still to be done, but the direction has now been taken.

Plenary session 5 | Urban Morphology and Design

Task force on practice and research.

Ivor Samuels

University of Birmingham, United Kingdom

This report reviews the relevant contributions made in the Urban Morphology journal over the three years since the Task Force was established. It also covers related topics which have been identified as significant themes in promoting the application of urban morphological methods in practice. From two Viewpoints in Volume 16 (2012) these contributions reached a peak of 9 in Volume 17 (2013) reducing to 7 in volume 18 (2014) and two in Number 1 of Volume 18 (2015). The conclusions of the four evaluations resulting from the ISUF bursary awards also have been reviewed. Barke (2015) sets out the different professional cultures of research and practice. To bring these two groups together a number of contributions suggest that the results of research must be translated into demonstrably useful tools for practitioners through the use of graphics and accessible language. In public authorities the continued presence of practitioners familiar with the relevant techniques is crucial to their application and these skills depend on their training, hence the importance of including relevant material in educational curricula. In practice adequate resources must be available to undertake the often considerable work involved. However, once the initial analytical work is completed it can form a sound basis for future policies even if political and economic circumstances change. Many Viewpoints point out the diverse conditions of the contexts of practice. The significance of this is borne out by contradictions between the views of contributors which can be explained by the different contexts in which they operate. It is necessary to take into account these differences in legal, economic and social conditions. The composition of the task force must acknowledge this and in particular to seek more involvement from outside Europe which, with a few notable exceptions, until now has dominated the research and practice discussion, in contrast to the wide provenance of other material published in Urban Morphology.

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Urban Morphology, design and development.

Karl Kropf

Oxford Brookes University, United Kingdom

- 40 There is a clear and indisputable logic to the use of urban morphology as a tool in design. The logic is rooted in a core principle of urban morphology, which is that we seek to understand **form** in terms of the **process of formation and transformation**.

The indisputable logic is that if you understand the process by which something has been made you can make more of the same thing.

Part of that logic is that there is always a generative idea involved in the creation of form and, just as importantly, there are three different kinds of generative idea: active, latent and embodied. The embodied ideas are found in all the built forms that surround us. A building is an embodiment of the idea that created it.

The other part of the indisputable logic is that all the embodied ideas are potentially active ideas. We can work backward from the building to the idea and use it again. The enormous potential of urban morphology as a design tool is therefore in seeing the built environment as a design resource: a library of ideas. But if the logic is indisputable, the application of it is not a simple matter of following a recipe. Even if it were, **successfully** following a recipe is not necessarily a simple matter.

Making reference to different practical experiences, the talk will explore some of the issues involved in seeking to unlock the potential of the innumerable embodied ideas that surround us.

The experience of teaching design for historic conservation provides insights into turning embodied ideas into latent ones. The move requires a shift in frame of mind when looking at and analysing the built environment to see forms as potential solutions to current needs.

To reapply those ideas we need to look carefully at the context in which they work: their position, the associations of elements and any inflections of form in response to particular situations. A morphological study for the city of Bath deals with this issue and ensuring we understand the context in which embodied ideas successfully function.

Lastly, the experience of trying to get projects built highlights the implications of the typological process as it operates today. Turning a latent idea into an active idea requires that the idea becomes **shared** and one of a number of habitual responses to a given situation. That transition takes time and effort.

The Saverio Muratori's archive. New improvements to learn from the landscape.

Nicola Marzot

University of Ferrara, Italy, and TU-Delft, The Netherlands

Since May 2015, the Municipal Biblioteca Poletti in Modena, Italy, enriches its impressive collection of Saverio Muratori's research work. In fact, his personal archive has been added, thanks to the important donation of his family. Many unedited territorial and architectural design drawings, and related written documents, will help both students and colleagues to cast a new light on a complex profile who still deserve a truly international attention and recognition. Saverio Muratori's main intellectual achievement is to consider the natural landscape as the deep "substratum" whose memory is still evident and alive at the base of every process of anthropization. As such, the landscape acts as the matter humans transform in order to define their own territorial field and the related settlements and buildings. Being valueless in its original state, it becomes meaningful through the operational attitude of the living beings themselves. By making the approach to its use repeatable and conventional, the human mankind arises through space and time. In Saverio Muratori this justifies the fundamental importance of the specific scalar patterns human beings used and still use to approach the landscape: in fact, by reflecting the human agency through a specific collective subjectivity, the above mentioned patterns clearly express and historically embody the specific community's shared values at a logical, economical, socio-political and cultural level.

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Heritage and Historical Fabric

Historical Urban Fabric
Modern Architectural Legacy
Modern and Contemporary Design in Historical Cities
Architectural Heritage

The *lacuna* inside urban tissue. Values and design

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The urban *lacuna* is an interruption of the urban tissue that prevent the comprehension of city conceived as an architectural and urban "text". In both cases the human environment is characterized by exemplar architectural and artistic episodes, by artifacts witnessing and documenting a specific civilization and culture. These architectural values, once recognized, deserve to be preserved and protected; therefore they are fully entitled to be included in the field of preservation. Human environment and historical centers are endowed with values as "exposure": environmental and collective values, particular spatial relationships connected to evident values, documents testifying specific cultures, techniques, way of living without aesthetic intentions. They represent a collection of forms to be read and interpreted at least as architectural literature if not as architectural poetry. This is what Renato Bonelli would maintain following the thought of Benedetto Croce on "aesthetics" and considering the functional and pragmatic reasons that generated them and their physical condition of artifacts. The assessment and the methodology on rehabilitation projects raised an intense debate and comparative studies. A selection of case-studies and methods on the current debate will be presented in the conference.

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Does History Matter? Morphological transformations of historical centers

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- 44 Nicosia, the largest city in Cyprus, has been changing rapidly during the past decades, in partial response to the processes of economic globalization, mobility and European integration. The historic center, traditionally inhabited by a number of transient ethnic groups, is subject to a changing population dynamic precipitated by net in-migration and has been undergoing a number of major redevelopments. This paper aims to address the spatial and social transformations of the walled city of Nicosia through time in an attempt to a) further facilitate an understanding of the ways in which urban form influences social phenomena and vice versa, b) explore whether present socio-spatial patterns may be better understood as being conditioned by the interaction between inherited spatial configuration and contemporary life and c) assess the impact of recent urban interventions. In order to understand the historically granted relations between space and society, the study focuses on a diachronic analysis which explores possible impacts of the development of each on the evolution of the other. The complex relationship of spatiality and sociability is approached from a variety of analytical perspectives, including both quantitative and qualitative research tools (space syntax analysis, observations, questionnaires). Research outcomes suggest that an historical perspective provides valuable evidence and facilitates understanding of the ways in which historical formations of urban configuration influence the present life of the city. Diachronic development needs to be well understood and taken into account when deciding new interventions as recent and future design decisions are likely to affect patterns of living either by transforming them or by reinforcing them. A more nuanced understanding of the relationship between spatial changes and social outcomes through time may facilitate more effective planning and decision making in relation to urban regeneration.

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Housing as a tool for city recovery

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The abandonment suffered by many minor historical centres, whether they are the result of a spontaneous transfer or of a forced evacuation following a calamitous event, is an opportunity to reflect on the meaning and the reasons for the restoration of the neglected villages. Their slow and progressive disappearance requires urgent conservation and proposals to assign a new role and meaning, without excluding "a priori" a possible conversion into places of contemplation and sedimentation of the collective memory.

Studying ancient villages means increasing interest and promoting the operational competences related to the preservation of historic buildings, the typological, formal and constructive values, which are the signs of identity of an urban organism to which is recognized the value of unrepeatable individuality, an organism, therefore, to be protected in view of its transmission to future generations. The study of the abandoned village of Craco (MT), beginning from the most representative buildings, is the first step along the road of developing a research project for the conservation and enhancement of the urban organism that, in accordance with the character of places, cannot ignore the critical geological conditions and the making safe problem.

The partially collapsed buildings facilitate the anatomical study of building sections and materials, promoting constructive understanding of architectural organisms at risk of slow, but sure disappearance.

Only the intimate knowledge of the buildings in their constructive anatomy, the awareness of their real state of preservation, the identification of their functional vocations can direct (through protective measures, instructions, regulations, constraints) the restoration project based, hopefully, on the criteria of minimum intervention, compatibility, recognizability.

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The city around the Walls. The Theodosian Walls of Istanbul as a guiding urban element

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- 46 Having been constructed in rural periphery of Constantinople in the 5th century, the Theodosian Land Walls of Istanbul played an important role in the formation of the urban fabric around them. From the fifth century to the 12th century, the area around the Walls maintained its rural character, with numerous monasteries located in and out of the walls in the rural and agricultural landscape. Accordingly, after the 12th century and in Ottoman period, the urbanization of the area around the Walls was mainly affected by the existence of the 5.6 km long Walls and numerous military/public gates on the Walls. The gates guided the main roads connected the city and its periphery. Similarly, not only the Byzantine monuments but also the Ottoman ones were located in relation with the Gates. Although the defensive function of the Theodosian Land Walls ended by the 1453 Ottoman takeover of the city, the Walls continued to be under control of the Ottoman military forces until 1826. After this date, the main force shaping the urban fabric was the 'modern' planning and conservation decisions.
- This paper discusses the forces leading to the current-day morphology of the area around the Land Walls of Istanbul. Saverio Muratori's basic concepts related to the typo-morphological approach – that are namely 'the concept of crisis', 'the process of self-awareness' or 'critical awareness', 'the concept of operational history', and 'the idea of an a-priori type' - will be utilized as reference points while discussing morphology around the Land Walls. Moreover, Nuray Özaslan's research on the network of relationships within the urban fabric will be correlated with typo-morphological approach.

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Abandoned villages, from conservation to revitalization.

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The abandonment suffered by many minor historical centres, whether they are the result of a spontaneous transfer or of a forced evacuation following a calamitous event, is an opportunity to reflect on the meaning and the reasons for the restoration of the neglected villages. Their slow and progressive disappearance requires urgent conservation and proposals to assign a new role and meaning, without excluding "a priori" a possible conversion into places of contemplation and sedimentation of the collective memory.

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Learning process from historical urban fabric of Ula and adaptation in Akyaka

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48 Urban architecture of the city provides us to understand the past and to form the future of the cities. According to the approach of Aldo Rossi (1991) towards understanding the city, urban form can be grasp just from the relations of the physical entity of the city. In time, function may change according to society, however urban form tells much about the essence of the settlement. Therefore, learning process from urban fabric of historical towns includes understanding the existence of being of its form.

The case area of this study, Ula is a historic district of Muğla Province in the Aegean Region of Turkey. The district is settled in a wide fertile plain and approximately 600m high from the sea, whereas Akyaka is tourism town center of Ula district 19km far from Ula and locates on Gokova Bay. Akyaka is an adaptation project of Nail Çakırhan, who first started to form the urban fabric of the town with a reference to traditional houses of Ula in 1970s; from then on, Akyaka has featured a distinctive architectural character. However, imitated reproductions of the buildings and building details in the last decade have damaged naive and distinctive urban fabric of the town and the essence of the settlement.

The aim of this paper is to assert the reading and learning process from historic urban fabric of Ula on behalf of Akyaka. Therefore, it first introduces the historic urban fabric of Ula, and then compares with the newly created urban fabric of Akyaka and presents the positive and negative consequences of this adaptation process.

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The concept of organism in Louis Kahns work: why his architecture is still relevant today

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When talking about contemporary design of historical cities, Louis Kahn's Venice Project (1969) is noteworthy. It allows us to better understand why Louis Kahn's architecture is still relevant today. Kahn wrote at the time: Venice is architecture of joy. I like a place as a whole where each building contributes to the other. An architect building in Venice must think in terms of sympathy: working my project I was constantly thinking as if I was asking each building I love so much in Venice, whether they would accept me in their company. It was at the American Academy in Rome, in the 1950s, that Kahn discovered the value of the city as organism showing the world the way to build places more than buildings for the population of the Global Era. The concept of organism was part of the architectural thought of Louis Kahn from the beginning. In one of his rare note books, dating back to 1943, Kahn wrote about the origins of Architecture and drew the map of the Mediterranean, depicting the cities of the first civilisations with the caption: religious impulse. Kahn was inspired by the essence of the ancient civilisation and understood that different cultures could learn from one another. He showed how integration and invention are the keys to obtaining true completeness. In his work, a creative stroke encompassing space, movement and light, gave life and expressive meaning to essential spaces. Lets see why Italy has been fundamental to Kahn.

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The Three Block Project: stasis and transformation in an urban Megaform

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50 The megaform emerged within architectural discourse and practice of the early 1960's as an innovation in city making. The architecture of the megaform (or megastructure as it is sometimes referred) attempted to both integrate and establish urban conditions while giving shape to a collective vision of society. The megaform was adopted in Canada as an architectural approach to public projects during the 1960s-1980s and was used as a tool in the creation of social infrastructure such as mass education, social housing and government administrative buildings.

The Three Block Project (later renamed Robson Square) is a multi-functional civic complex designed by Arthur Erickson with the collaboration of the landscape architect Cornelia Hahn Oberlander in the years 1973-1983. The project has made a definitive contribution to the social infrastructure of the city of Vancouver, CA. The project is as notable for its popular success as well as the apex of the megaform phenomenon in Canada. A close reading of the projects preliminary urban scale research and its eventual architectural and three block structure reveals a project that aspired to a careful insertion into Vancouver's urban fabric. Explicitly building on the analysis from the CIAM 8 search for a core (Tyrwhitt, 1952) the project utilized systematic urban form analysis to generate architecture as an urban fragment or civic kernel. Part urban design and part architecture, the project for a core constituted a departure within modernist urban planning and from any ambition to plan a city in its entirety. Yet nearly 30 years after its reception and eager adoption as the core for a city bereft of one, a contemporary formal and use analysis of Robson Square reveals the strengths and limits of project that aspired to be both symbolic architectural monument and a dynamic urban landscape.

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From disintegration to reinterpretation: urban design in Montreal, 1950-2014

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When George Baird, architect and researchist in urban morphology, studied Toronto's urban fabric in 1978, he examined the morphological transformations of its central core and showed that the urban fabric in some parts of this North American city was in the process of desintegration (Baird 1978). This phenomenon also affected the urban fabric of Montreal, and the urban design projects, related to a modernistic approach, built in the 1960s, were responsible for these transformations and provoked a spatial discontinuity (Charney et al. 1990). The paper will study projects from the modernist period, but will also include the postmodernist and the contemporary periods to determine the new urban design approach and to evaluate the relationship of these projects with the urban fabric of Montreal. We have endeavoured to study three major urban design projects in Montreal from 1950 to 2014 to determine their role in the progression of the phenomenon of desintegration. With the work of numerous urban morphologists on North American cities (Charney, Vernez-Moudon, Gauthier, Racine) and the impact of this more recent knowledge on the way we intervene on the fabric, this phenomenon should be in regression in Montreal as elsewhere. Our hypothesis is that the reinterpretation of the urban syntax in the process of designing urban fabric in Montreal is a solution to reestablish a dialog between new built environments and the historical fabric of the city. But is this new research for continuity still in a fragile state ?

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The rural tradition complex in the sacred and school architectures of Alfredo Lambertucci

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52 Among the first architectural works of Alfredo Lambertucci there are churches and schools. This projects occupied him between 50s and 60s. They were both issues that brought with them a strong sense of renewal, both ethical and architectural.

At that time in Italy the Church was entrusting modern architects with the design of new sacred building: in those works the desire for a renewal passed often through the recovery of stylistic features and compositive processes borrowed from the rural world. Referring to school in the very same years it was undergoing a radical reform: the need for new schools was real and urgent and architects were encouraged to experiment new functional units which exceed the centrality of the classroom. Immediately after WWII the architectural debate is aimed to re-define new features for the reconstruction; schools and churches should have been the "monuments" of a community, namely in suburbs and rural areas, public artifacts made to feed the post-war Italy ethically and spiritually. In those years were published the Carbonara's *Architettura pratica* volumes and featuring, in separate volumes edited one after the other, the topic of "churches" and "buildings for education and culture". Lambertucci, as many other colleagues did, collected this volumes in his library.

He have been studying these issues for a long time and dedicated some essays to the school building, starting from a survey of the small rural schools in his hometown. Both building types, in the work of Lambertucci, are structured as rural households, both in terms of morphological and linguistic features, becoming autonomous organisms and references to the area.

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Sacred space in the architecture of Dominikus Böhm (1880-1955). Geometric-functional analysis and structural morphology

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At the beginning of the twentieth century in North-West Germany, the Dominikus Böhm's project experience is characterized by the systematic research for a spatial morphology according to the changing liturgical needs of the Catholic Church. He significantly contributed to the definition of new style and functional standards - adopted by the Second Vatican Council - through formal and technical innovative solutions: investigating organic-structural systems, geometric-functional relations and materials technological aspects. He developed a common language, shared with other architects like Martin Weber and Rudolf Schwarz. Special harmony of proportions mattered through shapes that allow a uniform redistribution of the load (it requires no buttresses or other support elements). Generally, his buildings reached acoustically effective outcomes accommodating all the believers and the officiants without visual and acoustic obstacles. Considering he built about eighty churches following building German tradition, within this essay three are main buildings will be focused; five are the morphological categories will be analyzed: i) the layout (unidirectional and multidirectional systems, central and elliptical plans), ii) the internal elevation (according to different geometric configurations), iii) constructive materials (bricks, wooden solutions and concrete), iv) structural elements (bearing walls and pillars), and v) the element of the 'façade' (in its volumetric aspects).

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Building Modern Como: contextual unbuilt projects by Giuseppe Terragni

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54 Giuseppe Terragni was among the modern Italian architects the most rooted in the European avant-garde and the most inclined toward abstraction, deconstructing his building in layers upon layers of materials, architectural elements and strata conjuring to achieve a delicate and unstable equilibrium between plastic values and dissolution of architectural masses.

His buildings as famously testified by Peter Eisenman- are critical texts of the possibilities of decomposition of architectural forms and typologies as well as they are machines for the contextual transformation of the historical urban form in a subtle, unorthodox but contemporary way.

We analyze two unbuilt projects of the late creative season of the Italian master, two projects where the overlay of the sleekest, most dissonant, modernist language ever and the grid, textures and sense of Roman Como reaches a dramatic peak: the restoration of Casa Vietti and the Cortesella building (both 1940).

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The *consecutio temporum* in the contemporary-historical city design

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The city is a community with a stable and defined territorial basis. Since its origins, the city grows around and above itself; it is therefore always the result of a stratification where the parts that are being built are juxtaposed to, interposed on and overlap the ancient city nucleus. The city has an evolutionary inner character, a strong inclination to metabolize the novelty, with this last determining its relative present in return. At the same time it is characterized by an inherent resilience ensuring its tendency towards stability, defined by Aldo Rossi as “permanence of the plane” (Rossi, 1966). However, there is a genetic difference between the pre-modern city and the newer forms of urbanity. The former grows according to a continuous shaping process, whilst the latter overlap and are interposed in hybrid and unprincipled ways. Does this change represent a real rift between the past and the present, or is it simply the result of an acceleration of a process that was already inscribed in the DNA of the city and was triggered by exogenous factors?

Since the early twentieth century, early urban geography studies show that the deterministic model, related to physical laws is no longer suffice to describe a model of comprehensive development of modern cities. As a matter of fact, such cities clearly do not reflect the tight relationship between the organism's growth, its internal structure and its external shape (Geddes, 1915). This has led to negatively consider certain instances of recent mutation as pathologies, and to the employment of the metaphor of chaos, despite this being an order which is just not known (Miller in Quaroni, 1967). Nowadays, it is clear that the city as a whole is an open system with a multifaceted and porous structure. It lives off the relationship with its territory and the material and immaterial networks that transcend, feed and substantiate it. The city is forged over time and functions as a gathering place for matter and anthropogenic actions. Nevertheless, today its fringe is elusive. The new forms of urbanity, as GMOs, cannot acknowledge themselves as further developments of the original settlements, and no analogical figurative theory can explain the contemporary city.

The uncontrolled expansion, the realization of infrastructures, the intangible networks and the instability of the community have changed the meaning and the role of the historical city – even in the instances when its morphology has been preserved – and have turned it into new raw material open to new interpretations and significations. This change places any potential design in a new condition as it forces the designer to deal with unprecedented co-evolutionary aspects that have broken up the rhythms and modalities of the pre-modern Darwinian process.

Recognizing this condition means acquiring a systemic and inclusive vision. Methodologically, it implies accepting the coexistence of layers and the overlapping of the interpretations as the only effective – although improvable – instrument to grasp the complexity of the phenomenon. Only the empirical project, as both ontological and operational practice, is able to redefine a dynamic and unstable balance which could go beyond nostalgic rhetoric and the utopian approchement.

Shapes and layers

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- 56 Within the group of historic cities which have undergone a more or less constant organic change throughout their history, towns where a large-scale construction project has resulted in significant, morphological changes constitute a special category. (Kostof, 2005) Amongst these are Hungarian towns where the state socialist government placed new institutional building complexes in or near town centres; partly for logistic reasons and partly because they were meant to symbolize the new social order. Numerous new central complexes were designed in Hungary between 1945-90, representing a wide range of urban design quality. This includes architectural quality, the spatial and structural connection to the historic city and the quality of the urban context. (Conzen, 2004)

Context, which is most obviously experienced as the architectural connection between the building and its surroundings, is a key expression during the urban interpretation of buildings. However, this personally experienced context is also part of a city-scale context, which can only be perceived in the urban fabric from further away. (Kissfazekas, 2008)

Therefore, a new construction may have effects on different levels. This paper deals with the three layers with the highest significance in urban connections: the contexts of urban bodies (spatiality), of urban fabric (urban and building structures) and of urban design (connection of buildings and their environment)

The goal is to introduce an approach and an analytical method through the example of state socialist modifications of Hungarian settlements. The experiences of these different urban situations can be beneficial for the urban impact assessment of current projects in historic surroundings as well.

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A comparative study on morphological evolution of Inner-city residential blocks in Tokyo and Beijing

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This paper presents a comparative morphological analysis of inner-city residential blocks in Tokyo and Beijing. This research aims to clarify the origin of different residential blocks patterns in these two cities presently and provide new perspectives for future residential planning. Using typo-morphological approach, this research traces back to the late modernity period, and focuses on the morphological evolutionary process of case-study areas on the basis of a survey of historical maps. The analysis demonstrates firstly the mechanisms of blocks' initial stages, and secondly how the blocks have reacted to emerging events, and reached the present pattern eventually in term of physical form. The third part makes several comparative observations, and briefly analyzes the underlying causes of morphological dissimilarities. In conclusion the research suggests new visions for residential block design, which adapts to the needs of modern time and also echoes with the historical urban landscape.

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Figure follows type. Notes above contemporary project in compact urban fabric.

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58 Working inside a compact urban fabric is a challenge for contemporary architects. It means to define the identity of urban spaces through the differentiation of vertical plans, emphasizing the individual character of the facade of the single building. Otherwise, working in low density areas means to define the identity of urban spaces through the differentiation of the shape of the horizontal plan, emphasizing the expressiveness of the planimetric figure.

If we only think about Rome, we can notice that the figures of the most famous districts realized after World War II, they all look like very different, as if every architect would design a logo to distinguish his authorial work from another. Settlements such as Tuscolano (Muratori, Libera, De Renzi), Casilino (Quaroni) or Decima (Libera, Moretti) realize different urban patterns, first image that comes to mind is the floor plan. However, as Purini writes, the view from above comes to be a real fifth facade and become so prominent to overshadow the visible parts of vertical planes.

However, working at the architectural scale designing facade plan, it is the specific theme of compact urban fabric. This means to experience with the vertical plane, which can be regarded as a plane-surface, or as an area with a thickness.

Therefore, the proposed paper, through the selection of case studies, will try to demonstrate how contemporary architecture in compact cities (historic/consolidated cities) is forced to establish a direct relationship between type and figure, jumping totally the moment of the definition of the form.

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Research on renewal units of the historic city under the background of “Integrated Conservation” taking the Old South of Nanjing as an example

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Lots are generally regarded as the traditional spatial units for urban renewals in Chinese historic cities, on which the renewals are conducted by land owners gradually. However such kind of renewal units which were based on the traditional lifestyles and social systems cannot continue to function in contemporary practices any more. Under the background of “integrated conservation” of historic cities, whether a reasonable and feasible system of renewal units, which on the one hand adapt to the continuation and transformation of historically formed urban structure, on the other hand meet the demands of new urban functions and building typologies to be placed in historic context, has been created is the main issue of this research. Taking the Old South Historic City of Nanjing as an example, the typology and the distribution of renewal units in this area from 2006 to 2014 are analyzed in detail. According to the scale and the correlation with streets, renewal units can be divided into five types, namely “Multiple Blocks”, “Super Block”, “Block”, “Partial Block” and “Lot”. Each has respectively new functions and building typologies. In terms of the distribution, most of the renewal units concentrated in the areas along the arteries, Qinhuai river and the City Wall. Thus the upper level of urban structure, namely urban axes was further strengthened while the lower level, especially the historically formed street system continued to disappear. In some degree it is the disorder of renewal units that precipitated the fracture rather than integration of the urban structure. Therefore it is indicated that the typology, subdivision and institutionalization of renewal units should serve as the premise of the “integrated conservation” of historic city.

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Urban integrations in historical centers during the post-war reconstruction.

The Giovanni Michelucci's Provincial Directorate of Posts and Telegraphs of Florence

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After the extensive urban demolitions carried out during the fascist period, the rebuilding of new architectures inside the urban historical context was felt necessary by completely innovatory design approaches. For the first time, in that period, architecture has been called to deal with the issues of integration between ancient urban tissues and urban scale regenerations. The city center of Florence

hosted, from 1930 to 1966 in the quarter of Santa Croce, an urban void filled only in 1966 with the development of the new headquarters of the Provincial Directorate of Posts and Telegraphs of Florence by Giovanni Michelucci. This architecture is an important historical witness of how Italian architecture has had the ability to relate the new urban scale architectural graft with the old historical city tissue in the late 60's.

The content of the essay will be developed within the official activity of a Ph.D seminar (Doctorate of Architecture and Constuction; coordinator prof. Giuseppe Strappa) at Sapienza University of Rome and will be completed by analytical original drawings of the project chosen.

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Chiaramonte Gulfi an experience of urban morphology

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The paper illustrates a design experience for the city of Chiaramonte Gulfi, during the International Laboratory of Architecture_LId'A coordinated by Laura Thermes. In one of the laboratories –directed by the author with Federica Visconti and in relation to those coordinated by Carlo Moccia and Marco Mannino– the team worked on the redefinition of a “wall belt”. It was determined by the construction of a continuous strip in relationship to agricultural divisions and peri-urban plots during the seventies. The huge strip determined, on one hand, a new “urban artifact” (Rossi, 1966) of morphological value – even if of limited architectural value –as a kind of town walls to the ancient city, on the other it opposed the typical nebulized growth of sprawl-city. The project aims to propose a comprehensive reformulation for this wall, working in the significant points, highlighting discontinuities and openings to the landscape and establishing new relationships between the valley and the perched character - as in an acropolis - of the medieval center, re-entering portions of nature still existing in the urban fabric. The project combines two ways of composition, the stereotomic and the tectonic and develops the theme of the bastion corresponding to a hiatus of building curtain proposing a new condition overlooking open to the vision of the landscape of the Comiso valley and simultaneously founding itself as one of the elements of a distinctive and interconnected system of “places” able to establish long distance relationships (Monestiroli, 1998 – Giedion 1969) and summarize the whole urban morphology and geography of Chiaramonte.

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The post - liberal city of the 19th century as a resource

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62 Reuse, transformation and redensification of existing building stocks are long acknowledged sustainability strategies. Nevertheless, this policy has barely been applied beyond the scale of singular edifices until now.

The conceptual model Gründerzeitstadt[1] 2.1 is a visionary urbanistic and architectural approach, viewing blocks and urban quarters as the basic urban unit for redensification instead of singular buildings. By combining analytic, empirical and design methods evidence was found, that the post liberal city expansions of the 19th century alike those in the Austrian city of Graz could be a highly convenient resource to meet the demands of growing cities, both in quantity and quality, without questioning the cultural heritage of the historic town.

The design concept is to overwrite and reinterpret the perimeter block by annexing a circumferential addition to the top, as a rim that surrounds the entire perimeter block as a unique contemporary architectural structure.

Focusing on blocks and quarters as whole entities instead of singular edifices does not only come up to the nature of the old buildings, which were designed to band together and simulate grandeur, but leads to more and better energetic and infrastructural synergies. The possible variety of new, different floor plans becomes much larger and opens more opportunities as well. It provides a serious housing alternative to the single family home in the outskirts. Urban growth is no longer allocated to suburban sprawl and high infrastructure costs. It can happen in a sustainable way.

[1] German term for the post-liberal city of the 19th century.

Athens urban transformation

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The research aims to explore the urban transformation of the city of Athens and the factors in economy, in social and political sphere which have created the most influence in post-crisis periods at the beginning of the 19th century. Their interactions and various intensity have created Athens urban form in direct or indirect way. Athens, the capital of Greece is at the same time an old city as well as a modern city, and can be identified as a major European city. Generally characteristics have been depended on the historical circumstances within the sphere of economic, social and political organization of the city. Economy was directly dependent on the state organization and the level of political development while the urban planning indicated the economic power of the society, the commitment to strategic planning and the effectiveness of urban policy and legislation (Biris 1995). The urban design of Athens was the product of the consent and synergy of the state and the bourgeoisie, in an era of ideological, cultural and economic extroversion of Greece that simultaneously was the first period of economic globalization. The city was re-designed according to the morphological patterns of neoclassicism (Filippidis 1984) when in the meanwhile, the State acquired a capital city that epitomized optimally the national ideology for its imposition to the country and its projection abroad. The current discourse aims to understand more precisely the way larger scales of political, economic and geographical forces affect the shape, structure and culture of the contemporary historical city after a crisis.

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The architecture of the city contended between history and contemporary

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- 64 The research was focused on the analytic study of one of the "founding moments" of the city of Naples and its architecture, to draw from this knowledge the tools for a design practice that begins from the ability to outline strategies for urban transformation.

The different layers of the city embody a unique situation in the whole world, expressed through the coexistence of buildings of different ages and every single monument is exceptional for some reason with public spaces, with monastic cloisters and courtyards that are followed by a sequence that never fails to surprise.

The historical dimension of this development is best described by quoting from Adorno's essay *On Tradition: Against the verdict of obsolescence stands the awareness of the substance of that which renews it.* (Adorno 1958)

The rules for the architectural renovation are written into the fabric of the historic city, in the dialectic and in the complementarity between streets, squares, courtyards and cloisters, and cannot be separated from the relationship between architecture and city life.

The use of "private" spaces for public purposes will once again reflect the principle of contrast, which not only permeates Naples as an urban body in its entirety, but instills it to the isolated objects in its interior, making them the protagonists of a possible regeneration process.

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New architecture in the ancient city

The typological-procedural approach of Caniggia, Bollati and Vagnetti groups in the competition for the extension of the Chamber of Deputies

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The 1967 competition for the extension of the Chamber of Deputies represents a great opportunity for the most important personalities of Italian architectural culture and an important venue for comparing the different approaches to design thinking of various competitors. It also offers the opportunity to engage in a significant debate on the design thinking in Italy after World War II, a historic moment of reconstruction when the integrating the new architecture with the ancient one was of utmost importance. The outcome of the competition, which ended with 18 ex-aequo, provides the evidence about the great uncertainty that becomes apparent every time we have to deal with ancient architecture. Among the various proposals, some projects are distinguished for their typological-procedural approach rather than a self-reliant one. These projects can be traced back to the school of thought that developed in the name of Muratori: Caniggia, Bollati and, to some extent, Vagnetti groups. The case considered more congruent from an historical-procedural point of view, was that of the typological interpretation of the Roman palace, with all its specific attributes: basement area and the volume above, loggias, pseudo-portico, brick exterior walls, floor marking bands, windowsill markers, window frames made of "peperino", pilasters, roof cover in plain tiles and internal courtyard from the second floor in the project of the Vagnetti group; internal courtyard in axis with an entrance hall, fountain with through-axis, a hierarchy in overlapping of floors, serial rhythmic elements for each floor, continuous wall with nodal accentuations, division of the front in the three fundamental elements (base, support, conclusion), pilasters, brick cladding, floor marking bands, windowsill markers window frames made of travertine in the Caniggia group; windowsill marking bands, pilasters, central courtyard, flat roof and covered roof-terrace in line with the entrance for Bollati group. Through a detailed analysis of the functional-typological choices and of the designs of the three groups, the study aims to understand the coherence of typological-procedural approach in the historic urban fabric, the traceability of the formative process in flat plan and in elevated planes, as well as whether the ambition to create historically congruent transformations is translated into a mere replication or in a modern interpretation of the ancient architecture. The study of the projects submitted for the competition for the extension of the Chamber of Deputies offers an opportunity to understand if this approach was the one that best reflected a shared culture, historically consistent and congruent with the formative process, thus aiming to define "operating standards", that are essential for meaningful consideration when including new architecture in historic centres. The three groups studied have attempted to rationalise the complex linguistic forms of the old historical centre through a historically congruent proposal; the study and comparison of the three projects could be an opportunity to put the urban analysis at the core of the strategic choices about the area, without becoming a tendentious prefiguration of the design.

Urban tissues and masonry plastic language.

Emanuele and Gianfranco Caniggia's Houses in Trinità dei Pellegrini.

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66 This paper focus its attention on the relation between reinforced concrete and architectural language, not so deeply studied until now. It is the relation that, continually in time, tied tightly the constructive technique to its architectural expression, by a necessity link that supported the coherence of the final form, visible in its material construction. With the incursion of this new material, balances that regulated this relation come slowly in crisis: the reinforced concrete construction opens up new possibilities that the Modern Movement interprets according to the "Gothic" tradition of the wooden elastic structures (Muratori, 1980).

Indeed, next to the experimentation of the "official" modernity, we can recognize the "plastic" traditional approach (Strappa, 1995), that sees, in practice, the possible recovery and maintaining of that organic relation. We can consider, among others, the work of Auguste Perret, seeking a confrontation with the classical language, but using reinforced concrete. In Italy, while the work, intellectual and practical, of Pier Luigi Nervi contributes to the development of an organic approach to the use of reinforced concrete (Nervi, 1955), related to the "plastic" language, there was as much silent as continuous updating process in architecture, which reworks the styles, still trying to find cohesion, albeit difficult, between a linguistic coherence and a constructive one.

The Emanuele Caniggia's Houses in Trinità dei Pellegrini, conceived with his young son Gianfranco, demonstrate and make visible the entire process of the coherent transformation of the "plastic" language in its modern updates, thanks to the long duration of the phases of project and realization, that went on for more than twenty years; a sort of heritage transmission that tries to update the construction technique and, together, the architectural language. The paper will present, in its critical form, this complex urban project that includes all the intermediate steps of each cultural period that it passed through, and ending with the reading of the building closing the courtyard, an example of architectural continuity, coherent linguistic expression of reinforced concrete.

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Industrial morphologies: the historic London furniture industry and the new city of production

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This paper builds on an historical case study to describe how the conference theme of the “city as organism” may be used to characterize the urban morphology and building typology of the emerging city of industrial production.

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During the nineteenth and twentieth centuries, the London districts of Shoreditch and Bethnal Green contained hundreds of workshops and factories housing a vibrant furniture-manufacturing industry. Furniture makers, cabinet makers, chair makers, table makers, polishers, upholsterers, sawmills, carvers and related businesses together produced a large portion of furniture sold in England and Wales. Located on a variety of kinds of streets, in commercially-transformed variations of terraced houses and small factory buildings, they formed a coordinated system of production that operated “from the bottom up” rather than out of large, multi-functional factories. Based on historical maps, directories, business records and secondary sources, this paper will discuss the relationship between the morphology of buildings and streets in which these businesses were located, and the overall industrial system that the businesses comprised.

The research is part of a larger project dealing with the spatial order of industrial production in the twenty-first-century city. The work has implications for understanding the “city as organism” as a resilient and networked socio-ecological system and how such an understanding can help in the development of planning, design and policy for the form of cities in which small industrial shops are beginning to operate again in parallel with the massive firms of the global production system.

Transformation and specialization of the historical center of Santiago de Chile

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- 68 The urban transformation of the historical center of Santiago de Chile, is presented as a case study of Spanish American colonial city evolution model, based on a grid that was imposed on the territory with in the center a main square, "Plaza Mayor". This initial configuration has lead the continuous modification of the urban fabric, which shows significant morphological and typological changes during the process of modernization in the second half of the nineteenth century and throughout the twentieth century, period characterized for the specialized buildings and the subdivision of the blocks through passages and galleries, proposed as an interior public routes. At this stage take a leading role the "Official Development Plan of the Municipality of Santiago", proposed by architect Karl Brunner in 1930, which applied functionalist urban concepts that allowed to modify the "closed block", consists mainly of "courtyard houses", into "open block", understood today as urban unit organization of the historical center and, in turn, as the container of various architectural typologies developed over a constant process which has changed the perception and the way of living in the city center.

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The Planning concept of heritage buildings at Baluwerti Surakarta, Central Java, Indonesia

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Baluwerti was originally a residential area for family and courtiers of Kasunanan palace. Decision of Surakarta's Mayor Number 646/116/1/1997 stated that Baluwerti was a conservation area then developed into tourism villages. One common factor in livable cities is culture. Most of the landmarks in Baluwerti are experience shift physical and functional. Emotion's ties of Baluwerti's resident with the Kingdom began to decrease. Servant's settlement in the house of Prince (Magersari) reduce visual aesthetic. The problem is conservation activities that have been implemented in Baluwerti not synergize yet between new function with the potential of area and still confined to the physical aesthetics and not attention yet to non-physical aspects (social, economic, cultural). Therefore, Baluwerti require the planning concept which capable to increase the economic activity with reference to socio-cultural and environmental aspects. This study aims to give an idea of the planning concept of heritage buildings based on the principle of conservation which contextual with Baluwerti area. Indicators that will be analyzed are the physical development, changes in function, economy, social values, status of ownership, and understanding from Baluwerti people to preservation activity. Analysis techniques that used is a triangulation of data sources from empirical fact, reference, and opinion of competent experts. The results of this stage is structuring criteria which used as the basis to formulate the planning concept of heritage building in Baluwerti Surakarta to create a heritage building that is not only beautiful but also contains the meaning and provide a place for economic activity.

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Typo-morphological analysis of the Roman Block Forum on the western provinces

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70 The Roman colonization process of the western provinces of the empire (Gaul and Hispania) had in the Augustan period a strong development, with the founding of several cities and the construction of many important urban facilities. These cities sought, each with its scale, to copy and replicate the main typologies of roman buildings (Mateos, 2007), creating a uniform and easily recognizable built landscape. If several of the Roman colonial buildings are easily recognizable as following the same typological model, such as the theaters whose design rules we know from ancient authors like Vitruvius (Sear, 2006) for others this knowledge is relatively incipient. From these buildings we highlight the Roman fora built in European West provinces, that although framed by some authors as a common typology known as Block Forum or Tripartite Forum (Gros, 1996) are often analyzed separately as if they were autonomous and independent designs.

Thus the proposed comunicatio aims to show how it is possible to deduct the common geometric rules that controls the design of all these buildings, from the standpoint of a typo-morphological analysis comparing archaeological remains as well as the urban fabrics that overlapped them, similar to the methodology preconized by Saverio Muratori (Muratori, 1963) and Gianfranco Caniggia (Cannigia, 1979). Furthermore, given that in most cities today, the area once occupied by these ancient buildings is still and important part of the built fabric limiting the possibility for archeological excavations, the understanding of the design rules for the Block Fora can help complete the fragmentary knowledge we have from these structures as well as understand important parts of the current city as an appropriation of ancient structures.

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Repairing urban fabric in pre-cast concrete panel construction. The rediscovery of the historic city during the last decade of the GDR

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During the 1970s architects and planners began to doubt about the principles of modern urbanism according to the 'Charta of Athens' not only in West Germany (FRG), but also in the socialist East Germany (GDR) (Urban, 2007). Although first renovations of 19th century districts (Animplatz, Berlin) were carried out mainly for economic reasons, soon the socialist government in 1976 ordered redesign of the historic city centre of Berlin (Sophienstraße, Gendarmenmarkt, Nikolaiviertel) respecting the history of the place. Its motives were, on one hand, propagandistic ones - exploiting the German history, culture and tradition for the legitimation as the true German nation - and on the other hand, indeed, the growing belief in the economic and social value of the compact city.

The contribute describes and analyses the treatment of the historic fabric and weighs role and values that were attached to it by planners in the 70s and 80s. Further, it focusses on the question to what extent concrete slab/ panel buildings complete historic urban fabric or are in continuity with it. Especially in the 1980s the formerly rigid prefabrication systems were more and more adapted to the urban fabric of the 19th century (Berlin, Jena), of Baroque times (Potsdam, Greifswald) or even Medieval times (Rostock, Stralsund) assuming an angular geometry, and an appropriate subdivision and dimension of building corps. Also in the architectural language was tried to create a relation to historic architecture by attaching bricks on the concrete panels, introducing specially formed panels for slope roofs, gables or entrances. Günter Stahn, the architect of the Nikolaiviertel said: "The concrete panel simply was the brick of our times." (Krüger, 1986)

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Ruralist utopia & Modernity in Franco's Spain: the *pueblos de colonización*, 1944-67

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- 72 This paper analyses the ideological, political, and urbanistic principles of Franco's grand "hydro-social dream" of modernization of the Spanish countryside. Inspired by the works of the Tennessee Valley Authority and Mussolini's reclaiming of the Pontine Marshes, Phalangist planners developed a national strategy of "interior colonization" that, along with the reclamation and irrigation of extensive and unproductive regions, entailed the construction of three hundred and two new towns or *pueblos* between 1944 and 1967. The Instituto Nacional de Colonización (I.N.C.) was created in October 1939 to strengthen the strategy of "ideological ruralization of the proletariat" and implement the program of Franco's ruralist utopia through a national network of new hydraulic infrastructure and rural foundation. Each new town (from 100 to 500 houses in average) was assigned to one architect and designed as a small urban center, focused on a plaza mayor which embodied the political ideal of civil life under the national-catholic regime and whose form evolved from a Sitte-influenced design in 1940s to a more organic Aalto-inspired vision after 1954. Likewise, tradition and modernity shaped the morphology of the mixed-use, patio-based residential blocks, whose principles were established in the early 1930s under the Republic and fully codified morphologically and typologically in the 1940s. In contrast to the Italian Fascist examples whose public buildings and spaces were politically conceived as objects of propaganda to be extensively photographed and visited, the Spanish new towns were built along little traveled roads, almost anonymously, and far from the urban gaze. The "colonial landscapes" built by the dictatorship are now regarded as *Kulturlandschaften* (cultural landscapes) of outstanding quality and great interest for contemporary regional and town planning. Given their role as incubators in the search for a modern vernacular and abstracted urban form, the value of these rural-utopian settlements for the history of postwar Spanish architecture must be analyzed and re-assessed.

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Four improving strategies for the current industrial heritage renovation. Case study of Suzhou Creek, Shanghai

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Taking Suzhou Creek, Shanghai as an example, this paper reviewed the course of the historical area along the Suzhou Creek and the background of urban renewal development. Through the analysis of the reuse practice of historical heritage, it pointed out many problems in the practice at the present stage: (1), the lack of meticulous investigation on the current situation has caused historical buildings out of protection; (2), single development body and imbalance of regional development also have posed severe damage on the cross-strait landscape.

Then it further brought forward the overall strategy of multi-element association renewal based on the following aspects such as historical context, spatial pattern, ecological and social factors. The historical block protection zone should be divided into different regions, then the original function of historical buildings could be continued while some of them could be combined with the construction of residential district or developed into creative industry parks. In addition, to construct the urban waterfront ecological landscape was also a very important point. Finally, it explicated the view of seeking organic renewal of historical heritage. This paper will be subsidized by the NSFC (Natural Science Foundation of China). The project's name is "Research on the Typological Identities of the Contemporary Chinese Housing" and its authorized number is 51278337.

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Architectural heritage, social identity and multi-cultural urbanism in Doha

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- 74 The aim of the paper is to examine the impact of historical urban development activities in Doha on the erosion of architectural heritage and its implication for social identity, place making and general urbanism of the city. Doha, Qatar is one of the most rapidly growing and evolving multi-cultural cities of the Middle East. Rapid urban development has however led to a systematic erosion of architectural and urban heritage and created a problem of place and social identity in development. This is compounded by the recent adoption of high-rise modernism-inspired pattern of development in some new neighborhoods of the city. The problem is generating questions about the desirability of pattern of development and the need to reflect on it, with particular emphasis on the role that urban and architectural heritage should play. This concern is visible in discussions about the development of the Msherieb neighborhood and about the future of historical urban districts such as Al-Asmakh and Al-Ghanim. The specific questions the paper seeks to address include; how have urban development practices impacted architectural heritage in the city and what are the implications in terms of social and place identity? How are new development projects addressing the issue of architectural heritage and identity, and what recommendations can be advanced on ways to integrate heritage preservation into development activities in tune with demands for both social and place identity. The issues are examined through an examination of the historical pattern of development of the city and analysis of impact on heritage resources from secondary sources, along with information derived from active engagement in documentation studies of heritage resources in the Al-Asmakh and Al-Ghaneim areas of the city. The paper in concluding will highlight the fact that initial urban growth has placed little value on architectural heritage resources and this has led to their dilapidation and in some cases complete loss of such resources. But as the city evolved and assumed a global status, the role of culture in place marketing, along with a new emphasis on sustainability in development is gradually leading to greater emphasis on heritage preservation. The paper concludes with recommendation ways in which development and heritage preservation can be better managed to facilitate evolution of urban development patterns that facilitate both social and place identities and a desired urbanism.

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Defining traditional nigde house typologies and their morphological language in ancient linner castle area Nigde-Turkey

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Settlements in Anatolia which stratified over ten thousand years had carried out their traces both in cultural and physical dimension till today. In this sense, Turkish House has an effective form with its common spatial typology which never disappears even in different geographies. The effect of its proportion and equilibrium schemes on plan and facade design which integrates urban morphology is very strong. Structural base what differentiates from different climate conditions and material usages does not show much difference in house plans because of the common language of traditional Turkish culture. Formation of traditional Turkish House and its structural specialties are an important architectural heritage. Turkish house which located in Anatolian typological features with their patterns what formed by articulating with each other, create an important effect in morphological angle. In this paper, Central Anatolia Region what we can call as Kayseri Regions Turkish House and its structural form on region is tried to be addressed. In Traditional Turkish House what reveals as an introverted life style, relations with public space appears in indirect way by the impacts of social and cultural life styles. In our research area in Nigde Houses this can be seen clearly. The house structures their urban development by articulating in a proper system. These kinds of Turkish House typologies has brought some features like expansion of urban starting from inner house through outside which plot orders, urban form and relations are detected by the directions of streets contrast to western cities. In a single structure, room, sofa, courtyard and garden like elements what construct a Turkish House had been tried to analyze in "Nide City Inner Castle area" what hierarchic development of houses create a form, from private space to public and which also create morphological tissue in their spatial situations from the reason what it shows differentials from typical Turkish House character. We can see spatial impacts of antiquity times in Nigde Houses. In this concept, first of all Nide house will be describe from its spatial and schematic approaches and its comparative definitions as defining its place in traditional Turkish House. As for the second step in this research, the relations in a larger scale of Nigde House will be analyzed like; in neighborhood scale, house-street scale, public space relations and expanding through to all settlement by exploring its unique morphological spatial specialties.

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Metamorphoses of Venice.

The methodological approach by Giuseppe Samonà and Gianugo Polesello to urban design on the fringe of the lagoon city

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- 76 The idea of fringe in the city of Venice is a singular concept as unique as the morphology of the lagoon city itself.
- Unlike other cities on the mainland, Venice does not have precise borders; it evolves and grows on the water through the addition of islands, a process which could, potentially, make Venice a city with infinite extension.
- The boundaries are primarily represented by the challenges between the artificial and the natural, challenges on which Venice has been founded for many centuries. Moreover, they are always provisional borders which dissolve progressively into the sea.
- In *Progetti Veneziani* (1) Polesello writes about a non-antithesis between terminability/interminability and the indefinite fringe which makes a metamorphic shift from urban edge to urban interior, always tending towards the heart of the city.
- In this sense, although Venice is radially dispersed in lagoon waters (think of the historical map by Benedetto Bordone, 1536) it remains an absolute centripetal reference to which everything converges. Giuseppe Samonà in 1974, prompted by Ludovico Quaroni for the publication of the series "Città e Architetture in Italia", began "Libro su Venezia" with Egle R. Trincanato in which his studies of the lagoon city became a landmark for all future scholars of Venice.
- Designing within these boundaries is a complex and delicate matter, with different interpretations of the borders being given over the years, and these have resulted in the adoption of different design methods.

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Tradition as an architectural topos: role and interpretation for the contemporary sustainable urban design

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This paper aims to offer a critical reflection upon the heritage value of the traditional city, in order to formulate planning hypothesis for sustainable contemporary urban design. The identification of the historical city as constructive term of reference, is due to the fact that the city itself is anthropological (Krier, 1995) being that its spaces, morphological structures and dimensional proportions are commensurate with the human parameter. Starting from the interpretation of the constructed reality as an organism, in which the past of a cultural tradition has been stratified and layered in a dynamic way, this study aims to demonstrate the durability of its genetics potential, highlighting the logical and structural aspects even before the technical and formal ones. The thesis will be developed by analyzing some projects which, during the 20th century, tried to pursue not only the methodological tools of the project, but the inner reason of the construction of the city's space in the historic continuity (Gravagnuolo 1991). At first, the study proposes the elaboration of an ideal dialectic line, characterized by the constant seek of anchoring the project to a prolific cultural furrow, from the 19th century culturalistic approach to the traditional city, up to the theoretical recognition of its complex historical organicity. Then, it is possible to recognise those principles of design coherence, which are the basis for each sustainable operation in terms of material, cultural, social impact on the built environment (Maretto, 2012).

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Landscape and Territory

Reading Contemporary Landscape
Landscapes and Territories
Urban Landscape
Metropolitan Infrastructure

For a new organic-city

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Organic= deriving from living matter; relating to a bodily organ; fit together as part of the whole

In his investigation of Europe's architectural identity and crisis, V. Gregotti tries to examine the reasons of this condition and the material circumstances in which nowadays architects act. Among the mentioned causes the lack of thoughtful consideration towards the themes of transformation of the existing fabric instead of fostering the city expansion; the proliferation of specializations and the confining of the profession of the architect in the role of an image maker for the marketing; the rise of comprehensible environmental preoccupations acting as an ideological guise deprived of content. To these we have to add the lack of interest of the politics to take into account the *longue durée* of the territorial transformation. As a result our cities and architecture are designed through a careful attention in answering numerous building codes regulations as well as strict environmental controls and all sorts of bureaucratic responses, lacking instead the principal goal that is the capacity of "crafting the city". In his more recent contribution regarding the sublime in our time, Gregotti regards the landscape as a recently recuperated concept capable of nurturing a cultural collective idea of settlement. Yet landscape cannot be confused with sustainable and ecological practices, that per se cannot guarantee design excellence. The reference towards the geographical and historical nature of the landscape implies the acknowledgement of an overall character collectively recognizable in terms of scale, imaginary, memory, morphology. The paper aims at analyzing modern and contemporary urban design case studies with the goal of understanding the new urban design morphologies and principles and to highlight what we can understand as new organic-city. The urban is the site of complex relationships and successful projects are those who accomplish disciplinary knowledge together with sustainable and innovative challenges.

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Regional morphology: the impact of coal-mining on regional developments in central UK

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80 With the announcement of closing the last remaining three deep pit coalmines in Britain, an era of successive industrial growth and decline draws to an end. It is economic and political transitions influenced by globalisation that exposes regions to mayor challenges. While strategies often try to influence transformations locally, it is especially the regional and intra-regional relation that needs to be taken into consideration, when dealing with post-industrialised areas. Especially coal-mining regions are characterised by strong networks of industrial distribution influencing their morphology and hence suffer under the spatial implications of structural change. This study addresses urban and regional developments as processes and as complex systems of different inter-dependent multi-scalar networks. It sets the growth and decline of regional spatial structures and local settlements in relation to the impact of industrialisation with a focus on coal-mining areas in central UK, namely the Nottinghamshire, Derbyshire and Yorkshire region. The aim is to understand their urban and regional morphology and how this relates to their current socio-economic situation. Grasping the morphological characteristics of very large metropolitan areas poses a challenge, which this study addresses by using the theoretical methodological approach of space syntax. Analysing the spatial network of central UK, this study combines socio-economic data, spatial locations of coalmines and the urban morphology with GIS. Complex relations are exposed and provide a view into mechanism influencing urban transformations. The research emphasises the importance of spatial configuration and the relation between the local and the region for planning policies trying to trigger revitalisation and sustainability.

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Industrial landscape between modernity and tradition: what meanings to accompany change by the project?

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The industrial landscape is read as a material acted by time and by the joint action between nature and human practices. Geomorphological changes and open dialectics that characterize the landscape of Liège are subjected on one hand, to reinterpretation of readings and on the other hand, to a revival of innovative meanings, activated to respond to new waves of relentless modernity (Gregotti 1993) related to new palimpsests (Corboz 2001) carrying industrial history little known today, even forgotten. Architectural competition, new urban projects and deindustrialization are the new meaning of urban politic blinded by an apparent modernity that transfigured the Meuse valley and de rural context: territories that have been assaulted by early industrialization, emerging as a rhizome.

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The proposed study covers in-between area. Permanencies, like blast-furnaces and harbor structures, interspersed workers neighborhoods and "interrupted lands", are both landscape and urban contexts, whose metaphysical atmosphere expects a becoming, which neither the people nor decision-makers can no longer see the prospects. On the other hand, repeated and interpreted readings permitted the emergence of elements, factors and traces that hold enough potential of re-launching for building new urban and landscape narratives. They accompany typological writings, whose innovative character is not to be found in modernity to achieve, but in the thought in progress, represented by projects that help in understanding and formulating creative combinations of existing materials (Rowe 1978). This work introduces us to the possibilities to reread the prospective potential readings and writings to be extended with new projects.

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Territorial Planning: Vitória-ES, a case study

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- 82 This paper offers some reflections on the implementation and results of urban planning policies pursued in recent decades in the Vitória's metropolitan area, located in the southeast coast of Brazil. We adopt the hypothesis that, in that context, the choices made by the government do not take into account the prospect of build a fairer city. In Brazil, according to IBGE (2010), 50.7 million people live on the coast, which corresponds to 26.6% of the Brazilian population. This coastal area has an average density, five times higher than the national density. The harnessing of industrial structure to coastal areas with chemical and petrochemical, steel and port activity, the increase of tourism and the already sharp urbanization of these areas makes them very fragile areas regarding environmental impacts, changes landscape and spatial planning. This associated with the "inability" of government's response ultimately worsen the quality of urban services, representing still high environmental risks. According Clementino (2008), the specificity of metropolitan areas requires planning that considers their complexity and combines the principles of efficiency in the development of economic activities, quality of life for its inhabitants, urban design and quality control and preservation of the environment. There are indications that this specific look has been disregarded in our case study, which has suffered from the indifference of the government, reflected in the absence or in the wrong choice, planning policies to guide the use and occupation of soil, drainage, sanitation, urban mobility, environmental preservation and social justice.

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Morphological mosaic of Brabant

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Urban regions are sites of complex relations that can be visualised as a confluence of various social, economic, environmental and governance facets that intertwine to create a regional ecosystem. A history of entrepreneurship, creativity and craftsmanship, has shaped the region of Brabant into an integrated ecosystem that is based on shared social and economic values. Placing the region at a unique junction to initiate a dialogue between past and future urban forms.

This interwoven character of the Brabant landscape of townscapes and farmland is a result of a unique historical developmental logic. Till the mid nineteenth century, a predominantly rural landscape with small pockets of arable land led to a fine spider web like spatial pattern of farmsteads and hamlets connected by tiny sandy roads. Followed by an industrialised program that was grafted onto this spider like spatial layout in the twentieth century. The last century has witnessed a shift towards the creative economy, both spatially and economically.

This paper expands on the historical layering of land and townscape that is attested by the region's agricultural legacy: farms, estates, hamlets and villages and heaths, peats, marshes and fens. Mixed with the legacy of the industrial era: huge industrial complexes, colossal religious institutions for various social purposes (cure, care, education, etcetera), and vast industrial agricultural estates. The merger of scales within the landscape of Brabant, the authors hypothesise can be visualised as areas of regenerative potential within the region, where the mosaic of tradition and modernity can be seen as sites of success, vitality, and resilience within the current economic crisis.

Rurbanism/Urbanism/Meganism: toward different disciplines for different scales of human settlements and settlement fringes

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- 84 Current conurbations are the sum of very different situations that use to be approached always with the same tools. The scale of each city fragment, its nearness or remoteness to the natural landscape, its accessibility, density and social identity should be analyzed as an organism itself. Tools to be used, rules and future design might be completely different. Every situation has the capability to enrich the assembly keeping very different conditions compared to the surroundings. A city might be the sum of very different economic sectors. Growth in the countryside shouldn't always result in the disappearance of the agricultural sector, but the appearance of a quality food industry that develops it. Tourism in small towns shouldn't decrease together with the raise of residential land nor the architectural and cultural identity. On the contrary, new architecture should help along the affirmation of cultural and architectural values. Residential growths should always be the result of a local improvement, not the result of escaping from a nearby high density space. To avoid the escape from high density urban spaces, those places should be treated as the core of the civilization, the place where most of the processes that make possible a territory development occur. A place where large amounts of energy are consumed and, in compensation, large amounts of energy should be produced. The space where degradation never takes place. Solving the identity and economical base of each fringe of settlement itself means solving as a consequence other issues as traffic or family sustainability of the assembly.

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The interpretation of the territory by Saverio Muratori

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Studi per una operante storia del territorio is Saverio Muratori's work, that he left unfinished at his death in 1973. It is composed of 255 drawings and 18 printed materials, which represent the territory from the field form to the world map. After the researches of Venice and Rome, these drawings testify Muratori's goal: to go beyond the concept of organism as a city and extend this at the territorial scale. To describe this work, there is only an hand-written text by Muratori, on the back of a drawing, a note that summarizes his intent: to focus the attention of the men to interpret the context in the real form, in his most natural connection with the environment, in relation to the history of the real. The extension to such a wide scale of representation and the method with which Muratori reads the territory, make these studies still extant.

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Towards a social-ecological urban morphology: integrating urban form and landscape ecology

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86 In recent years there has been an increasing interest in the green areas of cities. The reasons are several but generally relate to the urgent need to redirect our cities into more sustainable trajectories. Of special importance here is the shift towards greater emphasis on biodiversity and urban ecosystems rather than climate change and technological systems for energy, waste and transport. This creates new demands for a deeper understanding of the morphology of green areas in cities in their own right as ecological environments and not only by way of park typologies as often traditionally has been the case in urban morphology.

Such spatial morphology of natural landscapes is already a developed field and essential part of landscape ecology (Forman 1986). However, there is no natural overlap between the two fields of spatial morphology in landscape ecology and urban morphology why they are not naturally integrated to each other. In this paper first steps are taken towards an integrated social-ecological urban morphology based on current developments in each field. The development of such a joint morphology has the aim of informing and supporting research as well as practice in the new endeavor towards functional ecosystems in cities.

More specifically, the aim is to integrate essential concepts in landscape ecology such as patches, matrix and fragmentation (Alberti 2001) with essential variables in urban morphology such as distance, density and diversity. The aim is here also to set this within a framework of network analysis as specifically developed in space syntax (Hillier & Hanson 1984; Hillier 1996). The empirical support will be taken from the point of view of ecosystem services in cities, more particularly pollination (Marcus, Berghauser Pont, Gren 2013).

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Reticulation, fabric weaving and Interfacing as interpretative lens to chart spaces of infrastructural mediation: a morphological approach to Lisbon metropolis

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The paper explores findings of a PhD research in Urbanism, in which Lisbon's metropolitan territory is interpreted through the conceptualization of infrastructural mediation. This concept is regarded from a morphological perspective, as an interpretative and design instrument for the metropolitan condition, as well as a morphogenetic mechanism. It focuses specifically on the infrastructural strata of mobility, communications and public utilities infrastructures and their dynamic and diversified relationship with metropolitan landscape and urban fabrics.

Three 'morphological mechanisms' were conceptualized as analytical lens to read, understand and chart infrastructural metropolitan spaces. Reticulation is associated to the laying of large scale networks, defining territorial hierarchies and providing the functional structure of the metropolis. Fabric weaving refers to the morphogenetic processes of urban fabrics development, revealing spatial types according to the nature of their own infrastructural support and the reciprocal relationships they establish with large scale networks. The third mechanism – interfacing – reveals the functional and spatial interlockings between complex infrastructural and biophysical networks, combining nodal elements and large scale territorial apparatus.

The development of interpretative drawings based on a systematized cartographic database and linked to each one of the three mediation mechanisms provide the graphical and spatialized support to the research's key findings.

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New ways of life, new urban forms: Socio-spatial transformations and townscape analysis in the tourist coastal region of Ecuador

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88 The tourism industry has been one of the most profitable and growing sectors in the global market during the last 5 decades. Especially, since the late 80s, the spread of global urgency of nature conservation, monotony of the cities and the development of technological advances on transoceanic transportations and communications, increased progressively the demand of eco-tourism and the search of new "pristine" landscapes to visit. Likewise, the developing countries with high levels of biodiversity found on this demand a new market niche to globally compete for catching foreign currencies and to locally detonate economic and social development at vulnerable regions. Nevertheless, development did not arrive as originally has been expected and new shapes of landscape emerged.

The main objective of this doctoral research is to understand the nature of the socio-spatial transformations related with international tourism along the sea-border region of Ecuador. It aims to contribute to the regional and urban planning of these types of regions that are strategic for the global resilience in the 21st century. The Ecuadorian sea-border tourist region of Puerto López is the case of study where the lack of a sustainable regional and urban planning and the weak knowledge about the intensive processes of change experimented during the last 20 years seems to be undermining the possibility of assure a sustainable development.

By the use of GIS technology and townscape analysis, the research aims to identify and assess the new types of urban forms that emerged in Puerto López by the processes of socio-spatial transformations detonated since the arriving of the domestic and international tourism to the region. The hypothesis is that a dichotomy of development spreads over this region. The local vision of the tourism activities as the "panacea" to achieve development created two new tourism landscapes at the same time and at the same place: one is the "standardized tourist space" that is globally promoted and the second is the "vulnerable tourist space" that is the consequence of the local people aiming to be part of the profits. The new ways of life produced new urban forms that have been shaping fishing villages to small-size globalized tourist cities during the last 2 decades.

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De la Plata river (Buenos Aires, Argentina): traces and new territories

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In the past two decades, streets, plots and blocks were replaced by networks of highways, large homogenous enclaves, new uses and typologies, shaping a new kind of city growth. These urban transformations produce new scenarios, new challenges to urban planners.

On the one hand, we need to recover the organicity of the traditional city but in a context of new land uses, forms and ways of inhabiting the territory. So, we propose to recover the persistences, the "cultural matrix", the "DNA" of the territory; those traces that give cultural and morphological continuity within the changes. (Sola-Morales i Rubio, 1997; Font, Llop and Villanova, 1999; Sabate, 2004) On the other hand, behind a so-called fragmented territory, through the identification of land uses, socioeconomic variables and fluxes, the reading of the city as a primary source allows introducing more complexity to the processes of urban production. In this regard, we would retrieve the different disciplinary concepts and tools, that would allow debating the socio-economic logic, the uses and experiences of the city and its urban landscape.

In this context, this paper focuses on the area of the northern riverbank of Metropolitan Area of Buenos Aires, Argentina, historically characterized by a mix of land uses, typologies and plots forms that became the scene of a transformation process that has homogenized and fragmented it. We attempt to outline the morphological changes and persistences of these fringe territories and their impact on the transformation of the last two decades.

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The «Prognoz Platform» based analytical tool and its use for conservation, protection and reproduction of urban forests in the city of Perm

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- 90 Nowadays information technology is widely used in urban planning, it allows us collecting and storing of large amounts of data about cities, their infrastructural networks, people and relationships between them. However, solving real urban problems we traditionally use unique knowledge of various experts preferring it to automated analysis of data.
- This is largely due to the lack of analytical systems that can work with cartographic data and can be used to solve spatial problems. To manipulate geospatial data we have developed an analytical tool based on the Russian Business Intelligence system «PROGNOZ PLATFORM». This system is designed to solve problems by predicting, control and simulation using a wide range of modeling methods such as econometric, balancing, optimization and target methods. The BI-system allows to solve problems such as “What if ..?” And “What do I need to ..?” and supports contingency scenario modeling. It also allows to visualize and analyze operational data model and forecast processes.
- We’ve adopted mathematical, statistical and adaptive methods of PROGNOZ PLATFORM extending it with data from the municipal database of socio-economic statistics, cartographical information from State Immoveable Property Cadastre. We have already tested this analytical tool at various urban problems.
- Now we would like to present a working scheme of combination of our instrument and cartographical data of the General Plan of Perm making comprehensive assessment of conservation, protection and reproduction of urban forests in our city.
- We demonstrate basic algorithms for integrated assessment of urban forests: target function method, design parameters and formulas. It is shown how to use the analytical software tool to process results of the reforestation monitoring according to state forest management regulations.
- The PROGNOZ PLATFORM based analytical tool is intended to increase validity of decisions in different types of city and regional planning, including priorities determination for municipal budget planning.

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- Prognoz Platform official web-site (<http://www.prognoz.ru/platform/modeling>).

Typological processes, urban landscape character and development control: the case of Auckland, New Zealand

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The idea of typological processes is a key tool used by researchers of the Muratorian school to understand the course of urban form change. Central to this idea is the notion that the city and its architecture are products of cultural consensus based on collective memory. The dominant types in a new period of urban development are conceived from the dominant types of an earlier period. The fact that the forms created in one period are different from those created in another, and that similar types are grouped over time, thereby generating distinct urban tissues, is fundamental to both characterising and planning the urban landscape. Despite the increasing interest in the idea of typological processes, it has been slow to receive clear empirical support and its application in planning remains limited. Major cities in New Zealand are under great pressure for change. This paper illustrates the analytical techniques for an investigation of the typological processes of the spatial structure of urban areas at difference scales in Auckland. The research findings suggest alternative zoning strategies which are place-based and more responsive to local and regional character.

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The Valle d'Itria landscape: a morphological synthesis between rural and urban environment.

“Socio-building” reading of the landscape's “scalar components”

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- 92 This essay focuses on the Valle d'Itria landscape, a sub-region of central Apulia. Here a long and arduous process of civilization occurred over the years has culminated in the emergence of an agricultural society which has shaped this landscape in such a way that the urban and the rural environment are synthesized. Within this essay I will investigate this synthesis by analysing the Valle d'Itria landscape according to different levels of complexity: elements (architectural organisms), structures (urban aggregates, urban organisms, rural aggregates and rural settlements), systems (settlements, routes and productive activities), and organism (the landscape itself). Such an analysis will be introduced by reflecting on a theoretical-logical method that tends to attribute a temporal-structural dimension to the territory and consequently to the landscape. In fact by referring to studies developed since the 1960s by the Italian architects Saverio Muratori and Gianfranco Caniggia, I will attempt to provide an idea of the territory as a living organism whose structure is determined by the anthropic process that has occurred throughout history. Aware that contents will emerge from this research could be interpreted in several ways, and that each of the levels of complexity of the Valle d'Itria landscape would require a more in depth analysis, this study has mainly the purpose to demonstrate how the aesthetic data of this landscape is the result of anthropic interventions which, conceived on different scales interconnected each other, bind living and working places with the countryside.

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New forms of the urban space in relation to nature. A didactic experience for the Apulian town of Monopoli

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The loss of the boundary between city and countryside and the presence of large voids and fragments of nature in the city, if reinterpreted with type-morphological grammars, could constitute the basis to gain a renewed organic feature of the contemporary city and redefine an alternative form for the compact city.

A recent teaching experience carried out at the Laboratories of Architectural Design Studio at the Politecnico di Bari has chosen the city of Monopoli as a paradigmatic case study to test new models of urban space in relation to nature. Monopoli has a very clear *forma urbis*, which it developed during the time in relation to the natural morphology of the coastline, but that went into crisis in the contemporaneity. In the Monopoli's old city centre it is possible to find some characteristic conditions of coastal Apulian towns, typical expressions of the relationship between the natural forms of the coast and the settlement forms.

In the Laboratories these spatial models have been assumed as the key issues for the design: the coast that stretches over the sea with a promontory, interpreted through the themes of the podium, the belvedere, the *muraglia*, the bastion; the coast that houses the sea with a bay, becoming a water square on which the compact city overlooks; the coast linearly in front of the sea, interpreted through the themes of the *palazzata* and the *riviera*; the reinterpretation of the peri-urban and rural textures and the *lama-cala* systems.

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Signage regulation: an overview behind the production of chaotic commercial landscapes in Brazil

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- 94 As second skin to buildings (Ashihara, 1983), commercial signs have great impact in the perceived urban landscape (Nasar, 1988; 1997); technology permits increase in size and diversity and the challenge is how to deal with chaos and order in such landscapes. In this sense, the aim of this paper is to discuss the production of commercial landscapes with visual overload in Brazil, bringing the view of those who produce and the role of signage regulation. As commercial landscapes, we consider its visual features which involve not only signs (ads, billboards), but also buildings, urban furniture, vegetation and everything that takes part of these particular settings visually perceived. Such elements, together with its maintenance and cleanness have a huge impact in landscape quality. To talk about these chaotic settings, we take the city of São Paulo, in Brazil, as a case study to discuss what is behind its production. This paper is based on qualitative study, in which, in-deep interviews were applied, to specialists and users involved in different areas of commercial landscape production, and perception. When commercial intentions are behind activities in urban space every square meter in landscape is valuable and disputed. It was observed that, not only the absence of law create conditions to chaotic landscapes, but also inconsistent ones are instruments to create these settings. These chaotic landscapes can certainly be intentionally created by law; however, when it is not desired, the presence of state in inspection and punishment is important to keep its coherence and legibility.

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Narrating Helsinki's Kalasatama.

Narrative plotting, genre and metaphor in planning new urban morphologies

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In urban planning, narrative is increasingly used as an instrument to give coherence to the often contradictory functioning of cities and their partly uncontrolled development. The “story turn” (Sandercock 2010) in urban planning has led to new planning methods and practices, but also to an increasing complexity in research methodology. The fields of literary and narrative studies could make two important contributions to the examination of changing urban morphologies: first, to actively engage in a process of narrative mapping (cf. Childs 2008) by supplementing existing qualitative data with more experiential knowledge. And second, to bring long-standing expertise on narrative structures to bear on the burgeoning narrative practices within planning.

In my paper, I will look at how cultural narratives of the Helsinki shorelines are actively sought for and implemented by planners in order to engage in place-making, and to communicate with local inhabitants. The most conspicuous use of cultural narratives is the recent move of the Helsinki City to hire 8 artists to help the Planning Department develop the city, as well as the highly mediatized use of landscape art to help create spatial identities, and the commissioning of a literary novel in one waterfront development. I will examine one case in particular: the former container harbour Kalasatama, in Helsinki, which is currently under construction.

I argue that adapting concepts from literary theory – Bakhtin's concept of narrative polyphony (1984), and the study of genre, plot and metaphor, in particular – could help researchers to come to terms with ongoing narrative remodelling of urban form, and might offer both planners and citizens new tools to enter into a more inclusive and democratic dialogue about how various narratives and voices are (or ought to be) petrified into the morphology of the built city.

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The fading of morphological conformity caused by street upgrading in arterial ribbon. Case study of Beijing Nanluo Guxiang in China

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- 96 In the analysis of Alnwick's town plan, the concept 'Ribbon development' is proposed by M.R.G. Conzen, referring to the extension of urban development along an existing arterial road. Meanwhile, 'Morphological conformity' is utilized to depict the manner in which a plan unit corresponds with the existing plan outline or morphological frame. It is not difficult to figure out there exists 'Morphological conformity' in double ribbon, that the plots pattern and plot series exhibit some extend of conformity. In the subsequent development, the arterial road may upgrade to a higher level, especially of commercial significance, resulting in an infusion of population and economic activities in each side of plots along the road. Then it follows repletion and repletive absorption, causing changes firstly in the burgage tail and eventually in plot series and plot pattern. The former double ribbons belonging to the same plan unit evolve into two distinct plan unit. Such a conformity fading can be discovered in the case of urban form development along the Bondgate street close to the Hotspur street. The above evolution can be found in city of Beijing, China, that the celebrated traditional morphological form Hutong, Nanluo Guxiang, changed its morphological conformity in its double ribbon, due to the road level promotion of social state among showfolks. Though the former ribbons belong to two plan units, the frontage of each ribbon sustain conformity. The road grading caused morphological conformity fading can be used to give further insight into the relationship between the road and plan-unit.

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On street networks, spatial configurations and morphogenesis: a case study in the greater Montreal region

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This paper presents partial results of a research that aims at characterizing the residential built environments of the greater Montréal area. Mobilizing classical urban morphology as well as topology and space syntax analytical tools, it focuses more specifically on the regions arterial system. Prior to the hegemony of the automobile, the deployment of roads and streets networks was informed by the geo-morphological substratum, inherited agricultural and early settlements configurations. The spatial logic of the arterial system stemmed from the broader morphogenetic process. Configurations, topological relations, dimensional thresholds and internal hierarchies were established in the historical *longue durée*. Such processes generally entailed the specialization of some routes that assume the role of a high street or that of a thoroughfare. Roads planned for the automobile era introduce spatial logics that are largely alien to the preexisting framework. At the regional level, a contrasted portrait emerges. In suburban areas, tree-like patterns are not uncommon, yet these are intertwined with preexisting rural road networks. In older urban contexts, characterized by meshed urban patterns, the introduction of controlled access highways altered preexisting topological conditions and hierarchies. A deeper understanding of competing and often conflicting spatial logics that affect the arterial system of the city helps to better measure their impacts on morphogenesis as well as on the articulations of residential environments. Such knowledge is crucial for planning post-carbon neighborhoods.

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Linear formations. Three emergent types of elements which structure the contemporary metropolitan territory.

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- 98 Infrastructural axes have always assumed a leading role in structuring and spatially organizing cities. However in recent decades and especially in urban contexts, where the fabric acquires a metropolitan dimension, there is a new impetus in the importance that these elements have in structuring of urban fabric and the territory in which it develops.
- In this sense, the article focuses exclusively on the transformation processes that recently occur in some Portuguese road mobility infrastructures and how these changes are the result of the surrounding urban dynamics influence in the structural character of these infrastructures. For such, it presents three examples of linear elements with different transformation processes, two located in the Lisbon Metropolitan Area and a third one in the Oporto Metropolitan Area, which in the last 50 years have evolved from its exclusively infrastructural state to a complex urban object which structure and references a large urban territory.
- The morphological metamorphosis that takes place on these infrastructures generates emerging elements with a linear character which, in certain aspects, can be comparable with the street in consolidated urban context. In this way, a process of decomposing and typification is used to simplify the object and expose their basic characteristics. This article seeks to demonstrate the potentially or already established relations, between the shape of the urban layout and fact that these elements (or linear formations), structure, organize and sew the adjacent urban fabric, function that is usually performed by the street in cities with a western cultural matrix.

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Atlanta beltline: peripheral interstitial urbanism

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As pointed out by Rem Koolhaas in *S,M,L,XL*, Atlanta is a new kind of city, a collage city, a multi-centric city, a generic city, a city of extensive infrastructures embedded in an undulating vegetal carpet of green. The city's formless configuration is best described by its highway system, a stretched X surrounded by a peripheral O. In his analysis of Atlanta, Koolhaas did miss a vital component of the city's makeup that in recent years has become a key ingredient in its urban revitalization, namely, the Atlanta Beltline, a pear-shaped perimeter railway that was completed in 1902 and serviced a constellation of warehouses along its industrial corridor. It is probably not surprising that Koolhaas missed the Atlanta Beltline, by the mid-1990s it was basically abandoned and literally enveloped in a sea of kudzu it was essentially a no-mans land that reinforced the boundaries between Atlanta's inner city neighborhoods and contributed to its urban fragmentation and, more importantly, its racial, political and economic segregation. Similar to other abandoned industrial infrastructures, such as the New York City Highline, the Atlanta Beltline in recent years has been transformed into a new urban vision a twenty-two mile promenade for pedestrians and cyclists that eventually will also be the site for a light rail transit system. Not slated for completion until 2030, the first three-mile section of the Atlanta Beltline was opened in August 2014, with other sections of the path currently in development. Within the context of a car-centric city, the project has provided an alternative, post-car infrastructure that has been a catalyst for the densification of its inner-city perimeter. As a project aligned with the tenets of ecological urbanism, the Atlanta Beltline features an urban arboretum and a linear park of native grasses, bioswales and permeable surfaces. Ironically, the Atlanta Beltline, once defined as the periphery of the city, has become the central focus of its urban re-invention an interstitial zone of urban intensification that provides a new connective tissue that fosters vital organic networks between the heterogeneous patchworks of Atlanta's inner-city neighborhoods.

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Study on spatial structure characteristics of intercity network based on the comprehensive intercity flow model: a case of Shanghai metropolitan area

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In order to understand the interaction relationship, social and economic contact condition and spatio-temporal evolution characteristics of territorial spatial structure which are influenced by economic globalization and information-networking, the paper, taking Shanghai Metropolitan Area as the research object, made a study based on the inter-regional economic contact intensity, frequency of intercity coach and railway passenger transportation, the intercity freight, regional scientific research cooperation and spotlight degree within internet users during the period from 2009 to 2014. By analyzing the intensity of intercity economic flow, passenger transport flow, freight transport flow, innovative cooperation flow and Internet information flow, the study built a comprehensive intercity flow model to research the city network characteristics, regional polycentric spatial structural system and its spatio-temporal evolution tendency from two aspects: link intensity and node relationship. The main conclusions were as follows: (1) The social and economic network between cities was increasingly interconnected in Shanghai metropolitan area; (2) The equalization and polarization coexisted in the regional spatial structure. (3) The spatial-temporal characteristics of city network changed greatly, with Shanghai still being the absolute core and the 'network + hierarchy' pattern was emerging in the metropolitan area.

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The effect of terrain on topological characteristics of street networks: evolution of Adriatic and Ionian coastal cities 1800-2010

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Streets are fundamental elements of urban form that reflect socio-cultural influences and affect social and economic life of cities. Street patterns express the constraining effect of terrain, including sloped grounds and bodies of water. The relationship between terrain and urban morphology has commonly formed part of urban analysis at the local scale of neighborhoods or city parts. The resulting qualitative descriptions have addressed the effect of terrain on street pattern, orientation, length, and the configuration of urban blocks. While recent studies in urban geography have aimed to quantify the effect of terrain on street patterns for the global scale of the entire city, they have been limited to the measures of street length, orientation, and dimensions of urban blocks without taking into account the impact of landscape on topological characteristics of street networks. Research in space syntax has shown that topological features of street networks are linked to the distribution of pedestrian and traffic flows in cities, cognition and movement economies. Seventy cities on the Adriatic and Ionian coast in three historical stages 1800-2010, totaling 210 cases, are studied in a two fold manner: according to axial maps of street networks and a categorization of terrain and coastline features. The analysis aims to quantify the effects of asymmetrical and constrained growth, related to seashore configuration and terrain, on topological characteristics of streets at global scale. The comparative analysis produces classes of cities with similar effects of terrain and coast on syntactic measures of streets in six countries along the littoral.

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The Construction of Mountain-river Skeleton Based on Oriental Culture in Bengbu City.

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102 Mountain-river skeleton is the basis of spatial structure in an oriental landscape city. It is also a three-dimensional space structure based on the natural topography and physiognomy of the city. Mountain-river skeleton in every city is unique. Its impact on the urban space will be seen in the urban space layout, urban building height and urban building density control, and it plays a supporting role in urban morphology. The construction of mountain-river skeleton was put forward in Chinese traditional view of nature as well as the reflection on the practice of contemporary urban construction. Moreover, it had become an important approach to shape the urban space features and get rid of landscape convergence that constructing unrepeatable urban landscape through the protection of landscape pattern of the city and reasonable utilization of natural heritage. Bengbu city with abundant natural resources was selected as the research object in this study. Though the multi-scale analysis, landscape morphology structure analysis, three-dimensional space modeling analysis and mountain-river topographical analysis, and based on the principle of protecting the landscape resources, as well as complying with the nature. Then according to the city's landscape resources, not only the operational construction method of local mountain-river skeleton was put forward, but also the urban structure in harmony with the nature was explored to derived the unique oriental charm of the urban characteristics. First of all, the characteristics of Bengbu mountain-river morphology on regional scale were analyzed. Under the background of the natural landscape of Bengbu, regional mountain-river morphology and pattern characteristics were refined to explore the relationship between the natural landscape resources and urban layout. Secondly, the characteristics of Bengbu mountain-river skeleton on urban scale were analyzed. On this basis, the characteristics of urban mountain-river morphology and the historical culture of the city would be combined to carry out space conception and image design. Thirdly, the construction of Bengbu mountain-river skeleton was completed. Space images were strengthened and improved by increasing the rivers and green space and other means, as well as promoting space art of landscape city. Furthermore, the layout suitability, development intensity and development capacity of the city were determined. The construction of mountain-river skeleton of city based on oriental culture would ensure the urban function structure of rationality and the continuity of natural landscape resources, and highlight the unique oriental charm of landscape city.

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Sustainable Design and Urban Regeneration

Urban Regeneration
Conflicts and contested areas
Informal Settlements
Sustainable Design Technologies
Sustainable Design

History in the Plan: why preserving the historic city pattern is key to preservation and urban character

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- 104 Preservationists usually focus their efforts on the preservation of particular buildings. While the disappearance of buildings tears at the emotions of neighbors and advocates, the disappearance of a historic urban fabric is rarely noted or mourned, and does not receive the attention from planners that it deserves. This paper, using examples from Cincinnati, Boston, and Salt Lake City, demonstrates how the preservation of the plan – original streets and lot subdivisions – can also have great importance to the character of a place and the ultimate preservation of its buildings.
- The streets and lots of a place, once laid down, are far more enduring than buildings -- sometimes enduring for centuries -- and effectively structuring (and protecting) all the buildings that follow. This study looks at original plans that are more than 150 years old and compares them through time using a time-series of historic maps, including Sanborn maps. The maps serve as the data from which the analysis and conclusions are reached. This paper includes extensive illustrations and maps.
- This paper demonstrates that historic plans which are violated, even when some buildings are preserved, often presage a weakening that ultimate brings on more destruction. Even small areas of a plan that are well planned and well preserved hold out against the forces of destruction much better than others nearby which are not. This paper also demonstrates that historic plans that are themselves weak – chaotic or unstructured – also presage far more destruction than a more regular plan.

Practices after a disaster: geographical narratives vs territorial dispersion

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After the earthquake on 6 April 2009, L'Aquila becomes more fragmented and dispersed physically, socially, and culturally. This transformation is closely bound up with some emergency solutions as the realization of segmented and separated residential zones that determine internal inequalities. L'Aquila knows a growing sense of fear, mistrust, uneasiness and a decreasing sense of cohesion towards a social polarization typical of larger cities. What most damages the community capacity to retain its potential for communication, participation, exchange, sociability is the sudden or accelerated replacement of open and public spaces with separated and private areas.

In the context of the urban transformation after the disaster that changed daily life of people and communities within the Municipality of L'Aquila, participation can represent a practice of regeneration to face urban fragmentation and territorial dispersion (Calandra, 2012). Some researchers of the Department of Human Studies, University of L'Aquila (Italy), have developed and are applying, according to the "trial-and-error" strategy, a methodology of communication and participation in research practices. It will be explained the geographical narrative issued from the participatory/participating research that involved citizens, students and scientists together (Cahill, 2007; Fuller, Kitchin, 2004; Pain, 2014) and that emphasizes the importance of places in the everyday life of people for their psycho-physical health and for the welfare of the entire community.

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Seismic vulnerability and urban morphology, tools for urban and building integration

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- 106 In historical towns, the morphology is intrinsically linked to the seismic vulnerability of the urban organism. The seismic history of the Italian peninsula has influenced its towns highlighting the close correlation among the evolution of masonry constructive technique, typologies and morphologies (Fiandaca, Lione, 2009). Through the reading of the urban fabric from a seismic vulnerability point of view, and the investigation of the property of structural resilience in the built heritage, it's possible to identify compromised, incongruous and improper components of both building and urban organisms. The purpose of the research is to provide effective tools to investigate and analyse the heritage in order to define an organic approach on the aforementioned components for building, architectural and urban intervention. Among these tools, the survey of the building and typological units, considered in their mutual aggregation and relationship, or the map of the age of the built heritage (MABH) show the components in the urban fabric where to operate to implement the 4Rs of Resilience (Rapidly, Robustness, Redundancy, and Resourcefulness) (Cimellaro et al., 2010, D'Amico, Currà, 2014). For example the MABH should be read in parallel and compared with the actual configuration, structural and morphological, of the urban organism analysed. The visualisation of the stratification of the building types and construction systems leads to determine quantitative and qualitative "degrees of freedom" in building and architectural renovation and integration projects. The study was conducted on a significant selection of cities in central Italy, from small to medium size, with a significant built heritage percentage. Each case study will be described through the sequence of the experimented tools.

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A new analytical morphological method for urban conservation and regeneration

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Four major schools of thought have well developed in the field of urban morphology (Oliveira, 2013), that is, the Morphogenetic school (Hofmeister 2004; Heineberg, 2007), the Conzenian School (Conzen & Conzen, 2004), the Muratorian school (Cataldi et al, 2002) and finally Space Syntax (Hillier & Hanson, 1984). And arguably the last one could be expanded to form a broader configurational school. Although those approaches bear certain resemblance in the formulation and application of some key concepts and could potentially benefit each other to better inform research and practise, they have been rarely used in a complimentary or integrated manner. And despite that each school of thought still remains strong and could allow for powerful and thorough investigations into many urban issues, the separation of these traditions has been increasingly becoming a hurdle for many studies that are inevitably confronted with the growing complexity of the city. (...) This new method provides a more coherent and comprehensive perspective on the study of urban form. That is, it incorporates the historic-geographical examination of the formative process of the city, i.e. how urban landscape is historically stratified and gives rise to the hierarchy of morphological regions and establishes the nature of historicity of different urban areas, into the cross-sectional evaluation of spatial layout of the city, i.e. how urban spaces aggregate themselves as a spatial whole and how this entity relates to human activity patterns, and vice versa. While the former is, generally speaking, pertinent to the extent to which local identity could be sustained and enhanced, the latter is closely related to the ways in which movement, interactions and transactions take place in the city. (...) And we would also be able to see whether the conservation planning, informed principally by the hierarchy of urban landscape units that allows for achieving succession of historicity of an urban area, may exert negative effects on the spatial configuration of local street network, hence constrain residents' social and economic activities. A small historical quarter in the Old City of Beijing is selected in particular as a case study to demonstrate this new method. This is because the lack of consideration of the significance of historic urban areas in relation to the wider built environment and the absence of insights into the historical development of their urban landscape with respect to the social, economic and cultural contexts precisely underpin the widely criticised urban conservation practise in China at present (Whitehand & Gu, 2007; Whitehand et al, 2011). The case study shows that this new method could enable a mutually informative understanding and analysis of the spatial configuration as well as the historicity of an urban area, hence effectively assist design decision-making.

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Dramatic changes in urban morphology: urban regeneration in Istanbul-Gaziosmanpasa

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- 108 In Turkey, urban planning is being replaced by piecemeal and property-led urban regeneration projects. Those urban regeneration projects affect cities in Turkey in two fundamental ways. The first impact is on the morphology and the second impact is on the social structure of the city. In this paper, their impact on the morphology of the city is analyzed through a case study of Istanbul's Gaziosmanpasa District. There are squatter houses from 1950s and apartment blocks redeveloped from squatter houses in the urban regeneration area designated by central and local governments. Today, these buildings have become the subject of regeneration. The paper is based on the preliminary findings of a TUBITAK-funded (The Scientific and Technological Research Council of Turkey) project being developed by the authors. As well as literature review, the research is shaped by face-to-face interviews with related agency representatives, on-site observations, analysis of plans, projects and documents prepared by related agencies and articles in the media on the subject. The main findings of the research established that the existing urban morphology of the area, formed by low-rise, single houses in an organic and unplanned setting, was changing. This existing urban fabric is being replaced by high-rise apartment blocks which can be described as gated communities. As far as Istanbul is concerned, its existing organic, unplanned structure leaves its place to a, mostly grid-shaped, planned structure and thus a spatial structure which takes no notice of local features such as climate, topography and orientation, and its immediate surroundings emerges.

The lost and gains in Chibi city's transformation

The reinterpretation of the deconstruction of historic morphology of Chibi

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The stunning space transformation during Chinese unprecedented urbanization has brought about severe space dilemma thoroughly, especially to historic built areas, causing great misunderstanding. After the study of various urban morphology constitutions and their evolution, this paper pay more attention on deep analysis of factors of the change and its operating mechanism. The co-performance way of various factors, such as local social organization, political decision, economical status and existing built environment. The reinterpretation of space evolution and its instinct factors can give hint to city planners to solve complex problems in a comprehensive perspective.

As a typical representation of Chinese medium-small cities' space change, Chibi can deepen our knowledge about the heterization of traditional urban morphology. In view of representation of Chibi's space transition, this paper is to dig out the typology of the solid space and open space, to outline the destruction of its constitutions, to review space elements' evolution of historic center (walled area), to describe the expansion of its morphology, to criticize the performance of urban social-economic mechanism. Furthermore, based on study on three built sites' evolution in the city, what the exact space status can be identified. Based on the reinterpretation of the morphology change and space transformation of the entity and some key sites, we can know how all the referred factors play in Chinese traditional cities' mechanism.

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Amor vacui/Amor pleni

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- 110 The urban void areas situated in the sprawled outskirts or the “dismissed areas” inside the dense-city, are those parts of the city in which the presence of the nature (“well preserved” or to be restored), allows us to experiment renewed ideas of city that assume the nature as the context of the city’s construction. Establishing renewed relationships among delimited spaces evocative of the urban “internality” and wide and free spaces, that let us recognize the forms of the land’s “physical geography”. For this reason it is necessary to renew the principles of the city’s construction opposing to the disordered dispersion of the contemporary junkspace a new “order”. A new order that cannot be based on the repetition of the same principles that informed the construction of the nineteenth-century city. It is necessary to replace the extraordinary paradigmatic value that the street and the plaza had in the construction of the city in the past period with new paradigms that may assume the void space as a syntactic value in the relationship among the built parts of a city, and no more a “reserve” of space to be occupied by buildings.
- New paradigms that contemplate the “internality” and the “externality” as characters of the spaces of a city-nature that may be coexisting and interrelated. Paradigms that summarize the discontinuity and the delimitation of several different urban parts and void spaces of nature among them.
- The definition of the elementary part of the city is one of the steps that founded this research. With a metaphor this elementary part of the city-nature has been called “architectural island”.

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Exploring Design Approaches for Urban Regeneration of Brown Fields: a Case of Hazaribagh Tannery Area.

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From the very beginning of industrialization in Bangladesh, tanning industries have been playing a significant role in the country's economy. Due to its importance as a labor based export oriented industry the full flourish of this industrial sector is essential but these industries are discharging and dumping their wastes and effluents without treatment into nearby water bodies and due to these reasons Hazaribagh tannery area of Bangladesh is considered an extremely polluted area and this industrial zones which have been formerly deemed as a vital part of human daily lives turned into a formidable obstacle and catastrophic place within the city. Dhaka is the world's one of the largest densely populated city and Hazaribagh is very important place and almost situated at the center of the city. Due to its harmful industrial activity government of Bangladesh decided to shift the whole place to out skirt of Dhaka city where the ETP (Effluent Treatment Plant) will be established to treat the produced waste. Dhaka is dense and having unplanned growth from various point but recently there are some steps are taken to make the city livable and sustainable from the point of urban development sector and Hazaribagh relocation and the development after its relocation is one of the major activity in the country's sustainable urban regeneration movement. As the this place is divided into various segments according to pollution level of the soil so this regeneration development process is also will be like this. This paper will depict the actions of municipal and state authorities are considered as well as their implications considering the economic activities and existing population involved also an extensive research and design decision towards a regeneration of this place which will actually dedicated to a new way of thinking process towards this vary situation.

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High-density city as a place for urban regeneration

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112 The large-dimension housing complexes in Rome have grown since the late '60s as a result of the 1st PEEP planning of 1964. The plan tried to face the large housing emergency caused by the rising urbanization (Albano, 2001). The peripheral areas of the city started to be filled with several neighborhoods in sharp break with the close urban fabric: high-density neighborhoods that for conformation and urban characteristics were placed in contrast to the existing compact city. This discontinuity is highlighted by urban scale designing approach, described by wide spaces for gardens and high speed roads, separating isolated great-size buildings.

Approaching the city as an organism in constant evolution in space and time (Piccinato, 1941) and composed of continuous additions and modifications (Rossi, 1966), these neighborhoods resulted immediately as amorphous objects, autonomous from the continuity of the existing city and isolated from the network infrastructure. Nowadays, after about forty years, they still live in strong isolation conditions, becoming the focus to look at for urban regeneration interventions.

The proposal article suggests a comparison between the great-size neighborhoods and the conventional compact ones by the analysis of different density data (floor area ratio, population density, cubic meter built on the covered area, green area ratio) in order to stress the morphological differences for the possibilities of transformation.

The transformability of some case of studies (CastelGiubileo, VigneNuove, Pineto, PrimaPorta, Torevecchia) are analyzed up to the building scale, through modeling correlating structural and technology performances with the morphological characters.

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Harmonious or monotonous: urban regeneration and the form of contemporary urban landscape

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The regeneration of urban environment is one of the key urban planning and design issues nowadays. Urban regeneration has become a widely accepted tool for restoring a city's economic, social and physical fabric (Sykes and Roberts, 2000). However, the stories of success of many regeneration schemes around the world have led many cities to underestimate the enormous challenges and complexities of urban regeneration. One of the key areas of debate amongst academics and professionals alike is the impact of urban regeneration on the form of city and whether this impact will result in harmonious or monotonous urban landscape. This paper aims to enrich this debate by studying two of the key regeneration schemes in the city of Liverpool. The two schemes are the Paradise Street Development Area PSDA (now branded Liverpool One), and the recently proposed 5.5bn skyscraper waterfront scheme 'Liverpool Waters'. Although the two regeneration schemes do have a lot of similarities, in fact, they undertook completely different approaches of regeneration and consequently different urban forms. However, by studying and comparing these two cases, this paper intends to provide a better understanding of the complexity of the issues that undermine the form of the contemporary urban landscape and how best to approach urban regeneration. This paper argues that there are no specific models or approaches that can create a harmonious urban landscape; nonetheless, what is important is ensuring the complexity and the inclusiveness of the process of regeneration which will result in a more distinctive, imaginative and genuine contemporary urban landscape.

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Reading Warsaw's complicated urban fabric.

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114 Looking at the Warsaw building blocks may be a confusing experience. Layers from different historical periods are scattered around the city, making up only parts of urban blocks. They often dovetail with each other, but are stylistically incongruous.

One of the reasons was the unclear building regulations, due to the political situation (the city was under Russian rule), and virtually no urban policy during the formative years for the urban fabric. From 1918 the situation changed, but the mass of building blocks was too huge to deal with by the authorities of an independent, yet poor state. WW2 caused mass destruction of Warsaw urban tissue, which gave the opportunity for big-scale interventions, in favor of communication and representation. Many historical urban blocks were according to the CIAM rules dismantled. Finally, from the 1970s the policy changed again and new buildings were supposed to fill in the gaps in the street fronts, rather than to blow up urban blocks.

In my paper I will provide an analysis of some building blocks history and try to evaluate the final outcome of city fabrics twisted growth. The result is a chaos in buildings heights and styles, but it also plays an informative role. One has to keep in mind, that the irregularity of urban blocks fabric was always one of Warsaw's hallmarks. It may be also presumed that the uniformity of street fronts (as in case of, say, Paris or Vienna) is not the only possible pattern of urban growth.

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From nature to the city and back: the case of Piazzale Clodio, Rome

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On the basis of complex urban realities that time dissolves into fragments, now punctual into the consolidated fabrics, now confined to the broken margins without coherence or dialectic with the surroundings, it is difficult to image the city as an unified organism, alive, able to adapt to changing needs of society as nature. The task becomes more difficult in the analysis of development of a city like Rome and in specific reading of the area named Quartiere delle Vittorie, so much rooted in the collective imagination cause its history and unique morphology, recognizable due to the typical starry path signed by a controversial planning and to its relations with Quartiere Prati and Trionfale. A part of modern city, still incomplete. The urban fabric is adapting to a geometric matrix of linear paths, no orthogonal, converging towards the highest hill of the city: Monte Mario. They stop in front of orography, not comparing with the territory. There is not a pole to mark a fitting end to a design planned, but only an undefined area, degraded in the use and in the physical state, as the landscape around Piazzale Clodio.

In a more general urban regeneration project it appears not only to architecture as a social art, able to reconnect communities, places and nature, but also as a process, in the reverse direction, which completes the anthropical reality from natural context, defining a unique landscape, that like every other living organism challenges its own limits, becoming into a continuous evolution.

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Urban form and social segregation: the case of Mazatlán.

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116 Its truth that urban form determines the degree of social segregation of the city, but is also true that the adoption for the city of urban forms balanced and well articulated is not a guarantee for the social integration of its inhabitants.

The Mexican city of Mazatlan is an interesting urban organism that has positive values in its urban fabric and its historic buildings, surrounded by a generous nature of the Pacific mexican coast.

The historic urban transitions in Mazatlan taken into account the joint geometric conditions that have allowed urban expansions without traumatic ruptures and radical specialization of urban uses.

However, contemporary extension was performed with a specialization in tourism services and radical changes in the predetermined urban form.

The result is a very negative segregative expansion for local residential urban habitat.

Given this situation, we will compare forms integrators cases more balanced results, as is the case of urban transformations of the Barcelona Olympic Games, as well as other more specific scale urban projects of the architect Álvaro Siza.

Of special interest, we will refer to the book *New Urban Spaces* by Jan Gehl, by the reflection that makes us interesting case selection of contemporary urban reforms, since it avoids falling into easy, such visions as the "paradigm of the European city or designing richest spaces for rich people, and presents a more complex and interesting vision, where the scale of success is more on the intelligent lecture and proposals able to apply techniques to improve the city, in any circumstance.

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Territories of social (dis)order: criminal landscape and spatial dynamics of St. Petersburg neighborhoods

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Problems of social order, improvement of territories and social organization have been always acute all over the world. Scholars have provided enough evidence to talk about significant correlation between cues of social disorder and deviance and crime contextualized within certain historical and spatial environments. In this paper we will focus on the transformations of social (dis)order in connection with crime and landscape over time using St. Petersburg as a case-study.

Using empirical data from police reports and various characteristics of municipal territorial units of St. Petersburg we would like to verify the main hypothesis of the theory of social disorganization theory, that is, that the environment, in which the individual lives, has a significant impact on their behavior contextualized within normative models of social order. The paper analyses the spatial distribution of crime by GIS and environmental determinants of deviations in various areas by OLS.

The paper consists of two parts. The first part deals with historical landscapes of crime and social (dis)order in St. Petersburg (1703-1990) to highlight historically inherent models of spatial dynamics of crime characteristic of St. Petersburg as a “regular” city and a capital of the empire descended into a provincial town after 1924. The second part of the paper explains how these historical models (dis)continued in the 1990s and 2000s due to changing environments and advances in urban planning.

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The search for a new organicity. The urban development in Jerusalem in the last hundred years between international culture and “spontaneous” housing.

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118 The study is part of the search field covering specific transformative processes of many cities in the south of the Mediterranean, characterized by political-religious tensions and economic, where the planned cities are in conflict with spontaneous urban fabrics. In that sense, the paper proposes a critical analysis of urban-architectural processes taking place in Jerusalem, which reflect three co-existing morphogenetic approaches: the first, related to the influences of the International Rationalism applied to the development of the Zionist “New Jerusalem”, after the beginning of the British Mandate in 1917; the second, represented by adaptation of the Palestinian-Arab Jerusalem, transformed from “spontaneous” housing and urban fabrics built in the interstices of the Walled City in response to the Jewish development after the war in 1967; finally, the third, related to the fragmented Palestinian ghettos, which consist of a series of fringe belts constantly evolving. The coexistence of these distinct processes defines today a scenario where the “spontaneous” Palestinian-Arab building is hybridized by linguistic elements taken from the National architecture of the Jewish neighborhoods, with Israelis in turn engaged in a “territorial urbanization”, to envelop the “spontaneous” Palestinian neighborhoods.

This study aims to analyze first the effects that this threefold process has produced and produces on the urban structure of Jerusalem and its identifying characteristics; secondly, It aims to investigate the relationship between the three different transformative approaches, verifying the possibility of developing new syntheses towards a new polycentric organicity of the Holy City, also applicable to other south-Mediterranean cities having similar issues.

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The meaning of urban form in conquering the West: the Brazilian case during the Vargas era (1930-1945)

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The Vargas Era in Brazil (1930-1945) meant the adoption of populist and most of all nationalist policies to bring the country into the modern world. One of the most important programs, March to the West, was adopted in order to conquer and colonize the West and the way to the Amazon, integrating the unknown lands to the rest of the country and setting contemporary urban patterns in the region. Morphology took then a prominent role at the urban fabric scale meaning the imposition of a modern culture of planned streets, facilities and public buildings over the organic settings of the early, 'non-civilized, settlers. Urban form in official projects took then a special meaning, contradicting the daily reality of the local populations. A number of tense negotiations, sometimes tacit sometimes spelled out, took place over the territorial endeavors.

Focusing on the Aragarças case (the first Western settlement in the way to the Amazon) this paper analyzes the March to the West program in its morphological propositions and dispositions, together with their implementation processes, in order to understand the dialectic that involved the campaign and how the ideal of progress promoted by the state was negotiated with the local populations. It also tries to picture, through photographs, descriptions and maps, the early settlements and the new urban arrangements, aiming at discussing how and to what extent early fragments were swallowed into the modern fabric. It finally discusses how the early fabric and social organization still resist and exist in the XXI century.

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The return of an interest in morphology in South African urban design

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Given the fact that urban morphology is greatly concerned with an appreciation of historic urban form, post-apartheid South African urban designers have been faced with a moral predicament. An aversion to the physically discernible Eurocentric past has greatly influenced the pedagogy of urban design in South African universities since 1994. The aversion towards the past related particularly to the mostly gridded and densely built up inner city areas of Johannesburg, Durban, Pretoria and Cape Town that rose rapidly on African soil under white minority rule since European colonization in the 17th century.

Rather than lambasting modernism and leaving the argument there, the Finding Lost Space theories of Roger Trancik and the Recombinant Urbanism theories of David Graham Shane consider the voids left by modernist traditions opportunities for creative analysis and revitalisation in the cities of the global North. Acceptance of the physical remnants of both colonialism and apartheid is similarly being considered as a context of new opportunity in the South African urban design discourse. The ideologically lapsed but physically pervasive 'white man's inner city' with its established but under-utilised infrastructure is now increasingly considered a site for both catalytic public sector investment and vigorous commercial redevelopment in the resource scarce, developing country context of South Africa. The Eurocentric typologies that built the apartheid city is gradually being replaced by nuanced stitching, hollowing out and gradual overlay by a new generation of entrepreneurs (Gardner). This necessitates reconciliation and engagement with the tainted colonial/apartheid morphology of the inner city and a subjugation of the moral dilemma that recently denied it as South Africans gradually move away from their segregated past.

This paper will consider this emerging dynamic, both in terms of current practice and inherent potential.

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The formal and the informal city in Africa

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Urban planning and governance have not adapted fast enough to the extraordinary situation of rapid urban change taking place in Africa. The planning profession is in many respects still prisoner of received laws and codes tied to the colonial tradition, and established prior to the rapid urban expansion of the post colonial period. Many analysts have observed in post colonial Africa a new process of urbanization unleashed by the masses of relatively low income migrants who have flocked into the cities since independence, and are seeking to solve their problems of accommodation and employment informally, and on their own terms...; the urban poor are dominant, and in most cases are transforming the city to meet their own needs, often in conflict with official laws and plans. Some elite neighborhoods contrast sharply slums where the bulk of the urban poor live in appalling and health-threatening conditions. UN-Habitat estimates that sub-Saharan African cities have over 166 million slum dwellers, most of who work in the informal sector where they simply do not earn enough to afford decent shelter and service. Government officials and planner, who often aspire to international standards of modernity, face a difficult dilemma of how to plan and manage this rapid urban growth in a way that promotes employment, income and shelter for the poor, and at the same time ensures a reasonably orderly, healthy and socially acceptable environment. Unfortunately, many of these officials tend to blame the victims, and to see the urban poor, the informal sector and the slums in which they live as evidence of the failure of official policy, and therefore something to be removed through misguided policies of forced eviction and other forms of repression. But current research suggests that the path to urban peace and sustainability in Africa lies in building more inclusive and socially equitable cities "where everyone, regardless of their economic means, gender, age, ethnic origin or religion are enabled and empowered to participate productively in the social, economic and political opportunities that cities offer".

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- 122 While planner and municipal authorities have the responsibility to look beyond the short term, the real challenge in the African situation is how to strike the right balance between the ideals of international standards and the reality of local conditions and requirements. This calls for rethinking and broadening the narrow technical approach to conventional town planning and urban management by reviewing some of the unrealistic, arbitrary and discriminatory laws and codes in a way to accommodate the vast majority of excluded townspeople.
- The panel welcomes papers that address the main challenges of formality and informality in urban planning and management in Africa; issues relating to urban poverty and social policy; movements to redress urban inequalities and grievances, and programmes to promote the growth of more inclusive, harmonious and sustainable cities.

Spatial and organization patterns in informal settlements. A morpho-typological approach

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The common perception of the physical space organization in slum and informal communities is that they develop spontaneously and in an unplanned way. Discontinuous and misaligned street spaces, lack of urbanity, use of multiple materials in buildings, density, congestion or poor hygiene conditions are some of the aspects that show a hardly comprehensible picture under the parameters of the planned city, which lead us to understand these marginal areas as disorderly and chaotic.

However, a careful analysis and a detailed examination of the urban morphology of these marginal areas allow us to understand that there are spatial patterns of organization, an underlying order and a "spontaneous" hierarchy, which are non-obvious at first sight.

Recent approaches to the regeneration of low-income and informal settlements are evolving into strategies characterized by improving their existing conditions, minimizing relocations of their inhabitants. This 'on-site upgrading' approach, together with improvements based on the street as the main public space in informal areas, constitute a very effective eviction alternative that facilitates the urban regeneration of informal areas.

This research studies the urban form and the physical organization of open spaces in four low-income areas in Thailand, Sri Lanka, Philippines and Colombia in order to understand their underlying order and the spatial patterns. As a conclusion, the paper shows how the improvements in low-income and informal settlements based on the understanding of physical organization patterns and on street-based upgrading constitute very powerful catalysts for the revitalization and regeneration process of informal areas, preserving the social organization network of communities and securing land tenure rights.

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The influence of site on settlements in Belo Horizonte: from slums to new housing developments

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- 124 This paper discusses the importance of site with regard to the morphological structure of urban centers. Studies of the implementation of Belo Horizonte show that the city initially occupied the valleys, due to their favorable topography, which allowed an orthogonal layout in its central area. Even so, since the beginning of the city, slums occupied the more rugged and remote areas, the tracing of which differed from that keynote. As the level areas were scarce, the new housing developments began to occupy the hills, due to a greater availability of land at the lowest cost. Although slums grew spontaneously and new housing developments were designed, both showed similarities in the street layout, a consequence of the steep slopes and structural conditions of the terrain. At the same time, lots defined another configuration, in which the building was occupied by only one family, and most often, the relationship of the building to the road was cut off by walls. In the case of slums, the formal absence of a land division led to a juxtaposition of the houses, where each family was crowded on one floor of the same building. The relationship to the street also differed in these places because the floor linked at street level was the immediate integration of housing and surrounding common space. The analysis of these parameters will allow a proposal of new projects that use some popular solutions best suited to the conditions of the site, integrating them thus to public policies.

Understanding the city as a whole: an integrative analysis of Rio de Janeiro and its informal settlements.

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Informal settlements are an increasing global phenomenon. Since the mid-century Rio de Janeiro went through a series of paradigmatic changes, trying to cope with this phenomenon. The scope of these interventions ranged from entire eradications of these settlements in the 1960s to present in situ programmes of infrastructural upgrades. Up to now favelas are seen as independent parts of the city, spatial manifestations of urban poverty and intra-urban inequality in the need to be solved. Even recent attempts to integrate favelas socially and spatially with the city failed to remove the physical and conceptual boundaries between the formal and the informal. Underlying these approaches is the perception of those areas as something different, rather than an integral element of the complex urban system. Trying to overcome the fragmentation of the city this study combines formal and informal parts into an integrated model of the whole city. Following a syntactical analysis using GIS mapping and space syntax, this study explores the morphology of favelas in the context of metropolitan Rio throughout different scales and in relation to their topographic location. 60 different local areas are then selected and compared against each other according to their configurational characteristics. The analytic results highlight the affordances and constraints of informal and formal structures. Understanding the particularities of those two differently perceived systems and the ways in which they interact with each other can inform future analysis and policymaking.

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Reading the form of informal Roma settlements in the light of everyday life.

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- 126 The intention of this paper is to point out how several basic interdependent characteristics of the functional organization of Roma communities based on everyday-life represent the ethos of the formation of spatial settings in informal Roma settlements, which not correspond with modernist public housing estates and their ethnically and socially deprived residents. The paper starts with the broader interpretation of territorialisation which suggests the existence of a relation between the spatial and the social level of Roma settlements; one that provides the understanding of the effects this group actualize in space. The physical spatial patterns of informal Roma settlements were created without professionals influence and represent a quality induced by the need to functionally organize a community where everyday activities take place, but also spatial forms which were built by the residents themselves. In this sense, the settlement morphologies resulting in unplanned Roma settlements process of formation are both culturally adjusted environment and human resources potential. The main purpose of the paper is to emphasize the fact that the Roma micro-environments already offer their own ways to participate in the creation of cities of future from the standpoint of urban planning and social policies that have emerged as a response to residential assimilation policies, which as a principle can be alternative or a new complement to housing planning and design. The study is based on multiple methods which include qualitative approach to constituents of Roma everyday-life and case study of their manifestation in representative spatial typology in informal Roma settlements.

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Informality of sprawl? Morphogenetic evolution in post-socialist Tirana.

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This research focuses on the urban transformation of Tirana, the capital of Albania, following the end of the communist regime in the early 1990s. While rapid urbanization fuelled by mass migration from the countryside to cities is commonly observed in many East European countries Albania's post-socialist urban form has been strongly influenced by the dramatic upheaval in land ownership that has taken place in the context of an inadequately developed legal system and involved the systematic appropriation of open space by developers. The impact of this urbanisation on Albanian society has been profound, but currently there are no systematic studies of the morphological processes that have transformed Albanian cities. This paper begins the process of addressing this deficiency. It identifies four distinctive patterns of informal growth in contemporary Tirana. The variety of post-socialist urban transformation morphologies can tell us much about the particular nature of urban growth in Albania under conditions of unrestrained, loosely regulated, development. The paper draws on the Tirana case study to comment on the nature of social change in the Albanian context, and the way in which 'planned' and 'unplanned' urban environments have contributed to the emergence of distinctive modes of urban life. Conzenian and space syntax approaches provide the methodological basis for morphological research into Tirana's post-socialist built environment. The configurational data is mapped to geo-referenced datasets of Tirana at the building scale, including details of building age and legal status. An initial survey of land uses is done for the case study areas. This integrated methodology is intended to help elucidate both the morphological dynamics of post-socialist Tirana and the broader implications of this urban transformation for Albanian society.

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New Urban Patterns - adaptations to sun and wind

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128 Contemporary trends in architecture and urban design can be an obstacle to climate-smart design. If we put daylight to good use in town planning, we could reduce the cost of heating and lighting. It would also make housing more pleasant and quite possibly more secure. The geometry of the street grid together with the height of the buildings is important for the amount of daylight in towns. Fundamental facts from connecting research in urban morphology and town planning will be studied and especially two reports are important to mention^{1,2}. An indication of energy savings by town planning is a study from DTU in Denmark that shows savings to up to 30% depending on different spacing between parallel houses³.

This paper deals with some of the findings of the current doctoral research on Energy Saving by Using Daylight in Town Planning where daylight computer simulation models are performed in order to calculate the savings of energy using one type of settlements instead of another. Different patterns for district and blocks will be evaluated in the paper. Further research will also include results for single buildings and separate building elements. The main goal for the research, and also where this paper draws some conclusions, is practical guidelines for "better" geometry in urban design where even the wind aspects will be considered.

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Density and solar radiation in the historical urban fabrics: Colle Oppio neighbourhood's case in Rome

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This research aims at determining the relationships among solar radiation and urban form of historical fabrics in Mediterranean compact city, taken density as useful parameter to illustrate their features. Despite the growing unsustainability of today's city, recent statistics have confirmed the increasing attractive power of metropolitan areas. An approach determining instruments and design methods at both urban and architectural scale, should be found in order to set out more appropriate conditions for the historical compact city. In respect of this kind of scale, the relationship between solar radiation and form takes a central role in the variation of energy performances. This comparative study investigates this relationships by models and simulations set up in order to control the correspondent factors. It is carried out for different historical morphologies existing in the Colle Oppio neighbourhood in Rome. The influence of urban morphology and built-form on solar access is shown by definitions of density indicators. Among these, are determined those more suitable to express reliable trends in relation to solar access. Built-form and typology are the main factors that occur in energy performances' variation of urban fabrics. The investigation of these kinds of performances achieved by density parameters facilitates the comprehension of the different behaviours in each urban texture. Moreover it offers a contribution to the energy analysis instruments at urban scale and permits more efficient conditions for the built environment. Methodological structure and the determined parametrical instruments show themselves as knowledge base for aware transformations of Mediterranean compact city.

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Microclimatic response of urban form in the Mediterranean context.

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130 The relationship between morphology, climate and energy has always influenced deeply the development of urban settlements. In the Mediterranean context, this process led to compact and dense urban textures, made of highly inertial materials and clad with bright colors in order to prevent overheating and thermal discomfort. Nowadays, cooling and heating systems relieve the architectural design from climatic constraints. However this has resulted in increased energy consumption, especially in the summer season because of the widespread use of air conditioning systems. The problem is worsened by the Urban Heat Island (UHI) effect. Shape and geometry of a city affect its climate, and so the energy demand at the urban scale (Ratti 2003, Morganti 2012). The proportions of the urban canyon (height/width ratio) can produce multiple reflections of solar radiation. In addition, the cooling process is decreased during the night due to the low values of the sky view factor (Oke, 2012). Therefore, in a dense and compact urban texture, higher temperatures can occur especially during the night. The present study seeks to highlight the effect of urban morphology on the UHI intensity in the Mediterranean context. Several morphologically homogeneous textures of Rome and Barcelona are parametrically modelled and compared, by means of the Urban Weather generator tool (Bueno, 2012). The results show that air temperature substantially varies according to different urban morphologies. Understanding the microclimatic behavior of most recurrent urban textures can steer energy and retrofitting policies at urban scale and help to achieve the energy goals set by E.U.

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Toward an Asian Sustainable Urbanism.

A comparative study of model eco-city. Projects in Japan and China

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The past decade has witnessed an accelerated growth of projects translating the Western concept of eco-city into practices of city building. Eco-city is now a global phenomenon, yet Asia sees particularly notable development with strong governmental interventions characterized by comprehensive national initiatives of model eco-city. In Japan, the central government launched an ambitious "Eco-Model Cities" scheme at the 2008 G8 Summit, and has by far designated twenty-three Eco-Model Cities, ranging from major cities like Kobe to small towns like Minamata. Meanwhile, a massive eco-city movement is taking place in China, where hundreds of towns have laid out their plans to become an eco-city. Chinese government took the lead by creating a few high-profiled demo projects such as Tianjin Eco-city. In both countries, the eco-city is promoted as innovative urban policy and planning concept under the overarching agenda of sustainable urbanization and restructuring of post-industrial urban economy.

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This paper compares the planning and development of model eco-cities in Japan and China, using Kobe and Tianjin for case studies to examine their common and contrasting approaches to ecological urbanism, their respective design strategies and technological measures, the relationship between the eco-city building and local economic development, the roles played by the governments and the private sector in this effort, and the influence of such exemplary projects on the rest of the country. The comparative research method sheds light on several debates that we often encounter in the study of eco-city, say, between new town and retrofit, between top down directive and bottom up force, between eco-city as technology and as culture, as well as on the controversial role of "model" in contemporary urban forms. Through the analysis of the policies and implementations of model eco-cities in Japan and China, this paper aims to offer a critical insight into the changing ideas of urbanity in Asian society, and enhance understanding of the global issues of sustainable urbanism.

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Study planned economy based urban plot distribution and urban fabric: casing center district in Nanjing

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In the light of the research framework and the method of morphological analysis established by The Conzen School, the morphological analyses has executed in many countries, which continuously enrich and develop the urban morphological theories. It's important to note that the researches in these areas are all based on the following conditions: the private land ownership and land marketization. However, the land ownership system in China is considerable different. During the traditional planned economy period of China (1949-1977), the construction units were the allocated land under the state ownership and the sizeable landholders led to very different outcomes in the urban fabricated form. Subsequently, with accelerating the tendency of land market and activating land use right, the redevelopment of the allocated lands engendered a mass of the fragmented plots, which finally formed one of the main interferential factors on plot index determination and urban landscape management, and consequently resulted in the poor relationship between plot and its urban fabric.

This paper selected two center commercial districts in Nanjing as the sample areas. Based on the investigation on the historical maps and construction documents from 1945 to 2010, this paper reviewed the relationship between the plot and its block-plan within the sample area. The historical investigation is aiming to develop the understanding on the following two aspects. The first is how the plots in contemporary Chinese city shaped. The second is if the existing research results on the level of plot are applicable for Chinese city of Nanjing.

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Evaluation, financing, planning and design of contemporary urban interventions

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The processes of transformation about urban settlements involve individual buildings, but also portions of consolidated urban tissue which characterize the structure and the form of minor historical centers as well as large urban centers. These processes are usually related to the objectives of enhancing the physical, economic and social aspects of the urban changes.

The technical, financial, procedural and managerial interventions should be developed and implemented focusing on specific objectives that justify the need and promote the opportunity to gain funding.

Nowadays funding performs a critical role to plan, design, implement, and possibly manage during operational phases. All the interventions must be coherent with the territorial "vocations" and satisfy the real needs of the individual and the whole community.

Over time, different assessment tools have been developed in order to check the congruence between choices about the "project" (technical, financial, procedural and managerial) and objectives of planning interventions, often related to the different funding opportunities for interventions.

This paper wants to build a framework concerning evaluation procedures that can be taken, even related to the different ways of financing. Moreover, the aim of this critical reflection is to highlight how the different choices about the project, operational phases and management must necessarily try to obtain the maximum benefit related to the least expenditure of resources, according to the objectives to be pursued with funding.

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Sustainable planning framework: case study New Delhi

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- 134 This paper proposes an alternative to land-use based city planning. It posits that energy (and other utilities) need to be distributed more equitably and that an energy density based planning framework provides the necessary parameters for a range of growth patterns. To achieve environmental, social and economic sustainability, planning of cities must be demand based, bottom up and within the city's ability to provide utilities.
- Using energy density in terms of units/sqm/year as the primary planning tool, planners are able to effectively plan energy, water and waste disposal systems to reflect actual and future growth patterns. Individual residents (and localities), freed of land-use and FSI restriction, can develop a range of functions suited to demand at various scales, with sustainable buildings bigger and taller than energy intensive structures.
- Space Syntax literature clearly demonstrates the correlation of the public realm network with movement patterns, with Spatial Integration providing the basis for determining natural centres at the local, intermediate and global scales. Additional energy allowance is made for these areas.
- The outcome of such a framework ensures bottom up development, where each individual (and locality) determines the best use of resources on their site, with environmental benefits such as more efficient buildings, growth within limits and reduced number of journeys; social benefits such as localisation of appropriate functions and integration of private property within the public realm; and economic benefits such as increased FSI for efficient buildings.
- Using New Delhi as a case study the paper demonstrates that such a framework is more in line with actual emergent patterns of development than the currently followed Land Use based Master Plan (MPD 2021)

Ecological pattern mode of landscape city on the basis of habitat networks

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Urban landscape environment, derived from nature with distinctive uniqueness, definitely provides unique background conditions for ecological network of city. Urban ecological network is not stiff demarcated by the administrative boundaries or transportation planning, but planned after finding out the operation laws of urban mountain-river ecological system, with basic researches on ecological continuity.

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In the perspective of animal and plant protection, the status quo of existing landscape and habitat network in sample city was firstly analyzed. Following the principles of reducing urban habitat fragmentation, protecting the health of biodiversity and ecosystems, basic features and target strategies of urban morphology in landscape city were proposed, and eventually an ecological pattern mode were established.

Through four perspectives of analysis, specific plans were formulated for the four elements composing habitat network. These four perspectives of analysis respectively were the elements of habitat network, the condition of habitat, the index of habitat network pattern, and the protection of ecological sensitive areas. On that basis, two technical methods, that is, the pattern index and the evaluation of ecological sensitivity were used to explore the pattern of habitat network. In addition, the mode "nucleus - patch - corridor island"(NPCI) was put forward to lay out habitat networks, and plans were made for the four elements, namely core protection areas, habitat patches, corridor structures and springboards. Finally a security pattern was established to protect biology in response to urban landscape, and to achieve integrity and stability of ecological processes.

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Mediterranean cities and gardens. Structures and sustainability

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- 136 In recent years researches on new 'sustainable urban forms' were influenced by theories based on polycentric growth, integration between town and country, enhancement of ecological corridors, and urban agriculture. This displays the necessity to bring back to an inter-scalar vision of the ratio between 'elements', 'structures' and 'systems', which make a territory 'sustainable' - focusing on the design of gardens and orchards, intended as 'linking structures' between architectural, urban, water and territorial systems – as well as to develop design theories for urban agriculture, intended as one of the inter-scalar components of the landscape, new centralities for peripheral areas.
- In a time when agriculture and gardens are having a new significant role in defining urban and territorial sustainability, a clear Mediterranean individuality hasn't been found yet. This entails the consequence that urban and territorial plans for Mediterranean cities are poorly integrated with the real environmental vocation of sites and, consequently, improper to their specific historical, cultural, and hence territorial individuality.
- This paper aims to demonstrate, through the reading of sustainable Mediterranean urban landscape structures, the possibility of re-propose high degree self-sustainability 'urban systems', appropriate, in their architectural form, to regional characteristics. Case studies will be taken into account, in order to highlight their inter-scalar consistency with territorial organism and architectural elements.

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Using urban ecology to design a sustainable vision for our future Eco-Cities

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In the search for sustainable solutions for our contemporary and future urbanisation, the geo-ecological approach to urban morphological theorising has been evolving. Urban Ecology takes this vision and defines the city in the framework of an ecological system. As the ecological system of a rainforest is self-sustaining – with energy from the sun, water from the rain, vegetation and animal wastes recycled as nutrients through the soil – so too the urban ecological system defines an eco-city as it captures renewable energy, harvests rainwater, forms dense urban growth around transport hubs, reuses wastes and emissions, composts organic wastes for nutrients in urban agriculture. The City as Organism. How does the Urban Ecology approach apply to Melbourne? Melbourne is the fastest growing Australian city with a population growth of 2,000 people per week. It is an emerging mega-city of 4.3 million sprawling around a beautiful bay across a distance of approximately 100km. Melbourne is the World's Most Liveable City again crowned in 2014 for the fourth year in a row. Melbourne's forefathers planned with foresight eg. large areas of parkland, copious fresh water, clean air regulations etc., contributing to a pleasant lifestyle for its inhabitants. However a lag in urban planning and infrastructure investment – both built form and social infrastructure– is placing the City under considerable future risk of stress from this surging population without appropriate investment. An Urban Ecology approach to planning, constructing and managing urban form and investment with the City as Organism in mind will ensure a sustainable and liveable future.

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New experimental stone buildings: research, teaching and construction

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This work describes a research on structural stone construction, launched over 15 years ago by the research group "Architecture and city of stone" of the Department of Civil Engineering and Architecture Sciences (DICAR) of the Polytechnic of Bari directed by the professor Claudio D'Amato. Herein below are exhibited two case studies: the first represents an experimental work designed and effectively built, the second is a final thesis project that reflects and amplifies the compositional and structural issues of the work previously explained. This project is the headquarter of the offices of the French company SNBR (Société Nouvelle le Bâtiment Régional) located in Troyes (FR), which deals with the major renovations of French historic monuments. The building is composed by 4 parallel diaphragms stone unarmored arches of about 20 meters of dimension that support a large wooden roof. The entrance of the building is composed by a unique portal of pre-compressed stone as an hyperbolic paraboloid sustained by only two shaped concrete supports. The final thesis project, reflecting on the issues already experienced in the building of Troyes, is a large domed structure as a spherical cap composed by 14 stone bearing arches of a maximum diameter of 58 meters, that are pre-compressed using sliding pre-tensed steel cables, that intersect at right angles in order to form a circular grid-based covered by a series of hyperbolic paraboloids of armed/translucent stone. The project, designed as multi-functional hub in the port area of Fiumicino, is a stone rethinking of the famous project of Félix Candela designed for the competition for the realization of the Velódromo de Anoeta in 1972. The aim of this work is to emphasize on the one hand the great morphological-structural potentialities of the structural stone, on the other hand to highlight the importance of shape resistant structures for a didactic based on constructive practice.

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Urban form as open-ended system.

Proposal for a new evaluation approach for sustainable planning: merging Maki's Group-form with the design structure matrix

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Cities are becoming increasingly complex to grasp and our traditional instruments are lagging behind. By the sixties, critical - but still unsolved - questions were discussed internationally about the relationships between architecture and needs of the city: Maki's approach focused on studying this relationship from the perspective of collections of buildings and quasi-buildings, developed in his famous essay "Investigations in Collective Forms", as possible solution for contemporary projects within critical urban context. According to Thom Mayne words in his book "Combinatory Urbanism", «the true territory for innovation in urban architecture is not in the production of platonic solids, but rather in the design of operational strategies that deal with the multiple and overlapping forces of a highly complex and entirely uncertain "collective form" ». Nowadays, Maki's organic approach has the potentiality to be applied as universal method, with flexible fulfilment for local cases. Facing worldwide issues related to the scarcity of resources to solve urban crisis, collective forms can be merged with technical tools to support the feasibility of the projects. This paper wants to show how the holistic process of analysis / planning / realization can be reinforced with new evaluation methods through the application of DSM (design structure matrix). The DSM is applied to rationalise the project decisions and the different steps of the building process to obtain time and costs reduction, achieving better building results and faster investment returns. In this way a stronger interaction between different steps of urban projects can be granted while the unplanned iterations and their consequent wasting of resources can be reduced. The general aim is to propose a different way of planning operational strategies in building process, supporting together feasibility and urban quality of the projects.

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Urban Form Reading and Design

Urban Knots
New Trends in Urban Design
Public Spaces
Modern and Contemporary Urban Fabric
Typological Process
Urban Growth

Knottings

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The term knotting indicates the outcome of the constructive act of connecting together the different elements of a structure, in order to form a spatial knot within the architectural or urban organism, often covering a space, so as to connect the surrounding structures, usually consisting of a series of rooms or buildings (1). Starting from this definition, the aim of this paper is to study this morphological type at the urban scale, by analyzing its origins, development and diffusion. As happened in many cases of the past, born from the dialectic between the fence and the cover, the serial and the organic structures, between the city and the building, knots form a sort of “urban palaces”, intended as an organic complex of many elements, originally autonomous. Starting from the French bastides, and continuing with the genesis of the Spanish Plazas Mayores we will search for the process at the base of a type that, once formally settled, has been coded and widely used until the modern era, as it will be shown in the analysis of some cases belonging to different geographical and cultural contexts, like the Don Bosco district in Rome, the Barrio Civico in Santiago, Chile, the district of the port in Le Havre and the MDM (Marszalkowska Housing District) in Warsaw. The methodology employed for this research is based on the so-called “processo formativo” of the architectural organism considered at the scale of the urban fabric (Muratori, Caniggia, Strappa).

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Commemorating the past and constructing the future: Checkpoint Charlie

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- 142 There is no more legendary border crossing in history than the physical vestiges of Checkpoint Charlie, the former border crossing from west to east Berlin, and its Soviet counterpart. Although the border installations have been removed in pieces to museums, stolen, or destroyed, the place remains a *genius loci* in the world imagination (Frank, 2009). At same time more venues are popping up where one can experience the Cold War era in a Disney-like environment based on urban forms of a free temporary open-air exhibit chronicling Cold War history, a private museum know as the Mauermuseum, a panorama of a divided Berlin and a memorial dedicated to Peter Fechter who was shot to death in a bold attempt to escape to the West. This paper examines how the urban fabric of the most well-known Cold War border crossing has become such decisive issue how to rebuild the urban tissue of a Baroque suburb. It discusses the Kleihues's (1986) and Stimman's (2005) philosophy of 'critical reconstruction' of modern Berlin and its application on a major redevelopment project 'Das Business Center at Checkpoint Charlie' (Loeb and Luescher, 2013). It analysis how Philip Johnson (1906-2005), one of the most influential American architect and colleagues applied the idea of morphology rebuilding the 19th-century stone city (das steinere Berlin) as the basis for urban infill repair, and extension.

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From node to network. Knotting process in the modern tradition of postal palaces

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Postal palaces represented in the nineteenth and twentieth centuries the occasion of remodeling and developing the city from their nodal essence par excellence.

Communication has always played a key role in modern society and, before becoming areal network, it has been embodied by points, for centralities.

The study will build on the post offices made since the end of the nineteenth century, questioning the character of monumentality and / or public service given to them, studying the evolution of language in the tradition of Modern.

The competition of 1932 in Rome for the construction of four post offices constitutes a turning point in this regard. Examples distant from the rhetoric of regime, and academia, expressive vehicle of rationalism, engines of urban development according to the four cardinal points.

The process of specialization and knotting crosses both the scale of the building and the scale of the city and makes it possible to fit the ancient, producing subsequent developments.

The study also wants to question on current building code, on the appearance of today's network engaged from communication and its possible morphological evolution.

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The development of property and land ownership by the Ursulines of Trois-Rivières: The monastery and the city

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144 The present case study focuses on the land tenancy of the Ursulines' Monastery in Trois-Rivières (Québec, Canada). The case study seeks to describe and understand how the land and properties supported the development of Nuns' monastery missions and affected the urbanization of Trois-Rivières. The master in architecture research question explores how real estate, in the city and the countryside, supported in means, in resources and in cash, the Ursulines' Monastery. It contributed to the construction, the maintenance of the premises and their educational and charitable mission. Indeed, studies suggest that a religious community and its built heritage affect the form of urban development and still participate today to the cultural identity of their environment (Martin, 2007).

The methodology is inspired by Gauthier's Muratorian diachronic morphological analysis applied to the Ursulines and Augustines real estate holdings in Québec city. This case study connects the economic transactions and the material transformations of the Ursuline's properties. Subsequently, material evidence is used to make a qualitative assessment aiming to contribute to the operational history. An interdisciplinary approach is inevitable; architecture, history, and geography are closely related disciplines. The study will attempt to establish guidelines for a possible future requalification of the site and a likely change of use following the decline of the religious community. By studying the structuring role of this Catholic institution in the formation of the urban cultural landscape of Trois-Rivières, the research will undeniably contribute to understanding the processes of urban morphology of Quebec.

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Morphological interaction of the bazaar and city in Iran, past and present

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This paper is aimed at studying and finding the relation between the general places of trading in Middle East and Asian countries (Bazaar) with the city from a morphological point of view. Historically many cities in the region depend hugely on a trading economy and in some cases have been initially founded as a site of commerce and trade. There have been some efforts to relate the growth and structure of urban tissue of the city to the form and structure of the Bazaars (Pourjafar et al. 2013), but they mostly fail to show what happens when in the modern period, cities started to grow bigger and the needs of the city could not be satisfied with a single central Bazaar.

General types and shapes of trading spaces and their forms in urban and rural places are discussed and the relation between them and the tissue around them is categorized. It would be shown how the Bazaar has encouraged or discouraged the expansion and formation of the city in certain examples. As another step the relation of Bazaar with different building types will be described. Other part of the research would be to study the effect of the city on the Bazaar complex, and how the expansion of city will change the morphology of the Bazaar. Having displayed this bilateral relationship a final conclusion on the morphological interaction of the Bazaar and the city can be defined.

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Learning *in* Las Vegas: Urban Gaming

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146 Gambling is a growing business. Most American states have some form of legalized gaming. It is a force and a pastime that permeates all human interactions. Cuff and Sherman suggested that urbanist ought to "Borrow[ing] from practices like gaming, game theory, risk management, and arbitrage"; they see gaming as "nudging the future forward." Many believe this is a dangerous premise yet, a few of us argue that cities are already a gamer's platform. Specifically if one considers that gaming is rooted in taking chances, in knowing the value of a wildcard, and in risking everything for one lucky strike. These acts, like game theory, which often deals with understanding competitive logics and outcomes between participants is how policymakers, city commissioners, speculators, citizens, bankers and others take chances and arbitrage land use in urban places. Pairing gaming logics with urban design practices is alien to most urbanist yet the physical apogee of this synonymous is Las Vegas as it expands, stagnates, and shrinks according to gaming logics. Unlike Venturi's signage explorations, this study rejects the glitter and learns from the dynamic logics of markets, political, and sociological behaviors that permeate the city. It exposes Vegas' unpredictable-predictable urban-gaming-logic. It uses the history of the original and the fake, socio-political agendas, and its build scenarios to explain that SimCity or Second Life games *nudge the future of urban design*.

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Single-family housing developments at small spanish cities: the case of Toledo

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Small cities in Spain have exploded since the 1980's, being transformed from compact densely built ones into spatially discontinuous and mixed density ones. This process that started earlier in large Spanish cities has only taken place during the last urban development economic cycle in the small ones at a very relevant speed. The paper analyses the single-family housing developments at Toledo and its surrounding municipalities. It studies their morphology, showing their neat differences and suggesting that they cannot be just identified as single-family urban developments. Consequently, the paper suggests a taxonomy of these urban areas according to their origin, urban location and type of rationale. The ten proposed types are: Industrial based new villages, Self-built/informal developments, New small developments within the built-up urban fabric, Incremental expansions around rural settlements, which include two types, adjacent and expanding the historic morphology and transformers of the historic morphology, New developments disconnected from the traditional built-up fabric (urban or rural settlements), which include four types, collage ribbon developments, big land propriety developments besides roads, developments based on natural areas and wildlife habitats and developments based on the creation of new spatial amenities (i.e. golf courses). The paper presents maps and spatial data of the different single family homes areas of Toledo.

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Evolutionary design for BiOrganic Architecture

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A new design philosophy is based on the contemporary condition that allows architects to manage complex-systems science as a tool for the development of the project. Conventional analytical - reductionist - methodology is supported and sometime substituted by non-linear processes, including computer aided software. Generative methods for urban design are able to propose solutions to complex building settlements through the use of self-generated computerized programs; in terms of possibility, the use of the computer as a thinking support, let the designer's community achieve natural system employing artificial intelligence. The potentiality of this methodology is that of creating a city that will be as natural as a spontaneously generated as a living organism. The paper illustrates a tendentious point of view putting in continuity the "natural" growth of ancient cities and projects for new neighborhood made up with the support of generative methods. Makoto Sei Watanabe's Induction Cities project is based on the main concept that cities as living organisms have to be planned using tools supporting this BiOrganic innate characteristic. The purpose is to discover ways of making cities and architecture that provide better solutions to problems at the same time offering greater freedom to the imagination. A test case for Induction design methodology in a selected suburban area of Rome is foreseen.

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From urban industrial heritage to comprehensive community: a case study of Redtown in Shanghai

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In recent years, a lot of cultural and creative industrial clusters have sprung up from industrial heritage in the urban renewal development of China since early 2000s. However, due to reasons such as increasing rents, excessive commercial speculation, lacking in features and homogeneity competition, many of them are deteriorated and can hardly keep sustainable operation. Through the case study of Redtown Culture and Art Community in Shanghai, this paper argues comprehensive community as a favorable method for urban industrial heritage renovation. As a epitome of Shanghai's transformation from industrial age to post-industrial era, Redtown has experienced a magnificent turnaround from a steel factory in 1950s to Shanghai Sculpture Center in 2005 as a single government public welfare program, and finally was transformed to Redtown Culture and Art Community operated by social culture company since 2007. By analyzing Redtown in three individual aspects of historical evolution, operational mode transformation and spacial reorganization, the paper seeks to tease out Redtown's progress and key factors of developing into a comprehensive community with mixed usage, good performance and sustainable growth, which significantly contributes to the reconstruction of urban space morphology and the perfection of community construction. This paper is subsidized by the National Natural Science Foundation of China (No.51278337).

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Slow city movement as a new approach in urban conservation: case of Seferihisar, Turkey

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The industrialization period that occurred in the 19th century is an important milestone in terms of cultural, economic, social and environmental factors for the cities that are constantly in change. During the 20th century, the reflection of globalization on cities has arisen the formation of consumption focused, uniformified and unidentified spaces. As a reaction to this case, urban development policies have began to gain a different point of view and urban tendencies focused on conservation have emerged. One of these tendencies which were developed especially in the 20th century is the "slow movement". The slow movement initially emerged against fast food and fast life. Afterwards, the movement has become active in the urban context with the establishment of Slow City Movement (Cittaslow) in Italy in 1999 and has become internationally widespread. Fundamentally, Slow City Movement aims to improve the life quality of the cities by conserving the intangible and tangible local values that are under threat of disappearing through globalization.

Especially from 1980s, the globalization as a worldwide phenomenon has affected most of Turkish settlements with various sizes. The local values of these settlements were affected negatively. The purpose of this study, is to examine the impacts of the movement on the urban conservation as a new tendency. Within this context, Seferihisar, a city located in the west of Turkey, which have a multilayered historical urban texture and a rich cultural and natural heritage will be evaluated. Seferihisar is the first city in Turkey that has a membership of Slow City international municipal network. Through this study, the projects based on the conservation of the cultural heritage will be analysed in the context of Slow City movement. In this way, the effects of the Slow City movement on the conservation of the cultural heritage of a city will be determined and will bring forward some alternative proposals directed to sustain local values.

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New wave of mosque building in Iran: a change in urban traditional forms

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Mosques have been one of the most common specialized buildings in Iran in the Islamic era. Almost from the first day the process of building mosques was combined with a quest to bind Iranian architectural heritage of many centuries with new ideological values of Islam. This led to a constant change in the architectural characteristics of this type of buildings. This process culminated in the 4-Ivan mosques as the summit and a natural and logical result. This Process stopped at a certain point due to the introduction of the modernity to the country and even more important, the flux of the educated architects in to the country.

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In this paper, seven contemporary mosques which are very different with the traditional mosques of Iran have been selected and analyzed. Parameters of analysis were the general forms, the elements, the ornaments, their relation to the surrounding neighborhood and their interaction with the city tissue in a small scale.

There are two main claims in this research, first, unlike the usual trend which has been always in a certain and clear way, now there is no logical perspective for developing the classic form of the mosques, thus there can be a turning point on deciding the general form of the mosques in the future. The second claim is that regarding to the changes in the structure of the city tissues and its results, the classic forms off the mosques are neither suitable nor desirable for a contemporary Megapolis like Tehran.

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Open spaces as originary places. Italian piazza

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- 152 Contemporary city is mostly interested by modification and transformation: the architectural design is almost exclusively the intervention on existing city. In this context, the public space has long been a crucial part of this renewal. On the other hand the assumptions on open spaces were oriented mainly towards functionalist horizons, “public space” is a definition too partial that unbalances the disciplinary interest towards the uses of places instead of morphology studies.
- We can say that the Italian “piazza” was studied with alternating attention to become an entity crystallized and iconic, a figure that does not belong and does not contribute more to the construction of urban form but which reached drifts media seemingly unstoppable.
- In contradiction to its original constitution, founded on the open space, the contemporary city is a city of buildings, objects juxtaposed, as anticipated by Colin Rowe in *Collage city* (1978).
- Keeping on my studies on Italian Piazza (Nencini, D. (2012) *La Piazza. Ragioni e significati nell'architettura italiana*, Christian Marinotti editore), the goal will be to present a deeply analyzed collection of studies on urban form and open spaces of Italian architectural culture, to present innovative contributions with the intent to specify the tools and the project actions necessary to redefine the role that the piazza has always had in the construction of city.

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The Italian Piazza – Methods for comprehensive analysis

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Through a project carried out over the last several years in the Marche and Veneto regions of Italy, we have developed a set of criteria for recording and evaluating the physical attributes of successful public squares. The analysis is structured around three poles of consideration (FORM, FABRIC and USE) each of which is divided into aspects that relate to the adjacent poles (diagram above). FORM identifies the quantitative attributes of the piazza (Space) including plan size and shape, section ratios of width to depth, percentage of perimeter enclosure and qualitative assessments of what the shape connotes. FORM also addresses compositional attributes of the piazza (Dynamics) including spatial typology, hierarchy of spatial markers, and kinesthetic experience. FABRIC addresses the linkages of the piazza to the larger context of the neighborhood (Connections) and the character of the physical elements that define the space (Containment). USE inventories the ways people interact with the piazza (Patterns of Use) recording evidence of activities in space, the various types of users, the flow of people and cars, distribution of activities at the ground floor, the number and location of entrances, and activities on the floors above. The fine-grained elaboration of the space (Details) is recorded in terms of the materials and furnishings, symbols and memorials that bring beauty, character and meaning to the lives of inhabitants. These analytics provide a basis to compare piazzas, one to another, for the purpose of generating principles to guide improvements to existing piazzas and inform the design of new ones.

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A metropolitan region, a river and two cities. Public space as a solution- Vila Nova de Gaia and Porto

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In the last forty years, the metropolization process and the extensive urban growth in the region of Porto, in Portugal, produced divergent effects on the cities of Porto and Vila Nova de Gaia, placed on each bank of Douro's river mouth. Despite the same territorial land condition and sharing a geographical unity, different urban dynamics created functional asymmetries, where Vila Nova de Gaia demographic occupancy and construction levels outperformed Porto - the regional capital city.

This study focuses on the differences between contemporary public policies that designed public space, considering the isolated urban agendas promoted by each municipality. Despite the urban migration dynamics that support their mutual existence, the analysis of public space remains essential to understand the political, economic and social conflicts between Porto and Vila Nova de Gaia. Evaluating the existing public spaces in each city, regarding housing programs, commercial areas or road structure, mainly supported by national and local planning regulations, is an opportunity to understand public space as an urban and territorial qualification system, beyond the administrative domains. Considering the functional relationship between the two cities with high urbanization rates, but divergent public space contexts, appears fundamental to create a whole and effective region public space strategy.

The city as public space introduces another urban planning paradigm, tested within creative solutions by recent public urban policies that assumed the importance of territorial cohesion. Those results of public space planning could be a productive example to the relationship between one canonical city and one that never was.

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Defining street boundaries

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In small settlements such as hamlets, streets and public space are often undistinguishable. Many French villages have started with no clear boundary between public open spaces and streets. While the evolution of planned French cities has been discussed (Lavedan 1952), this paper focuses on open space that has evolved into streets defined with clear vertical boundaries (Anderson 1986) and is later enhanced by distinctive horizontal boundaries. Based on both Napoleonic and current cadasters, the evolution of the street morphology is analyzed to address the different types of boundaries that drive the street experience. The publically accessible open space of 17 small towns and 18 villages or small French settlements is analyzed as a system of open spaces (Hillier & Hanson 1984, Batty 2001) and as a street network (Peponis, Bafna & al 2008). The analysis highlights a first set of transformations that emulates Haussmann's transformations of Paris by redefining the vertical street boundary (alignment and widening) and by adding new ones. These transformations impact the syntactic structure of the settlement, usually bringing higher integration, visibility and a shift of the core. The second set of transformation that leads to the 21st century street results from a series of changes on the horizontal plane (sidewalk, crosswalk, paving, etc.). These change in materiality are not just subtle design changes, they play a deterministic role on the accessibility of the public space. It leads to question certain modes of representations of the streets such as axial map, isovist, property boundaries, and street centerline, which embed only some aspects of the boundaries that privileges either the pedestrian experience or the movement of the car.

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Regeneration of the Bloemfontein city square

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156 When Bloemfontein was founded in 1846 it started as a small administration town serving a agricultural community of Boers. The first layout of the town allowed for a market square where the two main roads crossed in the center. This square known as Market Square housed the local market for the rest of the century.

The Boers (later known as Afrikaners) got independence from England in 1854. Three decades later the first building, a market building was established on the square. As part of the combined Boer-forces the Free State lost its independence in the Anglo-Boer War (1899-1902).

The English dominated the town for the next four decades. Thirty years later into power, the first regeneration took place. A new square was developed with the name Hoffman Square.

The Afrikaners took over the political power in the city in 1945 and was in power for about four decades. Thirty years later the second regeneration took place. The square was redesigned to fit the needs of the new people in power.

In 1994 South Africa became a new democratic republic with the ANC in control of the city which grew into a metropolitan area. Twenty years later the new power in charge had a new square developed, the third regeneration.

This paper will show how square was designed to fit the people in power and how the urban fabric around the square changed with each change in power structures.

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“Public Open Space” as a generator of urban forms in the viceroyalty of New Spain

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This paper analyses the viceroyalty's urbanism in New Spain, focusing on its public open space design as a configuring element of the current settlements in the Mexican territory. It shows evidence of the unique features that a model has different from other regions. To this purpose descriptions written by chroniclers of the mendicant orders were used, these were civilians who described a variety of daily activities carried out at the time, maps and geographical relationships. The information obtained from this research is useful for showing that the configuration of the cities located in the Mesoamerican region has an important pre-Hispanic influence observed in the large sizing of the public open space as a set. Public Open Space is often referred to by urban planners and landscape architects by the acronym 'POS' with varied interpretations of the term, however for this research we use the term Public meaning a space available for public use and access, and the term Open meaning a space that is outdoors, not within a building.

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Retail management to revitalize inner cities. Big boxes and detached centers

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- 158 There are different ways to revitalize Inner Cities. One widely used concept is to integrate Shopping Centres in the City Center. But we can realize that the Shopping Centre as a big box is nearly pasted. The new generation of Shopping Centres found their path from the suburban areas since around about 15 years more and more as new urban elements in our inner City Centres. This Development can show on the basis of different Examples (national and international): on the one hand side of different German Shopping Centres (like a big box) and their accompanying problems of integrating and on the other side of other European countries like the UK and the Netherlands which show interesting examples of the new generation: common characteristic are the detached building structure, the huge sales floor: and in some case studies the function as THE city center (historic centers are destroyed for example). In spite of the reasonable Shopping Centre integration examples in terms of the urban structure, public and private space can no longer be identified – private owners but public use: who is responsible for what? Who says what is allowed and what forbidden?! So we get new questions and challenges with this new kind of shopping development!

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The morphology of urban corridors in Mexico City

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In Mexico City, the term urban corridor refers to the concentrations of commercial and services activities developed historically and spontaneously in a linear form. Consequently, urban planning has been considering them as a component of the urban structure and as such, urban corridors must develop under certain zoning codes and urban development guidelines (i.e. investment and densification). However, in spite of the importance of urban corridors, until now, no detailed classification or differentiation exist between corridors concerning their nature, morphology or land use specialization, something that would support and would make more precise urban development goals. Therefore, in this paper we use a statistical method to identify significant variables to formulate a typology of urban corridors in Mexico City taking the official cadastral corridors database as analysis unit. In spite of the heterogeneity and mixture of land uses observed in the field, morphological variables remained as the significant ones and thirteen types of urban corridors were identified out of 106 corridors. Based on empirical evidences, we may say that phenomenon of urban corridors is much more complex than the normative definitions around them, but urban morphology techniques and concepts may be very useful to understand the phenomenon from a more comprehensive view.

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Post – shopping commerce New urban patterns of commercial activities

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160 The recent years have witnessed significant changes in commercial distribution systems. The global financial crisis and its effects on the economy have certainly affected the actions of the economic agents, including consumers, and inevitably have given rise to a range of phenomena that lead to an evident change in the configuration of the commercial spaces and consuming behaviour. I refer to leftover stock markets, temporary trading places of all kinds, sale of home made products, the reduction of generic commercialisation spaces and the increase of specialised areas, the “community orientated consumption”, or even “necessity retailers”, “obsolete factories”, “street markets”. I call this phenomena ‘post-shopping commerce’.

In short, it is a new commercial dictionary that, by drawing a diversified geography of commerce, shapes alternative and important hubs of urbanity and becomes the engine of interesting spatial, social and economic dynamics. The space is no longer moulded by a geography of decision centred in a few and large operators and drivers of change, but rather by a polyarchical and ever-changing model where distinct uses and diverse situations legitimately overlap, in opposition to the growing pressure for homogenisation of the city understood as a place of consensus and consumption.

By directing the attention to the specificity of post-shopping commercial spaces, this study aims to analyse such phenomena and their evolutionary processes, based on the premise that commercial spaces have a significant role to play in the transformation and consolidation of the current city and his “cityness” (or urbanity). Specifically, it defines the new trends in organizational, functional and space of commercial activities, becoming a useful planning tool for the relevant policies of the public authorities and identifying tangible ways of implementing urban and territorial models that use the commercial spaces in the making of the city.

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Imagining new forms. Urban morphology and design practice

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The very nature of creating public space is undergoing profound changes. In the contemporary city public space no longer possesses the figurative strength of classical typologies: the piazza, the forum, the boulevard. It assumes new and unprecedented forms, dictated by heterogeneous urban and building programmes that pursue other objectives. Public spaces must now be sought in “other” programmes. Programmes for the urban regeneration of peripheral or semi-central portions of the city, integrated transport plans, interconnections and exchanges between forms of mobility, operations to valorise or recover abandoned lands. This profound transformation “at the roots” has generated new morphologies of public space. The character of these spaces is less determined in its expression, less coherent. They appear more elementary, filament-like, inexorably conditioned by functions of connecting, linking, of “finding space”. A new challenge is presented to theoretical and design research: the search for new forms, new figurative structures that resolve not only the functions and needs underlying a project, but which constitute a balanced paradigm capable of integrating the multiple components of which it is comprised: contextual conditions, environmental compatibility, conflicts between resources and restrictions, a relationship with Tradition. The search for a “New Form” often comports a profound alteration of positions, of topographic structures, a more complex listening to context. Excavation, moving downward, or the construction of an acropolis, operations of “subtraction” or “addition”, appear to constitute a suitable response, even symbolic, to the definition of a new “Italian” space.

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Imageability, image building forces and phases, and everyday choices of Utopia the immaterial urban heritage of Rio de Janeiro

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- 162 This paper addresses utopia as one important attribute in urban configuration. The focus, however, is not planned areas. The principle of utopia has been defined by the French philosopher Théry Paquot (p.91, 1999) as circumscribing and modeling a space/place that does not exist, where a community will live according to new rules it implies a disruption with the surroundings. This definition would support many of the planned urban transformations that are taking place and fragmenting the city of Rio de Janeiro. One major attractive attribute of the city is the carioca *modus vivendi*, i.e. the peculiar way the locals have to relate to each other publicly in public places. In this paper, this carioca way of life is understood as the everyday utopian images of ourselves, and of our lives. The analyses carried out focus on the role this way of living plays in urban configuration, provided a certain balance between rules and permissions is granted to us, the public, in public. There is already sufficient evidence to prove that forces and phases of transition in urban growth are sequentially interrelated, and cumulatively woven, into the urban fabric. This paper explores the idea that collective happiness is one defining attribute as the everyday utopia in Rio. It discusses the role it plays in enhancing public places in the city and finalizes indicating future perspectives.

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The micromorphology of the street interface.

Urban conservation and change in the London terrace and the Manhattan row house

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This paper discusses built form transformations in light of historical spatial analysis and urban conservation policies. The study looks at changes in the micromorphology of the streetscape in London terraced houses and Manhattan row houses. Two urban areas are presented: Islington in London and West Village in Manhattan. The two case studies are examined in terms of historical street network properties, building-street interface, building morphology and building use.

Looking at building and spatial transformations for over a century (c.1880-2013), analysis confirms the role of the street network and built form in the patterns of morphological and functional change in the urban fabric. Moreover, in both case studies there is another – external, yet pivotal – factor which has played a fundamental role in shaping the street micromorphology: the protection of the historical building stock via building and planning regulations. Conservation areas in Islington and West Village were established in 1969 and brought about a shift in the course of built form events and transformations that followed thereafter. The data suggest not only the significant input of these policies in preserving the historic ‘ordinary’ urban houses, but also that conservation areas have developed a more sociable street profile over time.

Overall, the paper discusses that conservation and historical designation policies can act as incubators of the integrated past and futures of urban materiality. It is highlighted that the spatial culture (Hillier, 1989) is an important element for socio-spatial sustainability in urban conservation, affecting both the tangible and intangible properties of urban places.

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Chinatown as a city organ: new visions for urban life

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- 164 Traditionally, it is understood that Chinatowns have developed organically, according to the different stages of the Chinese migrants' settlements, and rather independently from city planning prior to becoming embedded in its vision. However, because of the nature of Chinatown development, very few morphological studies have been made possible and conducted. This is the case in Australia as well, where there is an additional specificity - the creation of Chinatowns by government planning forces since the 1980s. Based on M. R. G. Conzen's method of plan analysis and burgage cycle, the aim of this paper is to present and compare the morphological transformations of three Australian Chinatowns (in Melbourne, Brisbane, and the Gold Coast) in order to document the changes in the weight and role of Chinatowns in cities. Melbourne Chinatown organically developed after the Gold Rush in 1851, while the Brisbane and Gold Coast Chinatowns were top-down initiated in 1983 and 2014 respectively. Although these Chinatowns have different historical formation, their urban forms share some similarities - strongly influenced by the traditional colonial pattern of development with regular land division, and followed by the amalgamation or subdivision of plots prior to later redevelopment. By using historical and contemporary cartographic records, photographic surveys, and field observation, we aim to reveal the dynamics of the Chinatowns evolution and hence unveil their contribution to new visions for urban life in today's city.

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The impact of Iranian architecture parameters in the urban complex design of Shahestan Pahlavi in Tehran by Louis Kahn, Kenzo Tange, Arata Isosaki

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After the world war II, Tehran saw a rapid growth in size and population. Modern development of Tehran began in the 1930. In 1965, the social and physical structure of Tehran was divided into three main substructures; the old core, the central, and the north core. The first idea for a new urban centre was proposed by Victor Gruen- Farmanfarmaian Associates. The new central district was to be Abbas Abad, located a few kilometres to the north of the old city. As a big project which was made possible by the oil boom in the 1970s, during the reign of Mohammad Reza Shah Pahlavi, in the unique place of the hills of Abbas Abad. This location, which was called Shahestan Pahlavi, included a vast plaza to serve as "the civic heart of the nation" and governmental, financial, and residential building. It was the most potential site for both governmental and housing monumental intervention as a manifestation of modern governance of Tehran. The final plan of the project was achieved through the combination of three international famous architects Kahn, Tange, and Isosaki. The construction began in 1975, but did not continue because of the Islamic Revolution. The article intends to study the site, the specific topographic condition in the cross of main infrastructures and specific characteristics of three projects, to be a leap in order to form a better understanding of the design. The main aim of this article is to investigate the role and influence of Iranian architecture in the creation of this project and the contradiction between modernization and tradition in the old centre of Tehran and new centre.

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Urban morphology and land values in the CBD of Izmir, Turkey

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Research into urban land values is commonly conducted on residential areas by evaluating the effects of different spatial parameters on land values. One of the most effective factors is the distance of the CBD from residential areas, but there remain questions regarding the land values inside the CBD itself. Are land values in the CBD homogenous? If they are heterogeneous in the CBD, what is the reason for this? This study focuses on the relationship between urban land values and morphological parameters in the CBD, and is based on Conzen's town plan analysis components; street, plot and building. These components were spatially analyzed according to their configuration, metric and type, and quantitative data for street configuration was obtained by using space syntax methodology; segment analysis of a road-centre lines map. Configurational parameters (global integration R_n), metric parameters (road width, road length, pavement width, average parcel size, average building size and building height) and type parameters (road type; street, avenue, boulevard and building type; detached, attached) have been determined as the morphological parameters for the sample streets (63) under examination in the CBD of Izmir, a coastal city in Turkey. According to the statistical analysis, road type (street) and road width have a stronger bearing on urban land values than other parameters acting within the CBD. By investigating the correlation among morphologic parameters and land values in the CBD, this study is expected to contribute to further studies in city planning and design of new centers.

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Changes in the urban morphology from Monteruscello city

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Monteruscello is a "foundation city" and was built, under a contract between Ministry of Civil Protection and the Faculty of Architecture of the University of Naples, for 20.000 displaced inhabitants resettlement after the bradyseism that hit the Phlegraean area in the 80s of the last century. The project, developed by the university under the coordination of Agostino Renna, could be interpreted as an "analogous city": the urban plan shows, in a evident way, a composition based on more than one "idea of city" (with explicit references to Priene and the Goldstein siedlung by Ernst May while a kind of countryside-city with isolated houses, derived from Renna's studies for Abruzzo, is in the central part of the city). These ideas of morphologies distinguish the urban parts in relationship with their meanings (that are referred to an artificially but necessarily built history of the city: the historical centre, the first belt, the commercial city etc.) and the geography (the upper area, the area opened to the valley etc.). After thirty years from its building, Monteruscello is waiting for new transformations either because the project was not completed (particularly in the part of public spaces and buildings) or because the main part of the residential buildings (built according to the popular housing standard) are today unsuitable to the contemporary life. During a recent Workshop in the University of Naples, some of these themes were designed and the workshop results are, at the same time, reading of urban morphology, recognition of its values but also its necessary and contemporary interpretation.

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Relationship between the specialized buildings and urban form: changes and transformations of contemporaneity.

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- 168 After the analysis of the relationship between specialized building and urban form – an aspect that characterized the diacronic evolution of urban structure up to the XIX century – a strong evidence of the deep changes that cities are facing today emerges, in particular toward the relation between service buildings and their location within urban texture. Changes and transformations generate new meanings and a new updated of urban form quality with important consequences in the use of existing artifacts and for new linkages between users and urban conditions. Significant case-studies will be presented.

Revitalizing social behavior through build and unbuilt environment

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Last few decades have seen sharp increase in the speed, scale and scope of urbanization that has changed the character of the urban structure, giving rise to cramped spaces which are totally indifferent towards the local manifestations and the humane character of the space. Understanding the way in which environment affects the state of mind of people could enable the planner to design spaces to have positive influence on people's behavior and eventually reduce the negative effects of urbanization. This paper attempts to analyze and understand the complex environmental and behavioral issues that foster high level of psychological and physical well-being in urban residential complex by understanding the elements of 'Space Making' that contributes towards social interaction. It emphasizes on sensitizing architects to perceive the relation between spaces and human behavior. The study area selected is Mumbai, the financial capital and the most populous city of India, which has seen transformation from a fisherman village to a metropolitan and now is among top ten commercial centers of the world. However in this vertical growth, which is eminent for an island city, people are fast losing the neighborhood identity which was its cultural inheritance. The approach is to analyze various range and typologies of residential complexes based on their geographical location, relation to the city, housing typology, scale, design and planning and economical background of the residents. The study reflects that Interactive spaces and elements, helps and acts as stimuli for improved behavioral pattern of the society.

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Urban morphology of Murcia (Spain) in the twentieth century. Compactness and density of the urban fabrics.

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- 170 Expansion of cities during twentieth century, and especially in its second half, has raised, almost since its construction, a controversy about its consequences on the lives of its inhabitants. New urban fabrics appeared in this period as response to the big population growth. Describing cities morphology, compactness and density have become two of the most functional values, as Berghauser and Pont showed in the last years (2007). These two parameters are able to classify the urban fabrics forms, allowing to compare their influence in issues as: quality of life, mobility, energy and material consumption, etc. Since Muratori studies of Venice and Rome, development of Geographic Information Systems (GIS) and the open access policies to public data enable a systematic management of huge amounts of information required for these studies. In this paper, public information from Spanish Cadastre is used to classify different fabrics. Methodology is based on combining compactness and density at building level and at urban fabric scale and it is applied to the case of the last century periphery of Murcia city, at south east Spain. Results shows the evolution of fabrics morphology along the century and its contrast with contemporary urban design theories.

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New possibilities and challenges of the gallery apartments' renaissance in Shanghai

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In 2013, a new public rental housing project, Xinyue Apartment in Putuo District in Shanghai was available for applicants. This project is formed with high-rise gallery apartments, which are increasingly rare since the housing commercialization (began in 1998). According to the government and developer's plan, more projects formed with gallery apartments will be built for the "sandwich class" in Shanghai. These characters of gallery apartments below to some extent contribute to its renaissance: suitability for small spaced households, high-efficiency for space utilization, capacity for prefabricated construction, flexibility for space reorganization and convenience for neighbors' social networking.

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The renaissance of gallery apartments in public rental housing projects offers the city, the community and the residence new possibilities both in space and society more diverse and delightful urban space, more open and welcoming community, more sharing and harmonious inhabitants. However, compared to these good intentions, the gallery public rental apartments' application in Shanghai is just the first step. Breakthroughs are expected to make the gallery public rental apartments beneficial factors in big city. The orientation limit, the stereotyped building form and the single presupposed function should be challenged in public rental housing projects.

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Typological approaches of the modern cities (heritage of the k. und k. period)

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- 172 Different stages of urban development, as well as analysis and definition of its typological structure could be significant in case of practical urban regeneration. The effectiveness of design and rehabilitation depends on the structural, morphological information of the urban fabric. The urban fabric of the modern city in the former Greater Hungary was formed between 1867 and 1918. Before 1867 the development of the two basic archetypes of the Hungarian urban typology, step-town in the Great Hungarian Plain and cities with European character, were differently influenced by the economic changes and distinct functions within the settlements and by the landscape features. In the period of the k. und k. since the development of the cities were specific, a new typology is recommended. Amongst the steppe-towns, highland towns and other cities, taking into account the similar topography and hydrography, can be discovered characteristics that have generated the development-line and structure in terms of existing differences. These factors, as well as the study of visual documents make it possible to follow changes of the spatial forms in the city in terms of its structure and functions. The study aims to examine the underlying system of the towns in order to present and define by a typology the structural changes with regard to the street lines and system of squares.

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Morphological research in the process of design: Expert Focus Group.

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The purpose of this research project is to test and evaluate a proposal for a new design model. The aim is to investigate the relationship between research and design as a practical example of how architects can design a building within a research area guided by data derived from morphological research. An Expert Focus Group will be run involving eight leading architects and urban designers who will be involved in a short design workshop; the participants will be asked to design the basic building form and façade informed by specific research data relating to the project context of Brisbane, Australia. Diachronic streetscape elevations (1895 to 2012) illustrating the transformation of a specific urban landscape have been meticulously prepared as a basis for townscape analysis. Architectural parameters derived from this historic mapping will be presented to the design participants in two forms: one group will be asked to interpret the research data as a basis for their design approach; the other group will be required to respond within specific design guidelines. Comparative analysis of the workshop outcomes will be examined, the results of which will determine the relative congruence of the design proposals within the morphological commodity of the specific context. This paper will make a contribution to the current debate within the discipline on the importance of integrating practice with research (Marshall & Caliskan, 2011; Samuels, 2013; Sanders, 2013; Whitehand, 2012).

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A case for mezzanine: guidelines for the evolution of Montreal's tenements

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- 174 Municipal by-laws frame the transformation of a city, yet their hold on the actual evolution of the built form lies in an imperfect relationship with the market forces. Too strict rules remain words in front of private demands and investments; too permissive ones extend the offer beyond demand and dilute the opportunities for strategic development. The study presents the impact of the current by-laws regulations on the addition of a mezzanine floor above conventional tenements at the urban and building scales in Montreal. The building code and municipal by-laws offer some options for additional living space above existing tenements. A mezzanine, up to 40% of the dwelling below, may be built without built being an additional floor. Montreal's master plan (1997) and the Plateau Mont-Royal borough architectural regulation guidelines (2005), based on a morphological analysis of the built environment, temper these potential rights.
- The study is two-folds. At the urban scale, it reviews the building guidelines and the impact of additional floor and mezzanine on the potential growth of living spaces, roof-terrace garden and green space. At the building scale, 12 students projects highlight the potential impact on the residential premises and the evolution of the housing type. Presented at the borough's administration, theses preliminary results triggered ambivalent reactions. Architects dealing with building permit requests welcomed the potential guidelines while Planners feared the controversy of allowing changes of the current built landscape. How much the city remains a project built for change?

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The houses of two realms

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During the late quarter of the XIXth century, Italian immigrants occupy a still vacant part of the territory of the Rio Grande do Sul State in Brazil. In another work an analysis of the structure of a sample of twenty one old rural houses was made. Using space syntax techniques, some genotypes were identified and described. The houses could be assigned to two main genotypes: the first one is the tree-like structure, with the living room as the central space of the composition with only one door connecting the exterior space to the rest of the house. This genotype allows a more strict control over space and is more suited for patriarchal families as they were; the second genotype could be described as a more ringy structure, with the living room as the connecting space between the private and the service parts of the houses. The multiplicity of entrances from the exterior space produces a more open and shallow structure and could be considered less suited to a patriarchal family. The main goal of this paper is to analyse the sample of houses from a different point of view: comparing what changes in the genotypes when the door connecting the exterior space to the living room the space used as a place of representation for strangers is open in rites of passage and when it is kept closed, which happens most of the time in the daily life of the families. The first results show that when the door connecting the exterior space to the living room is closed the overall structure of the houses tend to become tree-like allowing a rigid control of the family life. When this door is kept open on liminal occasions, the structure is shallower, ringy and open and the control over the spaces is less unitary.

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Morphological change within residential areas: a Turkish case

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176 Turkish cities experienced basically five morphological periods after the nineteenth century. In the first two of these, cities sustained their spatial composition and the content of their built environments, giving rise to coherent character formation. In the following three periods, many cities underwent rapid development beginning during the early decades after the Second World War. As a result of morphological processes during the second half of the twentieth century, in many cities the historical urban fabric was replaced by a new urban tissue that led to the formation of a new spatial composition and content of the built environment.

The rapid population increase and rapid growth of cities gave rise to redevelopment within residential areas. Multi-family apartment blocks replaced single-family houses. This change was affected by the enactment of new planning legislation and emerging new forms of planning practice. At the end of the twentieth century, new residential building was particularly manifested in new housing estates, especially groups of high-rise apartment blocks.

This study examines morphological processes within the residential areas of Turkish cities that were developed in the course of the twentieth century, focusing on the city of Mersin. In relation to plot and building patterns, the influence of local actors and exogenous factors are scrutinized. This provides the basis for a discussion of urban fabric formation in Turkish cities.

A New Urban Topography of Residential Artificial Grounds in Korean Cities.

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Koreans' preference for living in high rise apartment buildings has changed the skyline of South Korean cities since the 1970's. Today the resultant morphological change in terms of building mass spreads downward to the more profound aspect of Korean urban form – the urban topography. In the late 1990's, installing a concrete deck covering the whole ground of apartment complex was proposed as a solution to insufficient space for parking and leisure uses. The deck houses parking lots under it and supports apartment buildings, parks and leisure space above. As these artificial grounds are only coherent within a single apartment complex and not conceived in harmony with other natural or artificial grounds, they create a new urban topography composed of artificial terraces having abrupt vertical facades at their borders.

The advent and spread of this spatial innovation create significant impacts on urban morphology and typology of space. First, the topography of Korean cities is becoming a mosaic of independent artificial grounds in an unprecedented scale. These artificial grounds constructed without coordination hinder visibility, disrupt traffic and create dead streets lined with manmade cliffs. Second, as the underground level in the artificial grounds is close to the natural ground and accommodates most of the traffic, it is now an intermediary space connecting apartment complexes to the outside while the aboveground is specialized for leisure use. The study analyses whether this modernistic urban order, faithful to the principles of the Le Corbusian city, can produce an ideal city envisioned by the thinker or forms a divisive barrier against achieving an organic and interconnected city.

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Vertical tissue: typological interpretation of the skyscraper

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- 178 The aim of this paper is to analyze the skyscraper as an architectural organism, and to interpret the vertical city like a "vertical tissue". Previously, the skyscraper, studied as an architectural type, was defined as a block developed in height (Pevsner, 1976) isolated from the urban context and opposed to the historic city (Maffioletti, 1990). This research is based on the concept of "organism" (Strappa, 1995), and it examines the skyscraper as a building type in which it is possible to identify a solidarity between the vertical structuring axis and residential units (example noticed in the first buildings of Chicago) (Condit, 1979). The skyscraper is therefore not considered as a model of the so-called "utopia of gigantism" (Samonà) that characterized the modern city in recent years, but as a system that can create a new vision of the city; so the skyscraper is treated like a basic element to compare an alternative model for the modern city. To study the vertical city like vertical tissue it is first necessary to define the skyscraper as architectural organism, therefore to interpret the aggregation of skyscrapers such as an urban organism, underling the "urban" features in which the vertical element is the matrix design for a new city-system. Thanks to this methodology we can study the city not as a set of architectural singularity but as vertical system, in which we can recognize both an architectural and urban organism.

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An Evolutionary Model for Urban Development

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In the context of the rapid growth of urbanized population as well as the effects of climate change and diminishing natural resources, the methodology by which cities are designed in the next 30 years is crucial to the success or failure of sustaining the growing numbers in the population. In this perspective, population based evolutionary algorithms, driven by biological evolutionary principles, excel over conventional problem solving strategies through their ability to optimize for multiple conflicting objectives, therefore generating multiple optimal solutions rather than a single optimized solution, allowing for a diverse solution set to a problem that has no clear single solution. To test this, a computational multi-parameter approach driven by an evolutionary model of development is implemented on an urban patch in the city of Barcelona.

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Neoliberalist political ideology as influencing factor in transformation of Indian urban form

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180 The urbanization process in India as elsewhere has catapulted cities as engines of national development. The Indian urban system was dominated by four metropolitan cities: Mumbai (Bombay), Delhi, Calcutta and Chennai (Madras). The opening up of the Indian economy since 1991 has stimulated the development of other cities, such as Bangalore, Hyderabad and Pune and led to the creation of new hubs of urban growth centered on the manufacture of computer software, electronics etc. Significant studies reveal that measurable changes have been observed in the urban growth pattern and are associated with growth in population, migration, industrialization, educational and health facilities and have affected living conditions in Indian cities. Studies also indicate that the transformation of core centered form of Indian cities to polycentric form, also include change in land uses, urban sprawl, infrastructure development, transportation facilities, changing skyline and formation of new centers at peripheries. The study in the paper puts forth that the neo-liberalist ideology with economic reforms in 1991, change in policy from State or Government controlled development to decentralized one of private, public partnership, opening up to foreign investment have brought challenge meeting dimension to urban infrastructure development, housing sector, growth of IT sector etc. the paper concludes that the size and location of these developments, types of activities, their sources central government/state government/private Indian Company/Foreign Company indicators of the extent of effect of neo-liberalist ideology on transformation of Indian urban form.

Taming the sprawl: Growth of a peri-urban city and policy response

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The concept 'peri-urban' remains elusive and often neglected by urban planners, however, this transitional zone is constantly under pressure by teeming population from the inner city or new entrants from the surrounding rural areas, thereby, resulting to an uncontrolled or unplanned landscape in most developing countries (laquinta & Drescher, 2000; Lawanson, Yadua, & Salako, 2012). Even though growth is inevitable and land use changes are imminent with peri-urban expansions of cities, the peri-urban space has a pivotal role in supplying agricultural resources like food and fruits for the survival of the city (Thebo, Drechsel, & Lambin, 2014). Understanding the development patterns, emerging urban forms and their attending impact on the peri-urban requires an understanding of development decisions (Lambin & Geist, 2007), this will help decision makers and urban managers develop appropriate policies to address growth 'edge' cities. This research focuses on the organic growth of Ikorodu, a peri-urban municipality in the outskirts of Lagos that rose from a sleepy farming community with a population of less than 100,000 people in the 1975 to a vibrant city of over a million residents in 2015. The study adopts multi-temporal remote sensing and GIS analysis to detect the urban pattern and emergent form for a 40 year period beginning at 1975 to 2015. An empirical analysis was also carried out by questionnaire survey of 300 land owners in 50 communities to determine the reason for the rapid growth and the response of planners to the city's growth.

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Growth and transformation of Salerno. From the dissolution to the recomposition of the urban fabric

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182 Salerno, a city with a very complex morphology, presents a fragmentary urban organism that results from a gradual growth and the absence of a unified vision. The bipolarity between ancient town/new town, triggered by the first extensions of the Twenties –Plan by Donzelli-Cavaccini in the north-east and Plan by Colamonico on the littoral zone–, is definitively enshrined after the Second World War, by the expansion along the east coast, beyond the mouth of river Irno. Here the housing emergency caused by the flood of '54 –which devastated much of the historical center– and the population explosion of the economic boom years involved a disorganized growth, based on speculative reasons aimed to an intensive exploitation of soils and favored by the absence of an adequate city plan. On the threshold of the new millennium, the city looks like an heterogeneous and inconsistent organism: the stratified medieval system of the old town is opposed to the massive building of the new eastern districts, generally lacking in quality and services. The guidelines for a deep urban transformation are dictated by Oriol Bohigas in the new PUC (Piano Urbanistico Comunale) drawn up in the 90s. On the base of the criteria of a 'metastatic' urbanism, a season of punctual interventions in certain areas (Areas of Implementation Punctual Urban, namely strategic nodes around which to organize a total regeneration) began. The paper aims to apprehend the urban system of Salerno through the historical-critical analysis of the various stages of growth, until the most recent redevelopment projects (completed or underway) that, on a different scale, attempt the recomposition of an urban texture and the dissemination of quality and livability.

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Reading and redesigning of district tafoura in centre of Algiers

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The city of Algiers has known a rather unusual development compared to other world cities. Its development was stopped or interrupted by the arrival of settlers who upset the spontaneous and natural growth of the city by creating a different typology. However, they tried to follow the morphology of the land and ensure the growth of the city according to its important and structuring percourses. But as their objectives were essentially military and commercial (economic), the city / sea relationship has not been studied from a purely civil point of view, except for the period before the extension of the city outside the walls and the birth of railroad. The cut between city & sea which followed has been physically expressed by the installation means, for economic production (rail transport, warehouses, factories ... etc.) and military installations. After independence many of the city parts, especially the parts overlooking the sea, as the boulevard Khemisti, have not been completed or structured to ensure this relationship. So, a consolidation of the urban structure is necessary to reset the true potential of the geographical position of the city. That's why our general problem is: How to ensure the relation sea city by ensuring the continuity of the process of formation and transformation of the city and following the geographical position of the city?

Typomorphology allows the reading comprehension processes of formation and transformation of human settlements, in order to act on them. It also brings out the formal urban fabric, features an urban or territorial organism, and identifies elements and components of their organization. Similarly it allows to define the mechanisms and laws that manage their relationships through a synchronic and diachronic return of their evolutionary process. It is a method that encompasses different scales of human settlements, and therefore can design a built-in hierarchy of structures that surround and contain the project. The MURATORIAN method looks at the city as a whole to be observed in these different scales: the territory, the city (the urban organism), the aggregate (the fabric or the neighborhood) and the building. Under this approach, MURATORI exposes two levels of interpretation: the first is the observation of the frame, not as an isolated object, but in its relation to unbuilt areas (the plot, the street), the second level of reading is to observe and study the grouping of parcels that leads us to consider the characteristic structure of the fabric elements according to their location in the body of the city, according to the period of their making and to their growth. From this, he draws three main lessons (or laws):

1. The type of structure is not characterized beyond its practical application, that is to say outside the built fabric.
2. The urban fabric, also, is not characterized outside its framework, that is to say outside the study of the entire urban structure.
3. The study of urban structure is conceived only in its historical dimension because its reality is based in time by a series of reactions and growth from a previous state.

The typomorphologie is more than a classification instrument, it is a reading and projection tool, and it is an attitude that allows to reveal the organised aspect of human activity. In this framework, we propose a solution for an urban project to solve the problem of continuity of the urban structure of the city of Algiers.

Urban Morphometrics: Towards a Science of Urban Evolution

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- 184 Urban theorists, social reformists and philosophers have considered the city as a living organism since Plato [1]. However, despite extraordinary advancements in evolutionary biology, now being used to explain social and cultural phenomena [2], a proper science of evolution in cities has never been established since Geddes' work at the dawn of the Town Planning discipline [3]. Commencing in the tradition of Urban Morphology [4][5], this research develops and validates a statistically reliable and universally applicable urban taxonomy. The research solidifies existing definitions of built form at the scale of the urban fabric and identifies the constituent elements of form in 40 contemporary UK cities. Quantifiable measurements of these elements allow mathematical descriptions of their organization and mutual relationships. Further, an optimized list of indices with maximum discriminatory potential distinguishes between cases from four historically characterised categories: 1) Historical, 2) Industrial, 3) Modernist, 4) Sprawl. This seminal work demonstrates that: a) it is conceptually sound and viable to measure urban fabric utilizing public, big-data repositories, b) the proposed morphometric system accurately characterises the structure of urban form and clusters cases properly based on their historical origins, c) scientific models of biological evolution can be applied to urban analysis to understand underlying structural similarities. Urban Morphometrics approaches the diversity of city form as early biologists approached the diversity of life forms on the planet. These morphometrics enable classification of existing and ancient urban form and can influence the direction of future urban developments.

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Urban Morphology Theories and Methods

Urban Form and Theories
Urban Form and Meaning
Reading Urban Form
Urban Morphology Methods
Fringe Belt Analysis

Morphological route structure analysis: an integrated approach to infrastructure and urban tissue

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186 One of the most fundamental forms of infrastructure in the built environment is the network of roads and highways. That network is composed of contiguous routes, generally viewed as transport infrastructure. At the same time, routes are a fundamental constituent of urban tissue, which forms the places where people live and work. The route is therefore part of two distinct kinds of aggregate: the patchwork of urban tissues and the network of contiguous routes. Any attempt to fully understand urban form therefore needs to articulate the relationship between these two different but interconnected types of aggregate.

While there are many different kinds of analysis that investigate either networks or urban tissue, none fully acknowledges the dual role of routes in both urban tissue and contiguous networks. One means of doing so is to take a strictly topological approach, defining types of route in terms of their connection to other routes within the network and, importantly, also taking into account the different position of routes within settlements and between settlements.

The paper presents a method of morphological route structure analysis that takes such an approach. The method builds on Caniggia and Maffei's concept of polarity and their generative definition of route types as well as Marshall's definition of routes and route structure. As the paper will show, the results aid in the analysis and definition of urban tissue and provide insights into the use and role of different routes within the overall system in terms of movement, choice and legibility.

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The crisis of the “common rationality” in the contemporary city

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Beyond a certain threshold, any crisis suddenly collapses from a temporary state into a permanent condition. While the former situation turns out to be physiological of every existing urban form development, the latter expresses a pathological situation affecting the city overall organic quality (Caniggia, Maffei, 1979). In fact, the crisis of the second kind identifies with an irreversible loss of “common rationality”, which is evident in the civil reality as well as in its anthropic project. The crisis we have been witnessing over the last seven years on a worldwide scale belongs to this species. At such, it offers us the chance to think about the present condition, looking backward to the recent past experience, to reflect forwards on future possible perspectives. The paper assumes the current interval as the originating process of a stimulating new sensibility towards the architectural practice. At such, it identifies in the building vacancies and in the urban brownfields prompted by the crisis of the globalizing Network City a new generation potential of experimentation, mapping its consistency in the European context and offering a wide spectrum of the more interesting design initiatives in progress (Oswalt, 2013). The paper additionally aims at tracing back the dismissed building heritage unsuspected premises in the pre-modern age, taking the opportunity to deeply investigate the relation between spontaneous and critical consciousness. In conclusion, the two aspects seems to be more complementary to each other of what one could argue, playing a crucial role within any urban form transformation (Conzen, 1969).

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The morphological relationship between the plot pattern and street facade in the new urban area of Nanjing, China

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188 The street façade encloses and defines the street space, which also affected by the plot pattern. In the traditional city, the block was usually divided into a series of plots with the same original plot width along the street and the module of the plot width closely relates to the dimensions of early houses. The similar type of buildings occupied the plot heads at the street-line forming the successive or regular street facade. Contrastively, in the new urban area of Chinese city, the block and plot division is much more based on the land use distribution and transportation demand. Furthermore, with the great diversification of building types, the plot pattern and building fabric are more connected by index of land use intensity, set back of plot boundary, or building regulation of fire case, etc. Therefore, their relationship becomes not as clear as in the traditional city and we hardly see the traditional consistent form of the street facade in the new urban area. (Fig. 1) Since the street space is important for the urban life, understanding how the plot pattern influences the formation of the street facade in the new urban area can be very helpful to create a better urban space.

Hexi, constructed after 1990s in the rural area with modern planning in Nanjing, China, is a typical new urban area. This paper chooses the central part of Hexi, which contains 238 built blocks with rare historic influence, to analyze the morphological relationship between the plot pattern and the street facade under the modern planning control. Firstly, the plot patterns are distinguished by the comparison of the orientation, quantity, layout, and land use of the plots within the blocks. Secondly, the three aspects: the variation of set-back, sky-line, gaps, and corner-ends of the street facade in each plot pattern, are calculated and classified. The viewshed analysis was also used to quantitatively describe the street space defined by the façade. Thirdly, the relationship between the plot pattern and the street façade is discussed. The result shows that the plot pattern is an important factor which influences the street façade with the limitation of the related codes and regulations. The reasonable plot division contributes not only to optimized utilization of urban lands, but also to achieve the well-organized street space.

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The urban event. The city as a complex system far from equilibrium

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This research explores the methodological, instrumental and conceptual possibilities of the systemic approach developed in quantum physics and mathematics: urban centers are complex systems that function as nodes articulating human activities network in the territory, in a dialectical relationship that evolves over time. Where traditional urbanism sees fragmentation, incoherence and chaos, this approach sees organized complexity as the true nature of urban form and meaning. The mechanistic and reductionist view has dominated since the beginning of urbanism as discipline, accompanying the determinist approach that dominated science for centuries. Currently urban studies and urban planning seem to have reached an impasse, even accepting the tendency of cities into chaos as an inevitable process, or proclaiming the death of cities we knew them. However, overtime, cities have grown and configured themselves as the centers of power, innovation and development; they articulate the cultural, economic and political development of societies worldwide. This article allows reading existing cities in the light of a new approach. It combines the complex systems framework with urban trends such as new urbanism and open planning. The urban condition is explored through its dynamic, complex, self-organizing nature, and the intensity of exchanges -synoecism- that define it. Therefore, diversity, exchanges and meetings between strangers are crucial. The city is a system open to the territory, where top/down and bottom/up processes occur simultaneously; the development of these processes over time produces a complex dialectic relationship, whose understanding is key to developing an efficient and sustainable urban environment.

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A New theory of urban design revisited: organic order and the city as a growing whole

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190 *"The venerable cities of the past, such as Venice or Amsterdam, convey a feeling of wholeness, an organic unity that surfaces in every detail, large and small, in restaurants, shops, public gardens, even in balconies and ornaments. But this sense of wholeness is lacking in modern urban design, indeed with architects absorbed in problems of individual structures, and city planners preoccupied with local ordinances."* (1)

In this article, the author will recapitulate the book *A New Theory of Urban Design*, by Christopher Alexander and his colleagues, which attempts to recapture the process by which cities develop organically for the use of urban development today. The author will present the original system of rules that were first developed to discover the kinds of laws that are needed to create a growing whole in a city and will show their application for a particular area in San Francisco to see how a growing whole could be formed in an organic way.

The author will then discuss other more recent examples of urban design projects that were designed in different places in Frankfurt, Portland, and in Venezuela and Colombia, to make progress with the implementation of this new way of forming the city with individual building projects building up one by one, in piecemeal growth and structuring wholes, a new kind of city that is connected by positive space, by human geometry, fields of centers, designing buildings and including construction systems and ornament in a way that is consistent with the day-to-day demands of urban development of an organic city.

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The form of the European city in the work made by Karl Gruber (1885-1966)

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This study focuses on Karl Gruber, a central figure in the German architectural debate of the first half of 20th century, and the importance that his contribution can offer to the study of the shape and character of the “European city”.

Erwin Karl Gruber (Konstanz, 1885 - Darmstadt, 1966) was a German architect who trained at the Technische Hochschule in Karlsruhe under the leadership of Friedrich Ostendorf. In 1924 he was appointed professor of “mittelalterliche Baukunst und Entwerfen” (medieval construction and design) at Technische Hochschule in Danzig, and in 1933 obtained the chair of “Städtebau und Altertümer” (Urban design and antiquities) at Technische Hochschule Darmstadt.

He is the author of numerous studies on urban morphology, from ancient to the modern city. His most important work, *Die Gestalt der deutschen Stadt* (The form of the German town), is a study on the formation processes of the city that changed according to the spiritual order of the era. Gruber's approach to the study of the city aims to show the relationship between the shapes of cities and their political, religious and economic organization. He describes the shape of the city such as the construction of a space that is based on the hierarchical opposition between sacrum and profane, public and private. His attention focuses in particular on the medieval age, recognized as the heyday of German cities. His analysis is not only urban but involves also the buildings types that make up the city, from house to specialized buildings, also in their local variants.

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Comparative analysis of neighbourhoods inhabited by Jews in pre-war central Poland

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192 Urban settings are widely recognised as an artefact of the cultures that created them (Rossi 1984). Among the factors that influence the form of urban structures the pivotal place belongs to everyday life (Tilley 1994). The general framework, defining the way citizens use space and what their attitudes towards place are, is strongly related to their systems of values and beliefs. All this finds its reflection in the actual form of the urban settings (Bandini 2000, Panarai et al. 2009). When looking at the culture of various Jewish communities living in towns and cities of central Poland before World War II, including the culture of usage of space, we may distinguish several significantly different types (Wodziński 2005). The changes in lifestyle resulted from the progressing acculturation processes, migrations, and to some extent, the movements of individuals between various smaller and larger urban centres. One of the crucial factors influencing lifestyles was religion, which determined many spatial behaviours and was reflected in the presence of several specialised edifices and the surrounding arrangement of buildings and accompanying spaces (Piechołko 2000). Another important group of circumstances was related to social status and income level as well as the range of available occupations. Analysing the urban structures and places that remained after their previous Jewish inhabitants, we are still able to read some traces of their long gone presence. However it is undeniable that, while in some neighbourhoods the percentage of Jewish citizens was quite high, there were also places where assimilation and acculturation progressed and, apart from religion, the differences between Jewish, Polish and German citizens were not that significant. In contrast, in some extremely impoverished communities where Polish and Jews coexisted together, the presence of both Jewish and Polish ethnic groups was marked. In general, while some places were considered Jewish, it never really meant that they were inhabited or 'owned' only by this group. This does not however bar current visitors to those places from sensing their specific atmosphere, which remains encoded in the form of urban space.

In the current paper I try to analyse and classify the features of urban settings responsible for such a perception, looking for their relation to the meaning that those spaces acquired when constructed and in the initial phase of functioning. In many cases the catalogue of examples refers to archival photographs and video footage showing the former appearance of squares, streets and backyards.

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Geographies of the Mediterranean city: the meaning of urban forms

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The relationships between the Ottoman Empire and Venice, the Adriatic and Central Europe strongly influenced the social and urban order of a city model that paid tribute to Asia and the West but is also far from the principles of the eastern Mediterranean city and from those of the walled European city (whether Greek or Arab).

The differences are formal and structural, even though the district (mahalle in the case of the Ottoman city; khitat in North Africa) constitutes the foundational unit of the urban fabric, both in the open Ottoman model and in the closed, North African for instance, one (consider the Tunisian cities of Al-Kairawan and Nabeul). First and foremost, unlike the Mediterranean medinas and European walled cities, the Ottoman city is an open city, not enclosed by walls (unless they date from an earlier period), therefore, in a relationship of continuity with the surrounding countryside, the expression of an urban society that “appropriates” the rural world: this is why the architecture of the city is, fundamentally, a landscape architecture. The Ottoman settlements extend into the countryside, going beyond the traditional contrast between architecture and nature specific to European and Arab-Islamic walled cities. The former sites are usually characterised by special topographical and landscape conditions, which document how the origin of Ottoman settlements is to be sought in the link with the architecture of the soil rather than with a geometric plane: it is the site that determines the choice of settlement and type.

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The problem of subjective individualism in the future of European cities in the 21st century.

Dialectic synthesis between urban aisthesis and linguistic-architectural identity

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194 The study aims to analyze the constitutive/formative essence of urban systems and European tissues reviewed with a critical, dialectic vision- that tries to find the different character of the built in his being concrete testimony of a "positive eugenics" produced by different cultures.

At the same time, it try to prove the relation link enclosed in the binomial urban aesthetics/architectural identity, as significant character of the individuality of urban bodies, distinguished for geographic-areal fields expressing that complex process of ethnical/cultural/linguistic/social/building osmosis, whose characters set out, in line with the expectations of the civil area, what has been cultural and identity-making brought of the culture that has generated them.

Using some samples of the study identifying the variables and indicative contexts of European realities, as interpretation of linguistic forms meaning different urban aisthesis, research will focus on the contradictory outcome which appears highlighted in this first glimpse of centuries.

In fact, the undoubted architectural distinctions of the pre-modern age, inherent in Mediterranean and North European realities, testifying a concrete form of cultural Objectivism, find in time, especially with modernity, a gradual homogenization which reduces the differences homologating the characters. With this showing an intentional-critical process that push to the side the collective making towards an increasing and unexpected marginality and elects the result "ego" as a paradigm of the being contemporary; tangible evidence of a systemic thinking that interprets reality not through the mediation of heideggerian being o that relates to the world, but rather as a form of individuality that makes use of dialectical mechanisms typical of so-called "age of the technique", proposing the future of reality with a more subjective vision.

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Clustering Places

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The concept of place is one of the many unclear complexities which arise when we study our relationship with the built environment, and no ultimate definition can be found for it. Instead, the many available distinctions are coming from a variety of fields, generally reinforcing the idea that place is not a purely spatial phenomenon, or perhaps has been relegated to a concept on which we can theorize about but not much else can be done. While a given place is experienced differently by each individual (individual scheme of a place), this paper argues that there is also a “common scheme of a place” and proposes a methodology for identifying and measuring the concrete components that take part in creating this common scheme, so these components could be quantified and geographically represented. The methodology was tested through a case study in Ueno Park, Tokyo, where it was possible to create a place-database of the park. Later, by using cluster analysis and hierarchical dendrograms we were able to generate maps of the park showing the different levels of linkage between its places. The conclusions indicate that some aspects of the concept of place can be objectively understood and geographically represented, and this information has the potential for being incorporated as a concrete coordinate for architectural and urban design.

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Collective behaviors: memory and morphology

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196 In *Architecture of the City*, Aldo Rossi describes a definitive characteristic of the city and its collective memory through 'genius loci' and 'locus'; urban artifacts and its surroundings (Rossi, 1982). Layers of collective memories and urban artifacts reference historical events and present spatial consequences of current individualities. Urban memories implant singular nodal moments in time while the collective identities are distributions of disparate artifacts emerging and transforming as urban contextualized spatial agents. Resembling the work of Lebbeus Woods in Sarajevo's conflicted past (Woods, 1996), artifacts of architectural memory provide clues on how the shaping of our future cities can be observed as a combination of historical events imprinting traces on a fluctuating urban terrain. Evolutionary processes within collective form allows for morphological engagements to be implemented as new radical strategies for urban growth. Initially borrowed from Fumihiko Maki's 'group-form' generative elements (Maki 1964), Thom Mayne's interpretation of the city is described as a 'constellation of polynucleated attractors'. The Post-Modern city 'is not the production of platonic solids but rather multiple and overlapping forces of a highly complex and entirely uncertain collective form' (Mayne 2011). Where do these moments of urban morphological processes and collective memory merge within the fast-paced 21st century of tomorrow? This paper attempts to uncover signs of intrinsic collective memory and morphology as latent potentials within our increasingly complex contemporary urban fabric.

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Urban morphological study based on the plot's character index

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Based on Conzenian school's theories urban form is defined by three fundamental physical elements: buildings and their related open spaces, plots or lots, and streets, through controlling these morphological elements urban design could reach its goal for the quality of urban spaces via forms. Therefore, urban design needs to study urban morphology and their physical elements to provide knowledge to support the practice. Among the elements, 'plots' is the key issue in terms of urban design, since it could carry on the urban planning indicators and urban functional regulations to the site as guide for the further building design. This paper focuses on the plots, through analyzing plot's characters such as: location/indicators, size/shape, and building context, to see the correlations between plot's characters and their buildings forms. Commercial plots are selected since their complexity, disorder and seemed-uncontrollability. More than 500 plots in the center of Nanjing city are chosen and the plot's location, FAR/coverage, size, shape, outline and angle are collected as the plot's character index database. Through statistics and analysis the result will show that the plot's character plays an important role in forming the building shapes, that the plot's shape and outline could guide the design and form making.

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Green Structure of Stockholm and Xi'an: from a historical perspective

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- 198 City structure and connected green structure have seen many different schemes among human history. The gap of understanding between Western and Eastern approaches influences open space planning currently and in the future. Many similarities and differences indeed exist when we investigate how green structure evolved in Stockholm (Scandinavia) and Xi'an (China). At the back of the phenomenon, we can also read how people's philosophical cognition developed. At the early age (Medieval Time in Stockholm and Han Dynasty in Xi'an), the world was viewed from up to down that city is built as people's interpretation of heaven. The worship of God (or gods) occupied a central position in the city structure. But the form of green structure, where nature view is employed, differs-antithesis or consociate to the city. In early age, green structure was comprised by gardens inside the city and wild scaring nature outside. As for gardens in the city, they are always geometrically ordered space which is an earthly paradise-consociate to the city, but to organic wild nature out of the city, they are conflicting and clashing with geometric city. As the pace of horizontal exploration, vertical world view blurs. Green structure companied with nature view experienced a more complicated path in both cities-from antithesis to emerging with geometric city (Stockholm) and from consociate to vibrate to emerging with city (Xi'an).
- In terms of both cities, re-reading history especially under a comparative perspective will bring a way to bridge past, nowadays and future, western, eastern and any geographical locations. In current globalized world, understanding among countries becomes extremely important and starting from city would be an available way. Modern era also requires new design and planning responses based on historical and comparative precedents and humanistic considerations. Hence, this paper is an attempt to describe and compare the planning and viewing process of green structure accompanied by city structure in Scandinavian and Chinese cities from ancient to nowadays. Our purpose is to dig out that with the evolvement of green structure, how world view and landscape planning view changed in both regions. All of them will be valuable references for current and future green structure planning.

Healthy and sustainable cities: the communication of an identity and its implications for the city taken both as body and as field

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This article aims to analyze cities as a living organism based on Maturana's theory of autopoiesis and as a field of dispute, as conceptualized by Bourdieu, in order to understand the reasons and also the outcomes of the voluntary and political process of implementing sustainable and healthy cities. The cities, taken as biologic social phenomenon are continuously evolving as a result of interaction of the cities elements with the external and internal environment. Several and different actors, for different reasons and purposes, put the city in motion, making this known to others by means of multiple languages and signs translated into the multiple identities that comprise the contemporary cities. Denominations may create or consolidate urban identities - bike-friendly, age-friendly, child-friendly cities; business cities; resilient cities etc. According to the theory of autopoiesis, such changes occur within operational limits that may be broken eventually, thus opening the closed system and leading to a new autopoiesis process. Denominations, however, are political process, of symbolic value, operated by actors and social bodies positioned in different fields. Once established, the sustainable/ healthy city acts as a symbolic system, simultaneously structured and forging the structure of certain way of perceiving, planning and acting over the urban form. This process implies dispute, which is not clearly seen within the organic concept of cities. Considering the city as a body may conceal the significant social and cultural differences that mark the urban tissue of less developed countries. This paper aims to compare both theories by using the movement of sustainable and healthy cities.

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The language of the city: from real matter to iconic expression

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200 The object of this thesis is to identify the relationships between the physical and the cognitive phenomena inside the processes of construction, adoption, interpretation and solution of the significance of the urban space.

Specifically, it means to investigate that transient domain, uncertain but however scientific -as verified by the studies on the perceptive and cognitive phenomena- aimed to consider the city as an áisthesis phenomenon and its Kantian interpretation of the sensible perception concept. A domain in which the urban matter, from being a real matter becomes a significant reference of the anthropic action, namely its ways and forms to organize and live the urban space. Released from the pure-visualist meanings, the approach (applied to some sample Italian cities and to some didactic experiments carried out by the author) is based on the interpolation between two types of interpretation: the physic- documental / historical-processing interpretation concerning the reconstruction of the urban formation phases, the building types and the spatial configurations and the phenomenological interpretation, aimed to find the significance levels of the matter and spatial components, when these latter become urban defined figures, i.e. iconic expressions of the physical-social identity of the place.

Applying these considerations to the phenomena characterizing more and more the potential significances of the nowadays city, this analysis will try to propose a theoretic-methodological project aimed to give a contribution to the construction of a modern city, that will be again fit of Urbis form, i.e. able to give significance to its own settlement process.

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Buildings as beasts, cities as jungles. An issue between poetics and politics.

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The contribution begins by noting that the model of the network and the incessant channeling information flows are fueling the current condition of the city, being wanted as smart, resilient, metabolic. The biological analogy of the “living organism” provides that urban life is governed by the forces of self-balance and self-organization, both in a physical and social way, and is nourished by the digital universe, which favors the parameterization of life in computable data through the self-generation of the form. Metamorphism of architectural design, characterized by exasperation and structural functionalist-oriented response to the problems of the city, clashes with the construction procedures that, rejecting the technicist communication, include in the single object an idea of the city. The search for tools and languages can reduce the separation between poetics and politics, going into actions of reduction, anonymity and the intelligibility of the form as the exaltation of the values of the construction: a construction that does not renounce to the generation of a sense in urban life through the definition of places. This paper addresses this problem by focusing on the analysis of constructive procedures as happening in the project, through the critical reconstruction of reasons and tools, and focusing particularly on high buildings as the contradictory emblem of urban values of modernity.

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Urban form as storyteller

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202 Narratives have often been associated with urban places, but some also have strong morphological standings. In traditional cartographic representations, the fabric and topographical features of cities were composed not as a cognitive network (as Kevin Lynch envisioned in his *Image of the City*), but rather as narrative structures. These structures include processional routes, concentric streets, quadrangle series, and others. Based on the hypothesis that spatial forms underpin narrative experience, this paper will examine cases of public places and explore the typology of storytelling urban forms that to a large extent defined the experience and identity of traditional towns and cities in China.

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Postwar reconstruction of Mainz as reflection on form and meaning of the traditional city

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The two World Wars appear as laboratories of modernity and containers of the new urban and architectural forms in terms of reflections on economy of space and materials, and on a new interpretation of the local architectural traditions. Ruined cities are an opportunity to put into practice the principles of Le Corbusier's *Trois Etablissements Humains*. However modernist planners have to struggle not only with the shortage of capital and building materials, but also with the traditionalist instances of the local communities. Hence the need to build a new relationship with the traces of the local history, the urban models and the traditional building techniques, combining them with the modern ones. The design drafted by architect Paul Schmitthenner in 1946 for the city of Mainz - in response to that advanced by the modernist architect Marcel Lods - aims to restore the quality of the destroyed city taking into account the changed needs of society. Schmitthenner makes proposals for the configuration of the historical center. Particularly he prescribes dimensions and proportions but not the image of the buildings. He does not impose a nostalgic revival of the forms but general rules which allow to hold together the idea of the traditional German city and instances of modernity (traffic, standardization of techniques and materials, health). The experience of the reconstruction of Mainz is a clear example of the relation between architectural heritage and contemporary design, with a reflection on the organic character of the traditional city.

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An operative experience of urban morphology: Mazatlán, Mexico

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- 204 On the occasion of next TAU (Taller international de Arquitectura y Urbanismo), International Architecture and Urbanism workshop, that is taking place in the months of January and February 2015 in the city of Mazatlán (State of Sinaloa, Mexico), the authors are going to play out the reading-project methodology of the Italian type-morphological school, experimentally applied for the second consecutive year (Cataldi, Urios and others, 2014; Cataldi, Montemagni, 2014) to the Mexican context of the Sinaloa State. The reading will starting, as usual, from the territorial scale, to continue progressively to the city, to the urban tissue and to the building types. At first the main routes of the coastal plain, which are believed to have determined the origin of the city, are being identified. The shape of the coast, with a headland and a cove, seem to have encouraged the settlement of the harbour and the origin of Mazatlán core. On the urban scale, the different types of blocks that shape the current set should allow the recognition of the various stages of urban growth. Considering the short time in which the workshop will take place, the synthetic reading should lead to a rapid setting of the various scheduled projects. One of those project probably to be carried out by the authors, who will report it as a topic of discussion in the ISUF Conference in Rome 2015.

Study of Liegi's types and specialized buildings

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The research elaborated in the final workshop in the city of Liege, established by the department DICAR in the Polytechnic in Bari, deals with study of specialized and basic buildings typically developed in the city of Liege. Particularly interesting is the confrontation with the building types constructed at first in the Italian peninsula of which we have a sufficient knowledge thanks to the studies made by the School of typologies. The reconstruction of the case of housing types in the Franco-phone city shows the presence of row house, in the north of Europe called house Mitoyenne, which seems developed in this cultural area since the XII century. The housing complex that appears in the primeval medieval buildings of the city shows two different, principal dimensions which can change essentially in the width of the façade on street. They are recognizable row house with front, tread mt. 3-3, 50 and row house with front mt. 5-5, 50; both with a variable depth around mt. 12-15 and over. They function as a clear social divide, typical of Liege's society. Other character particularly far from the building type existing in the Italian area is, together with very inclined pitched roof that above all in the first construction show the watershed line perpendicular to the front road, the very permeable façade declaring its membership to the elastic-wood cultural area recognisable in the north European boundary. The diachronic transformation processes of the type are more similar to the Italian cities: vertical increase, coinciding with the progressive substitution of trellis with brickwork, multifamily houses, as well as recast in units of higher grade to form the in-line house. In the matter of specialized buildings, is important to note the huge realization of Romanic churches which being classified in the ecclesiastic order as "collegiate", are not organized related to urban space; they never have the entry axis in the main aisle but mediately the crossing of a narthex that permit the lateral access. The serial types show sometimes an excessive repetition of the bodies organized without never developing important nodal points.

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The study on evolution of Shanghai urban living morphology based on the change of urban fabric

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- 206 Different types of urban housing constitute diverse forms of modern urban living, and the study on the spatial morphology characteristics and the evolution process is the most intuitive way of residential morphology study. Residential forms differ at different development stages of the city, while the contributing factors behind are complex and with the times. By analyzing and comparing, the paper tries to achieve the purpose of clarifying the correspondence between the elements and the function of the space with the help of study of trajectory of space revolution.
- In this paper, the study object are three main housing types of Shanghai after the establishment of New China, which are separately Li-Long houses, workers' village and modern high-rise buildings. And the paper tries to analyze the characteristics and evolution course of the living space from the perspectives of city, community and buildings. Through in-depth analysis of three individual cases which represent the three typical residential types separately, the paper tries to summarize the revolution pattern of the urban living morphology of Shanghai city which has colonial background as well as modern city feature. Thus, based on the evolution of the urban fabric, the paper also tries to explore the relationship between modern and tradition residential space and provide some suggestion for future development of the urban living forms.

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Typo-morphological Assessment of Ludlow.

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In many cities, because of changing social structure and subsequently needs, historic residential buildings become incompatible with their way of living and became abounded regarding to its function. Due to these abounded, the building fall into not only functional but also physical deterioration. British residential buildings in the city of Famagusta are not an exception with this regard and fall into process of decay in terms of structure and function. The aim of this paper is to analyze a declined British residential part of Famagusta city by field of observation. These analysis are based on typo- morphological approaches basically on the Conzen and Caniggia ones who are the pioneer of English morphological and Italian typo-morphological analysis in urban context. This paper by considering the social needs firstly tries to propose some acceptable changes in both plan and façade of current building for their physical improvement and consequently physical revitalization of this declined part. Secondly attempts to propose new design in homogeneous with existing morphology in unbuilt lands in the area.

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The urban forms of contemporary Rome

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208 Rome is the one of the most scenographic cities in Europe and one with the highest number of historical stratifications. To understand contemporary Rome in its outward sprawl, however, means to understand an uncontrolled relationship between order and chaos. Since the postwar period the loss of compactness in urban planning has been occurring with chronological progression resulting in the break-up of its own structuring principle in the city area, which should be understood more as a surrender to rampant overbuilding rather than a search for new models. In the latest years the badly planned city outskirts with their equal-height residential buildings showing no identifiable connection with the "territory" at all represent a considerable change of the urban settlement principle characteristic of the Italian landscape where the idea of beauty was given by the contrast between a building and its natural surroundings resulting in a mutual, organic celebration of both. After the Rome of Pope Sixtus V, the complexity of the Baroque style, the 19th century geometrical precision of the urban fabric, the "suprematist" experiment of E42, the myth of the Mediterranean and of Neo-realism, what will we have to do in order to build a new idea of a city anchored to the aspirations of a globally changed society? My conference paper proposal stems from this question as it intends to critically analyze the current meaning of the relationship between the urban and architectural aggregations of Roman monumental features and the urban sprawl as well as modern and contemporary interventions on the international stage which are compatible with the stratification principle and with the theme of "scale jumping" which Rome shows in its consolidated image.

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Lost in realization. Spatial fragments of grand urban design plans in the industrial age

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The industrialization brought forth not only urban planning as a method to anticipatorily shape the cities' building, but also a much more immediate dependency on market interests. When the great urban design until the industrial age were implemented with considerable energy from autocratic governments, the realization of urban plans since the early 19th century usually had to meet the demands of a variety of stakeholders and investors. Still, for the inevitable urban extension and transformation processes until 1945, planning authors and authorities largely abided by comprehensive design plans. A public negligence towards such morphological and spatial design considerations when meeting even slight opposition from the private economic sector, can be well seen with the German state of Prussia, which though being conservative in political terms highly supported a liberal market. Arguably, this is the reason why a variety of grand urban plans there, from provincial towns to the capital itself, could not be fully realized or until today lack major features of the original design. At the same time, the ongoing transformation process obviously integrated these places well into the overall urban organism despite their primary fragmentariness. Against this background the proposed paper seeks to present different examples of inconsistencies in Prussian urban plans from 1862-1927 by pinpointing the spatial fragments in today's morphology, revisiting the original plans and their implementation, and eventually examining the different reinterpretations of the according torsos to better understand the adaptability as well as the persistence of urban design approaches within the cities' development.

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Philadelphia: study of a metropolis.

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210 The proposed work is the outcome of a research thesis developed during a workshop group in academic degree 2010/2011. The thesis research conducted aims to knowledge of the development of the case that hit the city of Philadelphia, its characters aggregation and construction of the base. The process used, therefore, aimed to the knowledge of the city through a gradual change of scale, from the local to the aggregate, up to reach the scale of the housing type carrier: the row house. The assumptions underlying the search consists of a real challenge: to understand whether or not there is a chance to know the city through the method "Muratori", typically Italian, even in a world so different and highly planned, such as that of American metropolis. Being a city of foundation, the reading of the complexity of the urban organism was conducted through a mode of analysis that could be called "deductive", the distribution of "specialized building" along a path, was not considered as the testimony of a value, a priori attributed to the same, but as the first motivation with which a hierarchy of values attributed to the multitude of paths that can outline an American metropolis like Philadelphia. Although the plan of the city has from the beginning had a well-defined system, isotropic and symmetric, a series of urban dynamics of spontaneous formation altered the original plan to create the Philadelphia of today.

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A typomorphological approach study on village morphology in the South of Jiangsu Area, China

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As a method the typo-morphology has played an important role in Italian School developed by Muratori and Caniggia. The significance of this approach is that urban form can be described by detailed classifications of buildings and open space, through both typological and morphological deriving from studies of typical spaces and structures. Following typological thinking the typo-morphology could be translated into an operative tool by using buildings, routes (streets) and plot-series (blocks), which helps to bridge the gaps between morphological knowledge and design practice. Grown in nature the morphology of villages most clearly presents the patterns with both human culture and infrastructures of social development, so that through typo-morphological analysis of the natural villages one could understand the importance of the local culture, life style, and the natural topography in village generation, even during the modern social development. The research raises a question to the new type of village planning and housing design borrowed from the city or 'villa' contemporary happened in China, and suggests how to learn from natural structure.

In order to reach our goal two villages were selected in southern Jiangsu province, flat area with rich river network, as study cases. Based on the field works, our research investigated the village's generation process from 1949-2012, and housing samples and their typological transformation by the time. Three categories factors were studied: housing types, building placement, and geographic elements, such as water (river), farm fields and roads. This paper will clear display two results: first how village's form transformed in the force of social development. Second, what kept unchanged during social development.

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The evolution of Chinese urban morphology under the influence of mega-events (1865-1949). A case study of Nanking.

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212 The evolution of Chinese city has been widely discussed in the last few years. Researchers expressed their opinions in different ways and formed various perspectives, such as geography, transportation, architecture and so on. However, few studies focused on spatial analysis related to morphological variation, especially in the context of urban self-organization and hetero-organization. In this case, this paper attempts to analyze the morphological evolution based on the influence of mega-events.

Example is carefully selected to meet the requirement of this special perspective. Nanking was established 2,500 years ago, which was made capital in ten dynasties. In this paper, we will focus on a very special period in its history, which starts from 1865 to 1949. It can be divided into four sections.

(1) 1865-1927. We all know that, in 1861, westernization movement was started, which accelerated the progress of China's modernization. In 1865, Jinling Manufacture General Bureau was set up, which meant that Nanking's industry had begun to enter a starting and slowly growth stage of development. Instead of carriage, automobile gradually became the major vehicle during that time.

(2) 1927-1937. In 1927, the national government chose Nanking as its capital. And the following ten years were known as 'Golden Decade' in the history of Nanking's urban planning and construction. In 1929, <The city plan of NANKING> was published, which was the first formal urban master planning of this city. It changed the original morphology and laid the foundation for the coming development of urban morphology.

(3) 1937-1945. The prosperous progress was disturbed by the Sino-Japanese war for eight years. Urban construction was forced to stop in this period. Parts of the city were damaged in the war or used for military purposes.

(4) 1945-1949. In 1945, local government tried to regenerate the city, however, due to the civil war, the construction speed is quite slowly. In 1949, People's Republic of China was established.

This paper not only concerns the morphology of the whole city, but also pays attention to some specific space at local scale, whose morphology was changed directly by mega-events. We try to find out how does the space deal with sudden change, and integrate itself to the surrounding again or what adjustment other space have to make to adapt to the sudden change. At the end, we try to sum up a kind of intermediate urban morphology formed by both self-organization and hetero-organization.

Morphological characters of *intramoenia* Granada: a neo-conzenian approach

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This study aims at investigating some of the issues that arose following a series of geo-urban and typological-architectural studies on the city of Granada and its 14th Century Nazari walls.

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The collaboration between the Department of Architectural Construction of the University of Granada and the Urban Morphology Research Group of the University of Birmingham has allowed us to bring to light what we consider as problematic issues related both to the need to retrieve the appropriate centrality of urban studies on conservation policies as well as the enhancement of the historic centres and the need of methodological reviews for the study and analysis of the complex core settlements.

One of the goals of this study is to assess the mutual relations that exist between the approaches of the north European Conzenian schools, the tradition of Italian critics of Caniggian origin and the criteria used in the researches carried out in Spain between 1970s and 1990s in the discipline of urban studies.

In the specific case of the city of Granada, the eclectic approach leads to consider the value of the walls in the definition of further fringe belts in the complex of the old town whose urban morphology is linked both to the typological characteristics of the town and to the land use of the large vacant parcels.

We believe that the reciprocity between the typological process and development of the geographical periods theorized by Conzen human geography would give a comprehensive description of urban processes whose results unequivocally define the image of a contemporary Granada.

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Learning from Japan

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- 214 Following to the publication of Barrie Shelton's recent book "Learning from the Japanese city", I intend to analyze the city of Tokyo from the perspective of its urban morphology by comparing it with the Occidental City. While Hidenobu Jinnai, one of the leading expert on Tokyo's urban morphology, stresses the difference between the Occidental public space, expressed by the square (a closed space, delimited by its surrounding buildings) and the Japanese one, expressed by the bridge (a place surrounded by an open area), Yoshinobu Ashihara defends the superiority of the invisible order hidden behind the chaos of Japanese cities, a sensation of impermanence expressed by the adoption of floating floors, so different from the European tradition of preferring walls. With regard to that, Fumihiko Maki identifies two different kinds of urban order: the Occidental City is a clock-city, a Newtonian city where the relation between the whole and the parts is systemic, whereas the Oriental City is a cloud-city, where the significant autonomy of its parts better relates to a fast changing society. One additional difference I intend to analyze can be found in the different systems of writing between East and West. While occidental letters have no autonomous meaning and need to be composed with other letters, as buildings connected to each other by the linearity of streets in occidental cities, each Japanese kanji grapheme has a meaning of its own, as stylized representations of ideas, like the Japanese neighborhood in which the *chō* is an urban generating cell.

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The morphological effect of public transportation systems on cities: urban analysis of transit-oriented developments (TOD) in Swedish Cities

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The architecture and urban design generate, hinder and facilitate urban flows; produce frontages, exit and entrance in urban environments; create and stockpile network and spatial capital.

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The morphological effect on cities is analyzed through historical changes in the physical form of cities caused by public transportation systems. The European cities historically unfolded around public transportation stops and stations during the industrialization. Urban cores or corridors created then stayed until today as relics of that age. These artifacts are explored in Swedish cities to understand how public transportation shapes cities. These consistencies in urban design and form can be crucial for implementing policies of Transit-Oriented Development (TOD) in Europe and around the world.

The conceptual basis of the Italian School of Urban Morphology and its application to a case study in Brazil

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This paper has as its central focus the conceptual basis of the Italian School of Urban Morphology and its application in other countries, in this particular case study, Brazil. It discusses the use of the morphological type concept as applied to an analysis of the historical Brazilian town of Ouro Preto, classified as a world cultural heritage site by UNESCO. In order to assimilate concepts we sought secondary sources, contained in books, papers and presentations from the leading representatives of the schools given at scientific events related to the topic. Other methods used to enhance understanding of the concepts led to the use of methodological strategies such as discussion groups and internal seminars composed of faculty members and research students. The original axis of urbanization of the city known as, o caminho tronco (the trunk road), provided the practical material for the research project. All concepts related to the four main topics, such as, basic types, their derivations, the identification of basic types of the series, the main axis, nodes, pole and the basic formation of urban tissue were identified in the city. Significantly, our findings showed that issues of territory and aspects related to structure did not prove to be similar to those reported in the Italian case studies. However, the results did confirm that the Italian concepts can be applied to different realities, provide useful tools for the analysis of historical cities and thus productively influence guidelines on public policy evaluation and cultural preservation.

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The City Urban Layout: reading and project

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This communication focus on the morphological reading of the Portuguese cities urban form and addresses the meaning of the urban layout as a concept, its utility both as a tool for the urban form reading and for the city composition. This interpretation departs from samples of the sedimented city, adopted as a representative database of the diversity of the urban space, from which is possible to observe both the effect of time and the conditioning factors, as well as the logical systems and the principles of composition that interfere with the production process of the urban form.

The approach to the concept of urban layout is established through the notion of permanence, understood as the result of a process of sedimentation of the city and as a design tool integrated into the mental conceptualization of urban space.

The morphological interpretation of the built city is thus based on the classification of the composition principles and the phenomena involved in the production of the urban layout, on the deduction of their properties and on the reading of its evolutionary process. This analytical-interpretative process aims to establish a typological framework of urban layouts and therefore a descriptive system of the synthesis of its production process, in order to explain and relate the different spatial matrices of the urban layouts to determine a theoretical body of knowledge formulated on the praxis of the city.

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The effect of time in urban fabrics. A reading of cultural strata.

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218 *The urban fabric, analyzed at the present time, contains information that sedimented throughout its existence and which can be read from its analytical decomposition.*

The fragmentation process in homogeneous areas and samples and its systemic and elemental decomposition, developed as a methodological tool of interpretation of the urban fabric, allows for a reading that exceeds the lack of information in cases whose longevity and metamorphoses gives them an obvious complexity, far from precise urban models.

From a concrete urban fabric of the city of Lisbon, result of a permanent occupation of three millennia, that stemmed of successive urban cultures, including most importantly the Phoenician, Roman, Visigoth, Arab and Christian, from the Phoenician colonization to the present, we propose to interpret the existing urban fabric, showing the most striking features of each culture that sedimented this complex urban fabric.

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A pattern language for the human-animal interface

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Cities are built for human users. They may, however, be habitats for some generalist species despite the known conflicts between humans and animals. To sustain their coexistence for urban biodiversity, this paper explored how and to what extent the morphological elements could shape and, be shaped by animal movements. These elements, comprised of living organisms, constitute a dynamic framework where animals are included and benefited. To develop the framework, we present a pattern language that describes a behavioral process of a focal species in the built environment by linking a set of sequential patterns of human-animal interfaces. To set a pattern of interface, we constructed a four-dimensional array determined by the movement modes and the typo-morphology. The movement modes were defined by velocity distribution derived from the trajectories by performing direct observations. The typo-morphology, stemming from a typology of space shapes, the land-cover types and the environmental factors, was represented by shape grammars. The pattern language was implemented and tested at the observational sites on campus, showing promise as a vehicle for creating an ecologically meaningful urban fabric, and a constructed landform in particular.

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Milano Verde, order against disorder

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220 Studying "Milano verde" project means to investigate the relationship that existed between Milan and the rational city. Milano verde is primarily a program, a "tool of logical arrangement of data and goals" and also a diagram that is the "transition from the organization needs to which give an answer, assured by the program, to the formal polarization level". The most significant lesson, that the rational Italian city communicates, concerns the possibility of the urban project to be configured as a compact intervention, well defined, as the alternative to the contemporary city dispersion. Despite the project has a great expressive energy and arrangement, "Milano Verde" should not be listed among those urban plans in which predominates the idea of tabula rasa, an idea that has characterized many European projects of that time, but a urban project whose medium intensity, does not retract in some ways to a direct confrontation with the city and allows to convincingly modulate the transition between the two urban systems making them coexisting on the common matrix settlement imposed by Milan. In this meaning sets the difference between the idea of the city rational and the Italian rational cities. "Milano Verde" project was entirely rebuilt in digital form following a critical drawings of architects made in 1938 (Franco Albini, Ignazio Gardella, Carlo De Carli, Giuseppe Pagano, Giancarlo Palanti, Giangiacomo Predaval, Giovanni Romano). The was presented at the Milan Triennale the same year. "Milano Verde" is urban project that for many architects has become a constant reference in his work and in the idea of the shape of the city thought.

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Connectivity, density and built form: integrating 'Spacemate' with space syntax.

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The Spacemate diagram developed by Berghauser Pont and Haupt (2006, 2010) relates together four geometrical properties of urban fabrics: density expressed as floor space index (FSI), ground coverage or ground space index (GSI), spaciousness expressed as open space ratio (OSR) and number of storeys (L). The authors measured these variables in a sample of Dutch, Spanish and German residential estates and showed how Spacemate segregates the buildings into distinct morphological types. Steadman (2013) brings this piece of work together with the work of Martin and March (1972) and shows how Martin and March's analysis can provide further theoretical explanation for Berghauser Pont and Haupt's empirical findings.

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The morphological descriptions as developed by Berghauser Pont and Haupt combine the tradition of urban morphology to capture what Conzen and Muratori called the city's genius loci (Moudon 1997) with the more quantitative approach that started at the Centre for Land Use and Built Form Studies in Cambridge during the 1960s and 70s. Although Spacemate is an ingenious and useful graphical tool for urban morphological studies (Steadman 2013), we argue in this paper that it lacks a description of the relative or systemic dimension of cities, that is the description of relations between elements, to effectively understand the relation between urban form and the functioning of cities. To arrive here, Space Syntax (Hillier and Hanson, 1984), will be integrated with the morphological descriptions used in Spacemate.

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The nature and development of urban form. From a metabolic perspective into an urban hybridity perspective.

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222 The main purpose of this presentation is to discuss the links between urban form and infrastructure. Moreover, it aims to elucidate possible lines of thought that could contribute to the establishment of an Agenda of Urban Form built upon a biodynamic conception of urban space. In order to do so, this presentation confronts two specific scientific approaches that have witnessed recent advances to the study of the urban space, wherein considering sustainability as a key issue. The first approach regards the need to integrate the metabolism concept within the study of the city. At first, it appears to be a mere analogy to the function of the city as an organism, but integrates significant knowledge brought in by complementary scientific areas such as ecology and industrial metabolism, regarding significant environmental issues. The second approach regards the newly emerging concept of urban hybridity developed by Bruno Latour and that has brought important insights into the understanding of urban space as complex system that needs further attention within the relations between the several agents that operate within the urban and social territory. This presentation concludes that the insights produced by these two scientific approaches, even isolated, appears to be important drivers for Urban Morphologists to revise the so needed Theory of Cognition. This is the theory that was invoked by M. R. G. Conzen (1998) while discussing the pertinent role of urban morphologist to build a sounder Philosophical basis for Urban Morphology.

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Identified and modeled elements of urban fabric in academic works of students

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Every town has a unique urban structure regardless of whether it has developed spontaneously or in a planned way. The entirety of structural elements (streets, squares, blocks, buildings, etc.) forms a tri-dimensional composition of the town – its spatial structure. Some researchers of the urban phenomenon emphasize importance of certain elements in the formation of townscape, while other researchers accentuate other elements. Some consider the street to be the key element organising urban space, while others refer to the block (or a set of land plots) as the key instrument shaping streets and squares. Still another school of thought view the built-up as the determinant of towns' panoramas and silhouettes. All these considerations are valid. However, in order to understand the entirety and to analyse uniqueness of each urban object it is necessary to analyse distinctive features of the plan, built-up, size-and-space composition. This research analyses what elements of urban fabric students of architecture recognise/identify and model/design in their academic works. The presentation looks into and summarizes the knowledge accumulated from the academic works of students of Faculty of Architecture, Vilnius Gediminas Technical University (FA, VGTU) carried out in 2010 – 2014. It reviews methodology, tasks, solution argumentation and methods of designing new urban quality in historically developed urban fabric.

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Liegi's urban and aggregative organism reading

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The research elaborated in final workshop in the city of Liege, established by the department DICAR in the Polytechnic in Bari, re-build the formation different phases of Wallonia's main town. The analysis carried out at a regional scale has allowed us to reconstruct the dynamics formation of Gaul North cities; during the Roman dominion we find a modular structure of settlements, which are located on the Meuse and in the foothills and hilly interior, showing a more advanced civil level inherited by Merovingian and Carolingian. The original settlement of Liege is located at the intersection of territorial routes related to the axis of the river Meuse. A Roman villa dating back to the 1st century is the core for a new settlement during the Merovingian era. From a first settlement system consisting of scattered houses, especially in the Place Saint Lambert, we notice to a planned structure on the route towards the Publémont, with very large batches due, in all probability, to the typical size of the Roman home courtyard. The 10th century in the whole area of Wallonia and Liege there is a different organization of the settlements undertaken by the bishops, that install great cathedrals and starting an extensive subdivisions of the land extended up to the settled area introducing the type of the row house. The phases of the urban organism were reconstructed correlating together the historical data with the specialized buildings and the reality, detectable through the 19th century cadastral; the urban organism seems to find a progressive and controlled development until the 19th century. After that, there is a substantial transformations of closed canals that change the structure of the place and the organic nature of the urban system.

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The implementation of pattern recognition in urban morphology

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Mapping of socio-demographic and built environment variables has been a powerful methodology in urban research. Although urban landscape is employed as a physical entity in mapping studies to portray quantitative statistics, urban fabric has not been quantified to create interpretative maps of city morphology. This project seeks to introduce a novel method to quantify and map the intensity and spatial organization of urban morphological elements. We have developed a computer vision application, that produces geo-referenced measurements through detecting visual features described in pattern recognition templates. We tested our approach in a case study of Istanbul/Turkey by analyzing three territories of the city that are developed in different time span. This study aims at exploring the similar patterns between socio-economic and spatial structures of Istanbul. By utilizing our application, we produced a series of maps that we define as form-based maps in two categories. The first category focuses on the density measurements of built area, unbuilt area, number of blocks and number of buildings. The second group of maps allows the comparison of configurational similarities by detecting the repeating patterns based on the layout of street networks and buildings. At the final step, we compare the form-based maps with the city's demographic and economic maps to analyze the correlations across various layers of information. The results reveal that the typical relationships of social patterns and physical forms exist in the three sites although they are shaped by different forces. We conclude that the provided set of tools and methods enhance the understanding of urban fabric with producing a type of graph-based knowledge of the spatial structure.

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Methods for historical city design. On Gianfranco Caniggia's selected essays

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- 226 This paper explores the issue of architectural design of the Italian historical city, analyzing Gianfranco Caniggia's selected essays.
- The research work defines two main areas of interest: the first area identifies the applying of the typological process (as a succession of temporal mutations and spatial distinctions, and their mutual influences) of projects for Rome (Parliament Building, Lungara street, Giulia street and Moretta alley, and San Giovanni dei Fiorentini) and Naples (San Petrillo block, Santi Giovanni e Paolo tissue, e Spanish Quarters) according to the appropriate scalar components (from elements to organisms), through which it is explained completely the method developed by Caniggia from the topics covered in Conferenza Nazionale dei Centri Storici (1975); the second area is focused on the general Caniggia's methodology that, through the development of the typological reading-designing method, has given solid application at the critical thinking of Roman school based on the value of history, and its impact on the rehabilitation of new design developments.

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An organic method of village rehabilitation through the reconstruction archetype based on traditional houses

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In Japan, the industrialization has achieved the elimination of housing shortage. However, it resulted in the loss of the local atmosphere and the uniform landscape. Traditional houses have become extinct, while the local house production system has kept getting weaker. Furthermore, Japan has faced a large number of disasters over the recent years, making disaster management is an important aspect of the Japanese urban planning.

Yamakoshi region is an area stricken by the Chuetsu earthquake in 2004. The author played a major role as part of this area's reconstruction project team. The goal of this project was to create a reconstruction process based on the history, culture and climate, through providing a reconstruction archetype based on the traditional houses.

The methodology for realizing this goal consisted of three steps. The first step was the research of the traditional houses' essential elements such as floor plans, architectural style, structural details, location requirements, interaction with the climate etc. The second step was the discussion and interview with local carpenters. The third step was the proposal of the reconstruction archetype.

As a result of this project, various housing types based on the reconstruction archetype were created, and we were able to over great support the rebuilding of many houses. Through this project, we could present a new organic method of village reconstruction, using the reconstruction archetype based on traditional houses. Currently, this method begins to spread as one of the methodologies for the reconstruction of the next stricken areas in Japan.

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Extending fringe-belt research in China

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Research on the fringe-belt concept has grown significantly in the past decade. This is particularly evident in parts of the world in which interest in urban morphology has been slight until recently. The main emphasis continues to be the light that this concept can shed on the historico-geographical grain of urban areas. This paper reports a morphogenetic investigation into fringe belts that gives particular attention to the fixation lines associated with Chinese city walls. Discussion is concentrated on a fringe belt related to one of the worlds longest and most massive city walls, that of Nanjing. The formation, consolidation and, in places, alienation of the Ming fringe belt of Nanjing has been influenced by natural and artificial fixation lines and the political economy of an authoritarian society. Understanding the changing spatial structure of fringe-belt landscapes has implications for the management of urban form in ways sensitive to its historico-geographical development.

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Exploring the convergence of fringe belt theory and space syntax laws

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Fringe belt theory describes urban growth as a response to economic cycles: during economic slumps institutional and private developments, which require large spaces, accumulate at the urban fringe, while during economic booms residential building extends into the new urban periphery (Conzen, 2009). The processes of expansion and change of fringe belts occur in several ways: social, demographic and economic factors can be identified in the type and rate of change of different morphological areas. The space syntax laws of centrality and compactness describe growth as a process of maintenance of inter-accessibility within a settlement by minimising the gain in distance at both a global and local level. The law of centrality is driven by macro-economic factors, while the law of compactness is driven by socio-cultural factors (Hillier, 2002). Although at first these two modes of development seem to have fundamentally different characteristics, research has shown that at certain transformative stages of a city a large gain in accessibility values of a locality is followed by subdivisions, which indicates that the law of centrality drives the generative process and precedes the emergence of densification (Al-Sayed et al., 2012). These findings suggest that the relationship between the two theories might be closer than previously thought. Building on previous research (Geddes, 2014) suggesting that in the case of Limassol the two processes may be closely interrelated, this paper explores their common ground of the economic factors driving the generative mechanisms by relating the phases of Limassol's development to economic data, while space syntax, block size and land use analyses of the city's development are complemented by interviews with planning and municipality officials.

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City limits, Fringe belts: recent studies on the architecture of the city and beyond

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230 This paper aims to present further insights on the research issue of 'city and limits' based on previous studies already developed and published by the proponent in 2012 and in 2014.

In fact in *Città e limes*. Roma, Beijing, New York (City and limits. Rome, Beijing, New York), Nuova Cultura, Roma 2012, the proponent maintained that among the contemporary metropolises providing an authentic model of organised life and economic development, above and beyond national boundaries and geographical entities, two categories of individual cities can be clearly distinguished: first of all, the unanchored cities, among which can be numbered the great contemporary African metropolises and the Instant Cities of the Far East and the anchored cities (Roma, Beijing New York), which base their growth and their metamorphoses on the full length of their own past history, anchoring them (in point of fact) to the physical and symbolic structures that belong to the place they inhabit and to their memories.

Furthermore, in *La città e i suoi limiti interni* (The City and its internal limits) Bloom, Neaples, 2014, indeed, the thesis presented in *Città e limes* prevalently based on an ever growth model was discussed and compared to a model considering Life and death, as the prevalent historical urban condition and considering the new condition of Urban inclusion/exclusion.

The proposed papers will comparatively analyze the mentioned published studies with the most significant researches on "fringe belts" published on Urban Morphology and with other international research groups working on "city limits", "urban form" and "frontier urbanism".

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Radial fringe formation

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The reference to the concentric city model, that is implicitly incorporated into the fringe belt concept, has resulted in an under-representation of fringe belt studies concerning other models. Only a few studies draw explicit attention to the validity of fringe belt properties separately from its belt form. This paper seeks to contribute to this goal, by examining general processes of fringe belt formation and transformation, being applied to the specific case of the radial fringe of Eindhoven

Eindhoven is an industrial town, located on the elevated sandy land in the southeast of the Netherlands. The radial fringe of the town came to development prior to the planned extensions of the industrial heyday and post-war periods. Crucial to understanding the logic of the formation and embedding process of the radial fringe is the fact that the notion of centrality was not directly linked to the central city but primarily to the pre-existing polynuclear network. The radial shape was not only strongly determined by the network but was also closely interrelated with the socio-economic dynamics of the region during the shift from agricultural to industrial society.

The case study demonstrates two fundamental aspects that point out a distinct logic of the radial fringe. The first concerns the geographical and functional relationship between the fringe and the radial access roads, the second concerns the geographical location of the fringe plots related to the central core of the town. The analysis leads to speculations on the role of the embedded fringe structure within a new geographical configuration of the urban economy, social structure and urban governance.

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Fringe belts of the city of Yeniseisk as a resource for the historical renovation

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- 232 Yeniseisk is the historical city administrative center of the Yeniseiskaya guberniya (Yeniseisk's administrative region within the Russian Empire - in our days Krasnoyarsk Administrative Region) since the end of XVI till beginning of the XX century. Long years it was trade, industrial, religious, educational Siberian core as well as the host of annual Fur Fair, crafts, productions of the golden miners. Now it has status of shrinking town and candidate for the list of UNESCO world heritage. UNESCO committee determined the main problem as the historical panorama losing. Krasnoyarsk regional administration is searching for the strategy of the organic development using the scientifically based reconstruction of the city historical core as well as its fringes. Fringe belts still contain original Siberian samples of unique civil architecture, and more over some traditional industries, gardens, etc. everything that really could be lightly reconstructed for the purposes of the core maintenance including contemporary interventions. Old times, functional processes evidently leaved imprints in the forms of individual house holdings as well. Fringe belts could be considered as an integrating dialectic "sponge" between new and old functions, architecture and new and old forms of urban life "inscribed" into historical and contemporary world.

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Morphology of urban organism in Cyprus. The effect of borders and political changes in the fringe belts of Girne, TRNC.

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The contemporary city is developing inside and outside the limits of administrative territorial entities, and sometimes the urban organism is out of the control of local town planning. Nevertheless city limits, within the formation process of urban tissues, develop through time changing status from dividing limits to centralizing areas (Caniggia and Maffei, 1979), (Strappa, 1995). The notion of “fringe belt”, as developed by M.R.G. Conzen and the school of urban morphology of the University of Birmingham (Conzen, 1960), (Whitehand and Morton, 2004), describes coherently the change of status of these areas. This paper analyses the formation and change of fringe belts in the city of Girne, TRNC (Kyrenia, Cyprus). The case study of Girne, TRNC, as developed after 1974, is an interesting example of change in urban growth within a different State and local authority which enhances the open fringe belt formation, as happens in most metropolitan areas, determining a scattered and unplanned urban growth. The post 1974 changes of the fringe belts of this city will contribute to the further comprehension of urban policies used in the Turkish Republic of Northern Cyprus after the division of the island following the Turkish military occupation. The case study of Girne (Kyrenia) will be also useful for the discussion and the comparative analysis of post 1974 urban growth of cities in the south side of Cyprus (Charalambous and Hadjichristos 2011), following the latest trends of the research in urban morphology (Gu and Xu 2014) to understand the different land use policies, the property issue, the contemporary urban planning policies and the future urban design strategies in Cyprus.

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Local Networks Forum

Arab Gulf Network of Urban Morphology

The Morphology of the Transient Cities in the Arabic Gulf

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- 236 The urbanism of the Gulf refers to Dubai, a powerful and successful model, based on a smart combination of real estate and leisure, with the derived phenomena: bigness, iconicism, homogenization. Next to this model there is a world of small and medium cities, born as oil fields or small provincial administrative centers, consisting of extended serial urban fabric with essential facilities, or huge conurbations as Riyadh that growing exponentially along elementary geometric patterns of Anglo-Saxon origin, has "forgotten" a historic core of 300,000 inhabitants.
- What unites this diverse world is not the model of the shimmering instant city, as the absence of urban design, intended as the disciplinary body of projects, rules, guidelines that control the architecture of the city. Today a locational planning as part of a infrastructure plan is passed directly to the project of the single architecture, leaving the intermediate scale, which alone can give proper configuration to parts of the city. This is not, however, a typical character of the transient city of the Gulf rather the typical evolutionary phase of the global city.
- We must not forget at the same time that the region has past urban civilizations such as Yemen and Oman oasis, extraordinary urban complex organisms, testimonies of urban life authentically sustainable. The section Isuf Gulf must promote a renaissance of the urban form of the contemporary Gulf cities transferring those principles and rules of the local tradition, which are the guarantee of the organic city, sustainable and with a strong personality.

Chinese Network of Urban Morphology

Four Views on Chinese Morphology

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The instrumental role of urban morphology in Chinese urban studies have brought new insights to many issues as well as generated previously unidentified knowledge that in return informs the established discourse of urban morphology. This paper will address four of these kind of issues: (1) the morphological adaptation of socialist plans and layouts in contemporary market economy; (2) the rules and paths of evolution of rural morphology where arrangement of buildings is prioritized to alignment of plots; (3) mathematical description and assessment of compact urban form and its relationship to urban environment; (4) the mediating role of urban form between historical and empirical factors in contemporary context.

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Italian Network of Urban Morphology

The notion of process in design in historical centers

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The notion of process is based on the belief that urban design and design of the building fabric are nothing more than the result of arranging developed and orderly human structures within a sequence which progresses from the incipient form to the contemporary layout. Progressive humanisation of the territory with constant, mutual adaptation of the parts with regard to the whole. Picking up on some key elements in western geographical thinking, Muratori and Caniggia laid the foundations of the notion of process and type, and started to single out the all-important working instruments for interpreting historic architecture and fabric. Rome's school of urban morphology, which has examined these observations more closely in recent decades, puts forward the question of design in historic fabric as one of the fundamental paradigms of the contemporary city. Design must interpret the process of transforming the fabric as one of the key factors for understanding the essence of architecture in its ongoing transformation and specialisation as regards urban organism and type. Making changes to the historic fabric, which is the result of congruent and proportionate continuity, entails design aimed at maintaining its vital and cooperative parts; it means proposing an additional adaptation of its parts with regard to the renovated whole and in relations with elements on the upper scale. But it also entails acknowledging in the process of type, the admissible limits and relations found in the dynamic essence of the parts and of the whole. This paper is aimed at reconsidering design in the historic fabric as a project to conserve the essence of architecture, a dynamic safeguard project which takes into consideration the opportunities of specialising and tying together the building type and the historic building fabric. To this end, it offers some interpretation parameters in order to understand the process of transforming the urban system, fabric and type. Parameters which make it possible to distinguish the random from the systematic, episodic transformation from planned transformation, looking on the building fabric and architecture in general as a text to be interpreted in its integrity and in the values that can be found in cartographical signs. Which brings what has actually been achieved three-dimensionally onto two dimensions. Tracing back of the form achieved shows us the essence and synthesis of a process clearly seen in the architecture. The question, currently being examined in greater depth during graduate school studies (coordinated by Prof. Strappa), has generated a consideration regarding the special complex building. A unique organism which plays a specific role in both the building fabric, the re-blending of which it proposes, and the urban organism where it presents itself as a special node.

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Serbian Network of Urban Morphology

Contemporary architectural and urban design practice in Belgrade and Serbia through the perspective of urban morphology approach

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By analysing the contemporary architectural and urban design practice in Belgrade and Serbia the challenges in urban development can be identified and explained through the perspective of an urban morphology approach. The majority of these challenges are as a result of an inadequate relationship between different scales of professional interventions in built environment, as well as, an ineffective relationship between theory and practice. It should be noted that due to these challenges in urban development, the role of architects and professionals involved in urban designing and planning has been questioned. The findings indicate an emerging belief for the need for improved dialogue between professionals in relation to urban development in Serbia, as well as, interaction with wider professional networks. The general issues have already been expanded upon through the discourse of urban morphology and can result in the drafting of guidelines for further improvement of designing and planning practice in Belgrade and Serbia. The principal issues the urban morphology network in Serbia would be faced with are: consolidating up-to-date research and contributions; translating the key references and Glossary present within the Urban Morphology discourse; integrating theoretical and applied knowledge - developing a common morphological language – as a conceptual framework applicable to various typologies and urban tissues; providing a better understanding of the complex phenomenon of urban form; and introducing the morphological dimension to plans, that is, the concept of form into planning.

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Turkish Network of Urban Morphology

Morphogenetic survey on the transformation of a political center to a transportation hub: Taksim & Gezi park, Istanbul

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Taksim, which is known as one of the symbolic open spaces of Istanbul, is under transformation since the day of its establishment. It is not only the main centre of entertainment, retail and cultural activities, but it also functions as a connection node between the old and new central business districts of the city. Throughout history, Taksim has played an important role for both the city and the country as it was the "host" of several major social events while sometimes it was the direct "subject" of these events.

Taksim has long been the subject of debates on account of its unresolved pedestrian and vehicle traffic. In September 2011, the Metropolitan Municipality of Istanbul has approved a pedestrianisation project for Taksim Square. Despite the objections raised by professional organizations and civil protests, the area went under construction in order to build a tunnel system for vehicles, which would leave the surface above as a pedestrian-only platform, and to reconstruct a military barrack, which was once located in the place of Gezi Park but was demolished in the 1940s. The pedestrianisation project for Taksim Square was completed in 2013; however, the construction of the barrack was cancelled due to the wave of demonstrations throughout the country. The underground tunnel system, which drastically affected the patterns and orientations of movement flows, is under operation; Gezi Park remains as is with slight improvements, and Taksim Square, which is currently a wide concrete space, waits for an urban design project.

The aim of this study, is to achieve a morphological survey on the transformation process of this interesting area, turned from an urban fringe, to the political heart and then to the public transportation hub of the metropolitan Istanbul. For the purpose of this research study, the spatial history of Taksim is addressed in six periods; before 1920, between 1940-1960, 1960-1980, 1980-2000 and 2000 to date. With the determination obtained by mapping techniques, not only the morphological structure but also the urban form components of the different periods are analysed comparatively.

The study of the historical evolution of Taksim square and Gezi Park area related to their form and meaning, will shed light to the further studies analysing the effects of modern interventions on the sites which has special meaning and also contribute morphogenetic surveys throughout the world.

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Spanish Network of Urban Morphology Establishment of the Isuf-Hispanic (Isuf-H) regional group

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242 Introduction and justification

The research on urban form being developed by ISUF, the online magazine UM and the origin and contents of the papers of Annual Meetings, stated that the investigation of the urban form, could be extended in some specific aspects such as those linked to the historical urban heritage in the context of the Countries of Spanish Language (CSL). Also if we pay attention to the specific aspects of the big changes that have occurred in this territorial and urban settings As a way to complete the ISUF network, the ISUF-HISPANO (ISUF-H) main objective is the creation of a network in the Countries of spanish lenguaje (CSL).

Special attention for ISUF-H is the architecture and urbanism of the Spanish-speaking world, both in its economic aspects and incorporating the transformations of modernity and contemporaneity, as well as problems arising from the current environmental crisis, and it's emphasis on the need for new horizons for urban planning and architecture of the future.

Creating ISUF-H will be based on the 8 points signed by the members of the core group teachers: José María Ureña, Borja Ruiz de Apilánez, Eloy Solís Vicente Mas, Javier Pérez Igualada, Ignacio Bosch, Luis de Armiño and Vicente Colomer, on the report of the 1st meeting of Valencia of October 2, 2014 and are as follows:

1. To affirm our will to found the ISUF-Hispano (ISUF-H) as Regional Group INTERNATIONAL SEMINAR ON URBAN FORM (ISUF) and achieving fully operational in September 2015, coinciding with the 22nd Conference in Rome.
2. Contact ISUF Council to communicate our initiative and seek their help and advice.
3. Submit the advice of ISUF our proposal to organize a first conference ISUF-H and Valencia's bid to host the 24th Conference ISUF 2017.
4. Contact the boards of other regional groups such as Portugal and Italy PNUF, ISUF ITALY, to take note of the ways that have been organized.
5. Generate a list of candidates founding members from different institutions and countries, to represent the Hispanic community of researchers from urban form.
6. Explore possibilities for funding and other requirements for the operation of ISUF-H.
7. Explore options for developing a webpage of ISUF-H
8. Explore possibilities for editing a newsletter or magazine.

Speaking of Rome ISUF 2015, whose theme is "City as organism: new visions for urban life", we propose to ISUF Valencia 2017, the theme "urban form and social use of space", which is intended as a wake-up call on the future architecture and urbanism, which is only justified to the extent that will serve to improve the living conditions of life of mankind in society.

RESEARCH AND PRACTICE OF PROPOSALS FOR URBAN FORM ISUF-H

1. Definition of a space marked by the same language
 - 1.1 Territorial and urban aspects common to the countries of Spanish Language CSL.
 - 1.2 The historical heritage, pre and post Columbian in CSL.
 - 1.3 Heritage common and specific aspects in the cities of the CSL.
2. Promote the exchange of interdisciplinary experiences: investigative, educational, urban and architectural practice Europe-America
 - 2.1 Strengthening the pooling of disciplines involved in the study and practice of urban form in the CSL.
 - 2.2 European City - American city: analysis, forms and techniques of intervention.
 - 2.3 Management and public-private concert in configuration space in the cities of Europe and America. Comparison of urban agents and operators.
 - 2.4 Euro-American Culture in the roots of the urban form of the cities of the CSL.
 - 2.5 ISUF-H, will have among its activities, participation in the implementation of operational Workshops of Architecture and Planning, coordinating universities and architecture schools in Europe and North America
3. Research on the shape of the recent urban expansion in Countries of Spanishlanguage
 - 3.1 Analysis of the profound recent changes in the cities of the CSL.
 - 3.2 The problem of Historic Centers: Characterization heritage. Research and technical review of urban revitalization.
 - 3.3 Research and intervention techniques in the informal city.
 - 3.4 Paradigm Cities in the CSL and its Urban Regeneration processes.
4. Integration of environmental studies in the analysis of urban form
 - 4.1 Urban form and climate in the different geographical areas of the PLE.
 - 4.2 Energy simulation tools for calculating energy expenditure.
 - 4.3 Impact of urban form in CO2 emissions into the atmosphere. Calculation tools.
 - 4.4. Urban form in CSL and impact of urbanization on climate change.

Polish Network of Urban Morphology

Marketplaces as particularly active urban public spaces

Monika Gołąb-Korzeniowska/ Anna Agata Kantarek

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The paper presents the traditions of research on urban form in Poland. Within the historical geography this tradition is continued today in an environment of geographers from the University of Lodz. For years, Professors Mariusz Kulesza and Mark Koter collaborated with the International Seminar on Urban Form and are the authors of both papers published in the *Urban Morphology*, Journal of the ISUF as well as implementing research methodology of English school. These studies present a descriptive approach. Research in the field of architecture, urbanism and urban planning studies tend to be prescriptive. The article discusses research on the history and monuments preservation of architecture and urban planning, town and urban planning and landscape architecture.

The notions of urban interior and urban composition are also presented.

At present architects dealing with issues related to urban morphology are: Margaret Hanzl and Anna Agata Kantarek.

As an example, the study by Monika Gołąb-Korzeniowska ('The Role and Importance of Market Places in Town's Spatial Structure - Cracow Case Study') is presented.

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Portuguese-language Network of Urban Morphology Urban Planning in Portugal: a review

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The Portuguese-language Network of Urban Morphology (PNUM) was established at the ISUF Conference in Hamburg in August 2010. It was the third national/regional network of ISUF to be created, after the establishment of the Nordic Network of Urban Morphology and of the ISUF Italy. Over the last five years PNUM has been promoting the study of urban form in Portugal and Brazil mainly through its annual conferences (Porto 2011, Lisbon 2012, Coimbra 2013 and Brasilia 2015) and its biannual journal, the *Revista de Morfologia Urbana*, developed in close articulation with 'Urban Morphology'. Additionally, the Portuguese-language Network launches in June 2015 its first Annual Workshop on Urban Morphology inviting participants for discussing and improving our ability to describe, explain and prescribe the physical form of cities. This paper focuses mainly on two fundamental themes that have been under discussion within the Portuguese-language Network (and, indeed, within the International Seminar on Urban Form) over the last years: 'comparative studies of urban form' and 'teaching urban morphology'.

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New Researchers Forum

Utility of urban morphology studies for the design process: some educational experiences

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248 Enhancing, within the educational teaching of architectural design, the strong continuity between the typological evolution of the built organism and the building to be designed (Petruccioli, 1998) can greatly improve the architectural design process. From the territorial scale, to the scale of the urban tissues, the understanding of the coherence of paths and settlement patterns within a given site morphology, is the prerequisite for the proper design of the built organism. The paper will illustrate some case studies, in Latium, Rome and Cyprus, focused on the knotting process (Strappa, 2013) and the Muratorian design method (Maretto, 2013), underlining the strong continuity (Whitehand, 2012) between the Conzenian approach and the Italian School of Urban Morphology (Marzot, 2002). From the form of the site and the diachronic evolution of settlement patterns, it is possible to infer the transformation to propose with the contemporary design. The territorial scale is therefore the specific methodological base for the full understanding of the scalar properties, verifiable within other scales, such as the urban organism scale, the urban tissue scale, and the built organism scale. (Cataldi, Maffei, Vaccaro, 2002).

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Comparing different morphological approaches

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A full version of this paper was first published in the journal 'Urban Morphology' (Oliveira et al., 2015). The diversity and complexity of the physical form of cities is reflected in the variety of morphological approaches to describe, explain and prescribe it. Researchers and practitioners dealing with specific urban form problems are often faced with the need to select between different approaches without much knowledge of their main strengths and weaknesses.

Research projects are frequently designed with insufficient thought being given to how their findings may be related to those of other studies. Problems of comparison are made more difficult by the fact that research is undertaken within several disciplines and published in different languages (Whitehand, 2012).

In addressing the need to develop comparative studies of urban form, some projects have focused on the utilization of one morphological approach, or one concept or method, in different types of urban area in different parts of the world. Whitehand (2009) describes the utilization of the method of morphological regionalization for identifying and mapping urban landscape units in different geographical contexts. Conzen (2009) offers a comparative assessment of the performance of the fringe-belt concept in the different cultural settings in which it has been applied. He also examines the results of the European Historic Towns Atlas, a programme concerned with the preparation of maps of individual towns at a common scale and similarly designed in order to develop comparative analysis (Conzen, 2008).

Other authors have explored the utilization of different approaches in a single study. Osmond (2007) proposes an integrated classification framework of urban form, bringing together complementary morphological techniques and applying them in Sydney, Australia. Pinho and Oliveira (2009) study the evolution of the urban form of Porto, Portugal over the last two centuries, combining Conzenian and space syntax approaches. Similarly, Griffiths et al. (2010) combine these two approaches, within an integrated GIS environment, to analyse the persistence of suburban centres in Greater London, UK.

Whitehand (2001) and Maffei and Whitehand (2001) explore the relation between the Conzenian morphological period and the Caniggian typological process. The latter concept sheds light on the former by conceptualizing how the forms that are characteristic of one morphological period are superseded by those characteristic of the next.

Kropf (2009) undertakes a critical analysis of publications representative of the spatial analytical, configurational, process typological and historico-geographical approaches. His ultimate goal is to establish a composite framework in which the different approaches support each other to provide a better understanding of human settlements.

The main purpose of this paper is to understand how to combine and co-ordinate different morphological approaches to improve our ability, as researchers and practitioners, to describe, explain and

250 prescribe the physical forms of cities. This research compares fundamental concepts proposed in each of the four different approaches to urban morphology: the morphological region (historico-geographical approach), the typological process (process typological approach), spatial configuration (space syntax) and the cell (cellular automata or, more generally, spatial analytical). The possibility of constructing a co-ordinating framework is explored. Due to length limitations the paper will focus on the application of the first and second approaches. A brief introduction to the third and fourth approaches is offered in the following paragraphs and their application in Porto is described by Oliveira et al. (2015).

Space syntax research began at the end of the 1970s, with the main purpose of understanding the influence of architectural design on social problems in many housing estates that were being built in the United Kingdom. Hillier and Hanson (1984) defend a theory that a descriptive autonomy for space can be established, enabling the consideration of a wider morphological variety to reflect the different relationships between space and society. A new view of architecture and the city is proposed, emphasizing those urban spaces that people move through and where social and economic activities are carried out. A key outcome of space syntax is the concept of spatial configuration, in which relations take account of other relations in a complex (Hillier, 1996).

Cellular automata (CA) are simple, discrete representations of spatial systems. They operate within a grid based on elementary rules defining the state of the cell (on or off) according to the state of the neighbours (the adjacent cells) and their relation to the cell itself. CA operates over time. Starting from an initial state (defining which cells are on or off), each generation is updated based on the previous cell states according to given rules (such as the number of neighbours required for turning the cell on). This produces often unpredictable patterns and dynamics, implying that the system is capable of reproduction, and also of simulating self-organizing, emergent structures.

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