The new metropolitan voices.

Glossary of metropolitan terms.

Ramón Reyes Rodríguez (coord.)
Antonella Contín (coord.)
Patrizia Giordano (coord.)

UNIVERSIDAD DE GUADALAJARA
Red Universitaria e Institución Benemérita de Jalisco

CUAAD
CENTRO UNIVERSITARIO DE ARTE, ARQUITECTURA Y DISEÑO

The new metropolitan voices.

Glossary of metropolitan terms.

Ramón Reyes Rodríguez (coord.)
Antonella Contín (coord.)
Patrizia Giordano (coord.)

Co-funded by the Erasmus+ Programme of the European Union

Universidad de Guadalajara

Dr. Ricardo Villanueva Lomelí
Rector General

Dr. Héctor Raúl Solís Gadea
Vicerrector Ejecutivo

Mtro. Guillermo Arturo Gómez Mata
Secretario General

Centro Universitario de Arte, Arquitectura y Diseño

Dr. Francisco Javier González Madariaga
Rector

Mtra. María Dolores Del Río López
Secretario Académico

Dr. Everardo Partida Granados
Secretario Administrativo

Av. Juárez 976. Col. Centro
C.P. 44100, Guadalajara, Jalisco, México.

ISBN 978-607-571-455-4

This book was edited in december 2021.
Made in Mexico.

The new metropolitan voices.
Glossary of metropolitan terms.
First edition, 2021

Coordination
Ramón Reyes Rodríguez
Antonella Contin
Patrizia Giordano

Texts
Saúl Alcántara Onofre
Olga Clarisa Becerra Mercado
Socorro Camacho García
José Castro López
Antonella Contin
Blanca del Espino Hidalgo
Valentina Galiulo
Patrizia Giordano
Gabriel Lanfranchi
Massimiliano Lepratti
Franco Marchionni
Lucio Marinsalda Pastor
Rubén Márquez Rizo
Emilio José Mascort Albea
María Teresa Ocejo Cázares
Gabriela Claudia Pastor
Ramón Reyes Rodríguez
Eliazar Reyes Rodríguez
Domingo Sánchez Fuentes
Stefano Sanna
Carlos Tapia Martín
Laura Torres
Andrej Žižek

Cover and editorial design
Jorge Campos Sánchez
Diana Berenice González Martín

Authors

SAO Saúl Alcántara Onofre

OCBM Olga Clarisa Becerra Mercado

SCG Socorro Camacho García

JCL José Castro López

AC Antonella Contin

BDE Blanca del Espino Hidalgo

VG Valentina Galiulo

PG Patrizia Giordano

GL Gabriel Lanfranchi

ML Massimiliano Lepratti

FM Franco Marchionni

LMP Lucio Marinsalda Pastor

RMR Rubén Márquez Rizo

EJMA Emilio José Mascort Albea

MTOC María Teresa Ocejo Cázares

GCP Gabriela Claudia Pastor

ERR Eliazar Reyes Rodríguez

RRR Ramón Reyes Rodríguez

DS Domingo Sánchez Fuentes

SS Stefano Sanna

CT Carlos Tapia Martín

LT Laura Torres

AZ Andrej Žižek

Table of contents

1. Prologue

Metropolitan Glossary is one of the fundamentals of the TELLme project. Together with the Metropolitan Existing Situation Analysis (MESA), and General Issues and Principles (MGIP) it makes the basis of building the complexity of Metropolitan Discipline.

1.1 The need of a metropolitan glossary

The need of a glossary for the metropolitan discipline emerged from the long experiences of the HEI partners working in the multidisciplinary environment of metropolitan context. A clear set of definition describing various concepts of the new subject is fundamental for easy communication not only amongst the different fields in the academy but also with the practitioners. Every sector has its own terminologies defined within the circle and there is a limit in using the terms without reaching an agreement on the meanings of the vocabulary used in the discussion. However, multidisciplinary approach does not require individuals to be professional in all required fields; It rather needs various professionals to understand that priorities are set different when coming from a different discipline. While encouraged to think out of their own box, it is important to have some inside views in other boxes to reach a holistic conclusion. Glossary serves as the basis in understanding the different perspectives from various fields and topics.

The new discipline, by its nature, is practical as it is theoretical, requiring a refreshing perspective in looking into practical issues that leads to the building up of new knowledge. The Metropolitan Glossary needs to go beyond the traditional list of words and thesaurus format and represent the evolution of the new knowledge. Starting with the traditional definition, documenting how the meanings of these words changes, and providing new definition when necessary will record the evolution of the discipline. Moreover, the terms will start to create conceptual relations amongst themselves, crossing disciplinary boundaries. This is closely related to the perception of contemporary metropolises as a complex system where all parts are interconnected and issues cannot be separated as a static form; when an element in the system is modified, the entire system fluctuates in an unexpected way. Consequently, the construction of knowledge requires to reflect this systematic relationship amongst concepts. Hence, through research and practice, the glossary will shape the discipline itself.

Finally, as one of the main goals of the metropolitan discipline is to highlight the local context and value in the process, as much as providing a global platform to share knowledge, it is mandatory to maintain the heterogeneity of the concepts existing in various parts of the world. In the past few decades, the rapid globalisation led to a phenomenon of superimposing efficiency-oriented development that lacks local sensitivity. The challenge of the metropolitan discipline is to understand the multifaceted aspect of the metropolises and balance the various values beyond efficiency. The Glossary should provide the platform for the inclusive approach in the study and practice of the metropolises.

1.2 The characteristics of the Metropolitan Glossary

The complexity of the new discipline requires a different perspective in framing the issues and solutions and the Metropolitan Glossary is a way to begin creating the new conceptual structure of the discipline. Based on the primary needs identified above, the characteristics of the Metropolitan Glossary can be divided in four main categories: linkage between practical values and theoretical principle background, link between qualitative narrative and quantitative data, flexibility, and accessibility.

Clear communication amongst various agencies in a metropolitan project is an important issue. The issues and the solutions in the practical context are as much valuable as the theoretical knowledge in understanding the principles of the metropolitan structure. However, the time difference in the academia and practice create the gap between the theory and practice. Often the symptoms of metropolitan issues occur unpredictably, and the decisions need to be made in real-time when the gaps are revealed to reduce the negative impact of the conflict. Even though in some cases the academic knowledge is required in the form of consultancy, often the knowledge is highly specialised and has a limit in addressing the complexity that spans across multiple disciplines. Therefore, it is fundamental to change the way the knowledge is being built from the beginning.

The Metropolitan Glossary has multiple entry points so that both theoretical and practical knowledge is accumulating in the form of keywords. The discussion goes beyond the individual terms and focuses on the relationship amongst words composing the concepts that are fundamental in the metropolitan discipline. It is an open-ended collection of vocabulary brought and discussed by experts of various fields. The initial keywords are provided with the existing

disciplinary knowledge, however, through research and especially, training and case studies which involves both practitioners and academia, the existing knowledge is modified, duplicated, and adapted, while new topics are added as neologism and linked to the existing knowledge. This approach also allows us to include the very local knowledge that are often in the local language of the context we are working in. The limit of translation always exists, nonetheless, an attempt to explain keywords that capture different cultural concepts is a challenge that must remain as a core approach in the Metropolitan Glossary.

As certain parts of the glossary are constantly reviewed, tested, and updated, the Metropolitan Glossary remains as a living body of knowledge throughout time. However, the newest knowledge cannot exist without the past observations and the evolution of thoughts, therefore, it is important to keep track of the change in literature behind the newly defined keywords and compare the hybrid knowledge with the traditional disciplines that represent a certain value of the past. This approach allows each professional to fully include their expertise within the framework of the metropolitan discipline while pushing the borders of specialised knowledge in systematic way. For researchers working on peculiar topics may trace the genealogy of their knowledge by referring to an already existing cross-disciplinary knowledge. Finally, the knowledge accumulated in this manner become the way the future generation can study and approach the metropolitan complexity.

Since the Metropolitan Glossary is a **result of collective intelligence,** it is essential to make it available and accessible both as an evolving knowledge and an applicable tool. Providing a structure that is flexible enough to create multiple relations and constant update after the initial entry of knowledge is an important aspect of the glossary. Moreover, easy retrieval of the knowledge while the metropolitan issues and gaps arise is fundamental. This characteristic of the glossary led us to develop a particular way to structure the knowledge and represent the glossary. Semantic Package is an abstract container where all relevant concepts are stored through keywords. The connection amongst different knowledge based on the hypothesis and reading of a metropolis is done by drawing a '*zone of reading*', which is describe in detailed below in the semantic package section. The zone of reading provides a potential to conceptually cross disciplinary boundaries and observe new topics that are relevant in the metropolitan system.

Another important characteristic of the Metropolitan Glossary is how it works as a translator of the qualitative information to qualitative data that provides a base for a decision based on physical mapping, that is again a qualitative interpretation. This role is fundamental in facing the criticism against data-driven approach in nowadays urban studies. The overwhelming amount of urban data allowed us to interpret the city context in a way that could not be imagined in the past. However, questionable data sources and heavy dependency on calculation has drawn conclusions favorable only to values that are representable with quantifiable data, which are often linked to economic efficiency. Although concerns on validity and governance of data still remain, pairing with literature and grounding on real situations, the use of data could provide a strong support for decision-making in complex situations with multiple stakeholders. By connecting various concepts in the semantic package, the Metropolitan Discipline takes a science based approach and the keywords in the narrative of a metropolitan issue, that is qualitative, can be translated into existing or to-be-collected quantitative spatial data for mapping in the later stage. The Metropolitan Cartography is built using the data set defined by the semantic package. The use of semantic package, that is multidisciplinary by nature, in mapping attempts to prevent the predominance of a single value, which often is the economic efficiency. Utilising glossary as a tool to collect theoretical and practical concepts and translating them into time-spatial data also ensures the evolution of glossary itself.

2. Methodology

2.1 The Structure of the Metropolitan Glossary

Definition vs. Meaning

In the glossary, there are two ways of describing the keywords: definition and meaning. Definitions are assigned to keywords that has clear categories that they belong to. Most of the keywords related to data sets naturally come with a definition and these are stored in the glossary with the data source. On the other hand, the keywords that convey a theoretical concept behind have *meanings* to underline the value-loaded interpretation of the keyword within the metropolitan discipline.

From the semantic point of view, the definition of a term is a way of transmitting encoded information of some element or object. To more clearly convey what is meant by each term proposed in the metropolitan scale, we use three elements that complete the idea, and that are included in what is called the semantic triangle of Ogden and Richardson, modified by Stern Ullman (Fuentes, 1998, in Miyara et all, 2014): 4) the signifier (term), It is the part of the sign that the receiver perceives by any of its senses: 2) the meaning (of the term), is the concept or idea associated with the signifier, its semantic content, it is the explanation of what the term is , and 3) the referent, it is the reality, the physical expression (in the case of metropolitan terms) of the object or phenomenon. We can see the above in the following example:

1. Signifier: “metropolitan architecture”
2. Meaning: «visión multidisciplinar sobre el espacio físico de la ciudad y la arquitectura (…) Una arquitectura metropolitana en la actualidad (…) debe concebirse relacionada a una magnitud de amplio rango, que tiene que tener como referencia lo más próximo, y debe ser colocada en un contexto de movilidad masiva de personas y bienes que implica una relación diferente entre los individuos y grupos». (Contin, 2015)

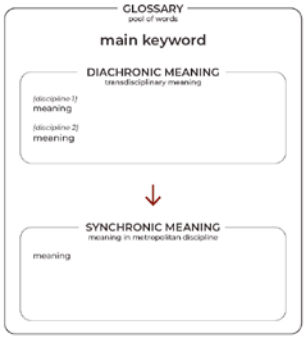
> *“Is a project of architecture. Urban design and landscape that deals with a new incommesurable scale and metropolitan dynamics. It requires a new sensibility to the natural ground. The environment, new ways of citizenchip that do notconceive the public space as a solid street-square matrix. [It] means to think about new styles of behaviour indued by virtual communica-*

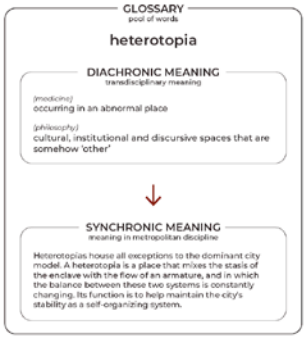
tions in a real time, a different built form type, land use and paesaggio [total built landscape, editor's note] as a new reality made by a strong conncection between the green-blue-grey infrastructures." (Contin, 2015: XII)

1. Referent :

Diachronic and Synchronic Meaning

In order to capture the evolution of a term in a multidisciplinary environment, we divide the meaning in two types: diachronic meaning and synchronic meaning (fig. 1). The diachronic meaning traces the history of a keyword. Often, terms that have a meaning in one discipline is borrowed in another discipline to explain a new concept and becomes a common term in the latter discipline. Even though the very fundamental definition might not have changed, the word conveys different meanings in the different disciplines. It is important to provide this shift of meanings rooted in a common origin in the multidisciplinary working environment, in order to expand the awareness of other area for the experts coming from a specific field. On the other hand, the synchronic meaning is the current meaning used in the metropolitan discipline. Some keywords keep its traditional definition in the new discipline while others have a new definition in the metropolitan discipline that evolved from the traditional definition. New keywords may be added as required to describe hybrid concepts and/or phenomenon in the metropolitan discipline.





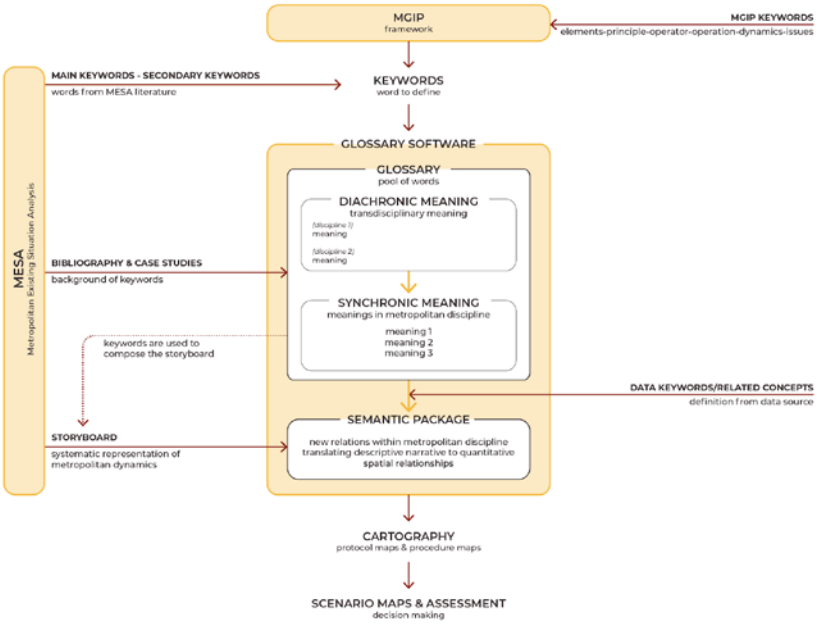
For example, *heterotopic* has a medical definition, '*occurring in an abnormal place*'. The word *heterotopia* derived from the medical field was adopted by

philosopher Michel Foucault in the late 1960s to describe certain cultural, institutional and discursive spaces that are somehow 'other'. These two meanings are the diachronic meaning of the word heterotopia. The synchronised meaning in the metropolitan discipline, on the other hand, in the metropolitan discipline D. G. Shane's definition of heterotopia is used. He says 'Heterotopias house all exceptions to the dominant city model. A heterotopia is a place that mixes the stasis of the enclave with the flow of an armature, and in which the balance between these two systems is constantly changing. Its function is to help maintain the city's stability as a self-organizing system.' By documenting the trace of change in meanings in various disciplines, it is possible to witness the origin of the term and allowing other experts to add, emendate or change the word.

Categories of Keywords

Keywords are the words that hold the most relevant meaning in describing the concepts in the metropolitan discipline. There are mainly three categories of keywords (fig.2) in the Metropolitan Glossary depending on the type of source they come from. **The Metropolitan General Issues and Principles (MGIP) keywords** are a set of predefined keywords within the TELLme project to describe the MGIP framework[1], a feedback mechanism where practical experience is reflected in the theoretical work of the Metropolitan Discipline. The keywords identified as **issues and principles** comprise the four metropolitan dimensions: territory, society, governance, and economy. Whereas the **operators, operations,** and gaps are compound keywords that describe the process of extracting the rule of the shape following the principles. These operative keywords tend to be site specific, therefore are accumulated as the knowledge in metropolitan discipline expands.

1 See report 03 Integrated Approach to Metropolitan Complexity for details.



ırds

The second type of keywords are the **main keywords.** These keywords represent a concept relevant to the new discipline, therefore may have both synchronic and diachronic meanings. Sometimes, a secondary keyword might follow, depending on the depth and breadth of the knowledge the main keyword represents. These keywords are selected from both theoretical bibliography and practical experience and are used to create new relationship amongst existing knowledge and build data catalogues to spatially represent the territories and their dynamics. The rules of selecting and synthesising data connected to the keywords is done previously on an abstract level through multidisciplinary research.

Finally, a set of **data keywords**, or related concepts, are included in the glossary. These are often the keywords of data sets where the exact definition is provided by the data source. It is necessary to include these keywords not only for data reliability and validity, but also to demonstrate the connection between the main keywords and the data keywords. As the discipline expands with time, new data set will be collected and added to both the glossary and the TELLme Hub.

In short, the classification of terms used in the glossary is defined as follows:

Metropolitan General Issues and Principles (MGIP)

- Goal: the term defines a goal or disciplinary objective
- Principles: the term constitutes a disciplinary principle
- Issues: the term refers to a problem or constitutes a theme
- Operators: the term expresses a function that transforms another
- Operations: the term expresses a process or mode of operation or operation of something Keywords and concepts (in Semantic Packages):
- Keyword: a word describing the the core, the content or the main topic of a document
- Related concept: concept related to the term
- Protocols: terms related with for protocol map names

Other: any element of the glossary that does not conform to the previous categories, but that it is necessary to define for the Metropolitan Discipline

d) Glossary template

The development of a term in the glossary is made up of five fields:

- meaning; to understand the meaning of the term, we proceed, according to the scientific procedure, to consult recognized authors who have used the term in their writings. Once the bibliography has been identified where the definition or meaning of the term appears, the phrase with the searched content is selected and transferred to the glossary, citing the author consulted. In case you do not have enough bibliography, because the term is of very recent use, the term, only in these cases is defined by the authors of the glossary;
- context: in this section of the glossary a bibliographic search is made where the term is literally mentioned, and the paragraph where the term appears is translated, citing, of course, the author of the text. Understanding how and in which context the term is used allows for a reinforcement of the meaning of the term;
- Synonims: there are some terms that are used in different contexts and / or disciplines to express the same problem or metropolitan phenomenon, so the glossary includes, if they exist, the synonyms of the term, in order to make it clearer its use. In this case, if it exists, only the word corresponding to the Synonyms: is included;
    1. comments: all additional explanations (meanings, evolution

of the term, etc.) are included in this section. The reflections and comments made here are intended to give more in-depth explanations of the authors of the glossary or other authors;

- Equivalent: synonims: since the objective of the glossary is to be consulted by a wider audience at an international level, it includes the translation of the term in English to its Equivalent: of Spanish and Italian; 6) references: finally, a list of the bibliography consulted for the construction of the terms is included in the glossary. The sum of the bibliography consulted constitutes in itself an important contribution of the bibliography related to metropolitan subjects.

Glossary Software

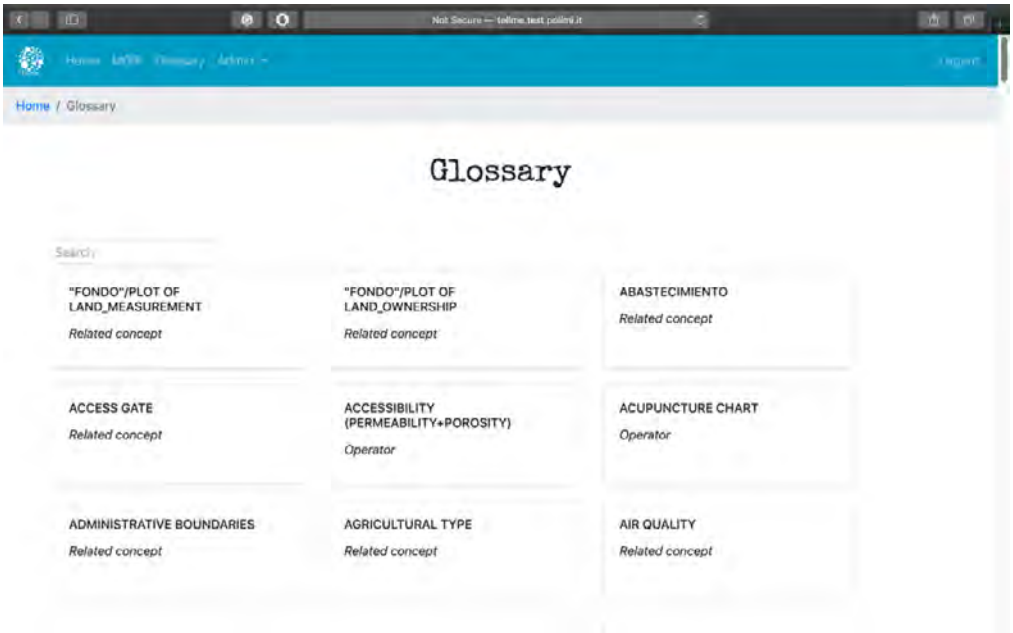


Fig.3 Glossary section of the Glossary Software

The Glossary Software (http://tellme.test.polimi.it/tellme_apps/tellme/home) is the main tool to enter and manage all keywords. It also allows the users to see the existing semantic packages of the metropolises that are studied amongst the TELLme partnership and to create new ones (fig.3). The software is a mandatory tool in accumulating the knowledge of the metropolitan discipline, while building and communicating the newly constructed knowledge during the training and metropolitan projects (fig. 4).

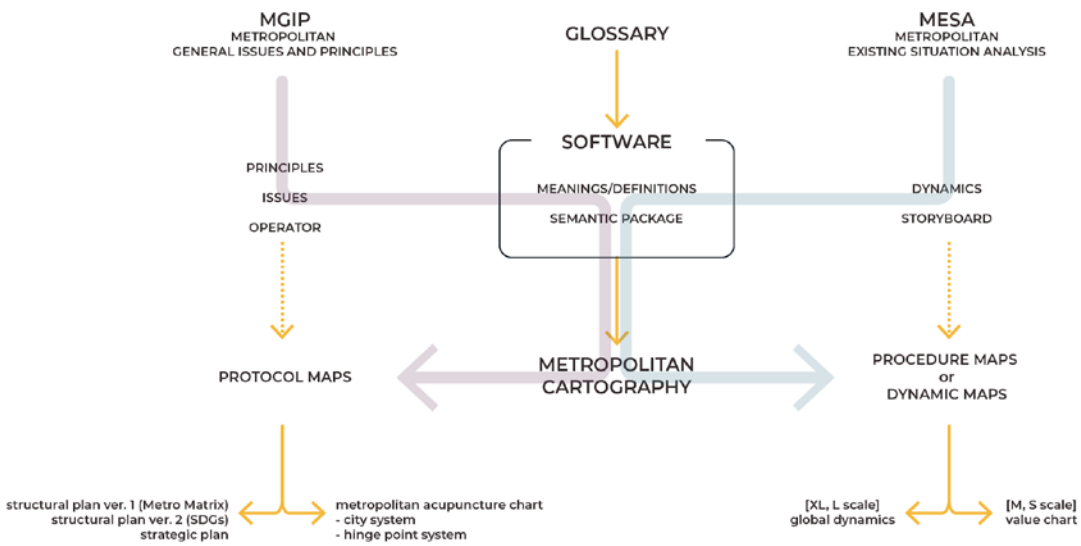


Fig.4 The role of glossary software

The entry of a glossary requires the following sections: an image representing the concept, type of the keyword, synchronic meaning, diachronic meanings (if applicable), secondary keyword (if applicable), context describing the use of the keyword (usually excerpt from a bibliography, list of reference, and note. Providing the theoretical background and context allows the keywords to be valid in the academic environment and clarify the use of the term in the metropolitan discipline. Moreover, with flexibility in creating relation amongst various concept through keywords allow neologism to be easily integrated amongst the existing knowledge.

The second part of the glossary is the semantic package of protocol maps and procedure maps (fig. 5). In this section, users can find the semantic packages of the protocol maps in five different scales (XL, L, M, S, XS). **Protocol maps** are a set of maps showing the fundamental relationship amongst elements constructing the metropolitan system. They reveal the metropolitan structure by layering physical aspects of geographic, historical, and geometrical data. Protocol maps are used as a base for discussing the dynamics in the problem finding phase and all metropolises have the same set of maps that are comparable. Using the terminologies entered in the glossary, the semantic packages of the protocol maps provide the theoretical explanation of connecting the various concepts and data set.

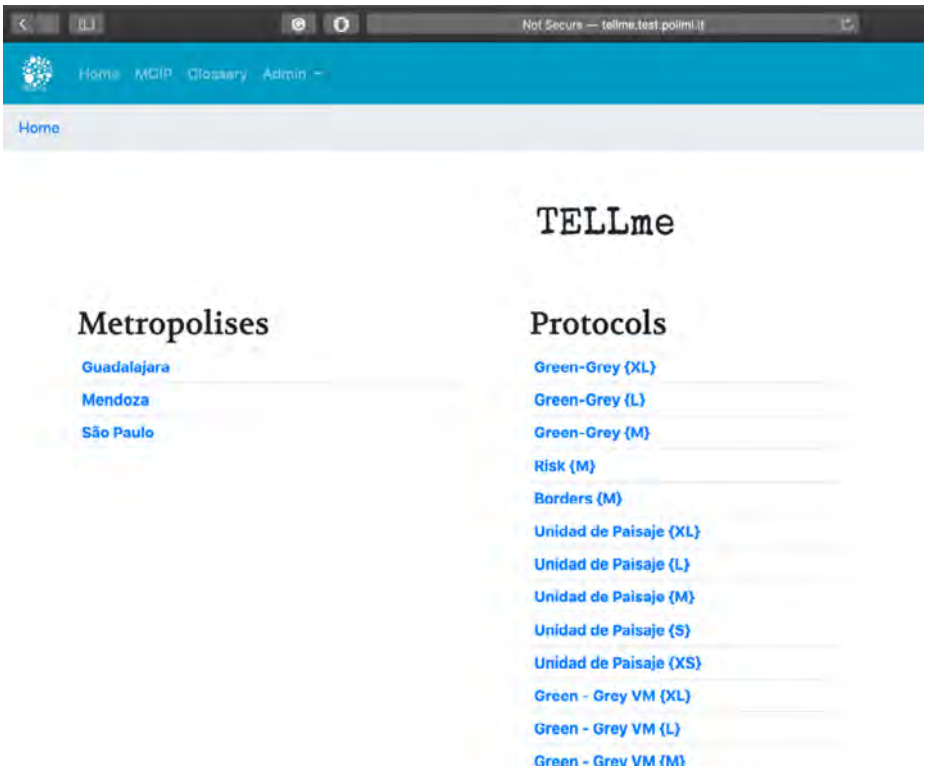


Fig. 5 Protocols and Procedure (Metropolises) Semantic Package Section on Glossary Software

Contrarily, **Procedure maps** are a set of maps representing the spatial impact of the process of ongoing metropolitan dynamics identified during problem finding phase. The maps are used as a base for deciding the operations necessary for the metropolis. Each metropolis has its own set since the dynamics varies from one metropolis to another. The construction of the **procedure semantic package** (fig. 6) requires a prior step of ***storyboard*** that represents the metropolitan narrative constructed during the stakeholders meeting in a systematic way. Storyboards are drafted under a metropolitan issue and the metropolitan dynamics[2] are highlighted within the represented system. A principle is assigned as a direction of intervening the dynamic system. In this case, the role of the semantic package becomes evident, because only through the semantic package and zone of readings, new knowledge describing the metropolitan narrative can be represented in data.

2 See report 03 Integrated Approach to Metropolitan Complexity for details.

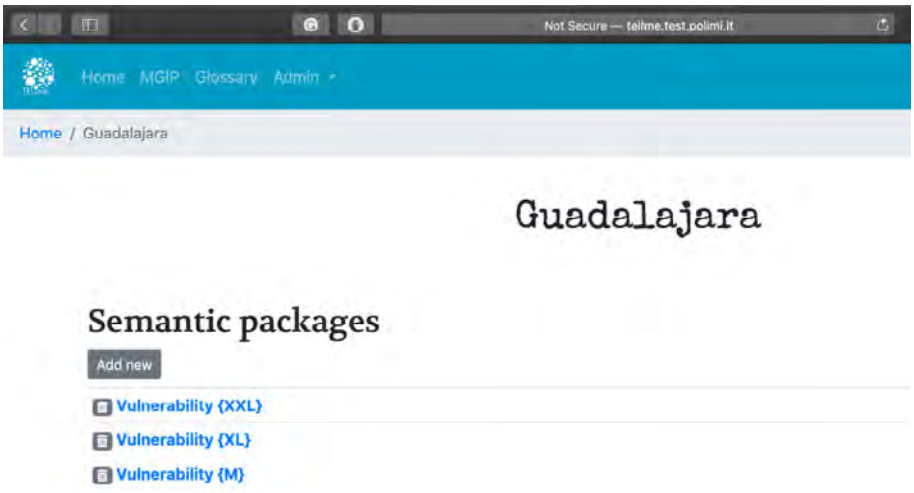


Fig.6 Procedure Semantic Package Section for Guadalajara in the Glossary Software

Semantic Package

a) Introduction

Even though the semantic package is technically part of the glossary software, it is the main structure holding and shaping the knowledge of the metropolitan discipline, therefore needs a special attention. Semantic package contains keywords expressing the important values of a metropolis and are selected by stakeholders (academics, local population, civil servants, decision-makers). Each keyword is defined in the glossary and bridges between the Metropolitan Dynamics (narrative – qualitative analysis) and Metropolitan Cartography (quantitative representation) (fig. 4)

The format of semantic package come from Einaudi Encyclopedia that used it to show the relevance and connection amongst keywords (fig. 7). Even though the methodology is not exactly the same, the semantic package in the metropolitan discipline uses the same idea of flexible connection amongst various keywords.

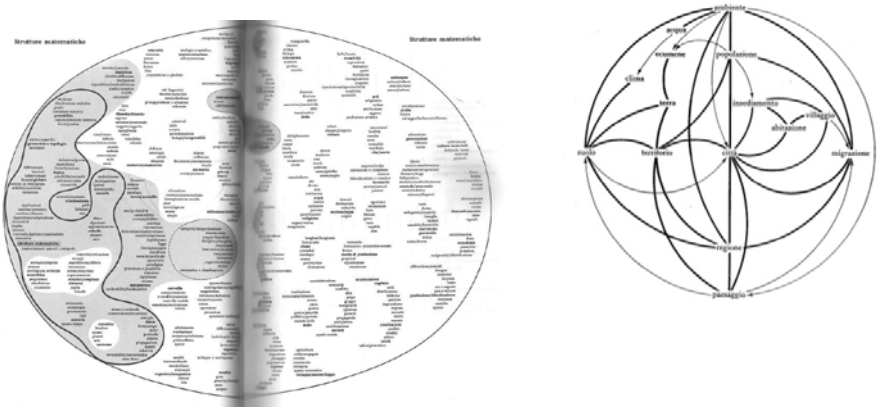


Fig. 7 Semantic Package in Einaudi Encyclopedia

In the metropolitan discipline, on the other hand, the semantic package (fig. 8) represents a collection of main topics of the discipline through conceptual keywords and data keywords. The semantic package is composed of several elements: the title, the 'bean', main keyword, data keyword, and zone of reading. The title states the topic of the semantic package. The title changes as we are moving and scaling in parts of the semantic package. This mechanism of shifting between different topics through scaling is elaborated in the next section. The limit of a topic is drawn by the oval boundary that makes the 'bean'. One of the main characteristics of the semantic package is flexibility. Within the limit of the discipline, which is also constantly changing and growing, focuses are made by drawing this artificial boundaries around the concepts that are related to the topic of a specific case. The content of the semantic package is composed of groups of keywords led by main keywords. Under the main keyword, a set of data keywords, or related concepts, are listed. And finally, the *zone of reading* is a specific lens related to the topic of a metropolitan project that allows the transversal connection amongst various data keywords under different conceptual keywords. Representing key concepts, groups of keywords are, by nature, specialised and in depth; The connection amongst the main keyword and the data keywords are provided by experts of various fields. However, the zone of reading is often related to the narratives and phenomena we observe in reality, which often are described as a series of episodes and/or cause and effect. The importance of the semantic package as a transdisciplinary tool is this potential of flexibly linking knowledge not only amongst each other but also with the reality.

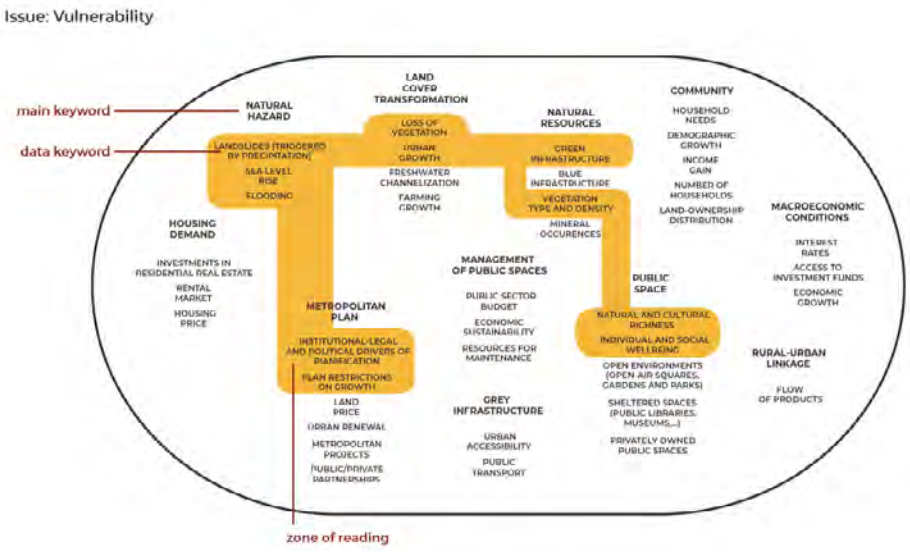


Fig.8 Elements of Semantic Package in the Metropolitan Discipline

b) Scaling of Complexity

Even though there are different types of semantic packages to explain different stages of thought in the metro-dology[3], they are not separate entities but rather scaling of complexity descended from the ultimate semantic package of the discipline (fig. 9). The ultimate semantic package represents the limit of the entire metropolitan discipline that constantly fluctuates as updated knowledge and new experiences are added through the *practice of the metropolitan discipline.* The level of complexity closely resembles the reality and it is truly a collective effort over time that keeps the discipline alive. The Metropolitan Discipline Semantic Package exists in a meta level to hold the discipline and the practical semantic packages that are extracted from it. Since it represents the discipline itself, the *zone of reading* of this semantic package allows us to define curriculums of the metropolitan discipline. The training of the metropolitan discipline puts the theory and the practice together and aims at equipping the learners with the ability to articulate a dialogue, a narrative on all subjects that make up the framework of metropolitan projects and be able to integrate the complex urbanization process in their strategic plans. Through this semantic package, it is possible to organise various levels of training depending on the aim of the training.

3 See O3

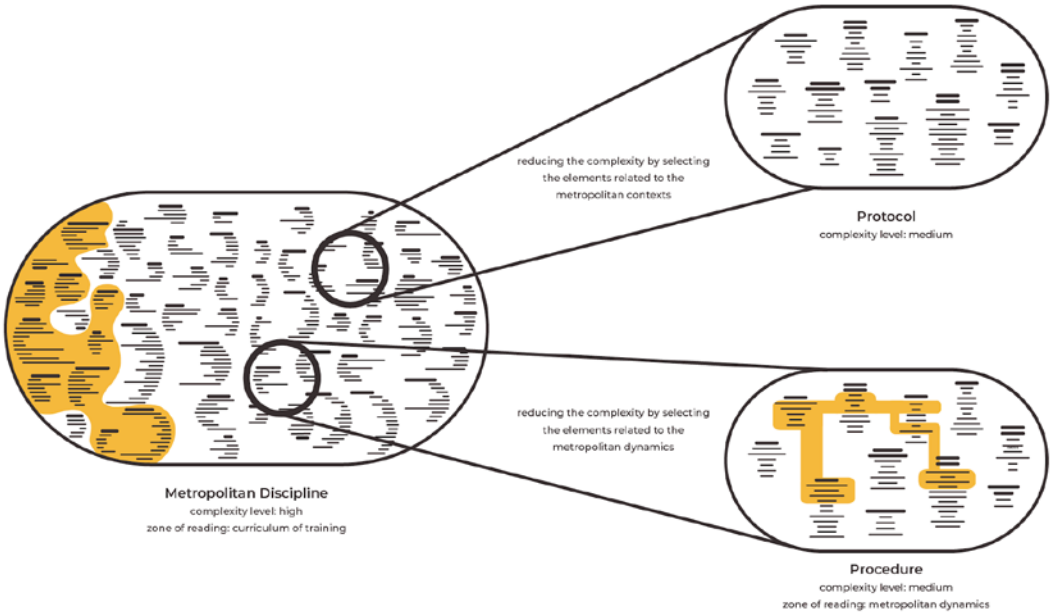


Fig. 9 Scaling of complexity using Semantic Package

The protocol and procedure semantic packages represent reduced complexity of reality done through selection of the relevant elements and concepts. Providing a process of thought for the selection of proper concepts and topics to reduce the complexity is an epistemological issue that is fundamental in training metropolitan experts because they are required to consider their own context of complexity with the integrated approach of the Metropolitan Discipline. This selection is also accompanied by the multidisciplinary research and practical experience.

The Semantic Package of Protocol Maps aims at orienting the views and thoughts to follow the goal of sustainability explained in the MGIP framework[4]. As most experts have a specific viewpoint in seeing the reality, it often occurs that the abstract vision for a metropolis is in far distance. The semantic packages of the protocol provide the conceptual lens to select elements related to the metropolitan context that can map the territory under this vision of multifaceted sustainability. They reveal the metropolitan structure as a whole through mapping, so that it is possible to recognise not just symptoms but the underlying driving forces leading to both problems and potentials. There is no zone of reading because they allow us to see the general structure, not specific phenomena,

4 See MGIP

however, the topics are global, meaning that all the metropolises case studies may have similar maps with different data set, depending on the context and the availability of data. This feature allows the maps to be comparable amongst metropolises that makes sharing knowledge and peer learning easier.

The Semantic package of Procedure Maps, on the other hand, focuses on understanding the underlying system related to dynamics in a specific context. After the discussion of various stakeholders using the Protocol Semantic Packages and Protocol Maps, some specific topics rise and are described as metropolitan dynamics. Then, the issue underlying the dynamic is identified. And working with various stakeholders, a storyboard is produced, connecting the various concepts in the form of narrative, together with the principle that may guide the direction of the operations necessary to address the dynamics. Finally, based on the storyboard, the zone of reading is drawn within the semantic package including the set of data related to the topics. It is important that various stakeholders collaborate on working this process to embrace the variety of interests and knowledge. The maps produced with the Procedure Maps semantic package serve as a base for decision-making of a metropolitan project and allow the actors to understand the physical impact of the process.

Semantic Web

Another way of representing and sharing the glossary is using the Semantic Web technology to create clouds of keywords connecting concepts. The Semantic Web links data so that with the information people already have, they can easily find related data. Using this technology will support the glossary to be available to a greater audience and help users to easily make connection amongst concepts.

Collection Process of the Metropolitan Glossary

The three types of keywords are identified by the source of the meaning or definition. MGIP keywords are defined through the discussion and research amongst the TELLme HEI partners. As every partner provides its metropolis as a case study for testing the methodology developed within the project, the base keywords of the glossary are provided by the partners through both literature review and MESA case study. All partners provide keywords closely related to their expertise and case studies and they are reviewed and discuss by the other

partners. Coherence amongst the meanings, MESA case study, semantic package, storyboard, data set, and Metropolitan Cartography is the key to test and revise both the methodology and the content. In general, the identified terms were divided into three large areas of the discipline: society, territory and environment, and economy. Following the proposed methodology, the investigation of each term was carried out, and once the information had reviewed, it was uploaded to the glossary platform, in this way, the list of terms is as follows:

Accessibility (operator)
Accumulation by dispossession (issue)
Antropogeographic landscape (principle)
Basic needs (issue)
Biocapacity (other)
Biocultural landscape (issue)
Biological connectivity (issue)
Blue economy (keyword)
Blue infrastructure (keyword)
Border (keyword)
Brown infrastructure (keyword)
Capabilities (operator)
Circular Economy (keyword)
Community (keyword)
Cultural Heritage (keyword)
Cultural service (keyword)
Displacement (issue)
Durability (principle)
Duty (keyword)
Eco-development (goal)
Ecological corridor (other)
Ecological imbalance (issue)
Ecological niche (other)
Ecological planning (principle)
Economic cluster (issue)
Ecosystem service (operator)
Environmental degradation (issue)
Environmental fragility (issue)
Environmental justice (protocol map)

Event (keyword)
Expansion factor (other)
Exposure (keyword)
Green Infrastructure (keyword)
Grey infrastructure (protocol map)
Homogeneous area (keyword)
Human and non-human assembly (operator)
Inclusive wealth (operator)
Innovative governance (operator)
Land use (keyword)
Map of Dynamics (other)
Metropolitan architecture (principle)
Metropolitan DNA (protocol map))
Metropolitan economy (operator)
Metropolitan gaps (issue)
Metropolitan governance (principle)
Metropolitan identity (keyword)
Metropolitan infrastructure (principle)
Metropolitan logistics (operation)
Metropolitan service (operation)
Metropolitan stakeholder map (other)
Natural capitalism
Natural risk
Neoliberal urbanism (issue)
Net city (principle)
New centralities (other)
Oasis (other)
Operation (other)
Operator (other)
Pattern (other)
Peripheralization (operation)
Physiography (keyword)
PlanificACCION (operator)
Principles (other)
Product cycle (other)
Prosperity (principle)

Protocol maps (other)
Provisioning service (keyword)
Proximity (issue)
Public realm (principle)
Public space (other)
Regulating service (keyword)
Renaturalization (other)
Resilience (operator)
Right to the city (principle)
Robustness (principle)
Rural territorialities (operator)
Rural-urban linkage (operator)
Social coherence (issue)
Social fabric (operator)
Spatial justice (operator)
(Spatial) proximity
Sustainable heritage (principle)
Unit of landscape (protocol map)
Unit of metropolitan landscape
Urban DNA (other)
Urban expansion (operation)
Urban Extractivism (issue)
Urban Metabolism (protocol map)
Urban porosity (operator)
Urban-rural linkage
Vulnerability (issue)

Antonella Contin and Ramón Reyes Rodríguez

Accessibility (issue)

Definition:

Production of a porous and permeable physical space of metropolitan eco-armature. It is endowed with environmental quality and defines public spaces, in which different levels of physical-spatial integration characterise the syntactical structure among infrastructures (green/blue and grey),- especially in peri-urban areas, linked to large megalopolises or in rural areas affected by rapid urbanisation -, with visible effects on the organisation of the metropolitan citizenships. This is the framework to support the new growth and for the metropolitan image construction.

Context:

Access: the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of the elements which can be reached. (Lynch, 1976)

Accessibility: the proximity in terms of activity time or facility. (Lynch, 1961)

Many of the contemporary territories are places of a juxtaposition of many independent singularities. A changing territory in which important reasons for crises emerge that they highlight and that is deeply linked to the distinctive features of dispersion, within which, in particular, specific infrastructural configurations have been defined: the diffuse water and road networks, for example. The hypothesis on which the research is based is that today the relationships between the fundamental elements of a territorial support and the practices of use are in crisis when they are not meaningless. The distance emerges between infrastructural support constituted over a long time and a society with contemporary needs and desires, which develops in a fast time. The research starts from the experimental and concrete project of some places affected by the transformation questioning the possibility of producing a metropolitan space in which the syntactical structuring is characterized by different levels of integration and physical-spatial alignment with visible effects on the organization of citizenships. (Viganò, 2007).

There are similarities between sprawl and the territories of dispersion, but the process of diffusion, the extended use of the territory and the mix of functions differ: ancient as opposed to recent; horizontal instead of vertical; integrated more than juxtaposed. In the metropolitan region of Venice, the longue durée dispersion has been related to the presence of specific infrastructural

configurations, in particular of a diffused and isotropic sponge of roads and waters – isotropic in the sense that they more or less create the same conditions throughout the territory, whatever the direction and wherever the point of observation. Movements of different kinds can percolate through them. (Secchi and Viganó, 2008).

Orientation. Beyond the sense of direct progression to a goal, the driver and passengers are orienting themselves in the general environment, locating its principal features and discovering their own position with relation to them. In part this is a practical, and in part an aesthetic, activity. Finding a way through the intricacies of a modern city is a demanding performance, and one cannot depend entirely upon such conventional aids as directional signs, at least not without some emotional insecurity. When not aware of general location with respect to the landscape, a driver is likely to make mistakes and is sure to be under stress. The image of the highway itself may also be clarified. Successive sections may be visibly differentiated so that they can be recognized as distinct parts. Thus the motorist can see that he is "in the hilly part," as well as "approaching the center."The general alignment may be made to appear as a simple geometric form. Continuities of edge, surface, or rhythm may be used. Typical sequences and gradients may be developed, and the sequence in one direction may be made recognizably different from the sequence in the other.

[…] Figurability of the urban environment: facilitating its visual identification and structuring. This is the frame for urban image. Routes, margins, references, nodes and regions are the building blocks in the process of building firm and differentiated structures of the urban scale. The routes, the plot of fixed or potential lines of movement through the urban complex, are the most powerful instrument to order the whole. The key lines should have some unique attributes that identify them concerning the surrounding canals: a concentration of any use or particular activity on their sides, a space quality characteristics, a particular flooring or facade grane, a specific lighting scheme, a unique complex of odours or noises, a typical detail or a mast system. These attributes should be used in such a way as to give continuity to the path.... That leads to what we might call a visual roads and ways hierarchy similar to the usual recommendation of a functional hierarchy: a sensitive identification of key channels, and their unification as continuous perceptual elements. (Lynch, 1964).

Comment / Notes:

The objective of accessibility is to deepen the observers' grasp of the meaning of the metropolitan environment: to give them an understanding of the use, history, nature, or symbolism of the metropolitan landscape, to produce a sense of identity even at the metropolitan scale. Public transport, walkable city and bicycle path have a dimension of social justice and sustainability, not only of pure road accessibility, but the important thing is to design places that have the quality to attract.

Equivalent:

Sp: Accesibilidad
It: Accessibilità

Accumulation by dispossession

(issue)

Definition:

"…accumulation by dispossession is associated with the commodification of the commons –especially those developed and created by popular classes to limit the entrepreneurial attempts to valorize urban space" (Gillespie, 2016 in Janoschka, 2016: 37).

Context:

"According to Sassen (2014), accumulation by dispossession operates through the expulsion of those who are not required by the market, at the same time as it seeks including the symbolic values and material resources of every space considered as "desired" to the circuits of capital accumulation" (Janoschka, 2016: 37).

"...social cleansing and the "selective modernization" (Delgadillo, 2016) of Latin American cities are based on mechanisms associated with a phenomenon regarded as "accumulation by habitat dispossession". This phenomenon is directly related to the five essential dimensions of social reproduction: housing, land, common (such as public space), mobility and the constitution and autonomy of subjects" (Janoschka, 2016: 38).

Comment / Notes:

This new cycle of accumulation by dispossession, which various authors associate with the upsurge of extractivism, implies a new advance on resources / goods and territories (Svampa and Viale, 2014) to be incorporated into the valorization circuit. It implies, as Harvey (2004, p. 115) has pointed out, new forms of territorial appropriation and curtailment of common goods.

Equivalent:

Sp: acumulación por desposesión
It: accumulazione per esproprio

Anthropogeographic landscape (principle)

Definition:

In architecture and with reference to the 'form of the territory' (Gregotti, 1966), to talk about the anthropogeographic landscape means "understanding architecture as an intervention at multiple scales on the environment as a whole". (editor's translation from Gregotti, 1966: 59)

Context:

"The purpose of this second part (of the book; editor's note) is to investigate the possibility to lay the foundations of a formal technology of the anthropogeographic landscape from the point of view of architecture, that is to investigate the main issues deriving from understanding architecture as an intervention at multiple scales on the environment as a whole.

It is itself a project, an attempt to structure the whole physical space inhabited by human beings in a meaningful way, not only by building artefacts with an esthetical intention, but also by giving an aesthetic sense to ensembles existing before human intervention." (editor's translation from Gregotti, 1966: 59) "We know that landscape, not only the anthropogeographical one, has always been built in history according to its use or as a remainder – desert excluded: we are able to recognize and distinguish the Tuscan landscape from the Swabian one – though similar – from the point of view of the physical geography because the history of human activities on that geographical support has patiently and consistently built it as a landscape."

(editor's translation from Gregotti, 1966: 64)

"We can observe the progressive reduction of nature to culture, the exploitation of nature itself, and the consequential progressive universalization of the systems of values involved in it. The value of "natural" nature as a sheer resource for profit, the reduction of the importance of "place" as the basis of the collective value through a process of technological transformation of the landscape, that is through the reduction of the features of a local place as they are ever more connected to global economies. The areas invested by this anthropogeo-

graphic operation increase every day to the point that the urban environment has become only one of the aspects of this issue." (editor's translation from Gregotti, 1966: 73)

Equivalent:

Sp: Paisaje antropogeográfico
It: Paesaggio antropogeografico

Basic Needs (issue)

Meaning:

"The NBI index measures a set of basic needs and is made up of the following five indicators: overcrowding, type of housing, sanitary conditions, school attendance, and household subsistence. Households with NBI are considered those who do not satisfy of at least one of these indicators" (Lanfranchi, 2017: III).

Context:

"Urban development planning is fundamental to ensure the quality of urban as its absence can lead to a loss of productivity, increased inequality, and deterioration of quality of life. In recent decades, national governments and international organizations have opted to make cities the centers of social integration and wealth generation. In this context, it is essential to make public policy decisions that target both growth with equity based on the redistribution of the value generated by urbanization "(Lanfranchi, 2017: II).

"The emergence of less dense and more fragmented urban areas requires planning and administrative coordination that connects different parts of the city, extends urban service networks, and provides public services and infrastructure"(Lanfranchi, 2017: II).

A reading of the territory that did not account for the socioeconomic situation of its inhabitants would be incomplete to describe the urbanization and development processes. For that reason, the Urban DNA Methodology includes the analysis of basic needs (Lanfranchi, 2017).

Synonyms:

Essential needs

Equivalent:

Sp: Necesidades Básicas
It: Bisogni di base

Biocapacity (other)

Definition:

"[...] It is the land area available for a given level of production and is also expressed in units of global hectares." (Tobasura, 2008; 26: 119-136)

"[…] Capacity of a specific biologically productive area to generate a regular supply of resources and absorb the waste resulting from its consumption" (PSUV Ecological Front, 2011) (free translation).

Context:

"This indicator, developed in the early 1990s by William Rees and Mathis Wackernagel, introduces a methodological novelty of great importance: the transformation of consumption into productive territory. In this way, the ecological footprint (consumption) can be compared with the load capacity or *biocapacity* (available productive territory) evaluating the resulting ecological balance (deficit or surplus). "(Gonzalez, J .; Garcia, L .; Arturo, C., 2011).

"The report indicates that the ecological footprints per capita of several countries reach sixfold the global biocapacity. That is, the citizens of those countries are exerting disproportionate pressure on nature.." (Ecombes, 2016) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the concept Biocapacity, refers to a territory or area, which is biologically productive and gives a certain level of supply of natural resources for its use and its ability to absorb waste produced by humans, from resource utilization When the biocapacity is greater than the ecological footprint, there is talk of an ecological reserve, since it is not exceeding the use of natural resources, nor the capacity of the territory to provide them, so that the natural resources of other generations are not being compromised . It would be achieving sustainability. Conversely, if the ecological footprint of a population is greater than biocapacity, there is talk of an ecological deficit, not sustainable.

Synonyms:

Biological capacity, Footprint consumption.

Equivalent:

Sp: biocapacidad
It: biocapacità

Biocultural landscape

Definition:

"Territory that shares a landscape and its own identity, managed under a unified regime of territorial management that allows to promote sustainable economic development through the protection and appreciation of nature and local culture." (Bezaury, J., Graf, J., Barclay, K. De la Maza, R., Machado, S., Rodríguez, E., Rojas, S., Ruíz, H 2015:30) (free translation)

Context:

"The mix between the diversity of flora and fauna on one side and the ways of management and cultural diversity of the other side, has led to the dissemination of the concept of biocultural landscapes, which is known as the link between biodiversity and biodiversity. local communities." (Libert, A., 2017:95) (free translation)

"The regime of territorial management of the biocultural landscape is defined and voluntarily adopted by the municipal governments, the states and the representative bodies of the social groups involved. The biocultural landscape is established through a "certificate of establishment" issued by the Ministry of

Environment and Natural Resources." (Bezaury, J., Graf, J., Barclay, K. De la Maza, R., Machado, S., Rodríguez, E., Rojas, S., Ruíz, H 2015:30) (free translation)

Comment / Notes:

Mixed public and social structure responsible for promoting the studies, agreements and financing required for the establishment of a biocultural landscape. In this group should participate: municipal governments and federal entities (…); indigenous peoples, ejidos, communities and small landowners; private initiative, producers, social organizations, conservation organizations, local opinion leaders and, where appropriate, a body of pre-existing territorial governance, who will have the task of elaborating the "territorial management program"". Ideally, the members of the promoter group will be the ones that will make up the "governing bodies" and the "citizens' councils" of the biocultural landscapes, once these are certified (Bezaury, J., Graf, J., Barclay, K. De la Maza, R., Machado, S., Rodríguez, E., Rojas, S., Ruíz, H , 2015:30) (free translation)

Synonyms:

Biocultural territory, biocultural region

Equivalent:

Sp: Paisaje biocultural
It: Paesaggio bioculturale

Biological connectivity (issue)

Definition:

"…functional attribute of the landscape, specific for each species, which has great relevance in the persistence of populations, together with other fundamental factors such as the quantity and quality of habitat "(Taylor *et al.*, 2006, citado en Gurrutxaga, M ,2013:141)

Context:

"The connectivity between protected areas and other conserved areas is a crucial strategy to conserve biodiversity, and to contribute to the viability of ecosystems and their species in the medium and long term. It is fundamental to allow regular movements of the fauna during its daily cycles of search for food, shelter, etc .; seasonal migratory movements; links to complete life cycles; recolonization and also in response to pressures in disturbed sites" (Dudley y Rao 2008 citado en Carabias y Meli, 2015: 544)

"The difficulty for biological connectivity is determined by the types of coverage and by the activities that exist or are developed on the surface of the land. The highest difficulty is imposed by those areas where the existing coverage or the activities that are developed are further away from the natural condition and vice versa. For example, areas with high concentrations of population and / or areas of high traffic are the ones that impose the highest difficulties; while the areas of unaltered natural coverage without the presence of human settlements will be the least difficult to impose. The difficulty values were determined based on the analysis of four factors: land cover, fluvial network, density of villages and road network." (Arias, E., Chacón, O., Herrera, B., Induni, G., Acevedo, H., Coto, M., Barborak, J. 2008:40)

Comment / Notes:

Facing the challenge of integrating ecological connectivity into spatial planning necessarily implies creating a series of positive synergies between the instruments of nature conservation - aimed primarily at the protection of spaces and, to a lesser extent, species - and those of territorial planning -integral and sectoral- and urban, in order to propose a management of the territorial matrix from an overall vision (Gurrutxaga, 2004).

Synonyms:

Ecological connectivity, landscape connectivity

Equivalent:

Sp: Conectividad biológica
It: Connettività biológica

Blue economy (keyword)

Definition:

"[…] The *blue economy* starts from a simple premise: to use the knowledge accumulated over millions of years by nature to reach ever greater levels of efficiency, respecting the environment and creating wealth, and translate that logic from the ecosystem to the business world."(Alvial, 2015) (free translation)

Context:

"[…] The concept of *blue economy* emerged during the preparatory process of Rio + 20 by a proposal from several coastal countries. This blue economy approach contemplates the same objectives as the Rio + 20 green economy initiative: "improve human well-being and social equity, while reducing environmental risks and ecological damage "(unep, 2015), and this is based on the same principles of low carbon, resource efficiency and social inclusion. However, the Blue Economy is framed in the context of the developing world and is designed to reflect the circumstances and needs of countries whose development is based on marine resources." (Ivanova, A. et al., 2017) (free translation)

"Very important for the *Blue Economy* are international law and ocean governance mechanisms. Each country has to participate in the protection of the high seas, which covers 64% of the surface of the oceans and comprises more than 90% of its volume. " (Ivanova, A., et al., 2017) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the *Blue Economy* concept refers to a new model of environmentally sensitive economy, which contemplates the basic principles of the green economy. It seeks social equity, improving human well-being, reducing environmental risks, however the blue economy focuses on developing countries and all those countries that base their development on marine resources, exposing the needs and problems of these sites , in addition to analyzing everything related to the oceans and their resources. The *blue economy* seeks to create wealth and respect the environment, transmitting this mentality to the business sector.

Equivalent:

Sp: Economía azul
Italian: Economia blu

Blue infrastructure (keyword)

Definition:

Blue infrastructure technically refers to infrastructure related to hydrological functions; including rainwater and urban rainwater systems. Also, to the water in the surface and aquifers. In urban design, blue infrastructure is traditionally discussed as a matter of resilient provision of water supply and security. Such water infrastructure can be natural, adapted or artificial and provides functions of deceleration, decentralization and propagation, immersion in the subsoil, evaporation and release of water into the natural environment. This includes flow control, detention, retention, filtration, infiltration, and different forms of water treatment such as reuse and recycling. In general, blue infrastructure addresses water quantity and quality control issues. (Wouters, P. et al., 2020)

Context:

To understand the concept of blue infrastructure, it is necessary to know its origin and the relationships it has as it is an environmental element. According to this, the blue infrastructure is broadly in accordance with the green infrastructure, which is defined as a "strategically planned network of high quality natural and semi-natural areas with other environmental elements, designed and managed to provide a wide range of ecosystem services and protect the biodiversity of both rural and urban settlements" (European Commission, EC, 2014).

The rediscovery of blue infrastructures has occurred in parallel with the identification of water supply, efficiency and management as crucial aspects to combat the effects of climate change and social and environmental inequality. Adequate planning and management of water and its associated ecosystems is essential for the integrated improvement of territorial processes; not only due to issues related to the resource (provision and treatment of water, food production, recharge of aquifers or flood control), but also due to its psychological and emotional effects on citizens (ARUP, 2011).

Comment:

The dissertation alluding to the meaning of the *Blue Economy* concept refers to a new model of environmentally sensitive economy, which contemplates the basic principles of the green economy. It seeks social equity, improving human well-being, reducing environmental risks, however the blue economy focuses on developing countries and all those countries that base their development on

marine resources, exposing the needs and problems of these sites , in addition to analyzing everything related to the oceans and their resources. The *blue economy* seeks to create wealth and respect the environment, transmitting this mentality to the business sector.

Synonyms:

Blue System

Equivalent:

Sp: Infraestructura azul
It: Infrastruttura blu

Border (keyword)

Definition:

The borderline idea of the gromatics

Practising agrimensura (surveying) means first of all mastering the technique of border tracing. The apprenticeship of the gromatici includes the study of subjects such as astronomy, geometry and agricultural law, but these are not at all abstract knowledge, to be applied in the countryside for the division of agricultural land (Classen, 1994).

Border line and the border area

Land boundaries are lines which mark the limits of the territorial claims and jurisdiction of the two states concerned. However, border lines have meaning only from the geographical concept of the border as a transition zone. The concept of transition zone extends from the distribution of plant and animal species in natural ecosystems to the distribution of ethnic, linguistic and religious groups on the terrestrial surface.

The political borders

Zones in which the characters and influences of two or more different regions or states come together. The boundary line therefore artificially and abruptly separates what the boundary naturally and gradually separates, but vertical separation could not take place without gradual separation. Boundary and frontier are two complementary rather than antithetical concepts in the thinking of geographers active in the early twentieth century. Transition zones

It is a buffer zone where different things happen within and where the boundary line can lie.

The concept of ecotone is the basic concept determining the transition zone before then the political discourse. Boundaries should then be placed in transition zones that are already de facto separation zones. The transition zones are subject to special rules linked to a dimension of thickness. In these areas, the inhabitants can have exclusive rights and duties.

Narrow belt

It is the border's definition with an area within which the technicians draw the border most appropriately. It does not exist in nature. Its function is temporary,

and it is part of the process of defining the boundary. It is a sort of vase (or cast) of the transition zone defined by points of geographical support.

Fields of Actions

These are land use practices related to areas that embrace the border lines and their transition areas. They can comprehend different areas also. From a legal point of view, we have an overlap between a set of laws, transition areas and fields of action. The research theme can be linked to their mapping. Border & citizenship practices

Administrative boundaries are built over the fields of actions. They attempt to capture, contain and regulate fields of action that already exist. The administrative fields are correct, and the administrative control is adequate if they can overlap with the fields of actions. The administrative boundaries, in the making so, accompany citizens in their movements without forcing them. However, this coincidence is always temporary because of the starting point, which are the fields of action, are never the same forever; they change how life changes. […] How administrative power is organised determines an essential part of the life of the citizen, which is linked to what we call "the right to the city".

Plastic frontier (fuzzy line)

Borders that are not used to close but to filter, and that keep social forces in balance.

This borderline (administrative limits that trace the field of actions of the new metropolitan citizenships) delimits the space but could also be so flexible as to be able to accommodate the evolutions of society that over time have to react to the no more temporary inclusion of different identities.

Stratify border

Semi-latex structure that reflects an urban reality made up of overlapping social and spatial systems.

Context:

How territory shapes social life. The determinations of the border are indifferently material and social: not in the sense that the qualities are confused but in the sense that every material determination is also social and vice versa. [...]

The theory of the boundary and its control effects could give a more general contribution to the understanding of "how territory shapes social life", to use an expression of the two geographers Jennifer Wolch and Michael Dear (1989).

The recognition of the zonal character of the frontier, despite the common spatial meaning attributed to it, is nevertheless interesting because it opens the way to a concept of the border as a field of action, as a site for events that take place in it and sometimes find their origin. The border appears to us, like the frontier, made up of a thickness that is something else than the simple spatial extension. By now it should be apparent to the reader that the choice of words such as "scope", "thickness", "cast" and "encumbrance" intends to prepare a borderline vocabulary that is not spoiled by monophysism. The going back to itself, which is typical of the border area, can be more precisely defined as a habitual practice (Pierre Bourdieu, 1972, 1980). Practice is a common way of acting, a systematic pattern of response that corresponds to recognisable situations. The practice is not limited to the execution of an invariant rule but requires its strategic adaptation to the situation to be faced. Agents are therefore not entirely supine to practice insofar as the material conditions of existence "produce habitus, systems of lasting dispositions, structured structures predisposed to function as structuring structures, i.e. as a principle of generation and structuring of practices and representations that can be objectively regulated and regular without being the product of obedience to the rules. The habitus is a socially produced and shared set of cognitive and motivational schemes, and it is a capable vision of the world rooted in the material conditions of life [...].

The boundary as a field of action, if we keep its social and material determinations in balance, we are clarifying as the horizon of the usual practices. The border is a daily horizon. 11 its thickness is the flap of the encumbrance of customary practice. [...] agricultural, legal and hydraulic practices have continued to make centuria their sphere of action day after day, year after year while differing from the methods of Roman settlers. The boundary that is not crossed by routine practices loses its thickness, becomes a generic artefact [...] The border includes practice in its concept - attests proposition means that the boundary cannot be adequately understood as a line or as an area whatever its supports (natural, artificial, astronomical, ethnic and linguistic). The border is nothing more than the practice that delimits. The conceptual and border unit is the easiest way to abandon monophysism. Secondly, the proposition means that any material determination of the boundary is also social and vice versa.

Therefore, the boundary theory based on this proposition is also a contribution to the theory of practice. […]

Come and go, move from home to buy food, attend Sunday Mass, get a haircut, go to the office. These and many other usual practices form, in their interweaving and with their paths, an environment from which they do not ordinarily come out. Certau (1980, trad it. p.180) defines spatializing practices as those of those who walk through the city. The boundary conceived from the perspective of habitual practices is an area of existential relational on the background of which the fine figure of the demarcation line detaches itself. In this regard, I am addressing the administrative boundaries, that is, the areas of competence. Let yourself be visited You have the areas of many usual practices outside the home. To be visited by your family doctor to report to the police station a theft suffered, to renew at the registry office a certificate expired vote for the renewal of the city council, to enrol children in kindergarten are examples - among many others - of citizenship practices. […] The seizure of political and administrative power over everyday practices presupposes the sharing of a horizon. In this sense, it is useful to the Certeau's hatchet not to neglect this subversive aspect of daily practices, their inexhaustible inventive vein of uses not foreseen by the authorities.

(Gaeta, 2018: 97-110)

[…] Not only is the indexical question "what is the border?" […] but the question of how, when, and who makes the border are just as crucial and complex.

The border is precisely "between" states. […] the cut or process of social division itself is what is common to all of its relative manifestations. [the border between states] is the fuzzy zine-like phenomenon of inclusive disjunction that many theorists have identified as neither/nor, or both/and. The border is an absolutely positive and continuous process of multiplication by division _ the more it divides social space the more it multiplies it.

It is thus important to distinguish between two kinds of division: extensive and intensive. The first kind of division (extensive) introduces an absolute break-producing two quantitatively separate and discontinuous entities. The second kind of division (intensive) adds a new path to the existing one like a fork or bifurcation producing a qualitative change of the whole continuous system. In other words, the border is an active process of bifurcation that doesn't simply divide once and for all, but continuously redirects flows of people and things across or away from itself. […] In this sense, the border is both constitutive of and constituted by society. […]

Chris Rumford points out, borders are the key to understanding networked connectivity as well as questions of identity, belonging political conflict and societal transformation. […]

The practical consequences of this are that the border is a zone of contestation. […] The border is not simply membrane or space through which flows of people move. In contrast to the vast literature on the movement of people and things across borders, there is relatively little analysis of the motion of the border itself. […] the process that Jacques Ancel describes as frontiers plastique: an equilibrium between social forces.[…] The third major consequence of a border theory defined by the social process is that the border cannot be properly understood in terms of inclusion and exclusion, but only by circulation. In part, this follows from the movement of the border. Since the border is always in between and in motion it is a continually changing process. […] there are four major social and material types of borders: territorial, political, juridical, and economic. (Nail, 2016: 2-12)

Synonyms:

Edge; frontier; boundary

Equivalent:

Sp: Frontera

It: Confine

Brown infrastructure (keyword)

Definition:

The concept of brown infrastructure supports and extends that of green infrastructure (European Commission, 2013 and others). It refers to the planned network of structures, processes and relationships that support primary production. In its network character, the brown infrastructure is linked to the green, blue and gray infrastructure; but it also contains a wide range of social relationships and knowledge that make the production and social reproduction of life possible.

Context:

In the context of "production" human beings transform the space and resources it contains based on work and, in doing so, transform themselves. In this process, *brown infrastructure* acts as supporting networks for primary production; liaison networks of social, cultural, economic, political and institutional dimensions. In their material expression they can acquire various forms (pens, paths and shelters) and are always the product of historically, situated knowledge.

Comment / Notes:

Although Mander et al (2018) considers the term *brown infrastructure* "to describe the anthropogenic infrastructure"(25), in metropolitan context, the notion seeks to capture the myriad of material and immaterial structures; and of processes and social relations that organize the processes of production and labour.

Equivalent:

Sp: Infraestructura marrón
It: infrastruttura marrone

Capabilities (operator)

Definition:

Capability (negative capability in Steven Holl's terms, according to poet Keats) is to be able to take in all the problematic aspects of the surrounding world, to see and acknowledge, to entertain uncertainty and still be able to act: *a modus operandi* for the twenty-first century. As an architect you go to a site to study every angle available, to feel in your body what needs to be done; intuitively you create.

Past and ongoing failures in this world include: the deterioration of natural and built environments, discrepancies of wealth and poverty, and the inability of capitalist democracy to manage economies while waging unnecessary wars. The first of these three issues can be directly engaged with urban projects of vision. Architecture and urbanism might have a position in the potential to re-direct and to shape the future. Urban examples of change, even if modest in scale, can lead to hopes and expectations.

Context:

Essentially, an approach to capacity for adaptation is not simply a top-up process below and managed by experts. A capabilities approach, therefore, offers a method of analysis of the specific needs of each community, and to focus environmental policies on the preservation or recovery of threatened capacities. It also requires us, and gives us the tools to do so, to analyze the current relationship between the conditions of individuals and human communities, and the natural environments that provide many of their capabilities. Comments:

In terms of environmental justice, capacity theory analyzes what it takes to convert primary goods (if available) into a fully functioning life, and what interrupts such process. As Nussbaum points out, "We don't just wonder about the resources we have around us, but how they work or don't work, allowing us to fully unfold human" (Nussbaum, 2000: 71). As this glossary has an entry on it, this operator is focused in how to acquire perspectives and possibilities to achieve the goal.

Equivalent:

Sp: Capacidades
It: Capacità

Circular Economy (keyword)

Definition:

A model of production, circulation, consumption of goods and management of the relative waste, oriented by the principle of temporal and spatial conservation of the socio -economic value of the assets (value of use and exchange value), and realized through the design of economically closed systems, in which the use of renewable energy is privileged. (Ellen Mac Arthur Foundation, 2012)

Context:

The circular economy (or system that tends to be closed) is the operating mode that allows to best satisfy the conservation principle. The circularity of the economic system makes it possible to maximize the reintegration of biological and technical waste within the production cycle, limiting its transformation into waste and maximizing its preservation of value (Ellen Mac Arthur Foundation, 2015)

The inclusion of circular economic systems within defined political-spatial areas allows greater coordination and collective control both on the economic, social and environmental costs of the various phases (favoring the minimization of costs related to transport), and on the destination and use of the values produced. (Di Stefano, Lepratti, 2016 et al.).

Comments:

Circular economy and model of development

The paradigm of the circular economy does not deal directly with the question of models of economic *development*, however the processes of application of new technologies and recovery of rubbish destined to become waste tend to increase the socio-economic value in the reference system, producing economic growth with low environmental impact.

Given all these dynamics and potentials, a development model with characteristics compatible with the preconditions of the circular economy appears to be *self-centered development* (theorized by the Egyptian economist Samir Amin).

At the base of this model there is a public policy oriented towards the internal development of a territory through the maximization of the value produced and used locally and the minimization of external dependency To achieve these results, specific policies must aim at reducing input costs (using as much as possible what is available *on site*), at a use of the same inputs for the production

of goods and services that satisfy mainly (not exclusively) the internal market, to choices of export and import of goods that are functional to promote further internal growth and not to suffer dependency from external subjects. This model was originally designed to respond to the problem of production and conservation of the economic value within countries of the so-called "Third World". It is based on economic cycles of financeproduction-consumption predominantly local (but not autarkic), and requires the intention of the local government to connect the various local subjects of the economic process to limit internal entropy and avoid external dependencies. (Samir Amin, 1990)

Structural characteristics that can be suggested also for objectives linked to the circular economy.

Genealogy and recent developments in the circular economy

The advent of a diffuse sensibility at the planetary level due to the negative ecological effects of the capitalist economic development model is generally attributed to the pioneering script by Rachel Carson of 1962 on the effects of DDT.

A second milestone, universally recognized, is the study on the limits of growth, commissioned by the Club of Rome at MIT and released in 1972. In it the question of the connection between ecology and economy is systematically investigated.

Starting in 1971, another member of the Club of Rome, the American economist of Romanian origin Nicholas Georgescu Roegen, a scholar of Schumpeter, begins to produce theoretical papers related to the bioeconomy and the need to consider the effects of entropy produced by the economic process on energy and on matter.

He is considered the first renowned theoretician to systematically investigate models of direct connection between physical, biological and economic processes (see in particular his provocative "Fourth law of thermodynamics", expressed in "Energy and Economics Myths", in which he analyzes the worsening of the entropic and economic quality of matter at each regeneration cycle).

Georgescu Roegen was the first to put his attention to the problem of the deterioration of matter in production processes and the related energy and economic costs that this fact involves. From the themes theorized by the Romanian-American economist (in Italy investigated by Stefano Zamagni among others) arose the questions for the solution of which the circular economy was born.

The circular economy is today a model of interrelation between the phases of the economic process. This model deals mainly with the life cycles of *matter,*

distinguishing it in biological and non-biological (or "technical"), but from the beginning has called for a simultaneous attention to *energy*, hoping for the replacement of fossil sources with solar sources. (Ellen Mac Arthur Foundation, 2012)

Synonyms:

Bioeconomy

Equivalent:

Sp: Economía circular
It: Economia Circolare

Community (keyword)

Definition:

The term "community presupposes a behavior from the subjects who would act norms other than those belonging to a society conceived as a whole" (Cravino, 2004: 77); "it also has the capacity to tell who and how "we" are and, in the same movement, who and how "they" are" (de Marinis, 2011: 129). Community is today another name for the lost paradise (Bauman, 2006). It can be defined by three basic characteristics: unity, homogeneity and "sameness" (Redfield, 1973 in Girola, 2006) with other attributes: *distinction* (exclusive division between "us" and "them"), *smallness* (which allows an intense communication between its members), *self-sufficiency* understood in isolation terms (Bauman, 2003 in Girola, 2006).

Context:

It is a term used with different reach and content by multiple actors: state actors speak of "relations with the *community*" (Cravino, 2004: 77), referring to inhabitants of a district in specific areas as education or health; even though it could also reach grassroot social organizations. There are multiple uses of the term but they have in common the incorporation of sociocultural theory in daily knowledge (Cravino, 2004). Trápaga (2018: 163), following Redfield (1973) states that in Anthropology the notion of *community* "has been more a comparative term than a simple theoretical concept".

Comment / Notes:

In 1933 McKenzie publishes his book "The Metropolitan *Community*" as advancement for vanguardist thinking in the period. There, he states that "the term *metropolitan area* has come to signify the territory in which the daily economic and social activities of the local population are carried on through a common system of local institutions" (McKenzie, 1933: 84). In this context he signals that "this new type of regional community that is emerging from the former pattern of semi-independent units of settlement is, of course, the direct result of motor transportation and its revolutionary effect upon local spatial relations" (McKenzie, 1933:68). The notion of mottled social formation proposed by Rene Zavaleta could explain the social condition of the metropolis, which "consists in thinking the unarticulated superposition of several societal types, that implies several historical times, modes of production, languages and forms

of government, among other factors" (Diaz Carrasco, 2011: 2). Operationally, Antezana retakes Zavaleta's concept and states that "it is about the mutual qualification of social-economic diversities, so that, in concurrency, none of them keeps their (previous) form; the reference, that is, the concrete society which is object of knowledge would allow to characterize diverse stories involved, diverse grades of (relative) social constitution implied there; and the framework of qualification of one diversity by other diversities would appeal to the concept of "intersurbjectivity" to recognise, in social crisis, the grade of unity-of-the-diversity reached in said concurrence" (Antezana, 1991: 132).

Equivalent:

Sp: Comunidad
It: Comunità

Cultural Heritage (keyword)

Definition:

Today, heritage is understood as the set of cultural and natural assets that document the different eras, the historical, spiritual, scientific, artistic and environmental evolution of a community which we are obliged to protect and transmit, as much as possible, the intrinsic cultural message of the built heritage, the tracing of the past, of what is a document-building, guarantee the conservation of the matter, mainly spatial, that makes the site a certificate of knowledge.

Context:

The metropolitan areas of Latin American cities have the same origin, they are viceregal or colonial cities built on the cities of American - indigenous cultures, a Renaissance trace was imposed on each ancestral settlement or landscape, a new architectural morphology from architectural treatises, stone cuts, and an eclectic 16th-century European morphology. Cities and metropolitan areas are a palimpsest that expresses their venustity in the layouts of the past and are sometimes architectural and landscape relics.

In the 1950s of the last century, the lack of cities has been excessive, out of human proportion, the cities overran their historical boundaries to absorb other ancient cities, which were immersed in metropolitan areas. Therefore, where a pre-Hispanic, viceregal, and neoclassical settlement is located, and including the first half of the 20th century, there is a considerable cultural heritage of great value to society.

Cultural heritage has not been mapped in urban areas, the experience of TELLme has been of great value for the knowledge of metropolitan cultural heritage, a methodology and cartographic techniques have been built to identify cultural heritage in the Metropolitan Area Valley of Mexico that constitutes a valuable document for planning and safeguarding, for example, since the heritage is georeferenced, the damage suffered by earthquakes can be identified and its protection provided.

Comments:

Cultural heritage is what makes a city different from another, it is the identity of a culture and the melting pot of the intangible, in which we can read our past and understand the evolution of the historic urban landscape

Synonyms:

Cultural Property

Equivalent:

Sp: Patrimonio cultural
It: Beni culturali

Cultural landscape unit (other)

Definition:

The Cultural Landscape Unit, is a portion of the territory characterized by a specific combination of landscape components of an environmental, cultural, perceptual and symbolic nature, as well as clearly recognizable dynamics that give it a differentiated idiosyncrasy of the territory.

Context:

The concept of landscape unit, is a system, economic, anthropological and natural among themselves, it forms a palimpsest composed of in-depth knowledge of the territory, territorial evolution, historical memory, footprint (s), archaeological sites and areas, spaces and landscapes sacred, (landmarks), the language, places of linguistic biodiversity, toponymy, ethnic groups - native peoples, migrant groups, migrations, historical roads, recognized heritage, tangible-intangible assets, anthropized, natural areas with social value. By developing a palimpsest of the territory, it is possible to identify the landscape richness generated over time in a given area, by superimposing layers of landscape from different periods of history

This definition incorporates the physical dimension (portion of territory), holistic - temporal (the action and interaction of natural and human phenomena that develop over time) and the subjective cultural dimension (perception that the inhabitants have of the landscape) (Mazzoni, 2014)

Comments:

The landscape is the instrument to build the bioregion: (territory that forms a space with common natural, geographical and historical characteristics and that enhances its identity values (Antequera, 2012). Cultural landscape unit, micro vision of a territorial module. It constitutes the core area where the outstanding, representative, essential features that give identity to the cultural landscape are expressed. (Leon, 2018).

According to the Landscape Charter of the Americas (2018) they are called strata; of nature, of worldview, culture, ethics and identity.

Synonyms:

Landscape culture

Equivalent:

Sp: Unidad de paisaje cultural
It: Unità di paesaggio culturale

Cultural service (keyword)

Definition:

[…] non-material benefits that people obtain from ecosystems such as spiritual enrichment, intellectual development, recreation and aesthetic values. (Millenniun Ecosystem Assessment, Cultural Services)

Context:

Cultural Services are based on:

- Cultural diversity. The diversity of ecosystems is one factor influencing the diversity of cultures
- Spiritual and religious values. Many religions attach spiritual and religious values to ecosystems or their components.„
- Knowledge systems (traditional and formal). Ecosystems influence the types of knowledge systems developed by different cultures.
- Educational values. Ecosystems and their components and processes pro-vide the basis for both formal and informal education in many societies.„
- Inspiration. Ecosystems provide a rich source of inspiration for art, folk-lore, national symbols, architecture, and advertising.„
- Aesthetic values. Many people find beauty or aesthetic value in various aspects of ecosystems, as reflected in the support for parks, “scenic drives,” and the selection of housing locations.„
- Social relations. Ecosystems influence the types of social relations that are established in particular cultures. Fishing societies, for example, differ in many respects in their social relations from nomadic herding or agricultural societies.„
- Sense of place. Many people value the “sense of place” that is associated with recognized features of their environment, including aspects of the ecosystem.„
- Cultural heritage values. Many societies place high value on the maintenance of either historically important landscapes (“cultural landscapes”) or culturally significant species.„

- Recreation and ecotourism. People often choose where to spend their leisure time based in part on the characteristics of the natural or cultivated landscapes in a particular area.

Comment / Notes:

The landscape is the instrument to build the bioregion: (territory that forms a space with common natural, geographical and historical characteristics and that enhances its identity values (Antequera, 2012). Cultural landscape unit, micro vision of a territorial module. It constitutes the core area where the outstanding, representative, essential features that give identity to the cultural landscape are expressed. (Leon, 2018).

According to the Landscape Charter of the Americas (2018) they are called strata; of nature, of worldview, culture, ethics and identity.

Equivalent:

Sp : Servicios culturales
It: Servizi culturali

Displacement (issue)

Definition:

"Displacement is understood as expulsion, as a replacement, without questioning the class implications of these movements" (Blanco & Apaolaza, 2016: 87).

"Displacement does not only refer to the involuntary movement of people –which is recorded through statistical methods (direct displacement). It also refers to the social and spatial injustice that impinges the legitimate right of people... In this sense displacement is not only inherent to urban capitalist production but also reflects an analytical and political perspective" (Janoschka, 2016: 35).

Context:

"… the displacement of farming communities in the global south through land grabs by foreign governments and corporations seeking to speculatively profit from industrial crop production (Hall, 2013); and the forcible eviction of people from their homes –whether rented, owned or occupied– which is on the rise across the world" (Kothari, 2015: 9)".

"Over the past three decades, however, Latin American cities have experienced their own new logics of expulsion imbricated in the restructuring of urban space. In contrast to previous eras when urban transformation in Latin America mainly took the form of expansion or urban sprawl to the suburban periphery in a centrifugal fashion (Herzog, 2015.), a series of urban political and economic processes associated with gentrification have reasserted the role of historic centres amid a wider socio-spatial rearticulation across central, semi-peripheral or peri-central area" (Hidalgo and Janoschka, 2014 in Alexandri, González & Hodkinson, 2016: 14)

Comment / Notes:

This notion appears strongly linked "...to state policies or strategic disregards that emphasise spatial dispossession" (Alexandri, González & Hodkinson, 2016: 17)

Equivalent:

Sp: desplazamiento

It: spostamento di posizione.

Durability (principle)

Definition:

It is related to the permanent city elements' capability to maintain relations in the long span of time. Every Era can confirm, reject or define new relations among the past elements and the city fabric.

Context:

While robustness highlights the resisting aspect of a physical structure and a metropolitan system, the principle of durability focuses on the lasting of a structure regardless of the change in the individual elements. In order to ensure adequate durability of a structure, the following interrelated factors need to be considered:

- the purpose and use of the system structure;
- the foreseeable environmental conditions;
- the composition, properties and performance of the elements that compose the system;
- the form of the structural elements and their construction details;
- the quality of the execution and the level of control of the same;
- special protective measures;
- the scheduled maintenance during the presumed life

Equivalent:

Sp : Durabilidad

It: Durabilità

Duty (keyword)

Definition:

The public sector mechanisms to capture enhanced asset values realized by private actors. Duty is associated to an administrative boundaries, that is, to a precise area of competence.

Context:

The public sector uses a range of mechanisms to capture enhanced asset values realized by private actors. We provide below a general list of value capture finance mechanisms, described as follows by Joe Huxleys.

- Land transfers. Land held in private or public ownership is provided to the public promoter for public use.
- Local taxation. Local general targeted taxation and local real estate tax increments where revenues are reinvested into the same area in which they were collected.
- Fees and levies. Planning approval fees, development levies and infrastructure tariffs.
- Debt servicing/Loan guarantees. Securing loans against the increased future increase value of the land. Local service agreements, private actors agree to give priority to the local community for access to new facilities, public space or to manage basic public services. (Serge Salat, Loete Bourdic Marco Kamtya, (2017) Economic Foundations for Sustainable Urbanization, UN-HABITAT/ Urban Morphology Institute and Complex Systems)

The boundary as a field of action. If we keep its social and physical determinations in balance, we are clarifying it as the horizon of the usual practices. The border is a daily horizon, its thickness is the flap of the encumbrance of customary practice. [...] agricultural, legal and hydraulic practices have continued to make *centuria* their sphere of action day after day, year after year while differing from the methods of Roman settlers. The boundary that is not crossed by routine practices loses its thickness, becomes a generic artefact. [...] The border includes practice in its concept - the boundary cannot be adequately understood as a line or as an area whatever its supports (natural, artificial, as-

tronomical, ethnic and linguistic). The border is nothing more than the practice that delimits. The conceptual and border unit is the easiest way to abandon monophysism. Any material determination of the boundary is also social and vice versa. Therefore, the boundary theory based on these propositions is also a contribution to the theory of practice. […]

The determinations of the border are indifferently physical and social: not in the sense that the qualities are confused but in the sense that every physical determination is also social and vice versa. [...] The theory of the boundary and its control effects could give a more general contribution to the understanding of "how territory shapes social life", to use an expression of the two geographers Jennifer Wolch and Michael Dear (1989). The recognition of the zonal character of the frontier, despite the common spatial meaning attributed to it, is nevertheless interesting because it opens the way to a concept of the border as a field of action, as a site for events that take place in it and sometimes there find their origin. The border appears to us, like the frontier, made up of a thickness that is something else than the simple spatial extension. Practice is a common way of acting, a systematic pattern of response that corresponds to recognisable situations. The practice is not limited to the execution of an invariant rule but requires its strategic adaptation to the situation to be faced. Agents are therefore not entirely supine to practice insofar as the physical conditions of existence "produce habitus", systems of lasting dispositions, structured structures predisposed to function as structuring structures, i.e. as a principle of generation and structuring of practices and representations that can be objectively regulated and regular without being the product of obedience to the rules. The habitus is a socially produced and shared set of cognitive and motivational schemes, and it is a capable vision of the world rooted in the material conditions of life [...]. (Luca Gaeta, (2018), La civiltà dei confine, Carocci, Rome).

Synonims:

Taxation

Equivalent:

Sp: Impuestos

It: Tassazione

Eco-development (goal)

Definition:

"[…] It is divided into three main parts: environmental, economic and social. Meanwhile, the main issue that this proposes is that basic needs such as clothing, food, work and housing must be met, because inevitably poverty in the world will only lead to catastrophes of different types, including ecological. (Ucha, F., 2010) [...] It is a development style that insistently seeks in each ecoregion specific solutions to particular problems, taking into account ecological, but also cultural data, as well as immediate needs, but also long-term ones. (Sachs, 1974: 363, 364 citado por Estenssoro, F., 2015)." (free translation)

Context:

Eco development exists due to the fact of having limited natural resources, such as nutrients in the soil, drinking water, among others, plausible to end, as in the fact that a growing economic activity, without worrying more than economic profitability causes serious irreversible environmental problems

"Eco development recognizes that the western neo-colonial industrialization and growth model engenders environmental degradation, dependence and underdevelopment. It also recognizes that inequalities and poverty caused by the world capitalist order also exert pressure on the environment." (Handal, L., Bélanger,

M., Montaño, C. y Nauro Viri, F., 2015) (free translation)

Ecodevelopment exist due to the fact of having limited natural resources, such as nutrients in the soil, drinking water, among others, plausible to end, such as the fact that a growing economic activity, without worrying more than economic profitability, causes serious irreversible environmental problems.." (Ucha, F., 2010) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the ecodevelopment concept refers to a concept that seeks to regulate the use of renewable and non-renewable resources, in terms of the speed with which they are used and their reproductive capacity, which are recycled and do not compromise the use of these resources in future generations. It is a concept that seeks to eradicate poverty, social problems in rural regions of the Third World and seeks specific solutions to apply them to the particular problems of each region and country. Ecodevelopment

contemplates a broader vision of the factors that affect development, not only environmental, social and economic criteria, but also political, technological, cultural and geographical.

Synonyms:

Sustainable development

Equivalent:

Sp: Ecodesarrollo
It: Sviluppo ecologico

Ecological corridor (other)

Definition:

"…it is defined as an element of the landscape whose function is to connect two or more sectors with similar environmental characteristics, so that it is passable and serves as a conduit for the movement of species."(WWWF , 2015)

"…spaces that connect areas of biological importance to mitigate the negative impacts caused by the fragmentation of habitats (Conrad et al., 2011, in García. F. y Abad, J., 2014:254-255)

Context:

"The concept of ecological corridor is linked to scientific and social contexts. During the last decades many data have appeared on the importance of ecological corridors to overcome the problem of territorial fragmentation" (Van and Sawart, 2008 citado en García. F. y Abad, J. 2014:255)

Comment / Notes:

In the design of solid ecological corridors based on functional relationships according to the species, the following guidelines apply:

1. Identify the indicator species (or define groups of species) that differ in the habitat requirements and for which there is sufficient updated information on their distribution..
2. Search / plan key zones of suitable habitat (differentiating them, if necessary, in feeding, breeding and displacement habitats) for the groups of selected characteristics..
   - Search / plan additional habitats for persistent populations (within the range of dispersion at the regional and national levels). (WWWF (2015)

Synonyms:

Biological corridor, conservation corridor

Equivalent:

Sp: Corredor biológico.

It: Corridoio ecológico

Ecological imbalance (issue)

Definition:

"Significant alteration of the environmental conditions in which cumulative, synergistic and residual impacts are expected that would cause destruction, isolation or fragmentation of ecosystems." (Secretaría de medio ambiente, 2013) (free translation)

Context:

"In those areas that present degradation or desertification processes, or serious *ecological imbalance*s, the Secretariat must formulate and execute ecological restoration programs. In the formulation, execution and monitoring of such programs, the Secretariat shall promote the participation of owners, holders, social, public or private organizations, indigenous peoples, local governments, and other interested persons.." (UN, 2017)

"The concept of ecological or environmental disease can be seen from two different perspectives, such as the faces of a coin; The first is the way in which the ecological or environmental balance has been seriously injured and is therefore ill. The second is that the environmental imbalance now threatens living species, in particular man and in turn causes disease." (Benítez, L. 1990) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the Ecological Imbalance concept refers to severe damage to natural habitats from industrial activities, urbanization processes, exploitation of natural resources and pollution; which not only sick and damage ecosystems, but also put the health and life of the species (flora and fauna) at risk, and especially that of humans.

Synonyms:

Altered environment, environmental impact, environmental pollution, ecological damage.

Equivalent:

Sp : Desequilibrio ecológico
It : Squilibrio ecologico

Ecological niche (other)

Definition:

"[…] It describes, in general, the range of environmental, physical and biotic conditions, in which a species, or more precisely, a local population, can live and perpetuate itself successfully." (Instituto de Ecología de la UNAM, 2018) (free translation)

"[…] It is the set of characteristics, environmental or ecological variables, that describe the precise resources that an organism needs to survive." (López, 2007) (free translation)

Context:

"The ecological niche is a concept that alludes to the way in which a specific species or a set of organisms is positioned within a specific habitat and always in relation to both the environmental conditions and the other species that cohabit in that space. That is to say: the ecological niche of a species is its punctual relationship with the other elements of its ecosystem." (Raffino, M., 2019) (free translation)

"Based on the concept of ecological niche of Hutchinson (1957), Maguire Jr (1973) developed the concept of centroid of ecological niche, which indicates that the centroid is a point where the average of the different variables or factors that determine the presence converge of a species, at which point a dynamic of high birth rate and reduced mortality is established." (Maciel, C., et al., 2015) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the Ecological Niche concept refers to the set of environmental characteristics and variables that propitiate the biotic and abiotic resources necessary for a species to exist in a certain environment, leading to high birth rates and low mortality.

Synonyms:

Habitat

Equivalent:

Spanish: Nicho ecológico

Italian: nicchia ecologica.

Ecological planning (principle)

Definition:

"[...] an instrument of environmental policy whose purpose is to regulate productive activities, in order to achieve rational environmental exploitation, promoting sustainable development strategies and avoiding irreversible destruction of ecosystems." (Cavallaro and Fratalocchi, 2015) (free translation)

Context:

"Ecological Planning implies the application of Landscape Ecology to decision making about land use allocations and land use planning. It is a discipline that combines ecological knowledge with the spatial analysis contributed essentially by geography." (Romero, H., et. Al.,) (free translation)

"…Environmental planning is proposed as a normative strategy to regulate the relationship of society with nature, understanding both as a structurally and functionally interrelated system whose elements and processes are interdependent. This planning approach therefore includes the instrumentation of legal devices to apply preventive, corrective and punitive measures.."(Aguiluz Casas, G. y Vásquez Sánchez, M. y Molina Rosales, D. y Saldívar Moreno, A. , 2001) (free translation)

Comment / Notes:

The dissertation referring to the meaning of the concept of Ecological Planning refers to an instrument of territorial planning, elaboration of plans and programs, which takes into account all the environmental factors of a given territory to guarantee its protection and existence. Another objective of ecological planning is to promote sustainable developments, taking into account private and governmental initiatives, but evaluating plans and programs from an ecological point of view, providing high environmental protection.

Synonyms:

Planeación ambiental, gestión ambiental.

Equivalent:

Sp: Planeación ecológica
It: pianificazione ecologica

Economic cluster (issue)

Definition:

A cluster is a group of companies sharing local resources, using similar technologies, and forming linkages and alliances. These linkages can take the form of buyer-supplier relationships, turnover and "pirating" of employees, joint marketing, training, or research initiatives, associations, and lobbying. (M. E. Porter, 1998)

Context:

"Today's economic map of the world is dominated by what I call *clusters:* critical masses—in one place—of unusual competitive success in particular fields. Clusters are a striking feature of virtually every national, regional, state, and even metropolitan economy, especially in more economically advanced nations. Silicon Valley and Hollywood may be the world's best-known clusters. Clusters are not unique, however; they are highly typical—and therein lies a paradox: the enduring competitive advantages in a global economy lie increasingly in local things—knowledge, relationships, motivation—that distant rivals cannot match." (M. E. Porter, 1998: 78)

"As Steiner (1998, pp. 1 and 4) observes, clusters have become an object of desire for many cities and regions, resting on the widely accepted assumption that in- creased specialisation will lead to increased levels of productivity, growth and employment. Cluster-based policies have been adopted by a range of organisations operating at different geographical scales, including regional development agencies within a number of European and North American states…" (Cumbers & MacKinnon, 2004: 959)

Comments:

Economic cluster is a typical economic structure that can be found in metropolitan cities serving the global markets. Various physical manifestations in the form of infrastructure and material flows in can be connected to the underlying economic clustering.

Synonims:

Economic cluster, industry cluster, competitive cluster, Porterian cluster

Equivalent:

Sp: Grupo económico
It: Cluster económico

Ecosystem Service (operator)

Definition:

Ecosystem Services (ES) means the direct and indirect contributions of local ecosystems to human well-being and quality of life. This definition marks the link between the natural ecosystem and human well-being since the ES are the spatial link between the human and natural environment. (Economics of Ecosystems and Biodiversity, 2008 – 2010 (TEEB). The ES are divided into 4 categories: *Regulating Service, Provisioning Service, Cultural Service and Habitat Service*

Context:

Provisioning services: are the products obtained *from ecosystems* as: food, fresh water, wood, fiber, genetic resources and medicines.

Regulating services are defined as the benefits *obtained from the regulation of ecosystem* processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination or pest control.

Cultural services include non-material benefits that people *obtain from ecosystems* such as spiritual enrichment, intellectual development, recreation and aesthetic values.

Habitat services/Supporting Service highlight the importance of *ecosystems to provide habitat for migratory species* and to maintain the viability of gene-pools.

Comments:

Mapping Ecosystem Services acquires significant meaning in the context of Environmental Accountability to quantify and sum the resources and active flows at different scales, in order to describe the current condition of the ecosystem of which the metropolitan city is part. Within the Metropolitan Discipline, cartography and maps are useful for presenting, organizing and categorizing spatial data that allow comparing the performance of countries and regions of the world through indicators and qualitative relationships between geo-localized numerical data.

Currently, technologies and research allow us to have a solid basis for mapping cities and metropolitan society, and therefore for mapping ecosystem services that are active locally.

Currently there is a request from policy makers to map ES to quantify the existing natural capital on a georeferenced geographical basis: one of the main challenges of the discipline is to map all Ecosystem Services in open source.

According to literature, Regulating Services are the most mapped out, as well as Provisioning onces, leaving the field of research for cultural ones incomplete.

As regards the regulation of the ES, the point of view of international research is mainly aimed at climate monitoring services and the location of procurement services related to the production of food, water and timber. The major milestones were achieved in the context of hyper-local mapping of data related to pollination or biodiversity control.

The specific challenge of mapping Ecosystem Services is linked to application in the interdisciplinary field; research has become an academic priority. The multifaceted concept of Es also includes a normative component. This factor exposes the ES to the need to make them understandable and universally communicable through a common international classification (CICES - Common International Classification of Ecosystem Services). It is important to remember that the need to map ES today is not only linked to the natural sciences, but also includes the social and economic ones. Furthermore, recent studies support the multi-layered mapping that allows to broaden the vision according to a cross – cutting analysis to the scientific and humanistic disciplines, being able to include the mapping of Ecosystem Services as a protocol process also in the field of urban and architectural planning.

According to Mentropolitan Discipline, starting from Mapping Ecosystem Services, it is possible to encourage projects to arm spaces according to the principles of the Green-Grey Infrastructure (based on tree coverage areas, urban and peri-urban forests, road trees that coexist with armed structures) constitutes a priority action for environmental improvement in order to facilitate the activation of the Ecosystem Services. GreenGrey Infrastructure development is strongly promoted by the EU, starting from the EU strategy for biodiversity 2020, up to the program Enhancing Resilience of Urban Ecosystems through Green Infrastructure.

Synonyms:

Ecosystem Functions

Equivalent:

Sp: Servicios Ecosistemicos

Environmental degradation

(issue)

Definition:

"[…] In environmental accounting, the concept of degradation refers to the decrease in the quality of the environment caused by productive activities." (SEMARNAT, 2010) (free translation)

Context:

"*Environmental degradation* (earthquakes, tsunamis, cyclones, hydroelectric dam constructions, industrial accidents, droughts, climate change, etc.) is gaining increasing importance as a cause of human migration. The figures indicate that it is a phenomenon of great magnitude (predominantly in nations belonging to the global South). The impacts of climate change are increasingly important and affected one more cause of current migrations that interact with the rest and even the powers. One of the most serious problems faced by those who migrate for environmental reasons is the poor recognition of their status in international treaties and internally. Therefore, it is essential to understand the complexity of environmental migrations, so there are no simple solutions. The amendment or adaptation of treaties and other regulations are viable options that should continue to be explored."(Felipe, B. 2016) (free translation)

"…from the concept of environmental degradation (...), we first accept the double definition offered by Herzer in his contribution to this volume in the sense that the degradation itself refers to "a reduction of degree or a smaller range "or" changes in the homeostasis of a system ", so there is a reduction in its productivity. On the "environmental" side, or the "urban environment", we refer not only to the elements of "nature", the natural environment or the ecosystem, but to a medium that is the product of a complex relationship, to form a particular relationship between the elements of support offered by "nature" (land, water, air, etc.) and the socially constructed environment (the city and its physical structures, social and cultural patterns, etc.). Degradation, in this case, refers to the environmental totality: the natural, the physical and the social.." (Fernandez, 1996) (free translation)

Comment / Notes:

The dissertation alluding to the meaning of the concept Environmental degradation, refers to the different natural and social phenomena that occur due to the contamination of natural resources, the modification and alteration of ecosystems, the scarcity of natural resources, climate change. All this generates natural disasters of different types that have a direct impact on the populations that suffer them, which are forced to migrate due to the factors resulting from the phenomena. Human migrations due to environmental degradation have been increasing, as we exploit, destroy and unbalance the biological, natural and environmental factors of our planet.

Synonyms:

Ecological deterioration

Equivalent:

Sp: Degradación ecológica
It: Degrado ecológico

Environmental fragility (issue)

Definition:

"…degree of vulnerability offered by the environment in the incidence of certain actions, M. 2011:6) (free translation)

Context:

"Natural hazards are incorporated into territorial planning through an official methodology that aims to incorporate the environmental variable called the Environmental Fragility Index (IFA)." Barrantes, G (2012) (free translation)

"El principal objetivo del índice de fragilidad ambiental es el desarrollo de una zonificación del espacio geográfico de acuerdo con sus aptitudes naturales, a fin de aplicar el principio de "adaptar el uso antrópico a las condiciones naturales del medio ambiente" y no adaptar el medio ambiente al uso antrópico, principio de desarrollo que induce, en algunas ocasiones, al uso de la tierra en actividades que no son adecuadas para ello, lo que, a largo plazo, produce una situación de desequilibrio ambiental." (Astorga, A. Mende,A , Piedra M.2005:4) (free translation)

Comment / Notes:

The Environmental Fragility Index (EFI) is described as a qualitative assessment of the degree of the fragility of the environment in the use of land: "It is defined as the total balance of environmental charge of a given geographical space, which adds the condition of natural aptitude of the same (biotic, gea and potential use of the land), the induced environmental charge condition and the capacity to absorb the additional environmental charge, linked to the demand for resources. "Four information axes are used in its construction:

- Anthropo-aptitude: condition that presents a geographical space because of the different types of land use that makes human beings.
- Bio-aptitude: natural condition that has a geographical space from the biological point of view.
- Edafo Aptitude: it includes the condition of natural aptitude that has a given land, respect to the conditions of the layer of soil that covers it.

- Geo-aptitude: refers to the condition of natural stability of the geographical spaces, both from the point of view of the subsurface conditions, and to the active geodynamic processes that can alter that stability. Barrantes, G (2012) (free translation)

Equivalent:

Sp: Fragilidad ambiental
It: Fragilità ambientale

Environmental justice

(protocol map)

Definition:

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, gender or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. It will be achieved when everyone enjoys the same degree of protection from environmental, industrial pollutions and vulnerability to natural and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work (USA Environmental Protection Agency and Beretta&Ilaria 2012). In this sense, Schlosberg (Verma, 2018) adds some clarifications like equitable distribution of environmental risks and benefits; fair and meaningful participation in environmental decision-making; recognition of community ways of life, local knowledge, and cultural difference; and the capability of communities and individuals to function and flourish in society. An alternative meaning, used in social sciences, of the term "justice" is "the distribution of social goods".

Context:

The notion of environmental justice was conceived in the United States in the mid-1980s, in the claiming for racial equality, and although it was not coined as such, environmental justice activism has been an essential frame in the politics of communities of people of color for more than a century. The link between racial and ethnic, socioeconomic status and environmental inequalities is prevalent to employ the term.

Comments:

Environmental justice is a varied and interdisciplinary topic and commonly binds with Ecofeminism, Environmental Degradation, Environmental Health, Environmental Policy, Environmental Protection, Environmental Risk Assessment, Hazardous Waste Sites, Effect of environment on Human beings, Human Ecology, Minorities Pollution, Poor Social Ecology, Waste Disposal Sites.

Synonyms:

Spatial Justice, Social Justice.

Equivalent:

Sp: Justicia Ambiental
It: Giustizia ambientale

Event (keyword)

Definition:

A natural event is an act of nature of such magnitude as to create a catastrophic situation in which the dayto-day patterns of life are suddenly disrupted and people are plunged into helplessness and suffering, and, as a result, need food, clothing, shelter, medical and nursing care and other necessities of life, and protection against unfavourable environmental factors and conditions." From Guide to sanitation in natural disasters 1971 – WHO World Health Organisation

Context:

There are different ways of understanding the word event according to the fields of action in which it occurs:

- A depression is catastrophic event for the economy.
- In physics (and in some kinds of philosophy), an event occurs at a point in time which can be distinguished because the state of the world changed. Something was different before and after the event.
- In special relativity (and general relativity), an event is a point in the space-time continuum, i.e. it has a position in space and time.
- In experimental particle physics, an event refers to a set of elementary particle interactions recorded in a brief span of time.
- In probability a possible outcome of an experiment is called an elementary event, while a set of those (a subset of all) is called simply an event.
- In palaeontology, one speaks of extinction events.

Comment / Notes:

The natural disasters that result can be divided into several different categories:

- *Geologic Hazards* : Earthquakes, Volcanic Eruptions, Tsunami, Landslides, Floods, Subsidence, Impacts with space objects.
- *Atmospheric Hazards* : Tropical Cyclones, Tornadoes Droughts, Severe Thunderstorms, Lightening.
- *Other Natural Hazards* : Insect infestations, Disease epidemics, Wildfires.

Events can also be divided into *catastrophic hazards*, which have devastating consequences to huge numbers of people, or have a worldwide effect, such as

impacts with large space objects, huge volcanic eruptions, world-wide disease epidemics, and world-wide droughts.

Natural Hazards can also be divided into rapid onset hazards, such as Volcanic Eruptions, Earthquakes, Flash floods, Landslides, Severe Thunderstorms, Lightening, and wildfires.

Anthropogenic Hazards

These are hazards that occur as a result of human interaction with the environment. They include Technological Hazards, which occur due to exposure to hazardous substances, such as radon, mercury, asbestos fibers, and coal dust. They also include other hazards that have formed only through human interaction, such as acid rain, and contamination of the atmosphere or surface waters with harmful substances, as well as the potential for human destruction of the ozone layer and potential global warming.

Effects of Hazards

Hazardous process of all types can have primary, secondary, and tertiary effects.

- Primary Effects occur as a result of the process itself. For exemple water damage during a flood or collapse of buildings during an earthquake, landslide, or hurricane.
- Secondary Effects occur only because a primary effect has caused them. For example, fires ignited as a result of earthquakes, disruption of electrical power and water service as a result of an earthquake, flood, or hurricane, or flooding caused by a landslide into a lake or river.
- Tertiary Effects are long-term effects that are set off as a result of a primary event. These include things like loss of habitat caused by a flood, permanent changes in the position of river channel caused by flood, crop failure caused by a volcanic eruption etc.

Vulnerability to Hazards and Disasters

Vulnerability refers the way a hazard or disaster will affect human life and property Vulnerability to a given hazard depends on:

- Proximity to a possible hazardous event
- Population density in the area proximal to the event

- Scientific understanding of the hazard
- Public education and awareness of the hazard
- Existence or non-existence of early-warning systems and lines of communication
- Availability and readiness of emergency infrastructure
- Construction styles and building codes
- Cultural factors that influence public response to warnings

In general, less developed countries are more vulnerable to natural hazards than are industrialized countries because of lack of understanding, education, infrastructure, building codes, etc. Poverty also plays a role - since poverty leads to poor building structure, increased population density, and lack of communication and infrastructure.

Human intervention in natural processes can also increase vulnerability by :

Development and habitation of lands susceptible to hazards, For example, building on floodplains subject to floods, sea cliffs subject to landslides, coastlines subject to hurricanes and floods, or volcanic slopes subject to volcanic eruptions.

Increasing the severity or frequency of a natural disaster. For example: overgrazing or deforestation leading to more severe erosion (floods, landslides), mining groundwater leading to subsidence, construction of roads on unstable slopes leading to landslides, or even contributing to global warming, leading to more severe storms.

Affluence can also play a role, since affluence often controls where habitation takes place, for example along coastlines, or on volcanic slopes. Affluence also likely contributes to global warming, since it is the affluent societies that burn the most fossil fuels adding CO_2 to the atmosphere.

Equivalent:

Sp : Evento

It: Evento

Expansion factor (other)

Definition:

"An indicator constructed taking into account the urban expansion and the population increase registered in an urban area: the quotient between the annual average growth of the urban area and the average annual growth of the population. A factor of 2x means that, for each percentage point increase in population, the urban area expanded 2 percentage points" (Cordara, C. et al., 2018: 227).

Context:

"Figure 7.6 presents the relationship between urban expansion and population growth for each agglomerate. The results show the worrying situations in several urban agglomerates, where the expansion of the urban area was much higher than the population growth. The agglomerates where the expansion factor was greater are: Rosario (3,1x), Bahía Blanca (2,4x), Río Cuarto and Río Gallegos (2,0x), Greater Córdoba (1,9x) and Greater Mendoza, Greater Salta, Santiago del Estero-La Banda, Neuquén-Cipolletti-Plottier, San Nicolás-Villa Constitución (1.8x).

The final result shows that, between 2006 and 2010, 19 cities expanded less than the population growth (0.4x to 0.9x), 2 expanded equally or somewhat above population growth (1x to 1.2x), 6 expanded above population growth (1.2x to 1.5X), and 6 GAUs expanded well above population growth (more than 1.5x).

Synonyms:

X factor

Equivalent:

Sp: Factor de crecimiento
It: Fattore di espansione

Exposure (keyword)

Definition:

Exposure science is the study of an organism's (usually human) contact with chemical, physical, biological agents or other health risk occurring in their environments, and advances knowledge of the mechanisms and dynamics of events either causing or preventing adverse health outcomes. Exposure science can be considered as the study of stressors, receptors, and their contacts in the context of space and time.

Context:

Exposure science is defined by the *United States National research Council* (2012) as the collection and analysis of quantitative and qualitative information needed to understand the nature of contact between receptors (such as people or ecosystems) and physical, chemical, or biologic stressors. Exposure science strives to create a narrative that captures the spatial and temporal dimensions of exposure events with respect to acute and long-term effects on human populations and ecosystems.

For the purposes of this report, the committee focuses on environmental risk factors and excludes behavioral or lifestyle factors—such as diet, alcohol, and smoking—although it includes contaminants in food, water, and environmental tobacco smoke. It also excludes social risk factors (for example, crime and child abuse) but does consider them as modifying influences on exposures to stressors. The influence of social factors on environmental exposures is an area of active research. Natural hazards (for example, weather and arsenic contamination) are included here.

Ecosystems are receptors for such stressors as mercury, which may cascade from the ecosystem to populations to individuals in the ecosystem because of concentration and accumulation in the food web, which lead to exposure of humans and other species. It is important to recognize that exposure science applies to any level of biologic organization ecologic, community, or individual—and, at the individual level, encompasses external exposure (outside the person or organism), internal exposure (inside the person or organism).

Coming into contact with a toxic material is *a highly dynamic process* that varies from person to person (depending on behavior, location, and life style) and from one toxic substance to another. The determination of the degree of

toxicity is the domain of toxicology, and occurs almost exclusively in the laboratory. The goal of Exposure Science is to identify and characterize 'real world' contacts with and uptake in the body of toxic materials that can cause acute or chronic health effects. The essence of environmental health, consumer safety, and occupational health policies and regulations is therefore to reduce and limit such exposures to acceptable levels. Accountable and (cost) effective policies thus require a thorough understanding of the exposure profiles in the population. For this reason, agencies like EPA and CDC, Equivalent: agencies abroad, and international bodies like the World Health Organization invest in human exposure research.

Exposure Science is a priority item in many national and international research strategies. Its principles and relevance are well documented in many *National Research Council reports, including the 1991 report* called: *'Human Exposure Assessment for Airborne Pollutants*.' It is necessary to use symposiums and public forums as vehicles to provide accurate information to the public, the private sector, and elected or career government officials. These are goals that are also promoted by activities of the *International Society of Exposure Analysis (ISEA: www.iseaweb.org),* and other professional organizations. Through such 'forward looking and introspective' efforts, the field can convey clearer messages about the meaning and implications of what each application of Exposure Science is trying to achieve, and how the results will be used to improve and protect the public's health.

Equivalent:

Sp: Exposición
It: Esposizione

Green Infrastructure (keyword)

Definition:

Green infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation. At the expense of forced solutions with artificial and energy-intensive infrastructure, this network of green (land) and blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity (European Commission, 2013).

Context:

Usually accepted by the greenbelt theories and applied design to cities, the context of "Green infrastructure" in our glossary, as an evolution of the range of use, extends to regional green infrastructure and furthermore to Bioregion. As the greenbelt, the green infrastructure is always part of a wider region than the limits of a city. It involves a living system that finds its sources of sustenance in the greater natural and ecological systems. In order to keep a healthy greenbelt, connections with the main supplying areas and natural corridors must be preserved and inserted in the planning design as strategical green infrastructure if whether they are Metropolitan Areas.

Comments:

In the literature is commonly found a controversial discussion when nature is treated as infrastructure. Therefore, this term is concerned with Anthropogeographic Landscape. By its side, you can consider two types of infrastructure: those that create physical networks, as channels, roads; and those that produce a network of professional organization, stabilized socio-technical practices joined to administrators, designers, operators of infrastructure and users. Historian Antoine Picon (2018) adds another one: imagination infrastructure. With it, it is possible to infuse them with a more general political significance than the sort that is born of services provided from day to day by infrastructure.

Synonims:

Green System, Anthropogeographic Landscape

Equivalent:

Sp: Infraestructura Verde
It: Infrastruttura Verde

Grey infrastructure (Protocol Map)

Definition:

Metropolitan Discipline considers Green-Grey Infrastructure Protocol Map as an operative project strategy with territorial-scale effects, aiming to overcome the fragmentary nature of urban extensions in the metropolitan area through a structural reading of the landscape system, characterized by forms of continuity with which architecture collaborates to define unitary interventions aimed at generating a new form of Linkage Urban Rural Pattern.

Context:

In current urban planning and policies scenarios, the Green-Grey Infrastructure is the strategically planned network of built and un-built environmental characteristics designed to provide Metropolitan Architecture projects in order to activate ecosystem services. Metropolitan Architecture means the structure that forms the Metropolis; this is a projects in which geography and its geographical support points are essential for integrating the infrastructure into a ground project. Metropolitan Architecture project grafted in Green-Grey Infrastructure is the determination of the environment adapted to the metropolitan lifestyle and its economy made of flows and new patterns of living: urban-rural linkage. So that Metropolitan Architecture project construction for Green-Grey Infrastructure follows the central principles of Landscape Urbanism, which focus on structuring urban space around green infrastructures and ecologically sensitive practices, which simultaneously include morphological and performative aspects, appear to be suitable for implementation in the metropolitan developing contexts (Governour, 2015). This network of infrastructure armatures, green and blue areas can improve the environmental conditions and, therefore, the health and quality of life of the inhabitants. According to the Conservation International Practical Guide to Implementing Green-Grey Infrastructure there are different synonyms for understanding the complexity of Green-Grey Infrastructure as Ecosystem-Based adaptation. It is therefore a complex system adaptive to the obvious effects of Natural Hazards, due to climate change on human-engineered armature.

Comment:

The purpose of the protocol map Grey-Grey Infrastructure induces map-reader and local agent to detect spatial interruptions of interface elements of the physical context, in order to ensure the continuity of the ecological infrastructure not integrated with the territorial urban system yet.

The object of the Green-Grey Protocol Map XL, for example, is to represent the intermittent spaces between the most densely built-up areas and high natural capital ones of Lombardy. The map outlines a strategic framework in which the city of Milan is a large dynamic urban exchange centrality between the region of Lombardy, Piemonte and Liguria. The maps show an historical linkage of urban and regional centralities of flows trades based on the primary and secondary sector of the Italian national economy.

The purpose of the map is to tell the narrative of the metropolitan city of Milan, strongly linked to the complex water system of canals, underground waterways, linked to the hierarchical scheme of primary and secondary roads that sets up territory as Net-City. Nevertheless, the map highlights the lack of connection between the infrastructure and the ecological system of the plains. It is a condition that allows to consider Milan and its territory as an ecotone reality. This spatial condition could be identified in the ecological corridors currently existing at the main rivers of the city. The River Lambro and the River Ticino are ecological wedges to encourage biodiversity links between the Po and the pre-alpine valley and the Alpine relief.

Equivalent:

Sp: infraestructura gris

It: infrastrutture grigie

Homogeneous area (keyword)

Definition:

Homogeneous areas. (Formal Landscape Unit)

Formal Landscape Unit, is a homogeneous geographical area of the territory structured by cultural, environmental, cosmogonic, perceptual variables, derived from metropolitan dynamics that provide it with a unique identity in the territory. Defined term under discussion at the 2nd Transnational Project Meeting of TELLme, February, 2019, UAG, Guadalajara, Jalisco, Mexico.

Context:

The landscape units are relatively homogeneous portions in the territory, this depends on the scale at which it works, that is, on the degree of detail that the study has. (Serrano, 2012). This homogeneity is defined both by biophysical, socioeconomic and cultural aspects as well as by the relationships between them.

After identifying areas of the landscape and their categorization into variables, homogeneous portions of territory are defined, with similar characteristics in order to facilitate their inclusion in planning, based on the determination of the landscape variables and the mapping of the elements that make up, a spatial subdivision of the entire area is made, which due to its extension, understanding, study and treatment, is delimited by areas in what is called "Formal Landscape Unit", understood as a portion of space that has its own character, given by a specific combination, made up of clearly recognizable and representative landscape components, that is, those that confer recognition on the territory that characterizes it and differentiates it from others, based on established criteria. (CHAVEZ et al., 2020).

The Geographic Information System (GIS-QGIS) is the basic instrument to establish and specifically delimit the Landscape Units that make up the territory.

Comments:

A homogeneous unit is a portion of the territory with some internal homogeneity both at the level of description and integration of variables (Díaz Terán, 1988)

A landscape unit is a portion of territory that is ecologically homogeneous at a given scale. (Zonneveld, 1989)

Synonims:

Geosystem

Equivalent:

Sp: Areas homogeneas
It: Aree omogenee

Human and non-human assembly (operator)

Definition:

Overcoming the notion of culture against nature, in the rise of post-humanist positions, the assembly for a parliament of beings from diverse backgrounds is defined as the power to recognize the coexistence and interaction of humans, machines, objects, synthetic intelligences, genetically manipulated beings, animals.

Context:

Modernity is often defined in terms of humanism, either as a way of acknowledging the birth of 'man' or as a way of announcing his death. But this habit itself is modern, because it remains asymmetrical. It overlooks the simultaneous birth of 'nonhumanity' - things, or objects, or beasts – and the equally strange beginning of a crossed-out God, relegated to the sidelines. Modernity arises first from the conjoined creation of those three entities, and then from the masking of the conjoined birth and the separate treatment of the three communities while, underneath, hybrids continue to multiply as an effect of this separate treatment. The double separation is what we have to reconstruct, to reassemble: the separation between humans and nonhumans on the one hand, and between what happens 'above' and what happens 'below' on the other. (Latour, 2012: 13).

Comments:

Even in the fragility of thinking of them still under a common constitution, with identical rights, our time cannot fail to admit their presence, which would broaden the understanding of what we call ecology.

Synonims:

Hybrids, Networks.

Equivalent:

Sp: Asamblea de humanos y no humanos
It: Assemblea umana e non umana

Inclusive wealth (operator)

Definition:

Inclusive wealth is a measure designed to address the sustainable development question. Inclusive wealth is defined as the aggregate value of all capital assets, where the value of a unit of a capital asset is measured by the contribution it makes to increasing current and future human well-being. (Polasky et al., 2015)

Context:

"Probably the most well-known definition of sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The inclusive wealth approach shares with this definition a concern about current and future generations but differs from it by focusing on well-being rather than needs." (Polasky et al., 2015: 3)

"One way to include equity considerations within the inclusive wealth metric is to use equity weights that assign a different value to gains (losses) of different groups based on their relative wealth. Groups that have low wealth have a high marginal value for increasing wealth, and the marginal value falls with increasing relative wealth. Such approaches have been used in climate change to give greater importance to climate impacts that affect low-income countries." (Polasky et al., 2015: 16)

"…the significance of wealth as a common denominator for measuring inequalities is becoming more evident, as recently demonstrated by Thomas Piketty in Capital in the 21st Century (Piketty 2014). Using inclusive wealth rather than income alone can pro- vide a more complete picture of inequality in contemporary societies across the world." (Alsaati et al., 2014: 9)

"As most countries experienced declines in natural capital, total growth is decelerated as compared to GDP and HDI. Moreover, empirical evidence shows positive average growth in per capita inclusive wealth in 85 of the 140 countries evaluated (approximately 60 percent); … Human capital is the foremost contributor to growth rates of inclusive wealth in 101 out of 140 countries. In 27 countries, produced capital was the primary contributor. On average, human capital contributed to 55 percent of overall gains in inclusive wealth, while

produced capital contributed to 32 percent and natural capital to 13 percent." (Muñoz, 2015: 6)

Comments:

The inclusive wealth concept and the related index (IWI) represent an alternative to the gross domestic product (GDP) measurement of economic development and are relevant for evaluation of complex economies such as metropolitan cities and regions. As a multidimensional and multidisciplinary tool IWI can be related to issues of sustainability, availability of physical and social infrastructures and finally, to the issues of wealth distribution as such.

Increases in inclusive wealth indicate an improved productive base capable of supporting a higher standard of living in the future consistent with sustainable development, whereas decreases in inclusive wealth indicate unsustainable development. (Polasky et al., 2015)

Methodologies of calculating the IWI are to same extent defined and clear. Additional open challenges exist in the area of evaluating human capital and of relating the IWI to mapping metropolitan economic and environmental structures and underlying dynamics.

Synonims:

Comprehensive wealth, genuine wealth

Equivalent:

Sp: Riqueza inclusiva
It: ricchezza inclusiva

Innovative Governance (operator)

Definition:

For Schmitter (2002: 52) Governance is a method/mechanism for dealing with a broad range of problems/conflicts in which actors regularly arrive at mutually satisfactory and binding decisions by negotiating with each other and co-operating in the implementation of these decisions. By other side, Paquet (2001, quoted in Hamel, 2003, p. 378), the newly emerging and innovative models of action result from the concerted combination of social actors coming from diverse milieus (private, public, civic, organized as horizontal associational networks of private –market-, civil society -usually NGO- and state actors) with the objective to influence systems of action in the direction of their interests. However, these forms of apparently horizontally organized and polycentric reveals that power is dispersed in rule-making, rule-setting and rule implementation at a variety of geographical scales.

Context:

Governance (beyond-the-state), for Swyngedouw (2005), refers in a context to the emergence, proliferation and active encouragement of institutional arrangements of 'governing' which give a much greater role in policy-making, administration and implementation to private economic actors on the one hand and to parts of civil society on the other in self-managing what until recently was provided or organized by the national or local state.

Comments:

The alteration from 'government' to 'governance' is linked to the consolidation of new technologies of government, on the one hand, and with profound restructuring of the parameters of political democracy on the other, leading to a substantial democratic deficit. Indeed, that socially innovative arrangements of governance-beyond-the-state are fundamentally hypocritical, particularly under conditions in which the democratic character of the political sphere is increasingly eroded by the encroaching imposition of market forces that set the 'rules of the game'.

Equivalent:

Sp: Gobernanza Innovativa
It: Governance Innovativa

Inventive Resilience

Definition:

Inventive Resilience emphasizing the active engagement and reaction to the critical environmental problems rather than a passive endurance. The characteristics of the natural landscape need to not only be recognized, protected and ruled, but also designed. It is new approach to the design of places at metropolitan scale, needed to go beyond the management of the phenomenon, an adaptive system, and move towards a work of invention, an inventive system.

Context:

We have to study, therefore, the rules of engagement between the different levels of formality related to various scales. The accurate transition between the landscape units will be marked through physical signs (Metropolitan Architecture), so that, the project will produce mental maps of space, considered as a new place of action and potential movement. According to Naveh (1990) the urban systems are part of the Total Human Ecosystem which includes three types of systems of self-organization: the mechanism system, which does not change its internal organization; the adaptive system, changing the environment by changing its internal structure in accordance with pre-programmed and external information; and the inventive system that changes its structure through the internal generation of reports in accordance with its intentions to change the environment, mostly generated by the system in an interaction with continuous feedback from the environment (dynamic communication). We believe, consequently, that the issue is not to get into the process of evolution of the place, governing the changes taking place, but it is rather essential to rethink the existing urban structure and correctly to interpret the leap in scale that changes the system. After a first phase of order / disorder, in fact, in which each growth process determines a scaling that changes the nature of some territorial elements, it follows a second one, in which the system presents new stable structures of scale invariants associated to critical points or ecotones designed as points of status change.

Comment:

Let's talk about processes of landscape, actually, so a landscape that comes from a dialectic between structure and function, and that, like an autopoietic machine (Maturana and Varela, 1980) defined as a unit, is a network of processes of inventive production (transformation and destruction), a network of components that the landscape continuously regenerates, according to their interactions and transformations, realizing a network of processes and relationships and producing, then, the mechanism in itself. This autopoietic machine is a precise unit in the space in which the components are specified through the topological space field: works of soil and water.Through this transcalar and geographical rooted methodology that provides a wider vision, we can link our project to a more general process. So that, the local usual relations between city and landscape: the traditional way to use the territory of the urban world and the agricultural and natural process can be transformed in a part of a wider system (Contin, Ortiz, 2015).

Equivalent:

Sp: Resiliencia inventiva
It: Resilienza inventiva

Land use (keyword)

Definition:

Land use refers to the activities attributed to a piece of land larger than one hectare, including: residential uses, industrial uses, commercial and / or administrative uses, equipment and other uses" (Cordara et al., 2018: 32-35).

Context:

"In relation to the land uses developed in the expansion areas in the period 2006-2016, 85% of the land was used for residential uses, 12% for industrial uses and 3% for equipment. Within the residential uses, the greatest expansion is explained by enclosed urban areas (private gated communities), which represent 27% of the total, followed by urban residential uses with 25%, extra-urban residential uses (land of more than 500 m2) with 13%, social housing with 11% and informal residential areas with 9%" (Cordara et al, 2018: 234). Comment / Notes:

Synonims:

Land management, spatial planning, soil use

Equivalent:

Sp: Usos del Suelo
It: Uso del suolo

Landscape Unit

Definition:

The Landscape Unit is defined as a portion of territory whose tangible and intangible characteristics are clearly distinguishable (Nogué, Sala & Grau, 2016).

The Landscape Unit expresses the combination of landscape components that generate a particular physiognomy, a differentiated organization that makes one part of the territory different from another. In other words, a landscape unit is a fraction of territory that has its own character. (Mata Olmo, 2014)

Context:

The landscape unit is a conceptual and methodological tool, derived from the consideration of the landscape as a complex territorial system linked to the need to establish a scientific reading of the territory and on the requirement to provide an operational response to territorial planning. (Pérez, 1999).

The Landscape Unit corresponds to the level of least generalization and is defined as a combination of elements that generate, at a certain scale, a particular physiognomy, a differentiated and differentiable morphological organization, which makes one part of the territory different from another. Landscape units are the basis of territorial ordering, they turn out to be a useful instrument in a triple dimension: they contribute to the correct location and arrangement of the elements and uses of the territory, as well as the structures or systems that make it up, they allow the diagnosis to be made. territorial, contain and show the use of the geographic space, understand and explain their ways to organize it with knowledge of the effects that they have produced, the valuation is considered as a factor that contributes to the proposals of territorial planning.

Comments:

Through landscape units, it is possible to classify the territory to analyze its characteristics, have observation parameters to define what transforms them and identify the participating parts in them.

Synonims:

Integrated Landscape

Equivalent:

Sp: Unidad de paisaje
It: Unità paesaggistica

Map of Dynamics (other)

Definition:

Maps of Dynamics are a set of maps representing the spatial impact of the dynamics of ongoing metropolitan process identified during problem finding phase.

They are used as analytical bases from which it is possible to deciding the operations necessary for the metropolis. They are produced with selected open-source data that are put in relation according to an interdisciplinary zone of reading of the Semantic Package to describe metropolitan phenomena.

Maps of Dynamics operate at the large scale and aim at highlighting the dynamics and defining strategies for promoting the sustainable development of the metropolis.

Context:

They are open-source maps based on open-source dataset. It is produced in the data mining and data collecting phase of the Protocol Maps and selected on the basis of the correspondence between the concept of Semantic Packages and informative level. The aim is to highlight the qualitative potential of the metropolitan context at the local level. In the MGIP TELLme Software Glossary, through the Semantic Package, the expert selects in an interactive and dynamic way the essential concepts for the description of the metropolitan phenomenon that unfolds in the analyzed context, generating disciplinary perspectives or zones of readings. On metropolitan experts side, they try to relate afterwards the Perspectives with the local user experience, understanding thus the metropolitan phenomena from the different and interdisciplinary points of view the local needs, with the aim of identifying the practical interactions between the physical, social, economic and governance dimensions. Through Maps of Dynamics different axiology of values is proposed, understood as principles that can support technical decisions for sustainable metropolitan projects.

Comment:

The narration of the urban facts of the contemporary metropolitan city is essential for the understanding of the processes of dynamic interaction between active agents in loco that produce potential new changes.

In the scenario of contemporary change, it is necessary that the urban biog-

raphy follows the same path of daily progression of the chronicle (d'Alfonso, 2017) of the city and the agenda of its inhabitants with the aim of aligning the principles of transformation of individual projects with those of the community. In order to have a balance between the parties, it would be necessary to replace, transform and maintain the public and private space by reconfiguring the common urban space, in accordance with the operations of Urban Metabolism, according to new and changing needs of temporary users and inhabitants of the territory, restoring an individual interest that may coincide with the social project of the community. Therefore, innovation projects should aim to generate new spaces for social evolution that can guarantee a balance between the dimensions of the city: physical, social, political and economic. Therefore, the transformation of the places and the image of the city are necessary to restore the progressive evolution of the metropolitan biography, keeping the goal of sustainability fixed.

Equivalent:

Sp: Mapa de la dinámica de los procesos metropolitanos.
It: Mappe della dinamica di Processi metropolitani

Meta-city

Definition:

The Meta-City is an additional layer of the city composed by meta-spaces: a fluid form of public space that evolves in time, generating different definitions of public space and different ways of participating in it. It is the product of the use of new technologies that co-exist and co-perform in the city defining a different and sometimes contradicting, spatial and hyper-spatial system of orders.

Context:

"The term Meta-City, in a wider conspectus, can be assigned to a state of co-existence and co-performance of different and sometimes contradicting, spatial and hyper-spatial systems of orders. The ultimate consequences manifest a complex configuration of multi-characteristic forces that are, on one hand, coupling as they enable the correlation between these systems and, on the other hand, are disruptive forces by being capable of exerting multi-dimensional values to each system and altering their initial shape of order. This can explain the use of the term 'Meta' prior the 'City'; since it is a state rooted in the spatial characteristics of the city that, paradoxically, eludes to follow the rational shape of its physical orders." (Shane, 2011)

When a part of a city is designated a metaspace, it becomes an Urban Gallery, a fluid form of public space that evolves in time, generating different definitions of public space and different ways of participating in it. These definitions yield "floors" in the spatial structure of the urban gallery. Metaspaces make it possible to bring the dynamic structure of scenarios into the flows of the second skin. A metaspace in the second skin is a public space, a public matrix. (Bunschoten, 2006)

Comment / Notes:

The question is how does the Meta-City converge and interrelate with the urban physical context and what will be the architectural and spatial qualities and values of this process?

According to Shane, we are living in a Meta-City. We have to critically face the dilemma of how to explore the relations between the physical context and the communicative dynamics it contains: to explore the state of the contained semiotic and symbolic values and the containers of such values within each context; to explore their "network of relations" and the performance of their dynamics through an analytical disassembling action; to extract the convergence

points in a temporal context; to reassemble them based on a complex entirety in order to enrich the neglected yet effective areas. The final results are meant to act as the new analytical indicators that not only help the urban studies to revealing the hidden values of the urban context towards the identification of projectable areas and addressing actions and spatial operations, but also, prior the materiality of the projects, propose the methodology for re-reading the contemporary urban context through its multi-dimensional characteristics. (Saffari, 2014)

Equivalent:

Sp: Meta-Ciudad
It: Meta-Città

Metropolitan architecture

(principle)

Meaning:

In Metropolitan Discipline, Metropolitan Architecture "is a project of architecture, urban design and landscape that deals with a new incommensurable scale and metropolitan dynamics. It requires a new sensibility to the natural ground, the environment, new ways of citizenship that do not conceive the public space as a solid street-square matrix. [It] means to think about new styles of behaviour induced by virtual communications in real time, a different built form type, land use and a *paesaggio* [total built landscape, editor's note] as a new reality made by a strong connection between the green-blue-grey infrastructures."

(Contin, 2015: XII)

Context:

In Metropolitan Discipline, Metropolitan Architecture should "have a multidisciplinary point of view over the physical space of the city and the architecture. [It] should be considered related to a wide range of magnitude, bigness it has been called, that we essentially have to refer to the proximity until now, and must be placed in a context of mass mobility of people and goods that implies a different relationship between the individuals and groups." (Contin, 2015: XII)

"In the last century and a half, the growth of metropolitan areas has been of concern for some groundbreaking urban scholars. The social and economic processes of metropolitan growth produce a physical footprint, and that footprint has a "shape". It has a specific formal layout that must be controlled, served, or promoted for an efficient result, in terms of public and private investments in infrastructure and facilities. Understanding that shape, and to make it the most equitable, efficient, and sustainable possible is the objective of Metropolitan Architecture: the Architecture of the Metropolitan scale." (Ortiz, 2015: 50) "[Metropolitan Architecture] means, then, that we must integrate into our project of architecture, urban design and landscape a new sensibility to the natural ground, the environment, new ways of citizenship that do not conceive the public space as a solid street-square matrix. [It] means to think about new styles of behaviour induced by virtual communications in real time, a different

built form type and a *paesaggio* [total built landscape, editor's note] as a new reality made by a strong connection between the green-blue-grey infrastructures. Finally, [it] implies an innovative relation between the concepts of heritage and inheritance or estate that forces us to link through a sensitive urban design and architectural project the medium and little towns and villages (and their local armatures) to the bigger metropolitan infrastructural scale. History doesn't found our project anymore, we are respectful but not subordinated to it." (Contin, 2015: 12)

Comment / Notes:

The Metropolitan concept is related to a measure and a scale which are not associated to human dimensions, or commensurate with the urban fabric and the density parameters/index of urban concentration, represented in the concept of proximity.

Metropolitan as a category is related to a context of mass mobility of people and goods, which implies a different relationship between individuals and groups.

The technological utopia, embodied by the spreading of metropolitan infrastructure networks and the overlapping natural universe, has erased previous geographical traces and has disarticulated agricultural and urban historical topological patches. Nevertheless, as a result, we may notice a sense of loss of productive and symbolic connotations of the cultivated land.

The old urban typo-morphological structure, whose functioning was mostly centripetal, suffers from congestion and lack of efficiency, and the concept of *paesaggio* has to be integrated by some issues from the Urban Landscape discipline.

The metropolitan works therefore as an alternative, intense urban form and environment, where new atopic proximities (Meta-City) are produced and a convenient bridge to the abstract and invisible world of the informational and networked city is provided (contents for the new technologies/new maps).

The Metropolitan Discipline field of action is the city that is the first engine for social integration, economic growth, cultural production, and the Metropolitan Architecture is the tool of this new discipline. Incommensurability is one of the main issues to be addressed by the Metropolitan Architecture, also in relation to a new sensitivity toward the natural and local ground and new styles of behaviour elicited by virtual communications in real time. It rises from the discon-

tinuity in the mental conception of the new metropolitan architectonical entity.

Therefore, the Metropolitan Architecture goal is to investigate ways and strategies to adapt and reform the typological and morphological paradigms of architecture and urban design to the transformation of contemporary urban territories.

Equivalent:

Sp: Arquitectura Metropolitana
It: Architettura Metropolitana

Metropolitan DNA (protocol map)

Definition:

The Metropolis Genoma is composed of four components: the economic, social, institutional, and physical.

Context:

The **4 Metropolitan components** had their origin in two sources: 1) the European Union 4C's policy of compensation in projects, which involved manufactured, natural, social, and human capital (in which I was involved before 1996), and 2) the previous analysis of the Dutch scholars Spangenberg and Bonniot, in which they produced the pyramidal integrated approach. The European Four Capitals (4C's) Approach is deeply related to the four components of the metropolis. In particular, the physical environment (natural and urban) component was decomposed into the five sectors of the plan: environment, transport, housing, productive activities, and social facilities.(Ortiz P., (2017) The Metropolitan Genoma MIT Metro Lab Research Paper The

Art of Deciphering the Metropolis Pedro B. Ortiz, Cambridge, MIT, www.PedroBOrtiz.com)

Performance characteristics will be more general, and the easier to use, to the degree that performance can be measured solely by reference to the spatial form of the city. But we know that the quality of a place is due to the joint effect of the place and the society which occupies it. I can imagine three tactics for avoiding the necessity of taking the entire universe into account in this attempt to measure city performance. First, we can elaborate those linkages between form and purpose which exist because of certain species-wide or human settlement-wide regularities: the climatic tolerances of human beings, for example, or the importance of the small social group, or the very general function of any city as a network of access. Second, we can add to the description of the spatial form of a place those particular social institutions and mental attitudes which are directly linked to that form and repeatedly critical to its quality, as I have already done at the end of chapter 2. Both of these tactics will be employed below. Third and last, however, we must realize that it would be foolish to set performance standards for cities, if we mean to generalize. […] What we might hope to generalize about are performance dimensions, that is, certain identifi-

able characteristics of the performance of cities which are due primarily to their spatial qualities and which are measurable scales, along which different groups will prefer to achieve different positions. It should then be possible to analyze any city form or proposal, and to indicate its location on the dimension, whether by a number or just by "more or less". To be general, the dimensions should be important qualities for most, if not all, persons and cultures. […]

To be a useful guide to policy, **a set of performance dimensions should have the following characteristics:** 1. They should be characteristics which refer primarily to the spatial form of the city, as broadly defined above, given certain very general statements about the nature of human beings and their cultures. To the extent that the value set on those characteristics varies with variations in culture, that dependence should be explicit. The dimension itself and its method of analysis should remain unchanged. 2. The characteristics should be as general as possible, while retaining their explicit connection to particular features of form. 3. It should be possible to connect these characteristics to the important goals and values of any culture, at least through a chain of reasonable assumptions. 4. The set should cover all the features of settlement form which are relevant, in some important way to those basic values. 5. These characteristics should be in the form of dimensions of performance, along which various groups in various situations will be free to choose optimum points or "satisficing" thresholds. In other words, the dimensions will be usable where values differ or are evolving. 6. Locations along these dimensions should be identifiable and measurable, at least in the sense of "more or less," using available data. They may be complex dimensions, however, so that locations on them need not be single points. Moreover, the data, while conceivably available, may for the present escape us. 7. The characteristics should be at the same level of generality. 8. If possible, they should be independent of one another. That is, setting a level of attainment along one dimension should not imply a particular setting on some other dimension. If we are unable to produce uncontaminated dimensions of this kind, we can settle for less, if the cross-connections are explicit. Testing for independence will require detailed analysis. 9. Ideally, measurements on these dimensions should be able to deal with qualities which change over time,

forming an extended pattern which can be valued in the present. More likely, however, the measurements will deal with present conditions, but may include the drift of events toward the future. […]

There are **five basic dimensions**: 1. Vitality: the degree to which the form of the settlement supports the vital functions, the biological requirements and capabilities of human beings-above all, how it protects the survival of the species. This is an anthropocentric criterion, although we may some day consider the way in which the environment supports the life of other species, even where that does not contribute to our own survival. 2. Sense: the degree to which the settlement can be clearly perceived and mentally differentiated and structured in time and space by its residents and the degree to which that mental structure connects with their values and concepts-the match between environment, our sensory and mental capabilities, and our cultural constructs. 3. FIT: the degree to which the form and capacity of spaces, channels, and equipment in a settlement match the pattern and quantity of actions that people customarily engage in, or want to engage in-that is, the adequacy of the behavior settings, including their adaptability to future action. 4. Access: the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of the elements which can be reached. 5. Control: the degree to which the use and access to spaces and activities, and their creation, repair, modification, and management are control- led by those who use, work, or reside in them.

If these five dimensions comprise all the principal dimensions of settlement quality, I must of course add two meta-criteria, which are always appended to any list of good things:

- Efficiency: the cost, in terms of other valued things, of creating and maintaining the settlement, for any given level of attainment of the environmental dimensions listed above.
- Justice: the way in which environmental benefits and costs are distributed among persons, according to some particular principle such as equity, need, intrinsic worth, ability to pay, effort ex- pended, potential contribution, or power. Justice is the criterion which balances the gains among persons, while efficiency balances the gains among different values.

All five can be defined, identified, and applied to some degree, and this application can be improved. Now, is this really so? Do the dimensions really meet all the criteria which were given at the beginning of this section? Do they in fact illuminate the "goodness" of a city, or are they only a verbal checklist? Can locations on these dimensions be identified and measured in a concrete way? Are they useful guidelines for research? Do they apply to varied cultures and in varied situations? Can general propositions be made about how optima vary according to variations in resource, power, or values? Can degrees of achievement on these dimensions be related to particular spatial patterns, so that the benefits of proposed solutions can be predicted? Do our preferences about places indeed vary significantly as performance changes? All that remains to be seen. (Lynch, 1981)

Elements of the city image: paths, edges, nodes, landmarks, and districts. (Lynch (1960)

City Elements : monument, residential-area, street pattern and services. (Rossi, 1966)

Urban DNA. This method was built to assist researchers and policy makers to understand where demographic and urban land growth is taking place. It provides a systematized approach to read, analyze and represent metropolitan areas considering three basic indicators: Density (D), Needs – poverty - (N), and Access to infrastructure services (A). A 3D indicator is constructed to overlap these variables creating a new way to understand cities, reaching to classify them according to urban typologies. This experiment was run for the 31 biggest cities in Argentina to promote integral planning in metropolitan areas. (Lanfranchi G., (2014), 1.522: UIS Research Seminar (Fall 2014) - Discussion notes. Buenos Aires Metropolitan Region Urban Growth Model, http://web.mit.edu/11.522/www14/discussion_notes/gl_urban_f14.html)

Comment / Notes:

The metropolis is a living system, an autopoietic system (Maturana and Varela). The system has components that have such relations among them that it is possible to reproduce through these relations, both: the components of the system and the relations that hold them together. The poietic organization is

that type of organization whereby in a system, the relationships that bind the components and the components themselves can reproduce components and relationships in turn. A reflexive process emerges.

The way in which it is possible to evaluate the performances of the metropolis dimensions nowadays is defined by the SDGs and New Urban Agenda.

Equivalent:

Sp: DNA Metropolitano
It: DNA metropolitano

Metropolitan economy (operator)

Metropolitan economy is a cohesive, naturally evolving concentration of industries, commerce, markets, and other economic elements in a particular metropolitan area. (Solís Trapero, Sanz, & Francés, 2015)

Context:

"From the metropolitan territory spatial organization point of view, NECs have been studied taking into consideration their flows attraction and their capacity to establish networks (Capello, 2000; ESPON, 2004; Lambregts, 2009; Taylor et al., 2007). Recently, a number of studies have sought to understand the influence of employment centres over metropolitan economy APS interdependencies (relationships between individual members—firms and cities—of an entire system of cities), such as APS-commuting, telecommunication traffic data, business and virtual contacts, as well as the types of relationships (asymmetrical, hierarchical, etc.) and the types of linkages (external and internal) of the metropolitan region (Cooke, 2013; Hall et al., 2006; Hoyler et al., 2008b; Luthi & Thierstein, 2009;Taylor, 2007)." (Solís Trapero et al., 2015: 5)

"This study examines the predictability of local retail gasoline prices in the El Paso metropolitan economy. Given its location on the border with Mexico, the potential influence of cross-border economic variables on gasoline prices in El Paso is taken into account…." (Fullerton, Jimenez, Liu, & Walke: 2015)

Comments:

The decline of manufacturing and the shift to services as the leading growth sector in major cities invites an examination of the locational patterns of the major new service industries. The industrial re-composition in the economic base of cities is not simply a function of the general shift from a manufacturing to a service economy. (Sassen, 1990)

The transformation of metropolitan global cities is represented in new economic complexity related to production, service sites as well as impact on general social issues in the metropolis. This development is encompassed in the metropolitan economy concept.

Equivalent:

Sp: Economía metropolitana
It: Economia metropolitana

Metropolitan gaps (issue)

Definition:

An innovative and collaborative theoretical approach inspired by the Gap Analysis technique, Metropolitan Gaps is used to design a metro matrix table for targeting metropolitan challenges. The method includes analysis in three key areas: dimensions, components, and gaps. Each dimension contains three components, and each component, two gaps (Lanfranchi & Contin, 2017).

Context:

The Organization for Economic Cooperation and Development (OECD) has defined our time as the

"Metropolitan Century" as many urban areas have expanded beyond their traditional jurisdictional limits, forming large urban agglomerations (OECD, 2015). In this context, the main challenge in moving toward a shared metropolitan vision involves innovative solutions and holistic approaches to tackling pressing urban challenges, such as increasing inequality, climate resilience, and new technologies.

We also need professionals that understand how the "metropolitan discipline" is expanding and changing. Currently, there are not enough academic areas that respond to this growing unsatisfied professional demand, or the lack of theoretical knowledge in the field. From the academy, there is also no relevant number of research organizations dedicated to generating knowledge in this matter, to be applied to the recommendation of public policy. Cross-learning among experts, civil servants, academics and civil society organizations is essential to achieve an impact on the processes of metropolitan coordination that we consider necessary to promote.

In this context, the metropolitan gasp methodology aims to strengthen the capacities that metropolitan experts should have in order to understand which disciplines could contribute to consolidate a specific academic corpus and the efficient management of the city.

The Metro Matrix contains dimensions, components and gaps. "Dimensions were initially organized in a sectoral way (economy, society, physical, and institutional) and, with debate, they evolved toward another type of classification that allowed for interaction between social, economic, morphological, and organizational issues and all of their components. The main components of each dimension led us to the metro gaps, where a flaw or knowledge gap

became apparent when an intervention was made on the metropolitan scale" (Lanfranchi & Contin, 2017: p. 116 - 117)

The matrix's dimension that allow us to outline the type of knowledge require are: Environment management (which is composed by "Natural systems", "Metropolitan infrastructure" and "Metroscape" components), Community strengthening (which is composed by "Social cohesion", "Social capital", and "Citizenship" components), Wealth generation (which is composed by "Assets", "Wealth creators" and "Human capital" components), Governance of complex systems (which is composed by "Legal framework", "Institutional framework" and "Management and systems" components), and the Cultural dimension (which is composed by "Academia", "Professional praxis" and "Identity" components).

The Organization for Economic Cooperation and Development (OECD) has defined our time as the "Metropolitan Century" as many urban areas have expanded beyond their traditional jurisdictional limits, forming large urban agglomerations (OECD, 2015). In this context, the main challenge in moving toward a shared metropolitan vision involves innovative solutions and holistic approaches to tackling pressing urban challenges, such as increasing inequality, climate resilience, and new technologies.

We also need professionals that understand how the "metropolitan discipline" is expanding and changing. Currently, there are not enough academic areas that respond to this growing unsatisfied professional demand, or the lack of theoretical knowledge in the field. From the academy, there is also no relevant number of research organizations dedicated to generating knowledge in this matter, to be applied to the recommendation of public policy. Cross-learning among experts, civil servants, academics and civil society organizations is essential to achieve an impact on the processes of metropolitan coordination that we consider necessary to promote.

In this context, the metropolitan gasp methodology aims to strengthen the capacities that metropolitan experts should have in order to understand which disciplines could contribute to consolidate a specific academic corpus and the efficient management of the city.

The Metro Matrix contains dimensions, components and gaps. "Dimensions were initially organized in a sectoral way (economy, society, physical, and institutional) and, with debate, they evolved toward another type of classification that allowed for interaction between social, economic, morphological,

and organizational issues and all of their components. The main components of each dimension led us to the metro gaps, where a flaw or knowledge gap became apparent when an intervention was made on the metropolitan scale" (Lanfranchi & Contin, 2017: p. 116 - 117)

The matrix's dimension that allow us to outline the type of knowledge require are: Environment management

(which is composed by "Natural systems", "Metropolitan infrastructure" and "Metroscape" components), Community strengthening (which is composed by "Social cohesion", "Social capital", and "Citizenship" components), Wealth generation (which is composed by "Assets", "Wealth creators" and "Human capital" components), Governance of complex systems (which is composed by "Legal framework", "Institutional framework" and "Management and systems" components), and the Cultural dimension (which is composed by "Academia", "Professional praxis" and "Identity" components).

The Organization for Economic Cooperation and Development (OECD) has defined our time as the "Metropolitan Century" as many urban areas have expanded beyond their traditional jurisdictional limits, forming large urban agglomerations (OECD, 2015). In this context, the main challenge in moving toward a shared metropolitan vision involves innovative solutions and holistic approaches to tackling pressing urban challenges, such as increasing inequality, climate resilience, and new technologies.

We also need professionals that understand how the "metropolitan discipline" is expanding and changing. Currently, there are not enough academic areas that respond to this growing unsatisfied professional demand, or the lack of theoretical knowledge in the field. From the academy, there is also no relevant number of research organizations dedicated to generating knowledge in this matter, to be applied to the recommendation of public policy. Cross-learning among experts, civil servants, academics and civil society organizations is essential to achieve an impact on the processes of metropolitan coordination that we consider necessary to promote.

In this context, the metropolitan gasp methodology aims to strengthen the capacities that metropolitan experts should have in order to understand which disciplines could contribute to consolidate a specific academic corpus and the efficient management of the city.

The Metro Matrix contains dimensions, components and gaps. "Dimensions were initially organized in a sectoral way (economy, society, physical, and institutional) and, with debate, they evolved toward another type of classification that allowed for interaction between social, economic, morphological,

and organizational issues and all of their components. The main components of each dimension led us to the metro gaps, where a flaw or knowledge gap became apparent when an intervention was made on the metropolitan scale" (Lanfranchi & Contin, 2017: p. 116 - 117)

The matrix's dimension that allow us to outline the type of knowledge require are: Environment management

(which is composed by "Natural systems", "Metropolitan infrastructure" and "Metroscape" components), Community strengthening (which is composed by "Social cohesion", "Social capital", and "Citizenship" components), Wealth generation (which is composed by "Assets", "Wealth creators" and "Human capital" components), Governance of complex systems (which is composed by "Legal framework", "Institutional framework" and "Management and systems" components), and the Cultural dimension (which is composed by "Academia", "Professional praxis" and "Identity" components).

Comment / Notes:

Gap analysis is a technique that businesses use to determine what steps need to be taken in order to move from its current state to its desired, future state. Gap analysis consists of (1) listing of characteristic factors (such as attributes, competencies, performance levels) of the present situation ("what is"), (2) listing factors needed to achieve future objectives ("what should be"), and then (3) highlighting the gaps that exist and need to be filled.

Source: Business Dictionary

Synonyms:

Metropolitan knowledge co-creation

Equivalent:

Sp: Brecha Metropolitana

It: Diviario Metropolitano

Metropolitan governance

(principle)

Meaning:

"Governance is the ability of a society to reach agreements and jointly define priorities and actions that toward a roadmap for its development. In other words, governance can be defined as the ability to govern through consensus, and to include diverse approaches and actors during the governing process, positively impacting all sectors of society" (Lanfranchi & Contin, 2017, p. 164).

"Metropolitan governance can be defined as a set of institutions, rules, and actions that delineate policies and conditions for the life and economy of a metropolitan region" (UN Habitat, 2015: 11).

Context:

Metropolitan governance is a fundamental issue, which varies from metropolis to metropolis, where each metropolitan city has developed its own mechanisms and practices, either formal or informal (Lanfranchi & Contin, 2017). In this context, institutions capable of evolving over time and adapting to the cultural, historical, institutional, and political demands of society are essential for governing the metropolis.

Synonyms:

Metro Governance

Equivalent:

Sp: Gobernanza metropolitana
It: Governo metropolitano

Metropolitan identities (principle)

Definition:

The concept of metropolitan identities contains a critique to the static vision of both identities and centerperiphery dualisms (Da Rocha et al., 2016). Instead of social marks of difference and similarity, and of binary oppositions, it pays attention to the contrasts; continuities and heterogeneities, assuming that in the metropolis, the sense of belonging is built and rebuilt in complex, changing, fragmented and diverse sceneries. As hybrid places (Garcia Canclini, 1992), metropolis suppose a continuously re-created mix of diveressities. This condition explains that, in them, people move in several different dimensions at the same time and their identities are not homogeneous nor developed once and forever (Velho, 2010). More than a perfectly delimited place, the term "metropolitan" opens the scope to multiple territories and fluid, changing and multi-situated identifications.

Context:

"The analysis of *metropolitan identities* appeals […] to new forms of "sociality", that is, the diverse ways to communicate and inhabit that the city today makes possible and impossible…" (Barbero, 1999: 39 in De Carvalho, 2010: 39)

"… one of the main characteristics of metropolis is the coexistence of several and diverse social worlds and cultural trends. These worlds and fluxes manifest diferent ways of relationships and interactions between subjects and reality, as well as the existence of multiple belongings and identities" (Velho, 2010: 16).

Comment / Notes:

The notion seeks to capture the myriad fluid, changing and superimposed identities that affect people in the metropolitan context.

Equivalent:

Sp: Metropolitan identities
It: Identità metropolitan

Metropolitan identity (keyword)

Definition:

Power-holding actors representing the territory (a metropolitan territory in our case but it occurs also in similar units outside the territory) define and symbolize the spatial and social limits of membership, and create discourses and practices for inclusion and exclusion. The citizens of this territory are proud to use the name in presenting themselves to the world outside, maintain a common symbolic imaginary, and a set of allusive images of recognition.

Context:

The different types of emigration, (political, climate change, war, inequality), the loss of belonging to a place, new nationalisms, promote feelings of cohesion or uprooting that affect the conformation of new metropolitan areas throughout the world. According to Massey (2004), this feeling is a "global sense of place" in order to explain that the identity of any place is not simply rooted in it but to a great extent constructed through the interrelationships with other places.

On the senses of belonging, self-denomination or collective conscience, it is possible to say that the communities do not respond to the regulations and projects located on traditional boundaries (municipal, district, boroughs, etc.), but that new territorialities are opened in the old limits, now areas of confluence. They can range from the emergence of new metropolitan areas, processes in the so-called post-metropolitan, communities in transition, etc. Its operators would be the assembly of the human with the non-human, the centrality, the resilience of the communities, etc.

Comments:

Activity spaces, symbolic environments and institutions, constitute a territorial unit and give it an emotional and political significance, but it is not enough to establish a metropolitan identity. The use of the term identity is always problematic, but here we use it as found (social demands, spontaneous expressions of collectivity, even those fervently assumed by people from institutions, pressure groups, media or advertising), but not as an inducing policy.

Equivalent:

Sp: Identidad Metropolitana
It: Identità metropolitana

Metropolitan infrastructure

(principle)

Meaning:

"Infrastructure is often understood as a physical structure of networks, being polycentric, linear or distributed. In a metropolitan context, infrastructure often includes water, transport, or education systems, among others. Introducing Transformative Metropolitan Environmental Infrastructure Theory to the discipline highlights the importance of both natural and ecological systems in this field" (Lanfranchi & Contin, 2017: 148).

Context:

More than 50% of the world's population lives in cities, as a consequence of migratory flows that have caused millions of people from rural areas to migrate to urban areas in search of a better quality of life and greater social and economic opportunities. The United Nations estimates that over the next five decades as many cities will be built as in the last 5,000 years (UN Habitat, 2016). This scenario of accelerated urbanization not only leads to housing deficits, poverty, and informality in marginal areas, but also to urban expansion and a lack of planned metropolitan infrastructure related to transportation, education, delivery of basic city services, and security (Cordara et al., 2018)

"A metropolitan area needs to build a metropolitan infrastructure, including water, energy, transportation, sanitation, waste, and public spaces, all of which were once managed independently by each city. Infrastructure touches the life of every person in a metropolitan area: from turning on the taps, to traveling to work, to turning on the lights, to heating a home in winter, to garbage disposal. Infrastructure also increases the effective functioning of a city to be productive and competitive, and decreases its impact on the environment" (Kang, 2017)

Equivalent:

Sp: Infraestructura metropolitan
It: nfrastructure métropolitaine

Metropolitan logistics (operation)

Definition (meaning):

Metropolitan logistics refers to the management of flow of things between the point of origin and destination to meet customer requirements within a metropolitan area (Woudsma et al., 2016; Lan et al., 2016).

Context:

"Since key impact factors like strategies, network design, and transportation will largely influence the ecological consciousness, economics perspectives will be affected ultimately (Lee et al., 2010). Thus, it is significant to study the coordination between economy and logistics. Specifically, analysis of key impact factors on coordinated development between metropolitan economy and logistics is important to achieve sustainable logistics." (Lan & Zhong, 2018)

Comments:

Metropolitan logistics and related infrastructure are of central importance for economic and consequently for general sustainability of the metropolis. Furthermore, new more complex and large-scale considerations from the logistic perspective have impact on the design and restructuring of metropolitan transportation infrastructures and economic production centres

Metropolitan service (operation)

Meaning:

Metropolitan services are essential benefits that a city provides for its citizens that, given the nature of urban expansion, require the coordination of multiple jurisdictions for their normal and efficient functioning. These services can cover different sectors such as water and sanitation, economic development, public space, waste, risk management, health, safety, land use, transportation, and housing, among others (Lanfranchi G. et al., 2018)

Context:

"The demographic, economic, and spatial growth of urban agglomerations in Latin America has not been accompanied by a parallel development of the infrastructure and urban services required to meet the needs of the growing urban population and sustain the development of economic activities" (Rojas, 2005: p. 41).

"To the extent that there are economies of scale in service provision, there may also be some opportunities for lower expenditures per capita for some services. However, the empirical evidence on the existence of economies of scale may perhaps best be characterized as "mixed", depending on the service in question and the units of measurement -- such as the jurisdiction size or the size of the facility. Hirsch (1959), for example, estimated cost functions for police services, fire services, refuse collection, water, sewage and education and found that expenditures per capita declined with the quantity provided for water and sewage but not for any of the other urban services. For some services, expenditures per capita actually rose as output expanded, indicating that there were diseconomies of scale. Other studies that have estimated cost functions have found some economies of scale for "hard" services such as water, sewers and transportation but generally not for such "soft" services as police, refuse collection, recreation or planning (Bird & Slack, 1993: 32). Hard services are capital intensive, so large government units can more readily make the substantial capital investments needed to extend the water distribution system or build a "least unit cost" size sewage treatment plant, for example (Bahl & Linn, 1992: p. 415). Other services, such as policing, are highly labour intensive and hence unlikely to show significant, if any, economies of scale" (Bird & Slack, 2004: 25).

"Experience shows, however, that municipalities alone cannot cope with the continuous and growing demands of citizens. The global trend toward political

and economic decentralization has placed local governments at the forefront of the crisis of urban services. Only some municipalities, due to their size and political importance, are well positioned to meet the challenges of providing clean water, sanitation, waste collection services, and energy supply. In this context, new responsibilities emerge. The municipality itself suffers its complications due to the process of disorderly growth and lack of coordination, and thus more responsibility, while at the same time public policies and programs that seek to establish themselves within municipal institutions increase daily" (Etchegaray, 2005: 498).

Synonyms:

Services with a metropolitan approach

Equivalent:

Sp: Servicios metropolitanos
It: Servizi metropolitani

Metropolitan stakeholder map

(other)

Meaning:

A research tool that is used to identify leaders belonging to the public, private, academic and civil society sectors of the ecosystem of local actors (Lanfranchi, G. et al., 2018: 23).

Context:

"[The diagnostic process of PlanificACCIÓN] results in the identifies local leaders, construction an ecosystem of local actors, including representatives from the public, private, academic and civil society sectors, and realization of face-to-face interviews and online surveys "(Lanfranchi et al., 2018: 13).

Synonims:

Metropolitan actors map; Metropolitan Stakeholder Mapping

Equivalent:

Sp: Mapa de actors

It: Mappa degli attori

Natural capitalism

Definition:

"[…] It is a proposal promoted by professors Paul Hawken and Amory Lovins, whose main thesis states that it is necessary to move from the consumer economy to the service economy and reinvest the benefits in the improvement and implementation of natural resources."(Arriols E., 2018) (free translation)

Context:

"Natural capitalism implies four important changes in business practices. The first involves drastically increasing the productivity of natural resources, hopefully 100 times. In the second phase, companies adopt closed cycle production systems that do not generate waste or toxicity. The third phase requires a fundamental change in the business model: from selling products to delivering services. The last stage involves reinvesting in natural capital to restore, sustain and expand the planet's ecosystem. (Lovins A,

Lovins H., Hawken P., 2008) (free translation)

"…natural capitalism proposes that it is necessary to rethink the economy model to move from the economy of industrial capitalism to natural capitalism."(Arriols, 2018) (free translation)

Comment / Notes:

La disertación alusiva al significado del concepto *capitalismo ecológico,* hace referencia a un sistema económico que pase del consumo a una economía de servicios. Que se maximice el aprovechamiento de los recursos naturales a través de la implementación de procesos que permitan abastecer las necesidades de un mayor grupo de personas con la utilización de la misma cantidad de energía y materia prima, implementar producciones de ciclos cerrados donde las empresas productoras no generen desperdicios ni toxicidad, y se reinvierta en restaurar, sostener y expandir el ecosistema del planeta.

The dissertation alluding to the meaning of the concept of ecological capitalism refers to an economic system that goes from consumption to a service economy, where the use of natural resources is maximized through the implementation of processes that allow to meet the needs of a larger group of people with the use of the same amount of energy and raw material, implement closed

cycle productions where production companies do not generate waste or toxicity and reinvest in restoring, sustaining and expanding the planet's ecosystem.

Equivalent:

Sp: natural capitalism
It: capitalismo natural

Natural risk

Definition:

Natural risk zones are zones where natural hazards areas intersect with highly populated areas and/or areas of particular environmental/ cultural/ economic value.

Natural hazards can be classified by origin namely: geological, hydro-meteorological or biological.Specific examples for different types of hazard were identified: Floods (calculation of flood impact, reporting and flood hazard/risk mapping), Risk Management Scenario (an example from a national perspective), Landslides (hazard mapping, vulnerability assessment and risk assessment), Forest fires (danger, vulnerability and risk mapping) and Earthquake insurance. From: Inspire Europe Commission

Context:

The notion of natural risk has been around for a very long time. In France, according to *article L 125-1 of the Insurance Code*"… *Are considered as the effects of natural disasters, direct "uninsurable"* material damage having had as a determining reason the abnormal intensity of a natural agent, when the usual measures to be taken to prevent such damage have not been able to prevent its occurrence or have not been taken… ». On average per year, from 2000 to 2012, natural disasters around the world cost nearly $130 billion, affecting more than 220 million people, of whom more than 92,000 died.

In line with the previous definition, it could be assumed that the notion of natural risk emerges when the human species comes into contact with the natural environment. The lack of knowledge of an environment, which generates processes that can manifest themselves in an unforeseen, sometimes violent way, and which acutely interferes with human projects (material or immaterial), leads to the idea of risk. From this first approach, two ideas emerge:

- On the one hand, it is about man's projects, through which his relationship with nature is manifested. These reflect a cultural situation, but also an ideological posture, defining not only humanity's place in nature, but also its prerogatives over it.
- On the other hand, we have highlighted the fundamental role played by the concept of knowledge. Since all knowledge is incomplete, the notion

of risk is therefore of a probabilistic nature, justifying the introduction of chance.

The notion of natural risk is therefore evolving over time and space. *It reflects the type of relationship that man perceives with nature*, but also the degree of evolution of a given society in relation to the natural environment. Finally, it expresses the quality or weakness of our intellectual capacities, and thus of our technological means, to understand the mechanisms that govern our environment, as well as the phenomena and processes that occur within it.

It is therefore understandable that the way in which natural hazards are treated has probably not always been the same, and has probably evolved over the past centuries, or even decades.

Today, it is accepted to define risk as the product *of intensity and the probability* of occurrence of a naturally occurring event.

The intensity of an event can be related to the volumes of materials mobilized, as well as to the dynamics of the phenomenon. The vulnerability of a given site to a phenomenon expresses its degree of exposure to it, and the degree of damage expected in the event of the phenomenon occurring.

The notion of vulnerability therefore includes both physical and social values.

Considering the *Encyclopedia of the Environment* **When a site is vulnerable to an identified hazard, it is called a risk**. The notion of risk is therefore defined as the product of a hazard by a vulnerability:

It should be noted that a risk refers to a phenomenon. If this phenomenon is of natural origin, then we will speak of a natural risk.

Comment / Notes:

The management of these risks is based on two perfectly complementary strategies: *observation* or *monitoring* and *forecasting*.

Observation makes it possible to better understand the mechanisms associated with a given phenomenon, to better understand the conditions of occurrence, to assess the return periods; in addition, observation and monitoring networks are effective means of collecting physical data (movement measurements, accelerated recordings, etc.) which can then be used in conjunction with modelling work. The forecast is based both on the observation and monitoring network, by analysing real-time data (e.g. flood monitoring network), and on

more upstream work to understand the mechanisms and integrate them into a numerical model to simulate the evolution of phenomena in the medium and short term. It is this vast field that is referred to as numerical modelling.

The advent of numerical methods and the generalization of powerful computing means make possible today the numerical simulation of complex phenomena such as avalanches or landslides. However, it is important to keep in mind that these calculations are based on a priori knowledge of data specific to the phenomenon (fractured state of a rocky escarpment, constitution of the snowpack) which is subject to many uncertainties. This fully justifies the introduction of probabilistic methods to incorporate a level of uncertainty on the input data, and to treat the propagation of this uncertainty to the output results. This field is still booming today, and is a very active and still very open field of research.

Equivalent:

Sp: Riesgo Natural
It: Rischio naturale

Neoliberal urbanism (issue)

Definition:

"A form of urbanism subordinated to the dictates of capital, where urban powers attempt to position their cities in higher positions of the hierarchical global urban network in which competitiveness is the key. Cities positioned at the top-global cities are the focus of most financial flows, being the most powerful in the world arena [8]. Besides, these urban spaces are specialized in the FIRE sector (Financial, Insurance, and Real Estate), which is also extremely connected to the touristization of that spaces" (Vives Miró, 2011: 2).

Context:

"Process of planetary urbanization, in which the city, as it had been conceived in the past, has ceased to exist to give way to the formation of large urban regions, which play a central role in the articulation of a new capitalist organization at scale" (De Mattos, 2016: 3)

"Those forms of private public articulation not formalized but with real effects, in which the liberalization of land markets converge, the concentration of real estate capital with great financial management capacity and the approval of local governments- and the irruption of investments for the development of megaprojects with high territorial impact " (Pintos, 2012 in Svampa & Viale, 2015: 247).

Comment / Notes:

This stage of capitalism - which involves opening territories, imposing new labor rules, privatizing public goods, confiscating rights, stopping migratory exoduses and breaking resistance (Roux, 2008) transforms the urban peripheries into new frontiers for a renewed set of real estate offers (Pintos, 2017) destined to sectors of high purchasing power.

Equivalent:

Sp: urbanismo neoliberal
It: urbanismo neoliberista

Net city (principle)

Definition:

In architecture and urban design, the net city is a "a multicentered network system (that) emerges to handle the apparently chaotic flows of diverse participants in an increasingly global network". (Shane, 2005: 281)

Context:

"Out of this second period of transition (the crisis of the linear, rationalized system of urban organization for handling increasing flows; editor's note), a multicentered network system emerges to handle the apparently chaotic flows of diverse participants in an increasingly global network (I call this arrangement the *net city).* Growth appears to take place at random over the network, with no clear hierarchy or top-down patterning. Relationships can shift and change among actors, resulting in rapid change and instability". (Shane, 2005:281)

"With hindsight, we can see the post-structuralists and the Deconstructivists were right to describe the city as a chaotic situation of competing systems. We can also see that this chaotic situation has an emergent logic of its own, produced non-centrally by actors designing systems across vast territories without regard for each other's decisions, each adding their own system as a new layer to existing topography, historic structures, and landscapes. The result is a tangle of actors and systems in a spaghetti system of flows and private motives, interacting with each other through complex feedback mechanisms wherever their paths cross. Each actor follows their own logic, creating a life-world that is a mixture of the usual urban concerns: land and property, trade and market share, social and political position. Each actor forms their own hybrid priorities and sets goals in the face of competing actors, contesting for territory.

A city of multiple actors connected by a spaghetti tangle of relationships produces patches of only local order, and no obvious mechanism of overall coordination. One urban actor might control a particular spatial environment while another manipulates flows between patches; and they might (or might not) talk to each other.

City planners try to imagine conversations between urban actors from a top-down perspective and to create structures to serve actors' needs. However, local and global actors on the ground meanwhile create independent lines of communication using their own logics, forging relational ecologies of fragments

and enclaves unimagined by large-scale planners with their mathematical models of traffic flows and demographics. Local ecologies of actors' relationship can link patches into a larger system – a network, a constellation, or archipelago. Today such patchwork systems are highly dependent on fossil fuels and centralized electrical generation to power their transportation and information (including communications) systems. Contemporary urban actors have used rapid communication systems to superimpose the network city on older city system over the city territory. The superimposed network city may be relatively inconspicuous, dissolving into the landscape thanks to high-speed transportation and communication networks. The result is a scattering of semi-autonomous cells across the landscape, each with its own logic and interested actors, who can use mobile modules (cars, phones, etc.) to move between patches of order while remaining in contact with each other.

Among these patches of order are highly structured nodes at various scales that serve multiple actors and provide meeting places and spaces of negotiation. Since no single person or actor is in command at this level either, relationships between actors can quickly shift. Rapid relational shifts typify this heterotopia of 'illusion'. Further, these heterotopic nodes of negotiation are also contested spaces in which different models of relationships between actors can compete. Individual choices matter in these spaces, influencing the emergence of new solutions (or, possibly, problems) from the bottom-up." (Shane, 2005: 305-6)

"[…] the complexity of the Net City informational approach becomes apparent, since in the hypermodernity of cyberspace the virtual, conceptual dimension of the city model begins to deal with fundamental group psychological needs, and irrational desires reappear. Such irrational structures appear to become enormously powerful in the media system of the Net City and to animate the creation of enormous, absurd structures of immense popularity." (Shane, 2005: 310)

"The conceptual model of the Net City provides room for all these models of the city to coexist as contemporaneous layers, each with its own system of heterotopias to regulate its stability and rate of change. Taken all together, this multi-layered, multisystem model is impossibly complex: we can only understand small parts of it in our design operations. Yet human beings have a supreme pattern recognition capacity that enables us as catalytic designers to make imaginative leaps. We have to rely partly on intuition for our readings of the Net City, as there is no central controller to quantify or model it exhaustively

for us. We strike new balances – and never foresee all consequences." (Shane, 2005: 311-12)

"In conclusion, I offer a flexible morphogenetic matrix of possibilities that can help actors build areas where they wish to construct order but which also works where actors do not seek a predominant order, where they desire flexibility and messiness, unpredictability and the chance for the unexpected – heterotopias of illusion. My urban elements, armatures, enclaves, and heterotopias form one dimension of the morphogenetic matrix; the other is given by the great normative models created by past actors, the Archi Città, the Cine Città, and the Tele Città, to which I add the Net City as an emerging form. Ideally the matrix would be three-dimensional, with time as a vertical dimension, revealing the laminations of actors in particular cities at particular times as a series of layers of patterns of activity and systems of organization." (Shane, 2005: 312)

We are currently living in a moment of extraordinary complexity when systems and structures that have long organized life are changing at an unprecedented rate. Such rapid and pervasive change creates the need to develop new ways of understanding the world and of interpreting our experience. […] This trajectory suggests that the moment of complexity can be understood in terms of the shift from a world structured by grids to a world organized like networks. (Taylor, 2009: 19-20)

[…] networks consist of interconnected nodes, which are able to communicate with each other. Each node is constituted by its interrelations with other nodes and its place in the overall network. A node, as the word implies (nodus, knot; from ned, twist, tie, knot), is a knot in a web of relations. Knots function like switches and routers that send, receive, and transmit information throughout the network. Separation and connection, like identity and difference, are mutually constitutive. The ways in which connections intersect create the distinctive traits and functions that differentiate nodes. While the connections of each node ramify throughout the network, the relations that are most decisive are relatively localized. […] Insofar as local interactions general global behaviour, the network as a whole is a network of networks. The web of nodes form a distributed network, which is radically decentered. Operations do not have to be ordered sequentially but can run in parallel. In the interactions of this distributed network, complexity is always emerging and emergence is inevitably complex. (Taylor, 2009: 154-155)

Synonims:

Network of networks (Taylor, 2009)

Equivalent:

Sp: Ciudad red

It: Città delle reti

New centralities (other)

Definition:

"…ability of a place to be a center, to be recognized, used or socially appropriate as a confluence space in the city." (Mayorga and Fontana, 2012:9) (free translation)

Context:

As one of the responses to the expansive growth of low density of the urban territory (urban sprawl), new urban centers or centralities begin to emerge within the cities. These urban spaces tend to concentrate services and activities of different types and scales, being generally points of access and reference for the areas that serve. (Cuenin and Silva, 2010:4) (free translation)

"Within the framework of the formation of contemporary metropolitan areas, urban centrality left the center, historically unique and multifunctional. It reproduced in a multiplicity of places or new centralities, diverse in their nature and hierarchy. (Beuf, 2012:2) (free translation)

Comment / Notes:

Experience indicates that the development of centralities begins to be relevant when the city has overcome key urban problems (World Bank, 2009), such as access to basic services (for example, through comprehensive neighborhood improvement programs) or deterioration of central areas (usually with historical heritage) and begins to face high costs of displacement to the interior of the city associated with the unbalanced and extensive growth of cities (DMQ, 2004, in Cuenin,F y Silva, M, 2010 :5) (free translation)

Synonyms:

Centrality spaces

Equivalent:

Sp: Nuevas centralidades
It: Nuove centralità

Oasis (other)

Meaning:

The aridity of drylands and the local availability of water have led to the establishment of 'irrigated oasis' ecosystems, using water channel systems fed by rivers. These oases have resulted in the expansion of irrigated agricultural areas within the region and frequently become human settlement areas. Most of the agricultural activities in desert regions come from oases (Abraham, n/d in Cirvini, Torres and Pastor, 2020).

Context:

The concept of oasis refers to an ecosystem created by the intentional management of superficial and underground water. "The production of human settlements and their articulation in urban systems, as well as the configuration of rural spaces, is closely related to water presence, a presence that was not entirely given by nature but that is explained, too, by the social manipulation of the resource" (Montaña, 2008: 3). In a climate change context, oasis can be privileged observatories to evaluate this process, given their high social and environmental vulnerability. Then, new public policies can be proposed to achieve intergenerational sustainability (Santos and Olivieri, 2018: 61)

Comment / Notes:

The notion of oasis appeals to its polar pair desert oasis. But the drylands environmental context, where this phenomena has place, signals that it is clearer to call these areas as irrigated lands.

Synonyms:

Irrigated lands

Equivalent:

Sp: Oasis
It: Oasi

Operation (other)

Definition:

The Operation is a principle of conception as a result of the Operator' s logical process extraction moment. It allows to define the Metropolitan Architecture Project 's constructive operations.

Context:

The Operation is not only a practical action, but it is a principle of conception. What we would like to underline then is the logic of the action. In the Alberti's book the six "principles" of conception concern the region (regio), the area (area), the plant division (partitio), the wall (paries), the roof (tectum) and the openings (aperitiones). For Alberti there are three fields of application: necessity, comfort and pleasure. After a lógico-critical deduction, which serves to establish them, the six operations of the conception are briefly defined then, in the order in which they recur from beginning to end of the project, examined one after the other and crossed with the three principles of necessity, comfort and beauty, which make them generate specific rules each time (Choay, 1980:103).

Equivalent:

Sp: Operación
It: Operazione

Operator (other)

Definition:

The operator as a logical process consists of two moments: “extraction” and “concretization”. The “extraction” moment aims at exploring metropolitan dynamics and, as a consequence, the intention of the project, and at translating them into information through data related to the elements of the metropolitan contexts that need investigation. Then it will be possible to concretize them with the operations of the project.

Context:

The Operator is a logical tool that serves to generate the rules of the construction and the order of an inaugural book and it is about how deal with a metropolitan dynamic. The operator is understood in the sense of indicator of sign transformations which allows defining the rule of operation following the definition of N. Dunford and J.B. Schwartz in Linear operator”.

With the name principia, partes or rationes, some of them are explicitly identified by Alberti. The operators of first type are considered as axioms and respectively called: the axioms of the triad (which generates the general plan of the book), the axiom of the bodybuilding, the axiom of the classification of uses (Choay,1980: 99).

Comment:

Operators are “rules of shapes”, that is they are logical tools that enable to produce concrete entities from theoretical concepts through a complex process. Operations are the specific actions following the operator to address the given issue and bridge the gap between the reality and the goal. These operators and operations are represented visually as maps using open source data in the Metropolitan Cartography tool. Reducing the metropolitan complexity into metropolitan dynamics is an important role of the MGIP framework. Compared to the entire entangled system that is the metropolitan complexity, metropolitan dynamics represent a series of phenomena explaining the issue and the gap in reality. These are related to specific topics and issues, therefore have limited factors to consider compared to the entire complexity. Recognising metropolitan dynamics is one of the most important works for the collective intelligence.

The academics, together with practitioners and metropolitan inhabitants, will understand the issues and define the dynamics in a holistic way.

The second moment of the operator process, “concretization” (fig. 17), aims at forming catalogues of data that are selected according to value judgements expressing the intention of the project. Selected catalogues of information, or semantic packages, are used to produce geo-referenced maps of metropolitan dynamics needed to determine the metropolitan projects.

Equivalent:

Sp: Operador

It: Operatore

Pattern (other)

Definition:

Constitutes the set of "connectors between different fragments" (Ferreti and Arreola, 2012:104). It is "… the wealth of territorial syntax. Quality and diversity of specific ways to combine built forms and spaces" (Borie & Denieul, 1984:1); "The arrangement of the parts as a whole" (Kropf, 1996). It is a notion that appeals to the intertwining of elements in diverse scales in specific territorial dimensions.

Context:

There is abundant bibliography using the term "pattern/framework" to characterize problematics and affections to territories, especially in urban ones. Generally, this notion links with adjectives, diverse attributes related to the dimension where the referred territorial syntax is inscribed. Normally, this happens with "urban" (Vidal Koppmann, 2007; Kropf, 1996), but also with "patrimonial" (Del Espino Hidalgo, 2018), "social", "cultural" (Sepúlveda, 2003, Ferretti and Arreola, 2012), "local", "residential of the environment", "of places" (Zoido et al, 2000) among others.

It implies considering the position, outline and internal arrangement of each element; also the type of component parts, their number and relative position (Kropf, 1996: 252). The character of the framework/pattern will emerge from the "pattern, complexity, hierarchy of components, level of resolution, specificity, and the characteristics of position, outline and internal arrangement and procedures of geometric and chronological comparative analysis" (Kropf, 1996: 262).

Comment / Notes:

The notion seeks to capture the ways of articulation of the forms that human habitat constructions (both material and immaterial) acquire in the space.

Equivalent:

Sp: tejidos territoriales
It: tessuti territoriali

Peripheralization (operation)

Definition:

"(…) *production of peripheries through social relations and their spatial implications"* (Kühn, 2014: 1) In order to grasp the structural problems of rural regions and their growing disconnection from urban agglomerations, urban and regional research describes such areas as ''peripheral'' in relation to metropolitan regions, and the process of becoming disconnected from and dependent on the centres as

''peripheralization". In this perspective, a ''periphery'' is neither a given nor a static entity to be localized on the "natural" margins of certain regional, national or transnational units. Instead, we interpret ''peripheries'' as the outcome of complex processes of change in the economy, demography, political decision-making and socio-cultural norms and values (Fischer-Tahir & Naumann, 2013: 9).

Context:

"The term ''peripheralization'' is used in both the academic and the political field with reference to the decline of rural areas and of small and medium-sized towns in Eastern Germany" (Fischer-Tahir & Naumann, 2013: 10).

"Peripheralization refers to a spatially organized inequality of power relations and access to material and symbolic goods that constructs and perpetuates the precedence of the centres over areas that are marginalized. Since peripheries are frequently localized as or within regions conceived in dominant discourses on a national or transnational scale as the apparently "natural" edges -such as border or other regions spatially removed from the centres of capital accumulation and the production of things with a recognized exchange value-, the territorialization of peripheries fosters their reification" (Fischer-Tahir & Naumann, 2013: 18).

"Critical analysis of the making of peripheries inevitably leads to thinking about ways of coping with peripheralization. Poverty, dependence and marginalization are not merely dimensions of peripheralization. They are also expressions of social injustice produced and perpetuated by structures that uphold the unequal distribution of power and unjust access to economic and political decision-making bodies on a local, regional, national, supra-national or global

scale. The debate on peripheralization is therefore inevitably a debate on social justice" (Fischer-Tahir & Naumann, 2013: 22).

Comment / Notes:

This notion allows to explain the territorial transformations derived from metropolization processes associated with urban extractivism´s dynamics.

Equivalent:

Sp: Periferización
It: Periferizzazione Rural

Physiography (keyword)

Definition:

*Physical geography (also known as geosystems or **physiography**) is one of the two major fields of geography. Physical geography is the branch of natural science which deals with the study of processes and patterns in the natural environment such as the atmosphere, hydrosphere, biosphere, and geosphere, as opposed to the cultural or built environment, the domain of human geography.*

Context:

According to the scientific vision of the experts Marsh, William M.; Kaufman, Martin M of Columbia University in the publication *Physical Geography: Great Systems and Global Environments*, 2013 Physical geography examines and investigates natural phenomena spatially. Physical geography also examines the interrelationships of these phenomena to human activities. This sub-field of geography is academically known as the *Human-Land Tradition*. This area of geography has seen very keen interest and growth in the last few decades because of the acceleration of human induced environmental degradation. Thus, physical geography's scope is much broader than the simple spatial study of nature. It also involves the investigation of how humans are influencing nature.

Academics studying physical geography and other related earth sciences are rarely generalists. Most are in fact highly specialized in their fields of knowledge and tend to focus themselves in one of the following well defined areas of understanding in physical geography:

- Geomorphology - studies the various landforms on the Earth's surface.
- Pedology - is concerned with the study of soils.
- Biogeography - is the science that investigates the spatial relationships of plants and animals.
- Hydrology - is interested in the study of water in all its forms.
- Meteorology - studies the circulation of the atmosphere over short time spans.
- Climatology - studies the effects of weather on life and examines the circulation of the atmosphere over longer time spans.

The above fields of knowledge generally have a primary role in introductory

textbooks dealing with physical geography. Introductory physical geography textbooks can also contain information from other related disciplines including:

- Geology - studies the form of the Earth's surface and subsurface, and the processes that create and modify it.
- Ecology - the scientific study of the interactions between organisms and their environment.
- Oceanography - the science that examines the biology, chemistry, physics, and geology of oceans.
- Cartography - the technique of making maps.
- Astronomy - the science that examines celestial bodies and the cosmos.

Comment / Notes:

The *Physiography dataset* represents the spatial intersection of landforms (available in EE as

ERGO/1_0/US/landforms) and lithology (available in EE as ERGO/1_0/US/lithology) data layers. It provides 247 unique combinations out of a possible 270. The values for each type are formed by concatenating the landform and lithology types (e.g., 1101 is "Peak/ridge" landform on "carbonate" lithology). This data layer is sometimes referred to as characterizing "land facets". The landforms layer is based on the USGS's 10m NED DEM (available in EE as USGS/NED). The lithology layer is not basen on any DEM.

Equivalent:

Sp: Fisiografía
It: Fisiografia

PlanificACCION (operator)

Definition:

"PlanificACCIÓN is a comprehensive city planning strategy for the development of smarter cities" (Lanfranchi, G. et al., 2018)

Context:

PlanificACCIÓN combines the use of participatory management strategies throughout the methodological process [...] It takes advantage of previous studies, builds on such studies through perception surveys carried out with local leaders, and incorporates quantitative indicators generated by the Urban Digital Laboratory (LUD) of CIPPEC. These strategies and methodologies permit rapid diagnosis that grows out of the political context and takes advantage of the knowledge and expertise of local actors" (Lanfranchi et al., 2018: 9). "[PlanificACCIÓN] makes it possible to design comprehensive strategies, based on participation with urban actors, that are more suited to local challenges. Participation facilitates planning as part of a collective process and engages the ecosystem of social actors, thereby empowering local actors and promoting continuity and sustainability of public policies so that such policies extend beyond the term of a single government administration to include various administrations" (Lanfranchi et al, 2018: 10).

PlanificACCIÓN is made up of five stages: Diagnosis; Definition of Strategic Projects; Implementation of

Strategic Projects; Creation of the Development Strategy for the City and its Metropolitan Region; and Acceleration of Platform Economy Projects (Lanfranchi et al., 2018)

Equivalent:

Sp: PlanificAcción
It: PlanificAzione

Principles (other)

Definition:

Principles as conditions that allow to interpret the territory's sustainability

Context:

We consider our discourse to be scientific because it is based on explicit or explicit assumptions. Our scientificity is in having set our assumptions. In doing so, we have reversed the pyramid of knowledge: it is not the process from data to information and knowledge that makes us wise. However, vice versa, we need to be wise to be able to explain the reasons why choosing the data we can illuminate the complex processes that impact on the metropolitan territory. Through the assumptions of sustainability, we interpret the metropolitan region dynamics producing the groundlessness that our metropolitan architecture project must heal.

Every discourse has assumptions; scientific discourse has many implicit assumptions. The TELLme method in defining the field of action of metropolitan architecture planning and design has extracted, clarified and highlighted them. We called these assumptions "Principles" and included them within the Metropolitan General Principle and Issues. The Principle is not a vision of a static "good city". We have identified through the MGPI Glossary software the keywords and relative concepts that identify the structural elements of the territorial dimension in its four dimensions. Then, through the Metropolitan Cartography tool, we interpret the data by the realization of two sets of synthetic maps: Protocol and Dynamics maps.

Comment:

Our maps are all exhibitions, - "what it shows"- of the Principles that we have set out as conditions that allow us to interpret the territory and that can always be discussed. As an academy, we believe we have to enunciate our assumptions and to be the curators of the maps, as an assumption of responsibility. On this basis, we will then be able to open a dialogue with the other agents of the contemporary city.

Based on our assumptions, the maps illuminate the problems of the real city. Unlike standard GIS analysis systems, Metropolitan Cartography produces a set

of synthetic, non-thematic maps that represent the territory through the combination of its structural elements. From the reading of this first set of Protocol maps, it will then be possible for each expert to define his or her perspective. By selecting a different composition of elements, Cartography can illustrate the issue of the unsustainability of the metropolitan

Equivalent:

Sp: Principios
It: Principi

Product cycle (other)

Definition:

Product (Life) Cycle is the typical sales pattern of a product over time and space from its introduction on to the market and its eventual decline as it is displaced by new, more innovative products or until demand for it falls, due to a change in consumer tastes. From Financial Dictionary

Context:

The product life cycle for product A, as illustrated in Fig, has four main phases: *introduction/launch, growth, maturity/saturation and decline*. Each phase can be characterized by the adoption of various MARKETING MIX formats (price, advertising, sales promotions etc.) to encourage both potential buyers to purchase the product and distributors to stock It:

- *Introduction/launch*. This occurs following the successful technical development of a NEW PRODUCT and indications, from MARKETING RESEARCH and TEST MARKETING trials, that the product is likely to be a commercial success. In the introductory phase, sales volume is relatively low and limited in the main to pioneering or innovator customers. Firms may adopt a high MARKET SKIMMING PRICING policy aimed at high-income, price-insensitive buyers, or, alternatively they may wish to accelerate the move into the growth phase by a low MARKET PENETRATION PRICING policy backed by heavy advertising and other promotional spending to obtain the maximum physical distribution and consumer interest in the product; growth phase. In this stage, sales volume expands rapidly as the product increasingly commands acceptance by the mass market of consumers. The introduction of imitation brands by competitors tends to heighten competitive pressures, but at this stage the collective and cumulative marketing effort of suppliers expands the overall size of the market, resulting in sales gains for most producers;
- *Maturity/saturation phase*. In this stage sales are largely repeat purchases to existing customers, since the majority of potential buyers have already made their first purchases. As the market becomes progressively saturated, firms are unable to benefit from further expansion of the market as a whole and must instead compete to increase or maintain

their market share. It is at this point that BRAND LOYALTY becomes critical, leading to a heavy emphasis on advertising and sales promotion and backup AFTER-SALES SERVICE etc. Fierce price competition is likely to be resisted, especially if the market is oligopolistic in structure (see OLIGOPOLY), in order to preserve the profitability of the market; firms may, however, have no choice but to compete on price if consumers see the product as increasingly a standardized item despite efforts by suppliers to differentiate their own particular brand of it;

- *Decline*. This phase is characterized by falling sales. If left to follow this downward path, the product will eventually die as sales fall to very low levels, although long before this the firm may withdraw it from the market. However, the rate of decline may be slow and protracted in the absence of rapid technological change and bolstered by entrenched customer tastes, so that suppliers may continue to earn good profits from the product

Equivalent:

Sp: Ciclo (de vida) del producto
It: Ciclo (di vita) del prodotto

Prosperity (principle)

Definition (meaning):

Prosperity is commonly conceptualised in socio-economic terms, highlighting equity and distributive issues within growing economies in terms of GDP. (Fritz & Koch, 2014: 192)

Context:

"Since ecological sustainability as a central dimension of prosperity is not achieved in growing economies for the time being, growth-critical scholars discuss the feasibility of providing ecological sustainability in nongrowing economies.

This is reflected in Daly's distinction between 'growth' and 'development', whereby the former refers to a quantitative increase of GDP, and the latter to qualitative change (Daly, 1991). Continued technological advances in combination with shorter working hours facilitate the maintenance of high living standards with relative low resource consumption and carbon emissions (Jackson & Victor, 2011; Koch & Fritz, 2013). Recent contributions from disciplines as different as equality and consumption research, the psychology of wellbeing and the philosophy of needs and capabilities suggest that prosperity should be understood by considering two additional dimensions: social inclusion and equity as well as individual wellbeing and the quality of life." (Fritz & Koch, 2014: 192)

"In the twenty-first century, politicians, NGOs, academics, and the general public are looking beyond economic growth to understand progress. Whether one talks about 'a different kind of growth' (as described by the OECD's Chief Economist Pier Carlo Padoan), or 'prosperity without growth' (as suggested by former UK Sustainable Development Commission Economist Professor Tim Jackson), there is an emerging consensus that economic activity should be seen as a means to an end, rather than an end in itself." (Jeffrey, Wheatley, & Abdallah, 2016: 4)

Comment / Notes:

As economic activity in general provides higher levels of wealth (Jiménez-Domínguez & López Aguilar, 2002: 99) the contradiction between economic activity and preservation of natural resources is extended to contradiction of increasing wealth and prosperity and decrease in natural capital. To

overcome described conflicts new development approach is needed, partially replacing existing urban economic development paradigms, but also producing a new development model for the metropolis.

Critique of different development approaches shares common roots with temporary debates on the end of post-Keynesian urbanism (Hodson & Marvin, 2009, p. 194; Sassen, 2008: 94) as the open competition model between cities and more recently between global metropolises failed to show its long-term viability, producing unprecedented wealth inequality and negative environmental impact.

Synonims:

Prosperity without growth, sustainable prosperity, shared prosperity

Equivalent:

Sp: Prosperidad

It: Prosperità

Protocol maps (other)

Definition:

Metropolitan Cartography tool facilitate the reading of development impact factors in the metropolitan region.

Protocol Maps are a set of Synthetic maps of the Metropolitan Cartography.

They identify and mark the lines of force of the territory, loading them with new relational meanings. With the Protocol Maps it is possible to highlight the morphological and tectonic data of the territory that, through the interpretive reading of the metropolitan expert, acquire new relationships to identify new spatial hierarchies. They are maps that reveal the metropolitan topographic structure by crossing quantitative and qualitative characteristics of geographic, historical and social data.

Context:

The construction of Protocol Maps is a structural phase of the definition of Metropolitan Approach to Complexity (Contin et al, 2017). They alloy the construction of Dynamic for Metropolitan Processes Maps to identify the rapidly evolving metropolitan dynamics of the contemporary scenario.

Metropolitan Cartography tool shaped a set of maps constructed from open-source data collection, with global and local extension. The objective of the Protocol Maps is to allow an analytical comparison between the different degrees of vulnerability among metropolitan cities.

The production of a set of Protocol Maps allows the researcher to verify how a meaning equivalence of a concept, specified in the Semantic Package, can have a different semantic value in the formal and spatial representation of data.

Comment:

Protocol maps are the fundamental outputs on which the Metropolitan Cartography Methodological approach is based on.

The specific structure of the maps of the Metropolitan Cartography, prior to the construction of the cartographic project of each case study, arises from the configuration of a Semantic Mental Map (Semantic Package) generated through software MGIP TELLme Glossary Polimi, which gathers concepts of the Metropolitan Discipline (Contin, 2015) according to the definition of a new analytical and interpretative framework of the metropolitan structure. The Semantic Package

is a container of concepts categorized by keywords or categories. The Protocol Maps and Maps of Dynamics are maps that operate through correspondence between concept and level of information through GIS (Geographic Information Systems), necessary to operate according to hierarchical levels categorized geographically, underlining the need for a new unit of analysis (Braudel, 1977) synthetic and non-thematic of the metropolitan region.

Equivalent:

Sp: Mapas de protocolo
It: mappe di protocollo

Provisioning service (keyword)

Definition:

According to Millenniun Ecosystem Assessment, Provisioning Service are obtained from ecosystems, they are the products obtained from ecosystems as: food, fresh water, wood, fiber, genetic resources and medicines.

Context:

Provisioning Services include:

- Food and fiber. This includes the vast range of food products derived-from plants, animals, and microbes, as well as materials such as wood, jute, hemp, silk, and many other products derived from ecosystems.„
- Fuel. Wood, dung, and other biological materials serve as sources of energy
- Genetic resources. This includes the genes and genetic information usedfor animal and plant breeding and biotechnology.„
- Biochemicals, natural medicines, and pharmaceuticals. Many medicines,biocides, food additives such as alginates, and biological materials arederived from ecosystems.„
- Ornamental resources. Animal products, such as skins and shells, and-flowers are used as ornaments, although the value of these resources isoften culturally determined. This is an example of linkages between the categories of ecosystem services.
- Fresh water is another example of linkages between categories in this case, between provisioning and regulating services.

Equivalent:

Sp: Servicios de aprovisionamiento
It: Servizi di approvvigionamento

Public realm (principle)

Meaning:

The metropolitan public realm is a meta-space that contains the intersection of existing boundaries; it is a looser concept of public space that is not objective since is constantly being constructed anew on the basis of negotiation and appropriation.

Context:

"[…] the existence of a public realm into which things can appear out of the darkness of sheltered existence, even the twilight which illuminates our private and intimate lives is ultimately derived from the much harsher light of the public realm". (Arendt, 1958)

"With the idea of the mass consumer whose household needs could be assumed to be much the same all over the city, and where each household anyway was seen to have a right to equal treatment, the Fordist metropolis is planned and organised around a number of monopoly public (sometimes private) service companies. Each service, gas, water, pedestrian and vehicular access, electricity, waste, sewage, telephone, etc. was planned to produce and deliver a standard product to each plot in the city. Town planning was often directly responsible for planning the road network for pedestrian and vehicular access to each plot. In the same way this network of streets was planned as a standard product, publicly owned and delivered to each location with the same level of safety, visual quality, economy of access to other parts of the city and its centre, and so on. It is to this network which urban designers refer when they speak of the "public realm". It refers only to the open street and sometimes the open space network. In these terms, nothing with a roof on, whether publicly or privately owned, counts as "public realm". It explains much about the narrowness of the current urban design paradigm, where many of the really interesting public realms of the city, some privately and some publicly owned, are not counted in or even considered to be 'public realm'.

[…] These same events overtake the road network, or what designers usually call the 'public realm'. New housing and commercial facilities are offered to particular groups, often with gated access to and from the publicly owned 'public realm'. These products usually have their own private covered or open

streets, which provide access between the individual units and the entrance to the public realm. It is these especially packaged services to particular consumer groups, delivered through privately owned streets and malls which are leading to claims about the 'privatization of the public realm'. Some people have argued that these extensions are only horizontal versions of apartment buildings and department stores which have been part of the city for over a century, others see it as the first steps towards the privatization of the road system itself.

[…] Thus what, we claimed, is an important function of the 'public realm'; the tacit contact to act as audience to each other's performances, is actively discouraged here. In such an environment, the chance of something spontaneous taking place between people is small and the management is working hard, through the design of the setting, to keep things this way. Voyeurism and spontaneity, two essential features of a properly functioning public realm if we believe Goffman and Sennett, take people's minds off the buying of goods and costs the company and its participating stores money." (Reeve and Simmonds, 2010)

"In its political form the existence of a public realm constitutes a shared relationship between rulers and ruled which makes politics more than mere power or domination. For this reason, the concept is intimately connected in modem Western political though with political legitimacy, which exists only when a government (in Michael Qakeshott's words) is 'constituted in such a way that if can be considered as belonging to the governed, and not as an alien power' (Oakeshoott, 2006). It need hardly be said, however that to determine how a public realm which provides for a political relationship of this kind between governors and governed can be constituted in an age of increasing individual and group diversity, as well as one in which the nationstate is no longer the only possible location for it, is a problem about which profound disagreement exists among Western political theorists. This disagreement, indeed, is sometimes so deep that if extends beyond debate about the form and structure of the public realm to fears about its possible disappearance from Western political life." (O'Sullivan, 2010)

"It is believed that information from any environmental system is based on its performance and its associated relations. Thus, actions taken place within the environment are outcomes of the urban system, which could modify qualities and adjust characters, inner developments and future inputs within a public place. These can also be expressed as activities or programmes taken place

within a public realm. Therefore, it is debatable that a particular public realm could appear in many ways, that by itself, it might have no definite identity. […] Therefore, public realms, as the major social places of any city, can play a vital role in influencing sociobehaviourism as well as articulating relations in experiencing and identifying urban identities of the environments. However, public realms are not always the major social places, but to some extent are liveable and collective nodes of the environmental framework of a city. In this respect, public places of a city can also be considered as dynamic parts for the changing and developing form of a city, and are certainly distinguished as the informative nodes, with which we perceive information and develop an image.

[…] Haydn and Temel (2006: 67-8) explore this theory of collectiveness and distinctiveness by identifying boundaries of spaces as incompatible components to the wholeness of a city. Nevertheless, they argue that representation of these boundaries, being perceived in various ways, can certainly manipulate the city and its environments. In this respect, a public realm can penetrate 'the built body of a city like a kind of metaspace, contained by the intersection of existing boundaries…[therefore]…public space is not an objective fact…[but is]…constantly being constructed anew on the basis of negotiation and appropriation' (ibid). The foremost point for this fact is, therefore, the exploration of space as source of possibilities and potentials, whereby needs, objectives and desires of human beings are considerably implemented.

[…] It is yet debatable that a particular public realm could appear in many ways that by itself, it might have no definite identity at all. By looking into the concept of placeness, it is almost inevitable to define place without activities and actions; therefore, programming of a place does not necessarily change what the space should represent, but can certainly define and revive its essence towards a better understanding of the community and its immediate context. In this respect, a public realm is an essential part of its context and is also defined through its relations with external qualities and elements; meaning that it is a systemised node relating to its bigger context. Nonetheless, this research paper has accentuated upon the relationship between human and his environment in order to define the implications of change and activities on developmental psychology. This paper has also explored the importance of environmental knowledge and how it matters to place identity, which means that in different stages of psychological development of an environment, individual is engaged with a series of perceptual and qualitative modifications, with which he inter-

prets and images the environment in mind. In essence, as Walmsley (ibid) puts it well, accumulation of information and developing the environmental perception involve 'a qualitative shift from action-in-space to perception-of-space to conceptions-about-space' as we develop our intellectual aptitude. Therefore, this development has a major impact on how we image and sense the identity of a particular place; i.e. the sense of place towards understanding self in society. (Cheshmehzangi, 2012)

Comment / Notes:

In Metropolitan Discipline, the public realm concept as movie set allows to represent multiple 'self-actors' characters in several circumstance of the artificial era. It originates also by mass use of new representation media as photography and television that transform into icons all significant images of a well-known place, but also the lifestyle that originates there. An important function of the 'public realm' is the tacit contact to act as audience to each other's performances: voyeurism and spontaneity, are two essential features of a properly functioning public realm. A public realm can penetrate 'the built body of a city like a kind of metaspace, contained by the intersection of existing boundaries. Therefore, public space is not an objective fact, but it is constantly being constructed anew on the basis of negotiation and appropriation. A public realm is an essential part of its context and is also defined through its relations with external qualities and elements; meaning that it is a systemized node relating to its bigger context. This concept is intimately connected in modem Western political though with political legitimacy, which exists only when a government is 'constituted in such a way that if can be considered as belonging to the governed, and not as an alien power'. The theme of this constituent situation is the identification of places, both at macro-scale (as container in landscape and landmark in territories) and micro-scale as sites inside interior landscapes. This interior landscape of new spaces is like a set that empathizes - in the word use itself- the dramatic visual of theatrical event, that maintains strongly the suggestion that landmark isn't only the framework that supports cultural manufactured goods, but also crowd and processions: is the body place, construction of nowadays life conditions, and creates rooms for wonder and imagination. The figurative tectonics of this places determines the concrete opportunity for rituals and meetings enlightening that the simultaneously pres-

ence of internal and external places reveals the relevance and the meaning of the physical presence of Architecture.

The public realm is done by set and scenarios which worn-out very fast. This means the possibility to meet and choose in a short period of time several lifestyles, inside which it is possible to insert ourselves as citizen everywhere without had assimilate necessarily all deepest traditions.

The public realm is the product of the detachment of bodily practices from the landscape itself. The consequent reduction of the internal and external landscape to a pure visual fact means that the focus of attention is not on every single place as it manifests itself in its individuality, but on the situation in presence that it allows those who travel and live in it. In this regard, the question of 'narration' or 'interweaving' becomes fundamental. The public realm is thus also the set of places that make up the landscapes and interior landscapes, which are connected through a mental map. It is, therefore, the sensitive manifestation of a conceptual unity that is revealed in movie sets whose tone of Style is a medium between the uniqueness of that individual space and the absolute generality of its spatial nature. Each cut-out of place in which we find ourselves is connected to a thousand spatial, historical, conceptual and sentimental relationships with everything that surrounds it, in greater or lesser physical or spiritual proximity. In the situation of separation that we have denounced, only the art form or the one that is bonded to it can 'reconnect' the spaces and the inhabitants in a new way and from the inside. It is a lifestyle problem linked to a movie set, for which it is important to reveal, through the construction of space, a typical figure as a way of 'wearing' behaviour: it is a Style problem appropriate to a place that thus becomes total again.

Equivalent:

Sp: Esfera pública
It: Regno del Pubblico

Public space (other)

Definition:

A multiplicity of divergent meanings attaches to "public," "public space," and the "public sphere." By "public space" we mean the range of social locations offered by the street, the park, the media, the Internet, the shopping mall, the United Nations, national governments, and local neighborhoods. "Public space" envelops the palpable tension between place, experienced at all scales in daily life, and the seeming *spacelessness* of the Internet, popular opinion, and global institutions and economy. Public space includes very recognizable geographies of daily movement, which may be local, regional, or global, but they also include electronic and institutional "spaces" that are every bit as palpable, if experienced quite differently, in daily life. (Low, S., & Smith, N. 2006).

Context:

The term "public" has democratic connotations. It implies "openness," "accessibility," "participation," "inclusion" and "accountability" to "the people". (Deutsche, R., 1996).

Comment:

Hou (2010) states that on the contrary to the rhetoric of openness and inclusiveness, the actual making and practice of public space often reflect a different political reality and social biases. Agacinski notes that, before the French Revolution, "the public" in the Western tradition referred to the "literate and educated" and "was never thought to be the same as the people." Even in recent Western history, some have argued that, "despite the rhetoric of publicity and accessibility," the official public sphere rests on a number of significant exclusions, based on gender, class, and race. The gender division of public and private, in particular, has been a powerful instrument of exclusion as it relegates women to the private sphere and prevents them from fully participating in the public realm. By delineating what constitutes public and private and by designating membership to specific social groups, the official public space has long been exclusionary, contrary to Young's (2002) notion of a public space that embodies differences and diversity.

Equivalent:

Sp: Espacio Público
It: Spazio Pubblico

Regulating service (keyword)

Definition:

According to Millenniun Ecosystem Assessment, Regulating Service are the principal services in ES. These are the benefits obtained from the regulation of ecosystem processes.

Context:

Regulating Service includes:

- Air quality maintenance. Ecosystems both contribute chemicals to and extract chemicals from the atmosphere, influencing many aspects of air-quality. Ecosystem Services are the benefits people obtain from ecosystems. These include provisioning, regulating, and cultural services that directly affect people and supporting services needed to maintain the other services.
- Climate regulation. Ecosystems influence climate both locally and glo-bally. For example, at a local scale, changes in land cover can affect both temperature and precipitation. At the global scale, ecosystems play an important role in climate by either sequestering or emitting green-house gases.„
- Water regulation. The timing and magnitude of runoff, flooding, and aquifer recharge can be strongly influenced by changes in land cover, including, in particular, alterations that change the water storage potential of the system, such as the conversion of wetlands or the replace-ment of forests with croplands or croplands with urban areas.„
- Erosion control. Vegetative cover plays an important role in soil retention and the prevention of landslides.
- Water purification and waste treatment. Ecosystems can be a source of impurities in fresh water but also can help to filter out and de compose organic wastes introduced into inland waters and coastal and marine ecosystems.„
- Regulation of human diseases. Changes in ecosystems can directly change the abundance of human pathogens, such as cholera, and can alter the abundance of disease vectors, such as mosquitoes.„
- Biological control. Ecosystem changes affect the prevalence of crop and livestock pests and diseases.„

- Pollination. Ecosystem changes affect the distribution, abundance, and effectiveness of pollinators.„
- Storm protection. The presence of coastal ecosystems such as mangroves and coral reefs can dramatically reduce the damage caused by hurri-canes or large waves.

Comment:

Also Supporting services are considered part of ES. They are those that are necessary for the production of all other ecosystem services. They differ from provisioning, regulating, and cultural services in that their impacts on people are either indirect or occur over a very long time, whereas changes in the other categories have relatively direct and short-term impacts on people. (Some services, like erosion control, can be categorized as both a supporting and a regulating service, depending on the time scale and immediacy of their impact on people). Some other examples of supporting services are primary production, production of atmospheric oxygen, soil formation and retention, nutrient cycling, water cycling, and provisioning of habitat.

Equivalent:

Sp: Servicios de regulación
It: Servizi di regolazione

Renaturalization (other)

Definition:

Within the field of ecology, renaturalization refers to a set of actions and attitudes aimed at producing compensatory effects derived from the current ecological crisis. It arises to restrict the denaturing pathways commonly accepted in the development of Modernity. If it is treated as an attitude, they can be described as a predisposition towards resistance, political, social and deepening practices in consciousness, which open up new foundations to characterize a pressured era, which seeks to avoid human extinction, in which they claim the ecological and human values. If it is treated as an action, the first recognized practices are directed towards remedial processes, these being of an environmental type, where the natural is defended as a moment prior to any human action. Renaturalization is a process of adaptation of the artificialized reality to a natural relational environment in transformation, in which techniques of environmental rehabilitation, environmental restoration and environmental engineering are involved. It is amplified to the territorial scenario, including urban configurations and constitutes a complex technology with characteristics of an emerging culture. (MCAS, 2018)

Context:

The term is currently used in urban planning, architecture and conservation of nature. It refers to processes of modification of a portion of the space, be it a building, block, neighborhood, plot, landscape or territory. This mutation can respond to a spontaneous ecological process or to an intervention organized by human actors, more or less strongly artificialized.

Comments:

The concept of renaturalization can not be understood as a closed term such as environmental rehabilitation but must be open to life within the human and the non-human. It is an open process, under construction not defined through strict conditions that limit its application in a reductionist sense. However, they are contextual alternative ethical actions of complex non-hierarchical relationships, where multiple life is enhanced in a collective continuous doing. Renaturalize can be conceived in different areas of knowledge, is open to the

incorporation of multiple collective actions that establish a new relationship between the human and the non-human.

Equivalent:

Sp: Renaturalización
It: Renaturalizzazione

Resilience (operator)

Definition:

Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience. It is necessary to redefine previously established social, political, functional and geographic borders, as well as engage with partners and stakeholders that best align with the scope of the challenge. This is especially true with increasing metropolization, with cities evolving into major metropolitan regions. As cities continue their rapid urbanization, they are expanding, and growing even more interdependent with their surrounding municipalities, regions and rural peripheries, further entrenching symbiotic relationships with them.

Context:

Building urban and metropolitan resilience requires looking at a city holistically: understanding the systems that make up the city and the interdependencies and risks they may face. By strengthening the underlying fabric of a city and better understanding the potential shocks and stresses it may face, a city can improve its development trajectory and the well-being of its citizens. Chronic stresses are slow moving disasters that weaken the fabric of a city. They include: high unemployment, overtaxed or inefficient public transportation system, endemic violence, chronic food and water shortages.

On the other hand, acute shocks are sudden, sharp events that threaten a city, including: earthquakes, floods, disease outbreaks, terrorist attacks.

Comments:

One of the most common criticisms of the use of resilience as an operator is that implies the persistence, adaptation and acceptance of a state initial of things, to move to a transformative resilience, not merely adaptive and compliant with the initial model.

Equivalent:

Sp: Resiliencia
It: Resilienza

Right to the city (principle)

Definition:

The concept of the right to the city as originally formulated by Lefebvre (1967, 1968) reestablishes the urban foundations of seeking justice, democracy, and citizen's rights. After centuries during which the national state defined citizenship and human rights, the city is seen again to be a special space and place of social and economic advantage, a focal point for the workings of social power and hierarchy, and therefore a potent battleground for struggles seeking greater democracy, equality, and justice.

As Harvey later elaborated in his liberal formulations, Lefebvre saw the normal workings of everyday urban life as generating unequal power relations, which in turn manifest themselves in inequitable and unjust distributions of social resources across the space of the city. Demanding greater access to social power and valued resources by those most disadvantaged by inequitable and unjust geographies defined the struggle to reclaim the manifold rights to the city. The aim, at least from a liberal egalitarian point of view, is to gain greater control over the forces shaping urban space, in other words to reclaim democracy from those who have been using it to maintain their advantaged positions. (Harvey, 2003)

Context:

Even if Lefevbre's original theoretical approaches data from the sixties and later Harvey transformed the principles of fight to the city by means of his liberal formulations, the concept has taken root in society and has given rise to bottom-up movements, promoted by civic agents but also academics. This is the case of the online platform Right to the City Alliance (https://righttothecity.org/), which promotes the theoretical principles in decision-making processes about the city and facilitates their understanding by citizens and their defence from onsite activism but also in digital networks.

Comments:

The concept has been summarized by righttothecity.org as:

Right of all inhabitants (present, future, permanent, temporary) to inhabit/

use/occupy/produce/ transform/govern/enjoy metropolis, cities, towns, villages and human settlements, which are: just, inclusive, safe, sustainable, democratic; to guarantee they are/have: gender equality, free of discrimination, embrace minorities and ethnic, racial, sexual and cultural diversity, inclusive citizenship, enhanced political participation, fulfill their social functions, including social production and reconstruction of the habitat, and with diverse and inclusive economies. According with this organization, this could be reach by means of:

Legal norms; instances of institutional participation; planning tools; participation (Participatory budgeting, Neighbourhood-impact evaluation); planning (Master Plan, Territorial Organization Plan, Participatory Plan, Urban Mobility Plan, Urban Development Plan, etc.); taxes (Property tax, Contributions from construction projects, improvements and inversions); compulsories (Property tax, Contributions from construction projects, improvements and inversions, Participation in surplus value); Land Provision and Recognition of Social Housing (Special social interest and Cultural Zones, Concession for special use for social housing purposes, Land regularization.

Equivalent:

Sp: Derecho a la ciudad
It: diritto alla città

Robustness (principle)

Definition:

Robustness is the potential capacity of the structure of the metropolitan system to survive exceptional actions not explicitly foreseen in the project.

Comment:

In particular, appropriate planning and design choices are necessary, following the concept of "structural robustness" as described in building technology.

A structure is robust:

- when the structural parts essential for safety are not very sensitive to defects and unforeseen actions
- when there is no generalised collapse as a result of breakage of limited areas of the structure (progressive collapse)

Regarding the complexity of the structure and the number of components:

- The more elements there are, the more robust they are;
- The higher the variability of the load, the less robust a structure is

These approaches not only provide technical design advices to increase robustness in the structure, but also provide general guidelines in shaping a metropolitan system that is robust. Lynch introduced the concept of "Civic Robust Image".

Equivalent:

Sp: Robustez
It: robustezza

Rural territorialities (operator)

Definition:

The production of space (Lefèbvre, 1974) is being carried out through social and institutional practices. Time as well place assign specificity marks to the territoriality produced. Thus, we can speak of territorialities, in plural, to indicate their historical and social character (Torres-Mazuera, 2009). Historical processes come together in the spatial definition and produce a diversity of territorialities that we can abstract as ideal types. The rural is one of those types.

Context:

"With the notion of territoriality, I refer to discursive and material exercises that reveal a logic of construction of space. A set of described events allow understanding forms of interrelation with the environment. Thus, the landscape is the visible face of a territory and a territory is the cultural and historical creation of a space; territorial public policies and social actions, for example, are elements that shape the landscape (Ardila, 2006). In that sense, it is not possible to understand that visible face if it is not understood as the product of the weight of histories, ideologies, economies and social relations... These are the result of conflicting relationships and superpositions between territorialities that share and compete for the same place and for the modeling of the environment, such as conservation policies and the dynamics of peasant occupation, both related to urban expansion" (Meza, 2008: 441).

"Studying the intersection of territorialities constitutes a critique of the nature-society dualism that extends to the dichotomy between the countryside and the city, which has caused a rupture in the dialectical relationship of adaptation and transformation between peoples and natural systems, undermining the society- environment and presenting nature as a world in equilibrium, broken by human impertinence (Leal, 2002) or, as a mere resource that can be exploited and dominated by science and production" (Meza, 2008: 441).

"These "slippery" territories, in a transitional situation and of permanent transformation, have received different names that refer to a definition due to lack of definition: the urban periphery, the rur-urban, the "diffuse city", the field-city border, the "dispersed city", edge territories, urban / peri-urban edge or the contour of the city (Capel, 1994 cited in Barski, 2005, p. 1; Álvarez, 1999). In this context, the term peasant operates for rural actors as a historically situated

consciousness in relation to the transformations of the landscape associated with phenomena of urban expansion, extraction of natural resources and conversion of inhabited space into a forest reserve" (Meza, 2008: 443).

"Thus, the regimes of territoriality are the theater of multiple histories that although they are associated with the development of the city cannot be seen solely from it. They are a frontier territory because their diffuse boundaries between city and forest, between rural and urban spaces show the transgressions of the development of the metropolis and the resistances of the peasant people, whose history of occupation transgresses, in turn, the ideal of conservation ecological of the eastern forest"(Meza, 2008: 475).

Comment / Notes:

This notion overcomes rural-urban, traditional-modern, natural-cultural dichotomies. Captures the actions that different actors project on the territory as historically situated practices.

Equivalent:

Sp: territorialidades Rurales

It: territorialità rurali

Social coherence (issue)

Definition:

Social coherence is a state in which groups of people (i.e. from family and friendship scale, to major organizations) interrelate and cooperate at raised levels, defining with it the form, the landscape, the presence of a space, and in a higher scale, of a region.

Context:

Although the term Social Cohesion is widely accepted by scholars, the tendency is to better use Social Coherence. Social Coherence provides, not a single shared identity, but multiple identities that interact together without conflict. Here, no conflict means to discover common values and humanity through working and living together, where the discussion of the differences has no place. On the contrary, if Social Coherence exists, then a symptom is the natural recognition of differences between collectives. Beyond this point, communities generate actions towards common goals or problems.

It's important the spatiality of these manifestations for non-shared identities according to family/tribal/geographic/cultural/historic connections. Anyway, both terms refer to a social process which aims to amalgamate plurality of citizenship by decreasing inequality, balancing socioeconomic discrepancies and closing fissures in the society.

Comments:

It identifies two main dimensions: the sense of belonging of a community and the relationships among members within the community itself.

Synonims:

Social Cohesion

Equivalent:

Sp: Cohesión Social
It: Coesione Sociale

Social fabric (operator)

Definition:

In Sociology, Social Fabric implies the intrinsic dynamics of a local neighborhood or network, a form of linkage that emphasizes the social webs among individuals, agreeing to bet on the same traits, what formerly were called values.

Context:

In countless articles, political speeches and urban development meetings, use these two cosmopolitan concepts, the social and the fabric, in different contexts, refusing to settle in any one. More recently, "fabric" has also frequently been qualified by the adverb "social". In this sense, politicians, urban developers and sociologists express their concern for coherence, to those alliances apparently forsaken in the 20th century (named the "century of the self" among many others by documentarist Adam Curtis in 2002). The social fabric of the city is, for these authors completely destroyed. Hence, the recuperation of the association between social and fabric provides the necessity of reunion of people into communities.

Comments:

Commonly, textile metaphors are used to map hard-to-grasp social issues, and these indirect means provoke to the imagination a kind of vagueness, open to new forms of understanding, but also uncertainties. Since metaphorical fabric has no physical appearance, we still need to discover exactly what components are being combined, and as a whole (Latour, 2005).

A value, in modern terms, is what makes life not worth living if one is deprived of it. On the contrary, traits are the starting point to answer the radical question of who we are, who we have been.

Equivalent:

Sp: Tejido Social
It: Tessuto Sociale

Spatial justice (operator)

Definition:

A mutually influential and formative relation between the social and the spatial dimensions of human life, each shaping the other in similar ways. (Soja, 2009)

Context:

Starting from the reverse of the latest and broadest sense, conjuring spatial (in)justice refers to an intentional and focused emphasis on the spatial or geographical aspects of justice and injustice, by means of searching the fair and equitable distribution in space of socially valued resources and the opportunities to use them. Inasmuch as the social, economic, or other forms of justice, Spatial justice is a way of looking at justice from a critical spatial perspective. The three most common forces shaping locational and spatial discrimination are class, race, and gender, but their effects should not be reduced only to segregation.

Soja gives examples of Spatial injustice, embracing from the gerrymandering of electoral districts, the redlining of urban investments, and the effects of exclusionary zoning to territorial apartheid, institutionalized residential segregation, the imprint of colonial and/or military geographies of social control, and the creation of other core-periphery spatial structures of privilege from the local to the global scales.

On regards of democracy, equality, citizenship, and civil rights, Spatial Justice offers new meaning in the contemporary context like the intensification of economic inequalities and social polarization associated with neoliberal globalization and the new economy as well as the transdisciplinary diffusion of a critical spatial perspective.

The discourses on territorial justice, the right to the city, the geography of social justice, and the urbanization of injustice were major advances in the conceptualization of the spatiality of (in)justice, even if none of the contributors ever used the specific term spatial justice. Although conceptually intertwined with the others and difficult to separate clearly, the development of the literature using the specific term, with its stronger assertion of the social effects of spatial processes, deserves particular attention. (Soja, 2010: 83).

Comments:

Guiding the exploration of spatial justice from the start is the idea that justice, however it might be defined, has a consequential geography, a spatial expression that is more than just a background reflection or set of physical attributes to be descriptively mapped (Soja, 2010).

Equivalent:

Sp: Justicia Espacial
It: Giustizia Spaciale

(Spatial) Proximity

Definition (meaning):

"In striving for sustainability, urban policy and planning increasingly emphasize proximity ideals in order to go beyond established mobility- and speed-oriented accessibility strategies. Yet proximity is a fluid concept with many contextualized meanings, cutting across most sectors of urban planning." (Solá & Vilhelmson, 2018: 1)

Context:

"A shift toward proximity-enhancing (i.e., distance reducing) strategies puts people's local access to a wide range of amenities important for quality of life—such as healthcare facilities, preschools and schools, social services, commercial services, leisure, cultural, and entertainment amenities, and parks and nature—at the center of planning. It extends established accessibility planning beyond the conventional domains of transportation and land-use planning, and reflects on the need for improved information systems, methods, and metrics that quickly map relevant bases for evaluation and decision-making." (Solá & Vilhelmson, 2018: 3)

"By coupling a multi-level proximity assessment model with a quality assessment model, a clear overview of inequalities in the quality and accessibility of green spaces (GS) is obtained, both quantitatively and spatially. The maps produced thus facilitate well-informed design and policy interventions not only on GS, the path network connecting residents and GS, but also on densification and general planning strategies." (Stessens, Khan, Huysmans, & Canters, 2017: 8)

Comments:

Increased proximity is believed to enhance individuals' quality of life, boost neighbourhoods, and promote environmental, social, and economic sustainability. The concept is central to discourse on how to reduce energy-consuming and polluting travel, foster local social ties, trust, and capital, and promote economic activity and innovation. Ideas of nearness lie at the heart of visions to revitalize and make cities vibrant and attractive via greater densification, land-use mixing and filling, and the co-location of various activities and facilities. In the metropolitan context proximity is related to urban fabric scale infrastructure and landscape planning and management and its economic viability.

Sustainable heritage (principle)

Definition:

Sustainable Heritage concept introduces interdisciplinary skills needed to deliver the heritage projects of the future by approaching historic buildings, sites and landscapes with a critical attitude regarding the conservation 's need. It is a concept linked to the symbolic mediator*, its referring Space Figures (Chaoay,1996) and their scale.

*It is a mark on the ground sign of a past object' s dimension or orientation that became the orientating element of the new project.

Context:

Within SDG 11, "Make cities inclusive, safe, resilient and sustainable", SDG target 11.4 emphasizes the requirement to "Strengthen efforts to protect and safeguard the world's cultural and natural heritage" for the benefit of its inhabitants, and not only. According to the UNESCO 1972 definition, Sustainable Heritage (UNESCO, 1972) is divisible into: cultural heritage and natural heritage. Physical objects, such as monuments, architectural buildings, sculptures, paintings and archaeological sites, are considered Cultural Heritage. The natural heritage refers to sites of natural characteristics, including physical, biological, geological and physiographic formations which have an exceptional universal value from the point of view of science, conservation or aesthetics. There are also mixed sites, so the World Heritage list includes cultural, natural and mixed sites. The term Sustainable Heritage is linked to the meaning of Cultural Heritage, which in the last twenty years has changed its configuration through the updated UNESCO regulatory tools. The United Nations Statistical Commission (UNSC) has established an Inter-Agency and Expert Group on SDG Indicators (IAEG-Sdgs) to propose a global indicator framework (UNSC, 2015) as a guide to measuring the achievement of SDGs under Objective 11, which includes the report on the development of metropolises in relation to the Cultural Heritage according to parameters of economic and environmental sustainability.

Comments:

The metropolitan paradigm has changed since the last century. Its purpose is a possible relationship (mode of connection) and the reactivation of a tension between the historical centre and the periphery. The metropolitan architec-

ture project is an agent capable of mediating and negotiating. It is about new metropolitan centralities linked to the old parts that change their role from being functional to being symbolical, conceiving the centre as the place where a tension is determined for the articulation of the metropolitan contexts with the new functions, and with the new actors that appear in the metropolitan sphere in the search for quality of life.

Growth needs a discontinuity in its configuration that regulates the unsustainable logic of urban and territorial structures. However, in order to avoid the dissipation of the heritage of the past, it is necessary to re-define the concept of sustainability with respect to three investments: economic, social and physical. How can metropolitan change be sustainable? Why we have to conserve?

Equivalent:

Sp: Patrimonio sostenible
It: patrimonio sostenibile

Unit of landscape (protocol map)

Definition:

Digit or Metropolitan Minimum Unit is the relationship between the quantitative dimension (measurement) and the qualitative concept (size) of large and small, where the small coincides with the body of man and the large coincides with the total metropolitan inhabited field (total landscape made visible). It is a Figural Unit[5] defined by its geographical structure (section) and durable cultural permanencies that determine its characterised landscape (its name). Metro ds of the eco-?eld. Its borderline marks the Urban-Rural linkage. It is determined by administrative limits that follow the fields of actions of the new metropolitan citizenships. It is so flexible that it can accommodate the evolution of a society that over time will have to react to the no more extended temporary inclusion of different identities. Two maps can represent It: a topographic and a mental map. Nowadays, temporary measures prevail over spatial measures. It is that shape, color, or arrangement which facilitates the staking of vividly identified, powerfully structured, highly useful mental images of the environment. It might also be called legibility, or perhaps visibility in a heightened sense, where objects are nor only able to be seen, but are presented sharply and intensely to the senses".

Context:

Landscape Unit In Landscape Urbanism an ecological matrix persists. In the study of the relational dynamism character of the known world, ecology becomes a lens through which to analyse and design future urban developments. In particular, we note that the complexity of interaction between elements within ecosystems does not follow linear models, but rather, as the discipline of ecology suggests, takes place in fields of action in which the incremental and cumulative effect of each agent determines the evolution of the entire ecosystem over time and continuously modifies the ends of the eco?."Landscape urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both

5 Figurability: "the quality that gives a physical object a high probability of evoking a vigorous image in every observer.

the lens through which the contemporary city is represented and the medium through which is constructed. (Corner, 2006)".

Consequently, chaotic situations or situations organised by chance show, on closer analysis, a geometric structure ordered according to definite rules (Chiesa, 2013). The maps of Landscape Unit allow an in-depth analysis of the human, natural and technological systems insisting on the area. Maps and diagrams spatialize the overlapping activities, then organised into axonometric sections to show the succession and overlapping of processes of activity in the context of the reconstruction of the ecological balance of the site (Shane, 2005).

In the TELLme Projet two definitions of minimum metropolitan unit have emerged, that of Cultural Landscape Unit and that of the Implementation Unit. In both definitions what is common is the principle of homogeneity. The form of the minimum metropolitan unit is constituted in the perceptual world in such a way that the elements unified in a formal complex, present a certain qualitative homogeneity, immediately identified by the expert eye. That is a property of the whole. The need to give structure to the perceptual world is a way in which there is a natural tendency of the elements to achieve a certain homogeneity of scale.

However, this tendency also acts on the elements unified in formal complexes of new dimensions: thus, even the elements in themselves tend to become homogeneous. The tendency to homogeneity supports the regulatory principle that tends to homogenise the elements in the perception of a form, to make them available for the implementation of a metropolitan project. The metropolitan project, moreover, is usually linked to infrastructure plans in which the technical component tends to be replicable everywhere. To avoid the de-differentiation of places affected by metropolitan infrastructure projects, the definition of a Cultural Landscape Unit becomes central.

The elements that make up the Implementation Units are called "factors" with an explicit reference to the equations of mathematics; the effects of the relationships between them can be measured and calculated:

- "It needs to define Metropolitan Governance, Metropolitan economics, Metropolitan sociology, Metropolitan Environment (urban and natural), Metropolitan transport, Metropolitan Land use, etc.
- And prove in each of these fields the difference with the urban approach and the regional approach. - It needs to establish the policies necessary in each of these fields.

- It needs to establish the calculus mechanisms to be able to calibrate the components, policies and budgets necessary to manage these fields.
- It needs to apply cost-benefit analyses, externalities calculus, efficiency, and efficacy standards.
- It needs to establish the mathematical curves that relate determining factors. Every "factor" must be quantified. That is what helps to find the right solution with the right amount of effort to be applied to each factor (Ortiz,2018)".

The Unit of Cultural Landscape is analysed based on: Natural resources, historical evolution, cultural landscapes and their dynamics, sense of belonging, and landscape views.

The way of describing the Unit of Implementation is configured as linked to the willingness to prepare a response to an immediate need. In terms of Choay (1980) we would call it "model" and "utopia". The way of describing the Cultural Landscape Unit is instead to be understood as an apparatus of tools for a future instance. In terms of Choay, we would call it "rule" and "treatise". (ERASMUS + PROGRAMME 2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new MEtropolitan discipline. IO O5 Handbook. Date 22 April 2019).

Comments:

This definition is the synthesis of the different concepts of Landscape Unit; Figural Unit of Landscape (E.N.Rogers); Cultural Landscape Unit (Alcantara); Implementation Unit (Ortiz). Keywords are : measure, scale, figural unit, name, section, field of action, (for) new citizenships, mental map (robust civic image) and topographic map (accessibility); all the definitions mentioned constitute the basis to delineate a specific criteria for the metropolitan digit description and measuring. According to Ortiz (Ortiz, 2014), measure and position are the criteria to define the metropolitan digits (operative reading unit, Gregotti, 1966). These must be connected to geography so that, to the territory formal values. This means to relate the Metropolitan Unit definition to the anthropic-geographical formal typologies (Cattaneo), conceived such as the reading and representation of the indicator of formal transformation due to the planning actions.

The goal of the Landscape Unit Map is to be able to understand how to live

and transform the territory. The Metropolitan Landscape Unit map allows an in-depth analysis of the human, natural and technological systems that insist on the territory. The map spatializes the overlap of activities, land uses and local habitus, and then organizes reciprocal relations in territorial sections that show the overlap of activity processes in the context of the reconstruction of the ecological balance of the site. In addition, the map of the Landscape Unit aims to represent not a new model on which to rethink the city, but rather identifies a structured dispositive organization according to a flexible physical configuration, repeatable and practicable not only on the scale of the single urban unit but above all on Metropolitan Region scale.

Equivalent:

Sp: Unidad de paisaje (mapa de protocolo)
It: Unità di paesaggio (mappa del protocollo)

Unit of metropolitan landscape

Definition:

*For each territorial scale there is a digit (minimum unit of intervention, the 1:1) physical and conceptual. Digit or Metropolitan Minimum Unit is the relationship between the quantitative dimension (*measurement*) and the qualitative concept (*size*) of large and small, where the small coincides with the body of man and the large coincides with the total metropolitan inhabited field (total landscape made visible). It is a* Figural Unit[6] *defined by its geographical structure* (section*) and durable cultural permanencies that determine its characterised landscape (its* name*). Metro Digit is a* field of action *in which the incremental and cumulative effect of each agent determines the evolution of the entire ecosystem over time and continuously modifies the ends of the eco-field. Its borderline marks the* Urban-Rural linkage*. It is determined by administrative limits that follow the fields of actions of the* new metropolitan citizenships*. It is so flexible that it can accommodate the evolution of a society that over time will have to react to the no more extended temporary inclusion of different identities.* Two maps *can represent It: a topographic and a mental map. Nowadays, temporary measures prevail over spatial measures.*

Context:

The essential architectural problem is the relationship between measure and scale. The terms of the relationship are the human body (measurement) and the inhabited field in its totality. From a metric point of view, the measure of a man is a relative invariant, and the scale of the city is variant: its measure changes in reality, in size, in value or sense. The change in value is the ability to commensurate, according to the variations of the urban field, its possibilities of action, now immeasurably increased by infrastructure. For this reason, now-

6 Figurability: "the quality that gives a physical object a high probability of evoking a vigorous image in every observer.
It is that shape, color, or arrangement which facilitates the staking of vividly identified, powerfully structured, highly useful mental images of the environment. It might also be called legibility, or perhaps visibility in a heightened sense, where objects are nor only able to be seen, but are presented sharply and intensely to the senses".

adays, temporary measures prevail over spatial measures and the measures become more sensitive and sophisticated. It is through metropolitan architecture that the entire city acquires a multi-scale character. The continuity of the ground is articulated and segmented into relatively discontinuous fields based on the distance from the interchange poles; the metropolitan centralities are then communicating with even larger fields through interchange poles of a higher order. However, connected to the multiscale and multi-function exchange poles, we immediately find local fields which are made discontinuous by the metropolitan, regional and national infrastructures, yet adequate accessibility in terms of time is ensured. That is how the net-city is born, which differs from the polycentric city because the interest is no longer on poles and actions of communication, but on the space that is now disjointed Body Spaces.

The digit at local scale is where citizens know how to understand and memorize the context, rootedness of identity and belonging, participation and consent to the identity altering necessary for the completion of the life cycle, so that of the urban biography. (ERASMUS+ PROGRAMME 2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O3.

Approach to complexity. Date 30 April 2019)

Landscape Unit. In Landscape Urbanism an ecological matrix persists. In the study of the relational dynamism character of the known world, ecology becomes a lens through which to analyse and design future urban developments. In particular, we note that the complexity of interaction between elements within ecosystems does not follow linear models, but rather, as the discipline of ecology suggests, takes place in fields of action in which the incremental and cumulative effect of each agent determines the evolution of the entire ecosystem over time and continuously modifies the ends of the ecofield.*"Landscape urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which is constructed."* (Corner 2006).

Consequently, chaotic situations or situations organised by chance show, on closer analysis, a geometric structure ordered according to definite rules (Chiesa,

2013). The maps of Landscape Unit allow an in-depth analysis of the human, natural and technological systems insisting on the area. Maps and diagrams spatialize the overlapping activities, then organised into axonometric sections to show the succession and overlapping of processes of activity in the context of the reconstruction of the ecological balance of the site (Shane, 2005).

In the TELLme Projet two definitions of minimum metropolitan unit have emerged, that of Cultural Landscape Unit and that of the Implementation Unit. In both definitions what is common is the principle of homogeneity. The form of the minimum metropolitan unit is constituted in the perceptual world in such a way that the elements unified in a formal complex, present a certain qualitative homogeneity, immediately identified by the expert eye. That is a property of the whole. The need to give structure to the perceptual world is a way in which there is a natural tendency of the elements to achieve a certain homogeneity of scale.

However, this tendency also acts on the elements unified in formal complexes of new dimensions: thus, even the elements in themselves tend to become homogeneous. The tendency to homogeneity supports the regulatory principle that tends to homogenise the elements in the perception of a form, to make them available for the implementation of a metropolitan project. The metropolitan project, moreover, is usually linked to infrastructure plans in which the technical component tends to be replicable everywhere. To avoid the de-differentiation of places affected by metropolitan infrastructure projects, the definition of a **Cultural Landscape Unit** becomes central.

The elements that make up the **Implementation Units** are called "factors" with an explicit reference to the equations of mathematics; the effects of the relationships between them can be measured and calculated:

- "It needs to define Metropolitan Governance, Metropolitan economics, Metropolitan sociology, Metropolitan Environment (urban and natural), Metropolitan transport, Metropolitan Land use, etc. And prove in each of these fields the difference with the urban approach and the regional approach.
- It needs to establish the policies necessary in each of these fields.
- It needs to establish the calculus mechanisms to be able to calibrate the components, policies and budgets necessary to manage these fields.
- It needs to apply cost-benefit analyses, externalities calculus, efficiency, and efficacy standards.

- It needs to establish the mathematical curves that relate determining factors. Every "factor" must be quantified. That is what helps to find the right solution with the right amount of effort to be applied to each factor (Ortiz,2018)". The **Unit of Cultural Landscape** is analysed based on:
- Natural resources
- Historical evolution
- Cultural landscapes and their dynamics • Sense of belonging
- Landscape views.

The way of describing the Unit of Implementation is configured as linked to the willingness to prepare a response to an immediate need. In terms of Choay (1980) we would call it "model" and "utopia". The way of describing the Cultural Landscape Unit is instead to be understood as an apparatus of tools for a future instance. In terms of Choay, we would call it "rule" and "treatise". (ERASMUS+ PROGRAMME 2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O5 Handbook . Date 22 April 2019)

Comment / Notes:

This definition is the synthesis of the different concepts of Landscape Unit (Corner); Figural Unit of Landscape (E.N.Rogers); Cultural Landscape Unit (Alcantara); Implementation Unit (Ortiz). Keywords are : measure, scale, figural unit, name, section, field of action, (for) new citizenships, mental map (robust civic image) and topographic map (accessibility); all the definitions mentioned constitute the basis to delineate a specific criteria for the metropolitan digit description and measuring. According to Ortiz (Ortiz, 2014), measure and position are the criteria to define the metropolitan digits (operative reading unit, Gregotti, 1966). These must be connected to geography so that, to the territory formal values. This means to relate the Metropolitan Unit definition to the anthropic-geographical formal typologies (Cattaneo), conceived such as the reading and representation of the indicator of formal transformation due to the planning actions. Each Unit named Figural Unit of Metropolitan Landscape has anthropic -geographical structure and represents a Typical Figure of

Landscape not only a Metropolitan Land-Use Digit (E.N.Rogers). The metropolitan digits are homogeneous, we have to explain how to interpret the role of each of them inside the metropolitan whole; to recognise the different scale of

their field of action (section strategy) (Gregotti, 1966); and to conceive new built form types to enlighten the dispositive rules able to allow a clear legibility of the metropolitan scape (Lynch, 1958). The morphology of the metropolis gathered the entire multiplicity of functions within a gradient system of formality. It is not a model, but rather it is organized and structured in a physical configuration that provides flexibility not only at the scale of the single unit but also at the scale of the general organism.

The concept of potential of the territory. The metropolitan territory is elastic, with imprecise dimensions but each point must be characterized and recognizable. The relationship among weights and quantities of the Units of the Metropolitan Landscapes has to be established to foster the metropolitan equilibrium of forces. Among the different units of the metropolis there will not have to be qualitative leaps through the infrastructure: each part will be placed at the same level of potential while maintaining the differences among them, i.e. each one of them is destined to a different situation (within a flexible and transformable system).There must be a need for complementarity among the landscape units, unless, the imbalances of the social and economic depression of the current peripheral areas will be produced at a larger scale also (formal resilience).

Synonyms:

Operative reading unit

Equivalent:

Sp: Unidad de Paisaje Metropolitano
It: unità di paesaggio metropolitano

Urban DNA (other)

Meaning:

"Urban DNA (ADN in Spanish) is a system of territorial analysis that classifies urban areas in different categories based on: Access to basic services infrastructures, population Density, and unsatisfied basic Needs. The unit of analysis used is determined by census blocks or sections ("censos radiales" in Spanish) because these sections are the most disaggregated units for which census information is available (in terms of cartography)" (Lanfranchi, 2017: III).

Context:

"The development of a country is closely related to the quality of its urbanization: the more urban quality the greater the value generated" (Clos, 2016). Urban development planning is fundamental to ensure urban quality, and its absence can lead to a loss in productivity, an increase in inequality, and a strong deterioration in the quality of life of citizens.

Urban poverty is the evidence of a lack of comprehensive planning and the asymmetries and inequity in the institutional systems of wealth distribution, access to land, infrastructures, housing, education, social security and employment, among other dimensions of the phenomenon" (Lanfranchi, 2017: I).

"However, most urban policies in the region are sectoral or limited to one administration, demonstrating poor coordination within different levels of government. This segmented approach to urban problems and territorial planning, together with a lack of coordinating urban management instruments, hinders the design and implementation effective solutions.

In this context, the development of tools for understanding the challenges posed by urban growth is essential and requires analysis of three dimensions: the relationship between the increase in population and the consumption of land per inhabitant; the level of the consolidation of infrastructure of basic services; and socio-economic indicators that measure poverty "(Lanfranchi, 2017: I).

"The Urban DNA methodology constitutes a substantial contribution to efforts in urban habitat planning and management since it facilitates the comparative historical analysis of urban areas and it allows to build scenarios of population growth, basic services and poverty, while contributing to the design and implementation of urban and territorial public policies" (Lanfranchi, 2017: I).

Synonyms:

Urban genesis, urban composition

Equivalent:

Sp: ADN Urbano
It: DNA Urbano

Urban expansion (operation)

Meaning:

"Urban expansion is the conversion of a minimum of one hectare of area previously destined for other uses to urban, industrial and / or equipment uses, regardless of the approval of this conversion of use by local authorities" (Cordara C. et al., 2018: 26).

Context:

The forms of growth characterized by patterns of high soil consumption and low density occupations produce negative urban dynamics. On the one hand, this type of expansion leads to an increase in social segregation and the proliferation of urban gaps. On the other hand, it generates higher costs for the city, since it requires investing more resources in the provision of infrastructure and public services necessary for the proper functioning of the city.

In contrast, as pointed out by the New Urban Agenda, signed in Quito during the Third World Conference on Habitat and Sustainable Development two years ago, the benefits of a compact city are related to greater (or better) possibilities in accessibility and proximity between urban activities (Cordara et al., 2018: 13).

"The CIPPEC Cities Program decided to study how much and how the Large Argentine Urban Agglomerates (GAU's in spanish) expand, based on four premises. The first is that the way cities grow is related to social inclusion, environmental sustainability, public finances and employment opportunities and population's progress. Second, the dynamics of expansion observed in Argentine cities is inadequate as the urban area expands at a rate faster than population increase. Third, such expansion occurs over a scarce resource, the soil, which fulfills important functions for society as a whole: food production, recharge of aquifers, retention of water excesses, among others. Finally, it is strategic to have evidence from all the Argentine urban agglomerates in order to make public policy proposals that modify this dynamic "(Cordara et al., 2018: 21).

Equivalent:

Sp: Expansión Urbana

It: Espansione urbana Fr: Expansion urbaine

Urban Extractivism (issue)

Definition:

"The radicality of the progress of the real estate business in its different manifestations has led some authors to propose the idea of urban or real estate extractivism (Pahisa, 2014; Hidalgo et al., 2016), considering that the search for obtaining urban income takes such autonomy that puts at risk the minimum conditions of reproduction of the rest of the actors that make the life of a city or a locality, both socially and environmentally" (Trivi, 2016: 5)

Context:

"The concept of urban extractivism seeks to provide a new explanatory matrix that allows addressing the problems and inequalities in cities, not as isolated elements among themselves, but as a result of a determined and planned development model. Think urban contexts in extractivism key, opens the possibility to see concrete phenomena under scrutiny economic-financial model that sustains and produces" (Viale, 2017: 9)

Comment / Notes:

This notion signals the arrival of extractism in metropolitan contexts, associated with real estate speculation processes, population displacements, appropriation of the public, among others (Svampa & Viale, 2015: 248).

Equivalent:

Sp: Extractivismo urbano
It: Estrattivismo urbano

Urban Metabolism (protocol map)

Definition:

"The sum total of the technical and socio-economic process associated with its own infrastructure, between regional and local scales and with strategic design and spatial design that occur in cities". (Kennedy, C. et al., 2007)

Context:

The attention to the *urban metabolism* is paid today, after its long haul and reactualization, not so much in the actual flows, but in the places where precisely the transformations were produced by the metabolic understanding of the territories. The complex interwoven knots constituted by social processes, material metabolism and spatial form, which are attributes of the formation of contemporary urban socionatural landscapes, is in the metropolitan areas where accelerating metabolic transformation of nature becomes most visible, both in its physical form and its socioecological consequences, as pointed out by Swyngedouw and Heynen (2006:41). The concept of Urban Metabolism tends to be measured empirically in a similar way to the "ecological footprint" (mathematical models) for a comparison among cities since 1990's.

Comments:

A clear contextualization is needed after decades of attempts to naturalize pressing issues into urban problems. Such naturalization is the disadvantage of all biological metaphors such as metabolism since XIX century (romantic, realistic, naturalist, as a novel by Zola o Balzac) until current times All those debates about the city as an organism must be remembered here. Bruno Latour (2018) warns of the importance of revising natural metaphors backwards to ensure that they are not going to extinguish precisely the policy that is intended to be promoted. In the third book of Marx's 'The Capital', he talks about social metabolism and precautions are already established for its use in the functionalist concerns in cities. There, the disruption of the biophysical landscape and the material and energy metabolic exchange between nature and society was a critique of industrialization. However, Metabolism is a prevailing metaphor form the original sense of the German word *Stoffwechsel*, which is the transformation of matter from one form to another The metabolism

therefore depends on the circulation of substances between the different points for making this *Stoffwechsel* possible.

Synonims:

Membrane

Equivalent:

Sp: Metabolismo Urbano
It: Metabolismo Urbano

Urban porosity (operator)

Definition:

With the concept of "urban porosity" we refer to the ability of an urban space to function as a network in which the transitions between the different elements are fluid and barrier free.

Context:

The term "porosity" derives from the Greek root pores / πόρος / which means passage, it means both a path, a street and a ford, all that means that allows you to move from here to there. Pores evokes the "traverse". Pass over a line or zone of union, or separation. The primary mythological review comes from "Poros", a mythical figure that represented the spirit of opportunity, profit, the means to achieve something and utility. Porosity arises from the daily "micro-liberties", and for that reason it is unmarked of the modern urbanism that tries to prevail. The so-called porosity is a space-time permeability as a result of the "passion for the improvised", Walter Benjamin suggests, product of necessity. No situation is planned to last forever.

Comments:

At the metropolitan level the concept of porosity is less decisive than at a smaller scale, where it is an enormously important operator for the social principles extended to the metropolitan area.

Synonims:

Membrane

Equivalent:

Sp: Porosidad Urbana
It: Porosità Urbana

Urban-rural linkage

Definition:

Urban-Rural Linkages are nonlinear, diverse urban-rural interactions and linkages across space within an urban-rural continuum, including flows of people, goods, capital and information but also between sectors and activities such as agriculture, services and manufacturing. In general, they can be defined as a complex web of connections between rural and urban dimensions. It is an ecotone where the different set of landscapes with different tonalities coexist within various types of inclusions and exclusions. It is a gradient of metropolitan space and to define its functional and symbolic values and forms, it is necessary to develop new syntax and grammar for the design of the ground.

Context:

Urban-Rural Linkages are nonlinear, diverse urban-rural interactions and linkages across space within an urban-rural continuum, including flows of people, goods, capital and information but also between sectors and activities such as agriculture, services and manufacturing. In general, they can be defined as a complex web of connections between rural and urban dimensions. (UN-Habitat United Nations Human Settlements Programme, (August 2017), Implementing the New Urban Agenda by Strengthening Urban-Rural Linkages)

In its essay: Notes Toward a History of Agrarian Urbanism, Waldheim argued that the categories of agrarian and urban are usually understood as distinct. Across many disciplines, and for centuries, the country and the city have been defined in opposition to one another. But today, in striking contrast, design culture and discourse abound with claims for the potential for urban agriculture: fueling this trend,- Waldhem said-, is rising public interest in food and its production and distribution in a globalized world. (Waldheim C., "Notes Toward a History of Agrarian Urbanism," Places Journal,

November 2010. Accessed 29 Dec 2019. https://placesjournal.org/article/history-of-agrarian-urbanism/)

Urban-rural linkages can be defined broadly as the "reciprocal flows of people, goods, services, money and environmental services" (Proctor, 2014: 5), with many of these linkages related specifically to food systems. There are significant changes happening within food systems that impact urban-rural linkages, such as the decline of traditional markets and the increasing availability of

highly processed food, which impact consumers as well as smallholders, who often rely on small and medium sized cities as entry points to markets. These changes are having profound impacts on smallholders across the urban rural continuum, and the divergence between urban rural development pathways needs to be addressed if we are to achieve sustainable urbanisation, resilient food systems and balanced urban rural development. With the food system being such a crucial component of urban rural linkages, this paper argues that an effective way to enhance the environmental, social and economic linkages between urban and rural areas is through implementing policies that enhance territorial or 'city region food systems' (CRFS).

(Thomas Forster, Makiko Taguchi, Guido Santini, David Edwards, Katie Flanagan, (2015), Strengthening Urban Rural Linkages Through City Region Food Systems (CRFS). UNCRD/ UN Habitat issue of Regional Development Dialogue, Vol. 35 on "Urban-Rural Linkages in Support of the New Urban Agenda.")

The Figure of the Agro-Urban Territory represents the transitional space between the urban and the rural areas (Contin, Sbacchi, 2008): It is an ecotone where the different set of landscapes with different tonalities coexist. It is, therefore, the location of "the catastrophic discontinuity and change" (Rene Thom) that allows various types of inclusions and exclusions. It is a territorial suture that constrains us taking a critical distance from the traditional tools of architecture and urban discipline. Today, the goal of a metropolitan project is to define a space with collective and public dimensions through the new hybrid urban forms that are public, common, entertaining, or productive. In order to build this gradient of metropolitan space and define its functional and symbolic values and forms, it is necessary to develop new syntax and grammar for the design. To understand how to do this, we can refer to the stories of the twentieth-century cities. The anguish story of a huge city, the dissolution of the "magical place," demonstrates the hope of establishing a different kind of citizens with new behaviors by providing a new dimension of welfare through modern forms. From these experiences, we can learn that it is essential to give meaning to the shape of a city. It means to represent the intention of urban design through images and feelings that accompany it. Today, this specifically refers to the invention of a dominant metropolitan figure, that is a new geometry tied to geography, water, topography and new social practices. This allows us to read the territory with new types of maps that are local, yet addressing the metropolitan scale context: The maps support us to practice in places that are

far away through recognizable nodes that express the will of meeting the "differences." They are the critical tools that are necessary, especially when dealing with the abandoned historic centres in medium-sized cities and planning of public open spaces. (Contin, 2017)

Synonims:

Rurban

Equivalent:

Sp: Vinculación urbana-rural

It: Collegamento urbano-rurale

Vulnerability (issue)

Definition:

Vulnerability is understood through three aspects: *exposure, sensitivity and adaptability*. While exposure is linked to the presence of an unfavourable context, sensitivity related to the means of operation on the context for improvement, and adaptability depends on the possibility of adopting practices that allow to address it without changing it. While exposure will increase in many developing countries as a result of climate change and sensitivity cannot be reduced in the short term due to a lack of resources to invest in infrastructure, an adaptation strategy based on the introduction of new practices and the implementation of small infrastructure interventions appears to be the most feasible solution in the short term.

Context:

In this specific case, the exposure to the tropical climate leads to having to deal with the alternation of two extreme seasons, one wet and one dry. This is a condition to which the local population is particularly sensitive, since subsistence farming is based on basic techniques and irrigation is dependent on rain, with no collection infrastructure capable of regulating water during floods and creating a reserve for periods of drought. Moreover, the response to the immediate needs arising from this situation is based on erosive mechanisms that preclude the possibility of facing future crises, rather than on adaptation practices and small interventions that can take advantage of seasonality.

Comment:

According to climate change projections, the entire tropical belt will be exposed to greater climate variability, with a decrease in annual rainfall and radicalisation of the differences between the dry and wet seasons. The possible answers at the exposure level consist of creating infrastructures for the storage of rainwater and collecting of the most inert groundwater, while developing an agricultural sector with higher added value that allows investment in these infrastructures (sensitivity strategy) and mediating the pressure of starvation by spreading new practices over larger areas (adaptation strategy).

Equivalent:

Sp: Vulnerabilidad
It: Vulnerabilità

References

100 RESILIENT CITIES, ROCKEFELLER FOUNDATION, NEW YORK (2013). WWW.100resilientcities.org Urban Resilience Hub by UN-Habitat http://urbanresiliencehub.org/ https://link.springer.com/referenceworkentry/10.1007%2F978-94-007-0753-5_2739

ABBOTT, P. L., (1996) Natural Disasters. Wm. C. Brown Publishing Co., 438 pp.

AGUILUZ CASAS, G. Y VÁSQUEZ SÁNCHEZ, M. Y MOLINA ROSALES, D. Y SALDÍVAR MORENO, A. (2001).

PLANEACIÓN AMBIENTAL PARTICIPATIVA: DE LA TEORÍA A LA PRÁCTICA EN SAN CRISTÓBAL DE LAS CASAS,

ALCANTARA S., (2018) Investigacion sobre las Unidades de Paisaje de la zona metropolitana del Valle del Mexico. UAM _Azcaputralgo.

ALCANTARA, S., (2018) Investigacion sobre las Unidades de Paisaje de la zona metropolitana del Valle del Mexico, UAM _Azcaputralgo

ALEXANDRI, G., GONZÁLEZ, S., & S. HODKINSON (2016) Geografías del desplazamiento en el urbanismo de América Latina. Revista INVI, 31(88), 9-25.

ALSAATI, A. ET AL., (2014) "Inclusive Wealth Report 2014: Measuring progress toward sustainability". 370.

ÁLVAREZ, M., (1999) "Prácticas espaciales y regímenes de construcción de la ciudad de Tumaco". In: Camacho J. y Restrepo E. Eds. De montes, ríos y ciudades. Territorios e identidades de la gente negra en Colombia. Bogotá: Fundación Natura-Ecofondo-Ican.

ALVIAL, A., (2015) "ECONOMIA AZUL Una revisión en el marco de nuevas tendencias en Economía" Disertación. Los Lagos, [On line] Available at: http://www.cursobioeconomia.mincyt.gob.ar/wp-content/uploads/2014/12/1.Econom%C3%ADa-azul-A.-Alvial.pdf [Accesed 10 august 2019]

Amin, S., (1990). Delinking. Towards a Polycentric World

ANDERSON, J.G. ET AL (1986) "Strong ground motion from the Michoacan, Mexico earthquake". Science. v. 233, p. 1043-49.

ANGUIANO, M. ET AL., (2018) Unidades de Paisaje de la Zona Metropolitana del Valle de México. UAM-Azcapotzalco. División de Ciencias y Artes para el Diseño. Ciudad de México. Diciembre de 2018.

ANGUIANO, M., ET AL., (2018) Unidades de Paisaje de la Zona Metropolitana del Valle de México.. División de Ciencias y Artes para el Diseño. Ciudad de México. UAM-Azcapotzalco.

ANTEQUERA, B., (2012) Propuesta metodológica para el análisis de la sostenibilidad regional. Tesis Doctoral. Universitat Politècnica de Catalunya. Institut de Sostenibilitat. Barcelona, España. Antezana, L.H., (1991) "Dos conceptos en la obra de René Zavaleta Mercado: Formación abigarrada y democracia como autodeterminación". Latin American Studies Center. University of Maryland, 117-142.

ARENDT, H., (1958) The Human Condition, Chiacgo: University of Chicago Press.

ARRIOLS E., (2018) "Que es el capitalismo natural", Ecología verde [web site]. 18 de diciembre del 2018. [On line] Available at : https://www.ecologiaverde.com/que-es-el-capitalismo-natural1427.html. [Accessed 1st august 2019].

ARUP. (2011) ARUP. [On line] Available at: http://ingenieriacivil.cedex.es/index.php/ingenieriacivil/article/view/2350#sec-5 [accessed 07 july 2020]

ASTORGA, A. MENDE,A , PIEDRA M.(2005) "Aplicación del Índice de Fragilidad Ambiental (IFA) en el Plan Regulador del cantón de Escazú y su área rural, según la metodología de la SETENA, provincia de San José, Costa Rica." [En línea] Disponible en http://www.escazu.go.cr/sites/default/files/Documentos/aaatodo_el_canton_menos_zaa.p df. [Accessed 25th march 2019]

BARESI, A. AND LA PLACA, S.M. (2012) Dar Smart. Progetto di una nuova centralità a Dar es Salaam (Unpublished) Master of Science in Architecture. Politecnico di Milano, Milan, Italy. Barrantes, G (2013) "Deficiencias del índice de fragilidad ambiental en la valoración de las amenazas naturales para la planificación Territorial. "En Revista Entorno a la prevención [On line] Accessed at: https://www.academia.edu/3690585/Deficiencias_del_%C3%8Dndice_de_Fragilidad_Ambie ntal_en_la_valoraci%C3%B3n_de_las_amenazas_naturales_para_la_planificaci%C3%B3n_te rritorial [Accessed 25th march 2019]

BARSKI, A., (2005). "El peri-urbano productivo, un espacio en constante transformación. Introducción al estado del debate, con referencias al caso de Buenos Aires". Scripta Nova, IX (194):36.

BAUMAN, Z., (2013) Identity: Conversations with Benedetto Vecchi. Cambridge: John Wiley & Sons.

BENITEZ, L., (1990) Patología ambiental. Contaminación, termodinámica y salud. Artículo Ciencia y desarrollo. UNAM, Ciudad de México. [On line] Available at: http://www.posgrado.unam.mx/sites/default/files/2016/05/2606.pdf [Accesed 22 april 2019]

BENITEZ, L., (1990). La patología ambiental. Disertación, posgrado. Facultad de medicina, UNAM, Unida de investigación médica en enfermedades oncológicas, IMSS. [Accesed 22 april 2019] Available at: http://www.posgrado.unam.mx/sites/default/files/2016/05/2606.pdf

BENJAMIN, W., (2016) One-Way Street. Harvard University Press

BENKLER, Y. THE POLITICAL ECONOMY OF COMMONS. UPGRADE, EUROPEAN JOURNAL FOR THE INFORMATICS PROFESSIONAL. VOL. IV, NO. 3, JUNE 2003.

BERETTA, I., & ILARIA, (2012) Some Highlights on the Concept of Environmental Justice and its Use. E-Cadernos CES, (17). http://doi.org/10.4000/eces.1135

BEUF, A (2012) "Concepción de centralidades urbanas y planeación del crecimiento urbano en la Bogotá de siglo XX". [On line]. XII Coloquio Internacional de Geo crítica. Las independencias y construcción de los estados nacionales: poder, territorialización y socialización siglo XIX –XX. Available: http://www.ub.edu/geocrit/coloquio2012/actas/07-A-Beuf.pdf. [Accessed 26th march 2019].

BEZAURY, J. ET AL., (2015) Los paisajes bioculturales. Un instrumento para el desarrollo rural y la conservación del patrimonio natural y cultural. Comisión Nacional de Áreas Naturales Protegidas - Agencia Francesa de Desarrollo. México.

BIODIVERSITY INFORMATION SYSTEM FOR EUROPE, (2013). Ecosystem Services. Available at https://biodiversity.europa.eu/topics/ecosystem-services

BIODIVERSITY INFORMATION SYSTEM FOR EUROPE, (2013). Ecosystem Services. Available on: https://biodiversity.europa.eu/topics/ecosystem-services

BIODIVERSITY INFORMATION SYSTEM FOR EUROPE. (2013). Ecosystem Services. Available at https://biodiversity.europa.eu/topics/ecosystem-services

BIRD, R. M. & SLACK, E. (2004) Fiscal aspects of metropolitan governance. ITP paper, 401. Blanco, J., & R. Apaolaza (2016) Políticas y geografías del desplazamiento. Contextos y usos conceptuales para el debate sobre gentrificación. Revista INVI, 31(88), 73-98 Borie, A., & F. Denieul (1984) Méthode d'analyse morphologique des tissus urbains traditionnels. UNESCO

BRAIDOTTI, R, (2013) The Posthuman. Cambridge: Polite Press.

BRAIDOTTI, R., & HLAVAJOVA, M., (2018) Posthuman Glossary. London & NY: Bloomsbury Publishing.

BRAUDEL, F. (1977)" Premessa", in Capitalismo e civiltà materiale (secoli XV-XVIII). Torino: Einaudi.

BROUWER, R. ET AL., (2013) A synthesis of approaches to assess and value ecosystem services in the EU in the context of TEEB. Available at: https://ec.europa.eu/environment/nature/biodiversity/economics/pdf/EU%20Valuation.pdf

BROUWER, R. ET AL., (2013). A synthesis of approaches to assess and value ecosystem services in the EU in the context of TEEB. Available at: https://ec.europa.eu/environment/nature/biodiversity/economics/pdf/EU%20Valuation.pdf CICES. (2020). Towards a common classification of ecosystem services. Available at https://cices.eu/

BUNSCHOTEN, R., (2006) From Matter to Metaspace: Cave, Ground, Horizon, Wind. Vienna: Springer.

BURKARD, B. AND J. MAES, (2017) Mapping Ecosystem Service. Sofia, Pensoft Burkard, B. and J. Maes, (2017) Mapping Ecosystem Service. Sofia, Pensoft.

BURKARD, B. AND J. MAES. (2017). Mapping Ecosystem Service. Sofia: Pensoft

BURKARD, B., AND J. MAES, (2017) Mapping Ecosystem Service, Sofia, Pensoft

CARSON R., (1962) Silent Spring

CASTELLS, M. ET AL., (Eds.). (2008). The social fabric of the networked city. London u.a: Routledge.

CAVALLARO, S. AND C. FRATALOCCHI, (2015) "La planificación ecológica del territorio a través del Análisis multitemporal en San Ignacio, Misiones, República Argentina", Revista ciencias especiales. Volumen 8, número 1 primavera. PP 214 – 215. [On line] Available at: https://www.lamjol.info/index.php/CE/article/view/2050/1859. [Acceso el 26 de abril 2019]. CE, (2016). Ecosystem services and Green Infrastructure. Retrieved from https://ec.europa.eu/environment/nature/ecosystems/index_en.htm

CHAVEZ ET AL., (2020) "Formal Units of Landscape and Heritage of the Metropolitan Area of the Valley of Mexico. (ZMVM) Mexico City, UAM-Azcapotzalco.)

CHESHMEHZANGI, A., (2012) "Identity and Public Realm". In: Abbas, M., Bajunid, A. and Azhari, N. (eds.) ASEAN Conference on Environment - Behaviour Studies: Way of Life: Socio-economic & Cultural Context, AcE-Bs 2012, 16-18 July 2012, Bangkok, Thailand, New York, Curran, pp. 307- 317.

CHIAPAS. ESTUDIOS DEMOGRÁFICOS Y URBANOS, [EN LINEA] (47), pp.321-349. Disponible en: https://www.redalyc.org/articulo.oa?id=31204703 [Acceso el 26 de abril 2019].

CHIESA A, (2013) "Landscape urbanism: un approccio ecologico al territorio urbano", ARC 2 CITTA', Giu. 2013

CHIESA, A., (2013) "Landscape urbanism: un approccio ecologico al territorio urbano", ARC 2 CITTA' Giu. 2013

CHOAY F., (1980) La Regola e il Modello, Roma, Officina Edizioni.

CHOAY, F. (1996) L'allegoria del patrimonio. Roma: Officina

CHOAY, F., (1980) La Regola e il Modello, Officina Edizioni, 1986 Roma

CHOAY, F., (1980) La Regola e il modello, Rome, Officina Edizioni, 1986.

CI, (2019). Practical Guide to implementig Green - Grey Infrastructure. Available on: https://initiative-mangroves-ffem.com/wpcontent/uploads/2019/09/ggi_practicalguide_190807.pdf

CICES, (2020) Towards a common classification of ecosystem services. Available at https://cices.eu/

CICES, (2020) Towards a common classification of ecosystem services. Available at: https://cices.eu/

CICES. (2020). Towards a common classification of ecosystem services. Available at https://cices.eu/

CIPPEC, (2018) Hacia el Desarrollo Urbano Integral del Área Metropolitana de Resistencia. Una Propuesta de Co-creación de Políticas Públicas y Planificación. Buenos Aires, CIPPEC.Buenos Aires, CIPEC CIPPEC. (2018) Hacia el Desarrollo Urbano Integral del Área Metropolitana de Resistencia. Una Propuesta de Co-creación de Políticas Públicas y Planificación. Buenos Aires, CIPPEC.

CIRVINI, S.; TORRES, L. & G. PASTOR (2020) Oasis: irrigated (Cuyo, Argentine). Encyclopedia of Vernacular Architecture of the World, 2nd ed. Bloomsbury, Oxford Brookes University Conradt, L., & Roper, T. J., (2000) "Activity synchrony and social cohesion: A fission-fusion model. Proceedings of the Royal Society B: Biological Sciences", 267(1458), 2213–2218. Available at: https://doi.org/10.1098/rspb.2000.1271

CONTIN A. AND G. SANTAMARIA (2008) Sustainable growth of the urban metabolism towards the net city: transformation, substitution, maintenance. Between landscapes and urban biography, in EURA 2008 Conerence, Milan 9-11 October 2008

CONTIN A., (2017), "The narrative structure of the agro-urban metropolitan territory. The metropolis as Hypertext for the history of the XXI century: A network of middle cities as an operational topography", in Petrillo, A. and P., Bellaviti, Urban Development and Globalization, Springer Nature, Springer International Publishing AG)

CONTIN A., AND SBACCHI M., (2008) Canicatti, Canicattì: campagne abitate, paesaggi d'arte, Alinea Ed. Firenze

CONTIN A., KIM S., MUSETTA A. AND F. MANFREDINI, (2017). "Metropolitan Cartography as a tool for the metropolitan approach to complexity: the Ugandan Key Study" in UN FUTURO AFFIDABILE PER LA CITTÀ. Apertura al cambiamento e rischio accettabile nel governo del territorio URBANPROMO XIV EDIZIONE PROGETTO PAESE, a cura di M.Talia, Planum Publisher, Roma.

CONTIN, A. (2017). QUESTO. Architettura Metropolitana. Torino, Einaudi.

CONTIN, A. (ed.) (2015) Questo. Metropolitan Architecture. Santarcangelo di Romagna, Maggioli. Contin, A. And P. Ortiz (2015) "Qualitative Metropolis. A new culturally encoded concept with qualitative regeneration of formal and informal settlements". The rule and the model in TECHNE - Journal of Technology for Architecture and Environment, (10), 120-129. Available a at: https://doi.org/10.13128/Techne-17508

CONTIN, A. AND P. ORTIZ, (2015) "La metropoli qualitativa. Un modello culturalmente codificato per una rigenerazione qualitativa dell'insediamento formale e informale. La regola e il modello" In TECHNE, 10, pp 120-129. TELLme Inaugural Book (ongoing)

CONTIN, A. AND P., ORTIZ, (2015). "Qualitative metropolis. A new culturally encoded concept with qualitative regeneration of the informal settlement. The rule and the model", Techne 10, 2015 DOI: 10.13128/Techne-17508.

CONTIN, A. AND V. GALIULO, (2020). "Metropolitan Cartography", in Contested Territories. Proceedings Contested Territories Seminario Virtual, 24 -29 September 2020. TELLme Inaugural Book.

COOK, I. R., & E. SWYNGEDOUW, (2012) Cities, Social Cohesion and the Environment: Towards a Future Research Agenda. Urban Studies, 49(9), 1959–1979. Available at: https://doi.org/10.1177/0042098012444887

CORD, L., GENONI, M. E., & C. RODRIGUEZ CASTELAN (Eds.). (2015) Shared Prosperity and Poverty Eradication in Latin America and the Caribbean. Washington, DC: World Bank.

CORDARA, C. ET AL., (2018) ¿Cómo crecen las ciudades argentinas? Estudio de la expansión urbana de los 33 grandes aglomerados. Buenos Aires, CIPPEC

CORDARA, C. ET AL., (2018) ¿Cómo crecen las ciudades argentinas? Estudio de la expansión urbana de los 33 grandes aglomerados. Buenos Aires, CIPPEC

CORDARA, C., DUARTE, J., FERLICCA, F., GIMENEZ HUTTON, T. & RODRIGUEZ, S. (2018) ¿Cómo crecen las ciudades argentinas? Estudio de la expansión urbana de los 33 grandes aglomerados. Buenos Aires: CIPPEC

CORNER J., (2006) "Terra fluxus", in Waldheim C., The landscape urbanism reader, Architectural Press,

CORNER J., (2006) "Terra Fuxus", in Waldheim C., The landscape urbanism reader, Architectural P ress, 2006

CRAVINO, M. C,. (2004) "El barrio concebido como comunidad: reflexiones acerca de algunos supuestos presentes en la focalización territorial de políticas asistenciales". Cuaderno urbano: espacio, cultura y sociedad, (4), 75-98.

CUENIN, F. AND SILVA, M (2010) Identificación y Fortalecimiento de Centralidades Urbanas. El Caso de Quito. Banco Interamericano de Desarrollo, Washington.

CUMBERS, A., & D. MACKINNON (2004) "Introduction: Clusters in urban and regional development. Urban Studies, 41(5–6), 959–969. https://doi.org/10.1080/00420980410001675896 D'Alfonso, E., (2017). On–line, pubblicistica d'architettura, arcduecittà: scrittura architettonica_comunicazione. http://www.arcduecitta.it/2017/10/on-line-pubblicistica-17 darchitettura-arcduecitta-scrittura-architettonica_comunicazione-ernesto-dalfonso/ (28/08/2020).

DA ROCHA, A. L. C. ET AL., (2016) "Apresentação do Dossiê". Revista Gestão e Desenvolvimento, 13(1), 4-6.

DALY, H. E., (1991) Steady-State Economics: Second Edition With New Essays (Urban Opportunity). Island Press.

DASGUPTA, S. P., (2018) "Inclusive Wealth Report 2018: Executive Summary". 1–16.

DE CARVALHO, E. (2010) "Identidade, sociabilidade e cultura metropolitana Identity, sociability and metropolitan culture". Revista Facultad de Derecho. Rafio Juris Vol, 5(10), 33.

DE MARINIS, P., (2011) "La teoría sociológica y la comunidad: clásicos y contemporáneos tras las huellas de la "buena sociedad". Revista de la Carrera de Sociología, (1), 127-164. Available at: https://publicaciones.sociales.uba.ar/index.php/entramadosyperspectivas/article/view/25/33 [Accesed 25th November 2019)

DE MATTOS, C. A., (2016) "Financiarización, valorización inmobiliaria del capital y mercantilización de la metamorfosis urbana". Sociologías, 18(42).

DEL ESPINO HIDALGO, B. (2018) Las ciudades medias del centro de Andalucía. Análisis territorial y evaluación de su sostenibilidad. Sevilla: Editorial de la Universidad de Sevilla. Delgadillo, V., (2016) "Ciudad de México, quince años de desarrollo urbano intensivo: la gentrificación percibida". Revista INVI, 31(88), 101-129.

DELLAVEDOVA, M. (2011) "Guía metodológica para la elaboración de una evaluación de impacto ambiental." TALLER VERTICAL MEDA ALTAMIRANO YANTORNO. Ficha 17. La plata, Argentina. [On line] Available at: https://www.kpesic.com/sites/default/files/Ficha-17-GUIA-METODOLOGICA-PARA-LA-ELABORACION-DE-UNA-EIA. Pdf. [Accesed 25 de march de 2019]

DÉOTTE, J. L., (2013) La ciudad porosa: Walter Benjamin y la arquitectura. Santiago de Chile: Metales Pesados.

DEZZI BARDESCHI, M. ET. AL., (2014) Quadrimestrale di Cultura, Storia e Tecniche della Conservazione per il Progetto, Abbecedario Minimo per il Restauro, Oggi Parte prima (A-C), Milano.

DEUTSCHE, R. (1996). Evictions: Art and Spatial Politics. MIT Press. Di Gregorio, (2016), Land Cover Classification System, FAO https://web.archive.org/web/20130511205341/http://www.eoearth.org/article/Land- use_and_land-cover_change http://www.fao.org/3/y7220e/y7220e06.htm http://www.fao.org/economic/ess/environment/data/land-use/en/ http://inspire.ec.europa.eu/theme/nz https://www.encyclopedie-environnement.org/en/soil/natural-hazards/

DI STEFANO, LEPRATTI ET AL. (2016): Economia innovatrice

DÍAZ CARRASCO, M. (2011) Sociedad abigarrada. Repensando la democracia multicultural en Bolivia. Entrevista a Luis Tapia Mealla (Entrevistas). Available from: https://relacso.flacso.edu.mx/sites/default/files/docs/01/sociedad-abigarrada.pdf [Accesed 29th November 2019].

DÍAZ DE TERÁN, J. R. (1988) "Tipos y metodologías de cartografías geoambientales o neocientíficas", en F. J. Ayala y J. F. Jordá (eds.). Geología Ambiental. Madrid, Instituto Tecnológico GeoMinero de España (ITGE).

DIJKIN, G., & V. MAMADOUH (2003) "Identity and Legitimacy in the Amsterdam Region". In W. Musterd, Sako, S. (Ed.), Amsterdam Human Capital (pp. 331–355). Amsterdam: Amsterdam University Press.

ECOMBES (2016). "Biocapacidad, ¿Qué es?" Ecombes, [On line], Madrid, España. Available at: https://www.ecoembes.com/es/planeta-recicla/blog/biocapacidad-que-es [accesed 22 april 2019]

EJOLT, (2021) Mapping Environmental Justice http://www.ejolt.org/

ELLEN MAC ARTHUR FOUNDATION (2012). Toward a circular economy

ELLEN MAC ARTHUR FOUNDATION (2015): Towards a circular economy: business rationale for an EPA, (2020) Environmental Justice Screening and Mapping Tool. https://www.epa.gov/ejscreen EPA, (2020). EJ Agenda 2020. https://www.epa.gov/environmentaljustice/learn-about-environmental-justice

EPA, (2021) EJSCREEN https://ejscreen.epa.gov/mapper/

ERASMUS+ PROGRAMME(2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O3. Approach to complexity. Date 30 April 2019 ERASMUS+ PROGRAMME 2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O5 Handbook . Date 22 April 2019.

ERASMUS+ PROGRAMME(2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O3. Approach to complexity. Date 30 April 2019

ERASMUS+ PROGRAMME(2014-2020 KA2 – Strategic Partnership for Higher Education. TELLme. Training for Education, Learning and Leadership towards a new METropolitan discipline. IO O5 Handbook. Date 22 April 2019

ESTENSSORO, FERNANDO. (2015). El ecodesarrollo como concepto precursor del desarrollo sustentable y su influencia en america latina. Universum (Talca), 30(1), 81-99. https://dx.doi.org/10.4067/S0718-23762015000100006. [Accesed 1st august 2019]

ETCHEGARAY, A. (2005) Gobernabilidad de los temas ambientales en las aglomeraciones metropolitanas. Experiencias y lecciones para las ciudades de América Latina. In: Cuadrado Roura, J., Fernández Güell, J. M., & E. Rojas, (eds.) Gobernar las metrópolis. Washington D.C., Inter-American Development Bank, pp. 473 - 525.

EUROPEAN COMISSION, (2013) "Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Green Infrastructure" (gi) — Enhancing europe's natural capital /* com/2013/0249 final.

EUROPEAN COMISSION, (2013) Green Infrastructure (GI)—Enhancing Europe's Natural Capital. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (COM/ 2013/0249 Final); European Commission: Brussels, Belgium

EUROPEAN ENVIRONMENT AGENCY, (2018) Mapping Europe's ecosystems. Available on: https://www.eea.europa.eu/themes/biodiversity/mapping-europes-ecosystems European Environment Agency. (2018). Mapping Europe's ecosystems. Available at https://www.eea.europa.eu/themes/biodiversity/mapping-europes-ecosystems European Environment

Agency. (2018). Mapping Europe's ecosystems. Available at https://www.eea.europa.eu/themes/biodiversity/mapping-europes-ecosystems European Environment Agency. (2018). Mapping Europe's ecosystems. Available at: https://www.eea.europa.eu/themes/biodiversity/mapping-europes-ecosystems

EXPOSURE SCIENCE IN THE 21ST CENTURY: A VISION AND A STRATEGY. UNITED STATES NATIONAL RESEARCH COUNCIL (2012) p. 19. doi:10.17226/13507. ISBN 978-0-309-26468-6. https://www.nature.com/articles/7500463 https://www.ncbi.nlm.nih.gov/ https://financial-dictionary.thefreedictionary.com/Production+cycle Febvre L., (1922), La Terra e l'evoluzione umana, Einaudi, Torino

FEBVRE L., (1922), La Terra e l'evoluzione umana, Torino, Einaudi.

FELIPE, B. (2016) La degradación ambiental, el cambio climático y las migraciones. ENCRUCIJADAS. Revista Critica de Ciencias Sociales || Vol. 11, 2016, r1102. Available at: https://dialnet.unirioja.es/descarga/articulo/5633666.pdf. [Accesed 1st august 2019]. Fernandez, M. (Comp.) (1996) Ciudades en riesgo (degradación ambiental, riesgos urbanos y desastres). Red de Estudios Sociales en Prevención de Desastres en América Latina. Available at: http://www.desenredando.org/public/libros/1996/cer/CER_cap02-DARDU_ene-7- 2003.pdf. [Accessed 1st august 2019]

FERRETTI RAMOS, M., & ARREÓLA CALLEROS, M. (2013) Del tejido urbano al tejido social: análisis de las propiedades morfológicas y funcionales. Nova scientia, 5(9), 98-126.

FISCHER-TAHIR, A., & N. NAUMANN (eds.) (2013) Peripheralization, The Making of Spatial Dependencies and Social Injustice. Springer Fachmedien Wiesbaden.

FORSTER T., ET AL (2015) Strengthening Urban Rural Linkages Through City Region Food Systems (CRFS). UNCRD/ UN Habitat issue of Regional Development Dialogue, Vol. 35 on "UrbanRural Linkages in Support of the New Urban Agenda."

FRASER, N. (2012). Social Justice in the Age of Identity Politics: Redistribution, Recognition, and Participation. In S. Wilmot (Ed.), The Tanner Lectures on Human Values (Vol. 13, pp. 15–26). https://doi.org/10.1111/j.1466-769X.2011.00518.x

FRENTE ECOLÓGICO PUSV (2011). "Biocapacidad", Frente ecológico pusv Venezuela. [On line] Available at: http://frenteecologicopsuv.blogspot.com/2011/01/biocapacidad-la-biocapacidadse-define.html [accesed 22 april 2019]

FRITZ, M., & M. KOCH (2014) "Potentials for prosperity without growth: Ecological sustainability, social inclusion and the quality of life in 38 countries". Ecological Economics, 108, 191–199. Avalilable at: https://doi.org/10.1016/j.ecolecon.2014.10.021

FULLERTON, T. M., JIMENEZ, A., LIU, Y., & A.G. WALKE (2015) "Gasoline price predictability in a border metropolitan economy". Applied Economics Letters, 22(6), 499–502. Available at: https://doi.org/10.1080/13504851.2014.952886

GAETA, L. (2018) La civiltà dei confini. Rome, Carocci.

GARCÍA CANCLINI, N. (1989) Culturas híbridas: estrategias para entrar y salir de la modernidad. México.

GARCÍA. F. Y ABAD,J, (2014) Los corredores ecológicos y su importancia ambiental: Propuestas de actuación para fomentar la permeabilidad y conectividad aplicadas al entorno del río Cardeña (Ávila y Segovia) [en línea] Available at: https://revistas.ucm.es/index.php/OBMD/article/viewFile/47194/44257. [Accessed 23rd march 2019].

GEORGESCU ROEGEN N., (1971) The Entropy Law and the Economic Process.

GIDDENS A. (1991) Modernity and Self-Identity. Self and Society in the Late Modern Age. Cambridge: Polity.

GIROLA, M. F. (2007) El surgimiento de la megaurbanización Nordelta en la Región Metropolitana de Buenos Aires: consideraciones en torno a las nociones de ciudad-fragmento y comunidad purificada. Estudios demográficos y urbanos, 22(2), 363-397. Available at: <https://estudiosdemograficosyurbanos.colmex.mx/index.php/edu/article/view/1283> doi:http://dx.doi.org/10.24201/edu.v22i2.1283 [Accesed: 28th November 2019].

GONZALEZ, J.; GARCIA, L.; ARTURO, C., (2011). Análisis de la huella ecológica en el principado de Asturias (2009), Asturias. [On line], Available at: https://www.asturias.es/medioambiente/articulos/ficheros/RI-12_Huella%20Ecol%C3%B3gica%20-2009-Estandar_%2020110707.pdf [accessed 22 de april 2019]

GOVERNOUR, D. (2014). Planning and Design for Future Informal Settlements: Shaping the Self- Constructed City. Routledge: Park Square, Milton Park, Abingdon, Oxon OX14 4RN.

GREGOTTI, V. (1966) Il territorio dell'architettura. Milano: Feltrinelli. (editor's translation)

HAMEL, P., (2002) "Conclusion: enjeux institutionnels et de fis politiques" in: C. GENDRON and J. C. VAILLANCOURT (Eds) Developpement durable et participation publique: De la contestation ecologique aux de fis de la gouvernance, pp. 377–392. Montreal: Presses de l'Universite de Montreal.

HANDAL, L., ET AL., (Dir. Sauvé, L. y Orellana, I.), (2015) Ecodesarrollo comunitario. Módulo 1. Programa de formación de líderes en ecodesarrollo comunitario y salud ambiental. Proyecto Ecominga Amazónica. Montréal: Les Publications du Centr'ERE. [On line] Available at: http://www.ecominga.uqam.ca/PDF/modulo/modulo1.pdf [Accesed 1st august 2019].

HARDIN, G. (1968). The Tragedy of the Commons. Science, 162(3859), 1243–1248. https://doi.org/10.1126/science.162.3859.1243

HARVEY, D., (2003) The right to the city. International Journal of Urban and Regional Research. http://doi.org/10.1111/j.0309-1317.2003.00492.x

HARVEY, D., (1997) Justice, Nature and the Geography of Difference. Wiley.

HARVEY, D., (2004) El nuevo imperialismo. Madrid: Akal.

HARVEY, D., (2009) Social justice and the city. University of Georgia Press.

HARVEY, D., (2012) Rebel Cities: From the Right to the City to the Urban Revolution. Verso Books.

HESS, C., & OSTROM, E. (2007). The Growth of the Commons Paradigm. In Understanding Knowledge as a Commons: From Theory to Practice (pp. 27–40). Cambridge (Mass): MIT Press.

HODSON, M., & S. MARVIN (2009) "Urban ecological security": A new urban paradigm? International Journal of Urban and Regional Research, 33(1), 193–215. Available at: https://doi.org/10.1111/j.1468-2427.2009.00832.x

HOLL, S. (2009) Urbanisms. Working with Doubt. New York: Princeton Architectural Press

HOU, J. (2010). (Not) Your Everyday Public Space. In, Insurgent Public Space: Guerrilla Urbanism and the Remaking of contemporary cities. New York: Routledge Taylor & Francis.

INSTITUTO DE ECOLOGÍA DE LA UNAM, (2018). "Nicho ecológico". En revista Oikos, [Digital]. Mayo 2018. Instituto de Ecología de la UNAM , Ciudad de México. [On linea]. Available at: http://web.ecologia.unam.mx/oikos3.0/index.php/articulos/tuxtlas/17-recuadros/376nicho-ecologico [Accesed 26 de april 2019].

IVANOVA, A. ET AL., (2017) "La economía azul como modelo de sustentabilidad para estados costeros: el caso de Baja California Sur". Sociedad y Ambiente, (14), pp.75-98. [On line] Available at: http://www.redalyc.org/articulo.oa?id=455752575005 [Accessed 6/08/2019]

JACKSON, T., & P. VICTOR (2011) "Productivity and work in the "green economy": Some theoretical reflections and empirical tests". Environmental Innovation and Societal Transitions, 1(1), 101–108. Available at: https://doi.org/10.1016/j.eist.2011.04.005

JANOSCHKA, M., (2016) "Gentrification, displacement, dispossession: Key urban processes in Latin American cities". Revista INVI, 31(88), 27-71

JANOSCHKA, M., (2016) Gentrificación, desplazamiento, desposesión: procesos urbanos claves en América Latina. Revista INVI, 31(88), 27-71

JEFFREY, K., WHEATLEY, H., & S. ABDALLAH (2016) The Happy Planet Index 2016: A global index of sustainable wellbeing. (January), 1–5. Available at: https://doi.org/10.1017/CBO9781107415324.004

JIMÉNEZ-DOMÍNGUEZ, B., & R.M. LÓPEZ AGUILAR (2002) "Identity and sustainability in two neighborhoods of Guadalajara, Mexico". Environment and Behavior, 34(1), 97–110. Available at: https://doi.org/10.1177/0013916502034001007

KANG, M. (2017) Seoul: Vertical and horizontal governance. In: Gómez-Álvarez, D., Rajack, R. M., López-Moreno, E., & Lanfranchi, G. (eds.). Steering the Metropolis: Metropolitan Governance for Sustainable Urban Development. Inter-American Development Bank, pp. 370 - 380. Cordara, C. et al., (2018) ¿Cómo crecen las ciudades argentinas? Estudio de la expansión urbana de los 33 grandes aglomerados. Buenos Aires, CIPPEC.

KENNEDY, C., CUDDIHY, J., & ENGEL-YAN, J. (2007) "The changing metabolism of cities". Journal of Industrial Ecology, 11(2), 43-59.

KOCH, M., & FRITZ, M. (2013). Conclusion: Non-Standard Employment: Concept, Empirical Results and Policy Implications. In Non-Standard Employment in Europe (pp. 229–241). Avaliable at: https://doi.org/10.1057/9781137267160_14

KROPF, K. (1996). Urban tissue and the character of towns. Urban Design International, 1(3), 247- 263.

KÜHN, M., (2014) "Peripheralization: Theoretical Concepts Explaining Socio-Spatial Inequalities". European Planning Studies. DOI: 10.1080/09654313.2013.862518

LAN, S. L., & R.Y ZHONG (2018) "Coordinated development between metropolitan economy and logistics for sustainability". Resources, Conservation and Recycling, 128, 345–354. Available at: https://doi.or

LAN, S. L., & R.Y. ZHONG (2018) "Coordinated development between metropolitan economy and logistics for sustainability". Resources, Conservation and Recycling, 128, 345–354. Avaliable at: https://doi.org/10.1016/j.resconrec.2016.08.017

LANFRANCHI, G. (2017) ADN Urbano - Aglomerado Gran Buenos Aires (AGBA). Documento de Políticas Públicas / Recomendación N°183. Buenos Aires, CIPPEC.

LANFRANCHI, G. (2017) ADN Urbano - Aglomerado Gran Buenos Aires (AGBA). Documento de Políticas Públicas / Recomendación N°183. Buenos Aires, CIPPEC.

LANFRANCHI, G. & A. CONTIN (2017) Shaping the Metro Gaps. MIT.

LANFRANCHI, G. & M. BIDART (2016) Gobernanza Metropolitana en América Latina y el Caribe. Documento de Trabajo N°151. Buenos Aires: CIPPEC.

LANFRANCHI, G. ET AL., (2018) Gobernanza Metropolitana. Análisis de modelos y posibles aplicaciones en la Región Metropolitana de Buenos Aires. Documento de Trabajo N°170. Buenos Aires: CIPPEC.

LANFRANCHI, G. ET AL., (2018) PlanificACCIÓN para el desarrollo integral de ciudades. Documento de Trabajo N°169. Buenos Aires: CIPPEC.

LANFRANCHI, G. ET AL., (2018) PlanificACCIÓN para el desarrollo integral de ciudades. Documento de Trabajo N°169. Buenos Aires: CIPPEC. CIPPEC, (2018) Hacia el Desarrollo Urbano Integral del Área Metropolitana de Resistencia. Una Propuesta de Co-creación de Políticas Públicas y Planificación.

LANFRANCHI, G. ET AL., (2018) PlanificACCIÓN para el desarrollo integral de ciudades. Documento de Trabajo N°169. Buenos Aires: CIPPEC.

LANFRANCHI, G., & A. CONTIN (2017) The Rise of a New Discipline to Manage Metropolitan Urban Systems. In: Gómez-Álvarez, D., Rajack, R. M., López-Moreno, E., and G. Lanfranchi (eds.). Steering the Metropolis: Metropolitan Governance for Sustainable Urban Development. Inter- American Development Bank, pp. 113 - 122.

LANFRANCHI, G., & A. CONTIN, (2017) The Rise of a New Discipline to Manage Metropolitan Urban Systems. In: Gómez-Álvarez, D., Rajack, R. M., López-Moreno, E., & G. Lanfranchi, (eds.). Steering the Metropolis: Metropolitan Governance for Sustainable Urban Development. Inter- American Development Bank, pp. 113 - 122.

LANFRANCHI, G., DUARTE, J. I., & G. GRANERO REALINI, (2018) La expansión de los Grandes Aglomerados Urbanos argentinos. Documento de Políticas Públicas/Recomendación N°197. Buenos Aires: CIPPEC.

LANFRANCHI, G., DUARTE, J. I., & GRANERO REALINI, G. (2018) La expansión de los Grandes Aglomerados Urbanos argentinos. Documento de Políticas Públicas/Recomendación N°197. Buenos Aires, CIPPEC.

LANFRANCHI, G., DUARTE, J. I., & GRANERO REALINI, G. (2018) La expansión de los Grandes Aglomerados Urbanos argentinos. Documento de Políticas Públicas/Recomendación N°197. Buenos Aires: CIPPEC.

LATOUR, B. (2010). "Will non-humans be saved? An argument in ecotheology." Process Studies, 39(2), 375–377. https://doi.org/10.5840/process201039240

LATOUR, B., (2005). Reassembling the Social: An Introduction to Actor-Network-Theory. Available at: https://books.google.es/books?id=AbQsDAAAQBAJ

LATOUR, B., (2010) "Will non-humans be saved? An argument in ecotheology." Process Studies, 39 (2), 375–377. https://doi.org/10.5840/process201039240 Latour, B., (2012) We Have Never Been Modern. Harvard University Press [1993] Latour, B., (2018) Down to Earth: Politics in the New Climatic Regime. Wiley.

LEFEBVRE, H,. (1967) Le droit à la ville. L'Homme et la société, 6(1), 29-35.

LEFEBVRE, H., (1968) Le droit à la ville (Vol. 3). Anthropos: Paris.

LEFEBVRE, H., (1974) "La producción del espacio". Revista de Sociología, (3), 219-229.

LEÓN, J., (2018) "Paisaje cultural y una nueva forma de entender el Patrimonio en Ecuador". Revista interamericana de ambiente y turismo. vol.14 no.2 [On line] Availabel at: https://scielo.conicyt.cl/scielo.php?script=sci_arttext&pid=S0718-235X2018000200161#:~:text=Unidad%20de%20paisaje%20cultural%3A%20Visi%C3%B3n,da n%20identidad%20al%20paisaje%20cultural.

LIBERT, A. (2017) "Paisajes bioculturales ante el cambio climático: Carbono y agro biodiversidad en cafetales bajo sombra en Chiapas "en Paz, en F., Torres, R., Velázquez. Estado Actual del Conocimiento del Ciclo del Carbono y sus Interacciones en México: Síntesis a 2017. México, Programa mexicano del carbono.

LÓPEZ, M., (2007) Descripción y caracterización de nichos ecológicos: una visión más cuantitativa del espacio ambiental. Tesis de maestría. Guanajuato, Centro de Investigación en Matemáticas, A.C. [On line] Available at: https://cimat.repositorioinstitucional.mx/jspui/bitstream/1008/87/2/TE%20244.pdf [Accessed 26 de april2019].

LOVINS A., LOVINS H., P. HAWKEN, (2008) Una ruta hacia el capitalismo natura, Harvard Business Review, ISSN 0717- 9952, Vol. 86, Nº. 6, 2008, págs. 68-82.[On line] Available at: https://dialnet.unirioja.es/servlet/articulo?codigo=2652154. [Accesed 1st august 2019]

LOVINS A. (2001). El capitalismo natural, Revista Apertura, Número Especial: "Argentina Sostenible, un rumbo país", pag. 26, Junio 2001. [On line] Available at: http://argentinambiental.com/notas/informes/el-capitalismo-natural/ [Accesed 1st august 2019]

LOW, S., & SMITH, N. (2006). The Politics of Public Space. New York: Routledge Taylor & Francis Luca G., (2018), La civiltà dei confine, Carocci, Rome.

LYNCH K., (1960) The Image of the City, The Mit Press Lynch K., (1960) The Image of the City, The Mit Press.

LYNCH K., (1961) "The Pattern of the Metropolis", Daedalus, Vol. 90, No. 1, The Future Metropolis (Winter, 1961), pp. 79-98

LYNCH K., (1981) Good City Form, trad.it., Melai R., Progettare la città, la qualità della forma urbana, Etaslibri, Milano, 1990

LYNCH K., (1981) Good City Form. Trad.it., Melai R., Progettare la città, la qualità della forma urbana, Etaslibri, Milano, 1990

LYNCH, AND D. APPLEYARD, (1964) View From The Road. MIT Press, Cambridge Massachussettes Lynch, K. (1960) The Image of the city. The Mit Press: Cambridge, Massachusetts.

LYNCH, K. (1961) "The Pattern of the Metropolis", Daedalus, Vol. 90, No. 1, The Future Metropolis (Winter, 1961), pp. 79-98

LYNCH, K. (1976) The good city form. Mit Press.

LYNCH, K., (1960) The Image of the City, The Mit Press

LYNCH, K., (1981) Good City Form, trad.it., Melai R., Progettare la città, la qualità della forma urbana, Etaslibri, Milano, 1990.

MACIEL, C., ET AL. (2015) "El área de distribución de las especies: revisión del concepto", Scielo. [Electrónico] v. 25, n. 2, p. 03-19, abr. 2015. México. [On line]. Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0188-62662015000200001 [Accesed 26 april 2019].

MANDER, Ü. ET AL. (2018) Green and brown infrastructures support a landscape-level implementation of ecological engineering. Ecological Engineering, 120, 23-35.Available at: https://doi.org/10.1016/j.ecoleng.2018.05.019 [Accesed 23th November 2019] Marconi, P., (1988) Dal Piccolo al Grande Restauro. Venecia, Marsilio Editori, Marconi, P., (1993) Il restauro e l'architetto, Venecia, Marsilio Editori.

MARSH, WILLIAM M.; KAUFMAN, AND M. MARTIN.(Physical Geography: Great Systems and Global Environments, 2013.

MARTINEZ (2012). Environmental Justice and Economic Degrowth: An Alliance between Two Movements in Capitalism, Nature, Socialism. Vol 23.-1 https://doi.org/10.1080/10455752.2011.648839

MARX, K., (1998) Karl Marx, Frederick Engels: Karl Marx: Capital vol. III. Lawrence & Wishart.

MASSEY, D., (2004) Geographies of responsibility. Geogr. Ann., 86 B (1): 5–18.

MASTER IN SUSTAINABLE CITY AND ARCHITECTURE (MCAS) at ETSA Seville in 2018 for Wikipedia: https://es.wikipedia.org/wiki/Renaturalizaci%C3%B3n http://www.hypergeo.eu/spip.php?article677

MATA-OLMOS (2014) "Paisaje y Territorio, Articulaciones teoricas y empiticas", en Checa-Artusu et al., Paisaje y Territorio, Articulaciones teoricas y empíricas, Universidad Autonoma Metropolitana.

MATURANA H. R. AND F.J., VARELA (2001) Autopoiesi e cognizione. La realizzazione del vivente, Venezia, Editore Marsilio collana Saggi.

MATURANA, H. AND F. VARELA,(1980) Autopoiesis and Cognition: The Realization of the Living. Boston USA: Reidel Publishing Company.

MAYORGA, M., AND FONTANA, M., (2012) "Espacios de centralidad y redes de infraestructura. La urbanidad en cuatro proyectos de centralidad urbana". Revista Bitácora Urbano Territorial. [On line] Vol. 21, No 2 (2012). Universidad Nacional. Bogotá. Available on http://cafedelasciudades.com.ar/carajillo/imagenes16/_04_ART_MAYORGAFONTANA_carajillo.pd f. Accessed 26th march 2019

MAZZONI, E., (2014) "Unidades de paisaje como base para la organización y gestión territorial". Estudios Socioterritoriales. Revista de Geografía. N° 16, vol. 2, julio-diciembre 2014, pág. 5181. [On line] Available at: https://www.researchgate.net/publication/317535629_Unidades_de_paisaje_como_base_p ara_la_organizacion_y_gestion_territorial, [Accesed 23 november 2020].

MAZZONI, E., (2014) Unidades de paisaje como base para la organización y gestión territorial. ESTUDIOS SOCIOTERRITORIALES. Revista de Geografía. N° 16, vol. 2, julio-diciembre 2014, pág. 51-81. [On line] Available at: https://www.researchgate.net/publication/317535629_Unidades_de_paisaje_como_base_p ara_la_organizacion_y_gestion_territorial, [Accesed 23 november 2020].

MCKENZIE, R. D., & TURNER, B. S. (1933). The metropolitan community (Vol. 49). New York: McGraw-Hill. Trapaga, I. (2018). La Comunidad, una revisión al concepto antropológico. Revista de Antropología y Sociología: VIRAJES, 20(2), 161-182. Available from: DOI: 10.17151/rasv.2018.20.2.9. [Accesed: 28th November 2019].

MEADOW D. ET AL (1972). The Limits to Growth

MEZA, C. A., (2008) "Urbanización, conservación y ruralidad en los cerros Orientales de Bogotá". Revista Colombiana de Antropología, 44(2), 439-480.

MILLENNIUM ECOSYSTEM ASSESMENT, (2005) European and Human Well Being.

MONTAÑA, E. (2008) “Las disputas territoriales de una sociedad hídrica. Conflictos en torno al agua en Mendoza, Argentina”. Revibec: revista de la Red Iberoamericana de Economia Ecológica, 9, 001-17.

MUÑOZ, P. (2015). Methodological Considerations in the Measurement of Inclusive Wealth. 18. Available at: https://www.researchgate.net/publication/280444258 Nail, T. (2016) Theory of the Border. Oxford, NY, Oxford University Press.

NAROTZKY, S. (2004). Antropología económica. Nuevas tendencias

NAVEH Z., AND A.S. LIEBERMAN, (1990) Landscape Ecology. Theory and Application, Student Editing. Sprinter-Verlag, New York.

NETTO, V. M. (2017). The Social Fabric of Cities. London: Routledge, https://doi.org/10.4324/9781315552804

NOGUE, J SALA, P; & GRAU, J. (2016). Metodología: “Los Catálogos del Paisaje de Cataluña”. Catalunya. Primera Edición. Observatorio del Paisaje de Catalunya.

NORDHAUS, T. & M. SHELLENBERGER (2007) Break through: from the death of environmentalism to the politics of possibility. New York: Houghton Mifflin.

NUSSBAUM, M.C. (2000), Women and Human Development: The Capabilities Approach. Oxford: Oxford University Press.

O’SULLIVAN, N., (2010) The Concept of the Public Realm, New York: Routledge.

OBSERVATORIO DEL PAISAJE, (2018). “El Observatorio y el ICGC publican el mapa de las unidades de paisaje de Cataluña”, [On line] Available at: http://www.catpaisatge.net/esp/notes_premsa2.php?idNot=394, [Accessed 30 pctober 2019]. Observatorio del Paisaje, (2018). “Los catálogos de paisaje de Cataluña: Metodología”. [On line] Available at: http://www.catpaisatge.net/fitxers/publicacions/ metodologia_catalegs/Documents_3_ESP.pdf [Accessed 15 november 2019]

OECD. (2015) The Metropolitan Century: Understanding urbanisation and its consequences. OECD Publishing.

OECD. (2020). Environmental healthand strengtheningresilience to pandemics. Retrieved from: https://read.oecd-ilibrary.org/view/?ref=129_129937-jm4ul2jun9&title=Environmental-healthand-strengthening-resilience-to-pandemics

ONU. LEY GENERAL DE EQUILIBRIO ECOLÓGICO Y PROTECCIÓN AL MEDIO AMBIENTE, (2017) Observatorio del principio 10 en América latina y el Caribe. [On line] Available at: https://observatoriop10.cepal.org/es/instrumentos/ley-general-equilibrio-ecologicoproteccion-al-ambiente [Accesed 22 april 2019].

ORTIZ P., (2017) The Metropolitan Genoma MIT Metro Lab Research Paper The Art of Deciphering the Metropolis Pedro B. Ortiz, Cambridge, MIT, www.PedroBortiz.com

ORTIZ P.B., KAMIYA M. (2016), The Political Economy of the Metropolis in the Global North and South: Connecting, Financing, and Ruling, in Governing the Metropolis, World Bank, UNHABITAT, IADB

ORTIZ, P. (2015) "Metropolitan Architecture. Archipelago to Metro-Matrix: Evolution of Species". In Contin, A. (ed.) (2015) Questo. Metropolitan Architecture. Santarcangelo di Romagna, Maggioli, pp. 48-63.

ORTIZ, P.B. AND M. KAMIYA, (2016) "The Political Economy of the Metropolis in the Global North and South: Connecting, Financing, and Ruling", in Governing the Metropolis, World Bank, UN-HABITAT, IADB

PAASI, A., (1987) "Geographical Perspectives on Finnish National Identity," GeoJournal vol. 43 nr. 1: 41-50.

PELLING, M. (2003). The Vulnerability of Cities:Natural Disasters and Social Resilience. London: Earthscan Publication.

PEÑALOSA, R. ET AL., (Edit). (2018). "Descubrir los paisajes de las américas. Diseñar, planificar, conservar y gestionar. Carta del paisaje de las Américas", in: Astrágalo. Cultura de la Arquitectura y la Ciudad. No 25. CAEAU (Centro de Altos Estudios de Arquitectura y Urbanismo). Diciembre 2018. Buenos Aires, UAI (Universidad Abierta Interamericana).

PÉREZ-CHACÓN, E. (1999). Unidades de Paisaje: Aproximación Científica y Aplicaciones. Universidad de las Palmas de Gran Canaria. [On line] Available at: http://www.paisajeyterritorio.es/assets/unidades-de-paisaje.-aproximacion-cientifica-yaplicaciones.-perez-chacon-espino%2C-e.pdf. [Accessed 23 november 2020]

PÉREZ-DE LA O N. B. ET AL., (2020), Ecological Niche Modeling to Calculate Ideal Sites to Introduce a Natural Enemy: The Case of Apanteles opuntiarum (Hymenoptera: Braconidae) to Control Cactoblastis cactorum (Lepidoptera: Pyralidae) in North America, Ciudad de México. [On line] Available at: https://www.mdpi.com/2075-4450/11/7/454 [Accesed 19 november 2020]

PICON, A., (2018) Urban Infrastructure, Imagination and Politics: from the Networked Metropolis to the Smart City. Int. J. Urban Reg. Res., 42: 263-275. doi:10.1111/1468- 2427.12527 Heynen, N.; Kaika, M. & E. Swyngedouw (2006) In the nature of cities: urban political ecology and the politics of urban metabolism.

PINTOS, P., (2017) "Extractivismo inmobiliario y vulneración de bienes comunes en la cuenca baja del río Luján". In Vasquez Duplat A.M. Comp. Extractivismo urbano: debates para una construcción colectiva de las ciudades. Buenos Aires: Fundación Rosa Luxemburgo.

POLASKY, S., BRYANT, B., HAWTHORNE, P., JOHNSON, J., KEELER, B., & PENNINGTON, D. (2015). Inclusive Wealth as a Metric of Sustainable Development. Ssrn, (November). Available at: https://doi.org/10.1146/annurev-environ-101813-013253

POLLAK P., (2006) Constructed ground: questions of scale contenuto, in Waldheim C., Landscape Urbanism Reader, Princeton Architectural Press, Hudson.

POLLAK P., (2006), Constructed ground: questions of scale contenuto, in Waldheim C., Landscape Urbanism Reader, Princeton Architectural Press, Hudson

POLLAK, P., (2006) "Constructed ground: questions of scale contenuto", in Waldheim C., Landscape Urbanism Reader, Princeton Architectural Press, Hudson

PORTER, M. E., (1998) "Clusters and the new economics of competition". Harvard Business Review, 76(6), 77–90.

PORTER, M. E., (2000) "Location, Competition, and Economic Development: Local Clusters in a Global Economy". Economic Development Quarterly, 14(1), 15–34. Available at: https://doi.org/10.1177/089124240001400105 Procuraduría de protección al medio ambiente, 2019. Glosario: Desequilibrio ecológico. México, Procuraduría de protección al medio ambiente. [On line] Available at: http://www.profepa.gob.mx/innovaportal/v/766/1/mx/glosario.html?num_letra=3&num_ letra_siguiente=4 [Accesed 22 april 2019].

R. BROUWER EL AL., (2013). A synthesis of approaches to assess and value ecosystem services in the EU in the context of TEEB. Available on: https://ec.europa.eu/environment/nature/biodiversity/economics/pdf/EU%20Valuation.pdf

R. BROUWER, L. BRANDER,O. KUIK, E. PAPYRAKIS, I. BATEMAN. (2013). A synthesis of approaches to assess and value ecosystem services in the EU in the context of TEEB. Available at https://ec.europa.eu/environment/nature/biodiversity/economics/pdf/EU%20Valuation.pdf

RAFFESTIN C., (2003), Immagini e identità territoriali, in Il mondo e i luoghi: geografia delle identità e processo del cambiamento, a cura di G.Dematteis e F. Ferlaino Ires, Torino

RAFFINO, M. (2019) “Hábitat y Nicho ecológico”. En “Concepto.de” [En línea].Disponible en: https://concepto.de/habitat-y-nicho-ecologico/. [Accesed 26 de april 2019].

REEVE, A. AND S. SIMMONDS, (2010) “Public Realm as Theatre: Bicester Village and Universal City Walk”. Urban Design International. 6 (3-4), 173-190. Available on: doi:10.1057/palgrave.udi.9000050.

ROGERS, R., (2000) Ciudades para un pequeño planeta, Barcelona, Gustavo Gili.

ROGERS., E.N., (1997) Esperienze dell’architettura. Skira, Milano.

ROJAS, E. (2005) Las regiones metropolitanas de América Latina. Problemas de gobierno y desarrollo.In: Cuadrado Roura, J., Fernandez Güell, J. M., & Rojas, E. (eds.) Gobernar las metrópolis. Washington D.C.: Inter-American Development Bank, pp. 35 - 59.

ROMERO, H., ET. AL.,(Evaluación Ambiental de las Cuencas Urbanas del Piedemonte Andino de Santiago de Chile. Chile. Disponible en: http://repositorio.uchile.cl/bitstream/handle/2250/118056/evaluacioncuencas.doc?sequenc e=1&isAllowed=y [Acceso el 26 de abril 2019].

ROSSI A., (1966) The Architecture of the City, Clup Milano

ROUTLEDGE. PIDWIRNY, M., AND S. JONES (1999–2015). “Physical Geography”. http://www.physicalgeography.net/fundamentals/1d.html http://developers.google.com/earth-engine/datasets/catalog/CSP_ERGO_1_0_US_physiography https://www.who.int/environmental_health_emergencies/natural_events/en/ tm

ROUX, R., (2008) “Marx y la cuestión del despojo. Claves teóricas para iluminar un cambio de época”. Revista Herramienta, 38: 61-74.

SALAT S., BOURDIC L., AND M. KAMIYA, (2017) Economic Foundations for Sustainable Urbanization; A Study on Three-Pronged Approach: Planned City Extensions Legal framework, and Municipal Finance, United Nations Human Settlements Programme, United Nations Human Settlements Programme (UN-Habitat)By Urban Economy Branch. UN-HABITAT/ Urban Morphology Institute and Complex Systems. https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf

SANTOS, A. O., & C. OLIVIERI (2018) "Tierras de oasis. Historias y narrativas de identidades territoriales en Xinjiang (China) y Baja California sur (México)". P 49-64. In Roque, A. C. et al. (coord.) Alterações Ambientais em Perspetiva Histórica. Porto: CITCEM – Centro de Investigação Transdisciplinar Cultura, Espaço e Memória, Universidad do Porto; Porto. Available from: DOI: https://doi.org/10.21747/9789898970084/alte

SASSEN, S. (2008). Cities in Today's Global Age, An exploration of the new economic role of cities and the networks they form in an increasingly global world" in Connecting Cities Networks.

SASSEN, S., (1990) "Economic Restructuring and Redevelopment". Cities and Society, 2(2), 167–182. Available at: https://doi.org/10.1002/9780470752814.ch13 Schmitter, P., (2002) "Participation in governance arrangements: is there any reason to expect it will achieve sustainable and innovative policies in a multi-level context?", in: J. R. GROTE and B. GBIKPI (Eds) Participatory Governance: Political and Societal Implications, pp. 51–69. Opladen: Leske and Budrich.

SCHLOSBERG, D. (2004), «Reconceiving Environmental Justice: Global Movements and Political Theories.» Environmental Politics 13, No. 3: 517-540.

SECCHI B., (1986) "Progetto di suolo", in Casabella, n. 521, pp. 19-23

SECCHI, B. AND P.VIGANÒ, (2008) Water and Asphalt, John Wiley & Sons, London

SECRETARÍA DE MEDIO AMBIENTE, 2013. IMPACTO AMBIENTAL, CONCEPTOS GENERALES. MÉXICO, SECRETARIA DE MEDIO AMBIENTE. DISPONIBLE EN: HTTP://WWW.SEMA.GOB.MX/SGA-IMPACTOCONCEPTOS.HTM [ACCESSED 22 APRIL 2019]

SEMARNAT, (2010) Compendio de estadísticas ambientales, 2010. SEMARNAT. Programa de las naciones unidas para el desarrollo. Available at: http://aplicaciones.semarnat.gob.mx/estadisticas/compendio2010/10.100.13.5_8080/ibi_ap ps/wfservlet32c2.html.[Accessed 1st august 2019]

SERRANO, D., (2012) "Consideraciones en torno al concepto de unidad de paisaje y sistematización de propuestas" in Estudios Geográficos. Vol LXXIII, 272, pp. 215-237, enero – junio 2012. [On line] Available at: http://estudiosgeograficos.revistas.csic.es/index.php/estudiosgeograficos/article/view/370, [Accessed 27 de november 2020].

SHANE G., (2005) Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory, Wiley, London

SHANE, D.G. (2005) Recombinant Urbanism. Conceptual Modeling in Architecture, Urban Design and City Theory. Chichester, Wiley.

SHANE, D.G., (2011) Urban Design since 1945. A Global Perspective. Chichester, Wiley.

SHANE, D.G., (2011) Urban Design since 1945. A global Perspective. Chiester, Wiley.

SHANE, G., (2005) Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory, London, Wiley.

SOJA, E. (2009) "The city and spatial justice". Spatial justice, n° 01 September 2009, Avaliable at: http://www.jssj.org.

SOJA, E. W. (2010). Seeking Spatial Justice. University of Minnesota Press.

SOJA. E. W. (2009) The city and spatial justice [«La ville et la justice spatiale», traduction: Sophie Didier, Frédéric Dufaux], In, justicespatiale | spatial-justice n. 01 September. Solá, A. G., & Vilhelmson, B. (2018). Negotiating proximity in sustainable urban planning: A Swedish case. Sustainability (Switzerland), 11(1), 12–14. https://doi.org/10.3390/su11010031

SOLÍS TRAPERO, E., SANZ, I. M., & J.M.U. FRANCÉS (2015) "Global Metropolitan-Regional Scale in Evolution: Metropolitan Intermediary Cities and Metropolitan Cities". European Planning Studies, 23(3), 568–596. https://doi.org/10.1080/09654313.2013.878691

STESSENS, P. ET AL., (2017) "Analysing urban green space accessibility and quality: A GIS-based model as spatial decision support for urban ecosystem services in Brussels". Available at: https://doi.org/10.1016/j.ecoser.2017.10.016

SVAMPA, M., & E. VIALE (2015) Maldesarrollo: La Argentina del extractivismo y el despojo y el despojo. Buenos Aires: Katz.

SWYNGEDOUW, E., (2005) "Governance Innovation and the Citizen: The Janus Face of Governance-beyond-the-State". Urban Studies, 42(11), 1991–2006. https://doi.org/10.1080/00420980500279869

SWYNGEDOUW, E., (2005) "Metabolic urbanization the making of cyborg cities". In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism. http://doi.org/10.4324/9780203027523

TAYLOR, M. (2009) The Moment of Complexity: Emerging Network Culture. Chicago, University of Chicago Press

TOBASURA, I., (2008). "Huella Ecológica y biocapacidad: Indicadores biofísicos para la gestión ambiental. El caso de Manizales, Colombia". Revista Luna Azul, [On line], No. 26, Enero - Junio 2008. Pp. 119-136. Available at: http://www.scielo.org.co/pdf/luaz/n26/n26a07.pdf [Accesed 22 april 2019] Torres-Mazuera, G.. (2009) "La territorialidad rural mexicana en un contexto de descentralización y competencia electoral". Revista Mexicana de Sociología, 71(3):453-490.

TRIVI, N. A., (2016) “Expansión urbana privatizada y migración de amenidad en destinos serranos. Loteos y urbanizaciones cerradas en el Valle del Conlara (San Luis, Argentina)”, IX Jornadas de Sociología de la Universidad Nacional de La Plata, 5 al 7 de diciembre. La Plata, Argentina.

UCHA, F., (2010) “Definición de Ecodesarrollo” Definición ABC. Marzo 2010, [On line] Available at: https://www.definicionabc.com/medio-ambiente/ecodesarrollo.php [Accessed 1/08/19] UN Habitat. (2015) Unpacking Metropolitan Governance for Sustainable Development. Nairobi: UN Habitat.

UN HABITAT. (2016) World cities report 2016: Urbanization and development. Emerging futures. Nairobi: UN Habitat.

UN-HABITAT UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME, (August 2017), Implementing the New Urban Agenda by Strengthening Urban-Rural Linkages

UNESCO, (1972). La Convenzione per la protezione del Patrimonio Mondiale culturale e naturale.https://www.unesco.beniculturali.it/la-convenzione-sul-patrimonio-mondiale/ United Nation, (2015) Technical report by the Bureau of the United Nations Statistical Commission (UNSC) on the process of the development of an indicator framework for the goals and targets of the post-2015 development agenda. Avaliable on: https://sustainabledevelopment.un.org/content/documents/6754Technical%20report%20of %20the%20UNSC%20Bureau%20(final).pdf

UNITED NATION, (2017) Sustainable Goals and Development. Available on: https://sdgs.un.org/goals

VELHO, G. (2010) Metrópole, cosmopolitismo e mediação. Horizontes Antropologicos, Porto Alegre, v. 16, n. 33, p. 15-23. Available from http://dx.doi.org/10.1590/S0104-71832010000100002. [Access on 04 December 2019]

VENTURINI, T. & B. LATOUR (2010) "The Social Fabric: Digital Traces and Quali-quantitative Methods. Proceedings of Future". In Seine 2009, 87–101. Available at: http://www.tommasoventurini.it/web/uploads/tommaso_venturini/TheSocialFabric.pdf Verma, M. K,. (2018) Globalisation, Environment and Social Justice: Perspectives, Issues and Concerns. Taylor & Francis.

VIALE, E., (2017) "El Extractivismo Urbano". En Vásquez Duplat A.M. Comp. Extractivismo urbano: debates para una construcción colectiva de las ciudades. Buenos Aires: Fundación Rosa Luxemburgo.

VIDAL KOPPMANN, S. (2007) Transformaciones socio territoriales de la región metropolitana de Buenos Aires en la última década del siglo xx: la incidencia de las urbanizaciones privadas en la fragmentación de la periferia.

VIGANÒ, P. (2007) "Landscapes of water", Iuav giornale dell' Università, Iuav di Venezia Vives Miró, S., (2011) "Producing a "successful city": Neoliberal urbanism and gentrification in the tourist city—the case of Palma (Majorca)". Urban Studies Research. http://dx.doi.org/10.1155/2011/989676

WALDHEIM C., "NOTES TOWARD A HISTORY OF AGRARIAN URBANISM," PLACES JOURNAL, NOVEMBER 2010. ACCESSED 29 DEC 2019. HTTPS://PLACESJOURNAL.ORG/ARTICLE/HISTORY-OF-AGRARIAN-URBANISM/ WOUDSMA, C., JAKUBICEK, P., & L. DABLANC (2016) "Logistics Sprawl in North America: Methodological Issues and a Case Study in Toronto". Transportation Research Procedia, 12(June 2015), 474–488. Available at: https://doi.org/10.1016/j.trpro.2016.02.081

WOUTERS, P. ET AL., (n/d) "Blue-Green Infrastrructures as tools for management of urban development and effects of climate change". Ramboll Environ [On line] Available at: http://download.ramboll-environ.com/environcorp/Blue%20green%20infrastructures.pdf [Accessed 21 october 2020]

WWWF, (2015) Conectividad ecologica: importancia, situación en España y criterios para identificar redes ecológicas. Buenas prácticas para la definición de redes ecológicas en España. [On linea] Available at: http://awsassets.wwf.es/downloads/buenas_practicas_para_la_definicion_de_redes_ecologicas_en_espana_gr.pdf . [Accessed 23rd march 2019].

XIAOA, W. ET AL., (2017). Geoinformatics for the conservation and promotion of cultural heritagein support of the UN Sustainable Development Goals. Elsevier. Available on: https://reader.elsevier.com/reader/sd/pii/S0924271618300017?token=F39150C831E03F534 77ABF9390C208D-6C7CCA25897A99130360615A39E6F7373A52FE6BC89F72D51CC050D-739C3BB772 https://www.ucl.ac.uk/bartlett/heritage/

YOUNG, I. M. (2002) 'The Ideal of Community and the Politics of Difference'. In, Bridge, G. and Watson, S. (eds.) The Blackwell City Reader, Malden, MA: Blackwell Publishing.

ZOIDO NARANJO, F. ET AL., (2000) Diccionario de geografía urbana, urbanismo y ordenación del territorio. Barcelona, Ariel.

ZONNEVELD, I., (1989) "The land unit. A fundamental concept in landscape ecology, and its applications". Landscape Ecology, 3/2, pp. 67-86.

The new metropolitan voices.
Glossary of metropolitan terms
was edited in december 2021
at *Partner Aliados estratégicos en producción* offices.
Alicante 2282, Santa Mónica.
44220, Guadalajara, Jalisco