THE MULTIPLICITY OF SPACE AS A DIALECTICAL REFLECTION

A Multiplicidade do Espaço como Reflexão Dialética

Claudio Manetti Jonathas Magalhães Pereira da Silva

ABSTRACT

This article makes a theoretical reflection, based on several Brazilian authors of the "field of geography", regarding the definition of Space and the way of apprehending its dynamics and physical characteristics. It discusses the forms of perception of the inter-scalar relations, their meaning and the contributions that this reflection is able to bring to the field of Architecture and Urbanism. The text searches for the "connection keys" of the anthropic interference as a geomorphological action, in order to favor the reading of the fragment and through this to infer the Total space. Therefore, the text does not adopt the regulation of insulation of fragments or cutouts extracted from certain larger structures, nor does it focus on thematic decisions in confinement (monothematic coherences). Throughout the text the arguments are constructed at the intersection of the themes of space defined by the coherences articulated in systems of vital exchange (pluri-tematic coherences). The methodological problematization collaborates with the discussion regarding the criteria in the establishment of the "Areas of Influence" for Studies, Plans and Projects, such as: Environmental Impact Studies, Management Plans, Urban Intervention Plans and other planning instruments.

Key words: Space. Territory. Scales. Environmental structures. Social-economic structures.

RESUMO

O presente artigo dialoga com diversos autores na problematização da definição do Espaço e a forma de apreendermos sua dinâmica e características. Discute as formas de percepção das relações inter escalares, seu significado e as contribuições que esta reflexão é capaz de trazer para o campo da Arquitetura e do Urbanismo. Buscamse as "chaves de conexão" da interferência antrópica como ação geomorfológica, da leitura do fragmento a inferir o espaço total. Não se aceita a normativa de insulamento de fragmentos ou recortes extraídos de certas estruturas maiores como perímetros estaques, nem se concentra nas decisões temáticas em confinamento (coerências monotemáticas), mas no cruzamento das correlações do espaço definidas pelas coerências articuladas em sistemas de troca vitais (coerências pluritemáticas). A problematização metodológica colabora com a discussão referente à critérios de delimitação das "Áreas de Influência" para Estudos, Planos e Projetos, como: Estudos de Impacto Ambiental, Planos de Manejos, Planos de Intervenção Urbana e demais instrumentos de planejamento.

Palavras-Chave: Espaço. Território. Escalas. Estruturas ambientais. Estruturas socioeconômicas

Introduction

Space can be understood by different forms of observation of its content, composed of innumerable configurations that are interdependent in systems integrated by essence and interchangeable correlations.

In this sense, things and human beings are revealed as inseparable units in the different scales of amplitude and significance in the totality (SANTOS, 1996). The understanding of the nature of space takes as its primary condition the understanding of existence. The present text reflects on some principles that help us to structure thoughts about interpretive visions of realities.

For Architecture and Urbanism the dialectic between the relations of space and its constituent elements can establish possibilities of innumerable syntheses, regardless of their coverages. The same happens with the sciences geared towards the studies on the structure, form and human movements in the formation of the planet. The question that moves us to reflect is within the framework of coherencies that are grouped in certain scales, which can be shown by cutouts or oscillating connections between indicators of the operational logic that subsidizes and operates the reasons for knowing, by concrete tools (plans, projects and the various areas of research). The methodological problematization seeks to collaborate with the discussion regarding the criteria in the establishment of Areas of Influence for the territorial planning and their propagations in intervention devices in the different scales, as well as in **Environmental Impact Studies.**

The proposal to search for scalar variables as the foundation of notions of space, which teaches us to understand it more widely, is a paradox if we consider the totality (SANTOS, 1996; WHITEHEAD, 1919; SARTRE, 1968) as a relational body between "all that is" and "all that are", as a set systematically fed by cyclical totalizations; concrete actions that leave their marks, inheritances in history. In seeking the possibilities of approaching different forms of intervention or reflexive situations (POPPER, 2001; MORIN, 2015; MORAES, 1987), one arrives at the

formulations of the following starting points: To know how to think the world, is it urgent to consider pertinences that are constituted by the search for a truly collective consciousness? And if so, in the face of so many complexities of this world, why do each discipline line or field of scientific knowledge remain in its convictions of specific deepening within this universe?

If we accept to understand that the structure of Space is organized by the divisions of varied scales, contained in totality in portions or parts, dialectically interacting and conformed by units of coherence, then three principles must be understood for the foundation of a theory on division of space:

a) The Integrality of Thought: Articulation between the foundations of the research lines (disciplinary fields or scientific structures) of each area of study that are attracted by the thematic coherences coexisting in territorial units that form the Space;

b) Inseparability in Space Relationships: Structuring the organiser components of Space in the constitution of a network of analytical relations that identify the organizational coherences of the territories and their scalar interactions;

c) The Totality of the Scales in the Interrelationships between the Parts and the Whole: Definition of the cutouts of territorial compartmentalization premises, their pertinences and coherences in the constitution of units of reflexive management, as well as in the understanding of the movement of totalities.

THE FORMATION OF REALITIES: HISTORICAL MOVEMENTS VERSUS GEOGRAPHICAL CRIB

Faced with the idea that the universe is constituted of all the elements and their fields of influence, even of the invisible and immaterial particles, we seek the associative correlation between matter and movements in relative temporalizations.

This condition contributes to the formulation of a theory that leads us to other forms of learning, that the Whole is constituted by arrangements, by orders of influence that are dynamically

provoked at variable speeds, as in interacting units, where the scale is a factor of organization of the coverages by total units.

The division of coherences by a single planetary correlation from the possibilities of understanding and acceptance of the Whole as a means and as a principle, in the constitution of approximate forms among the scientific diversities that still go erratically through their own isolated ways, may be intrinsically to each other, in the search for "connection keys" among so many dispersive orbits. These links of approximation between disciplinary interests may lie at the root of the logic that groups existence between the components of space and its quintessences.

Material elements and their correlational amplitudes (as immaterial fields of influence), are in constant reciprocity dynamics, by the coverages they accomplish among themselves (in complex oscillatory arrangements by varying amplitudes), constituting the structure of Space.

The question of the totality and the constitutive portions of environments that form the interacting realities in territories intrinsic to the set of great spaces is also discussed by Milton Santos. In his book "A Natureza do Espaço – técnica e tempo/razão e emoção", written in 1996, he discusses (among many other significant issues) and deepens the significance of economic forces and space-modifying processes of space by for "technical" diversity, as inductive elements of the relations between the social groups and the geographical environment. Thus, for the author, the matrix is given by the relation between man and the environment - by the technical domain - in the productive constitution and in the formation of space, therefore as realization of political life.

Milton Santos discusses in the passage "O Espaço e a Totalidade" of this work, the relation of space dimension by the dynamics of the movements that give the world the cyclical totalities (totalization), considering the philosophical pertinence of the notion of totality, unity and dialectic "[...] constituting in a fundamental element for the knowledge and analysis of reality" (SANTOS, 1996, p.93).

The author takes up again the Aristotelian question, questioning about the definition of Unity and the pertinence of totality as the sum of the parts devoid of autonomy of each of them in the game of scales of correlation with the Universe. Santos (1996) relates the comprehension of totality as a basis for understanding the world; of the world in transformation by the human actions in movements that tend to cycles of change that lead the dynamics of the reality. According to him, the scale of totality occurs in the metamorphosis of socioeconomic formation by historical processes that amplify the complexity of life.

How, then, to face the arduous task of understanding the totality? The first notion to be taken into account is that knowledge presupposes analysis, and the second essential notion is that analysis presupposes division (SANTOS, page 94, 1996).

Adding to the indignative effort of understanding the world is in another important scholar of the formation of Brazilian geographic contexts, Aziz Ab'Sáber. His work is a fabulous contribution to understanding of physiographic regions of Brazil for the in-depth investigation of formation of territories, about the form's origin and about the constitutive elements of nature, which, according to him, would be structured in a "Total Space" (MODESI- GALTTIERI, 2010; AB'SÁBER, 1957).

If for Santos the revealing process of the territorial reasons find the basis of investigation in the social and political forces that compete for such spaces (and their scalar amplitudes), for the economic productive modes, through the appropriation of the techniques in overcoming the nature imposing movement to the dynamics of cyclic totalities (roughness); for Ab'Sáber the root of the realities lies on the confirmation of the relationships between the form of the environments arising from systemic processes and relevant past, cyclically originated by the temporal (geological) deformations that gave the geomorphological feature, and that precisely for this reason accumulated ecosystemic "residues" (form, vital structure, and human designs), where human beings have historically sought to appropriate.

These questions contribute to the amplification of the definitions of Totality, Total Space and Total Environment, which would allow the fusion of the relations between geographic conformation and its coverages, by these thinkers and others who approached the search of the philosophical and sociological implications of that organization unleashed on scales of importance for understanding the universe. We can adopt so many denominations or concepts, but the question is in understanding that the Whole is a Unity, but the Parts also constitute themselves in Total Units (ARISTOTELES, 2015).

This conceptualization is induced by Santos (1996) when he discusses the "split of totality" by the need for broad understanding. In another aspect, Ab'Sáber deepens the understanding of the compartmentalization of the geographic space identifying paleogeographic factors and remnants through the "Theory of the Refugees". These are two lines of deepening that can be related if there is an approximation between the transformation forces of the movements that form and are formed by space and, otherwise, the preexisting natural consequence that foreshadows the transformations which arise from the human relations in these confined or cutout systems, for the movements of persistence of life.

The understanding of the importance of fragments of coherent structures (grounds form, vegetation types, fauna, climate, human organizations) obey scientific parameters of deepening studies to understand why, in revealing the hidden reasons why certain territories were maintained or were significantly modified (in case of vegetation refuges and in wildlife shelters resulting from prehistoric times).

If the refuges and shelters result from evolutionary geological accommodation processes and are gradually confined dynamically, since vegetation and fauna are adjusted by climatic variations and connectivities, their relation to the whole is much more dichotomic than sampling. On the other hand, in recognizing its particular importance due to the conditioning factors of its configuration, the methodological axis of the research starts to identify the structural reasons for its existence, reversing the research base to a system that contains surprising contexts that deserve to be deepened from within to outward in the correlation between fragments of the same order situated sparsely in distant territories, denouncing answers to the puzzles of life maturation. A system that derives from oscillations and that is kept active, by new modifications, in variable amplitudes, using the scales as vital parameters.

Obviously it does not apply to the mentioned theories (refuges and shelters) the same principle for the foundation of a Theory of Compartments to be constituted, considering the correlations between the conformation of sites and the most recent human occupations. Political and cultural aspects of human populations that are historically organized in territories that are conducive to the establishment of collective structures of life, and that gradually become cities and then overcome their local boundaries by connecting by greater amplitudes - as a blind civilizing flight on geographical structures not yet fully revealed - especially by the difficulties of balancing divergent thoughts and agreements by the best processes of maturation of sociability embodied in constructed spaces, overcome the contradiction of fragments and reorder the logic of transformation by expansion in overlapping systems.

Three foundations can be defined as the first structure composed between human movements on "geographical cribs", by oscillating actions in the artificialization² of territories:

^{1 [...]} according to Aziz the Stone Lines and Theory of the Refuges are great aspects of his fundamental works " (MODENESI-GAUTTIERI et all; 2010). They are, according to him, the geographical definition of climates and the climatic phases in the formation of the national ground. "It extended the question of the Stone Lines to several other parts of Brazil, creating the idea of a very broad cold dry phase. In the equatorial region there were more certado and less forests and in the eastern region there were more caatingas and also less forests. At a later stage of the work, Aziz realized not everything was caating at the time, left over from jungle habitats, and concluded that during the time when these blocks of forests were isolated, the ombrophilic fauna also took refuge. Then there was an isolated process of evolutionary genetic order (this work was developed by the zoologist Paulo Emilio Vanzolini, in Theory of Refuges)" (MODENESI-GAUTTIERI et all; 2010. Page 19).

² Antônio Carlos Diegues in his book O Mito Moderno da Natureza Intocada, 1996, approaches the processes of modifying the environment, to the idea of a supposed artificial environment facing a supposed original nature. The discussion here establishes the interrelationship between such contexts (natural and artificial) as a single systemic structure, capable of interfering with each other and revealing the presence of human transformation in all of them, removing the idea of untouched nature or isolated spaces, and amplifying the idea of total space or total environment. (DIEGUES, 1996).

- The recurrence of human currents as transforming agents of the environment and social and political relations in the organization of structures of appropriation and occupational development;
- 2) The recognition of the meaning of "geographic crib" or geographic space as a support and capacity for historical appropriation of civilizations and their interfaces with the environment;
- 3) The speed and time of the occupational and exploratory processes by the (and of the) human groups on territories in formation by economic forms and available techniques.

Conversions, "crib" and transformations. The geographic feature of the territory, derived from the previous alterations, is a principle of space delimitation and reveals in recent occupations (after its period of geological formation) gradual forms of accommodation of human groups in cycles by layered overlap, which combine the environmental and economic domain by successive technologies that both deepen the findings of the environment and point to possibilities of action (exploration and settlements).

What we have in the Present is a definitive chain of overlapping organizations but in constant adaptation, always in cycles of physical expansion over spaces that tend to cluster in contiguities, and at the same time in segmentation by adverse economic and social characteristics. Totality does not reveal equality, nor historical linearity.

INTEGRITY OF THE PARTS: PRINCIPLES FOR THE CONCEPT OF TERRITORIAL CUTOUTS

The scientific method of cutting out tissues or samples that are meaningful - which contain in particular the relations of the "whole" - is a practice. The assumption behind the analysis of representative portions of the "whole" is that particularity is not considered as a multiplication factor by simple summation, as if the "whole" were a group of a single repeated sample.

It is understood that the sample should be a parameter of recognition of something in its entirety when it contains the structural constraints that bind it to the general system, but which may in turn contain unique particularities that do not fold as a standard.

By evaluating and studying residual patterns determined by past processes that have remained for many years as a resilient chain of life logics in gradual cyclical isolation, or that have migrated through survival channels by jointly altering biological systems, generating other more extensive or more restricted configurations, one can verify the effects of the transforming processes of these territories and their future implications. At the same time, through analysis, the search for scientific answers in representative fragments strongly demonstrates accepted practices as correct in the conduct of research processes – of rigorous and scientific feature. Thus, one would not accept the regulation of the insulation of fragments or cutouts extracted from certain larger structures, as unique findings by specific content merely refuting the "whole", but instead the methodology of extracting to verify the relations between "part" and the "whole", returning what is of structural interest to the "whole" and deepening specific aspects more intriguing in the "parts" as specifically particular universes.

Extreme cases that represent unprecedented findings, as in certain loose fragments in diverse and determinant systems, are objects of analysis that carry with them the uniqueness of the contents. However, its peripheral correlations with vectors of articulation between the fragment and the totality of territories that surround it, when the conformation gives it a cell of coherence in the middle of an ocean of coherences constituted by other logics of life, can be given as a line clearly demarcated, confronting borders between directly conflicting universes.

Discussions about the need to approximate the contexts of interest are based on other cutouts in the figure of the Units of Studies, Landscape Units or Interest (SILVA, 2013). The very way of cutting territories for their broader and more detailed

understanding, as well as for their reconstitution and operative union of actions that interfere in complementarity scales, is a planning practice (zoning, macrozoneamento, sectorisations, planning units, etc.) and the actions of prospecting problems and potentialities, adopted by several areas of knowledge.

The geographer Cleide Rodrigues (2005), in her work of analyzing the correlations between physical-territorial morphological units and anthropogenic morphologies, seeks to establish the analogy between morphologies (original and altered by human processes), to define spatial planning units, taking as a study case the metropolis of São Paulo.

Among the numerous contributions of this work, the question of the interfaces between morphological structures cut as study areas and geomorphological deepening, which aggregates the anthropic implications in their physical alterations as a unitary fusion of factors that give the cutout its own configuration, in a kind of integrated geographic identity, incorporates in the general study the conditioning of the shape of the territory and its features by the superposition of forces that outline another way of considering limits for more precise studies: morphodynamics.

The fundamental difference to other approaches is the consideration of the anthropic interference itself as geomorphological action, which can: modify properties and location of surface materials; to interfere in vectors, rates and balance of the processes and to generate, directly and indirectly, another morphology, here denominated of anthropogenic morphology. (RODRIGUES, page 101, 2005).

This concept approaches landscape research as a living result of ever-changing human relations, altering the original natural structure that precedes the occupation process. Instead of replacing the natural landscape with the artificial landscape (social, economic, political and cultural), it is understood that the human presence learns in harsh dialogue that translates into the new configurations, constantly fed by history.

In Gregotti (1972), the discipline of space by the landscape dimension seeking the relation between Architecture and its contextual whole appears as an attempt to extrapolate the domains of the *object* by the possible connections between *architectural objects* in a "whole" transformed by human hands. When referring to Anthropogeography, in the domains of Geography, Gregotti emphasizes the quality of his focus of analysis.

It is necessary, however, to identify the boundaries of this area, to establish a coordination between the various studies, but also to determine the proper and specific field of architecture as a total and differentiated environment of scientific geography. (GREGOTTI, page 63, 1972)

The basis of the thought linking human relations to geomorphology would be a new term - coined by the German Friedrich Ratzel (1844/1904) - and developed by other authors (with different critical views, especially on the "determinist" line of Ratzel) is anthropogeography (Anthopogeographie) (DANTAS and MEDEIROS, 2008) or, in dialogue with RODRIGUES (2005), an "antropogeomorphology" (GOMES, 2005)³.

Let us return to the question of the division of the Whole into the knowledge of the Parts, dialectically stimulating the full and complex possibility of the understanding of the Whole from the knowledge of the Parts. An experimental deconstruction of totality by the dialectic of scales. This strategy of appropriation of realities that interact in the world assumes that the need to respond to the mysteries of association between the physical space and the social space, as a living and mutant process by the historical blend, sometimes tending to an environmental conflict sometimes to a political and economic conflict, and that in its cyclical movement results in intermittent realities, gives to the totality a time that consolidates it transitorely (SILVA, 2016).

³ http://www.vitruvius.com.br/revistas/read/entrevista/06.023/3315

Nevertheless, there is no technical and conceptual agreement that the division of environments and themes into portions of theoretical and operative deepening allows a closer proximity of the compositional elements of this analytical order.

What is meant by this reflection is to give the "cutout method" another dynamic possibility, where the delimitation of the parts, by analytical associations (environmental support, transformed environment and socioenvironmental structure), is complemented by other variables of recognition and technical conduction of results. As a challenge to truths, one may not consider that fragmentation of space alone and ways of understanding it by approximation in subdivisions (as usual practice in the treatment of the project, plan and technical programs), meets the prerogatives of throb needs that exist in it, even in the proximity of the detected problems of the Parts cut out of a Whole.

This infers in the way in which the physical or sociopolitical boundaries (lines or spots) are chosen that are formally adopted as legitimate content boundaries of the conventionally accepted portions of interest. As certain works make territorial readings considering amplitudes much larger than the definition of area of action⁴, the delimitation of the approximation cutouts obeys parameters and agreements that are often political or cultural pacts assumed in the context of the studies.

The form of approximation derives from the readings and tactical construction of the verifications of the general scope of work (which gives the definition of the limits of the intended plan or action), therefore, deriving from large scales - by survey processes and planning modalities - in the configuration of determinate structures of the studied territorial support and its derivations until the demarcation of the sectors or fragments of interest.

These "boundary lines," which are usually established, are based on barriers or transitions in the environment, as well as on historical and administrative conformations, seeking to reveal coherence in their content cut by conventional acceptance, but need to be rethought by the extension of the environmental coverages and by the pendular movements that transcend such regulations. Take the example of a hypothetical stream belonging to a river basin that instead of being considered the "backbone" in the environmental structure of the context to be understood to be planned, is almost always treated as a delimiter between portions; that is, it loses its territorial relevance and is reduced to a mere dividing line.

Operational technical actions obey the static assumption of legal moorings or political determinations, isolating themselves from the public returns that should prevail as a dynamic principle, clearly informing the segments of society a way of recognition of territory and the reasons for its action.

There seems to be a discord between what actually occurs and infers in the reasons of the landscape that is rapidly transformed by economic and social variations, and what the institutional standards and procedures of reading and public operation practice, through legislation, in conducts and instruments of planning (control and urban and rural "development"). The lag is in the understanding of territory and economic strategies such as they are, as the only reality, a kind of natural consequence, which, when analyzed reveals only the contours of its essence, hides rugosities (SANTOS, 1996) and anomalies of the future.

In this sense, it can be understood that the revelation of reality and its amplitudes and public dissimulations, is in the unveiling of the "filters" of the territory by means of the verification of the environmental matrices and their political conformations, ordered by other little questioned organizational logics.

This question is tied to the possibility of understanding the realities by approximation, without necessarily emphasizing decisively (and definitively) the portion of the Whole, because it is understood that space, therefore, does not divide, but

⁴ See the cases of Areas of Influence of Environmental Impact Studies EIA RIMA, experiences of territorial planning in reserve areas (Park Management Plans and Environmental Protection Areas), or in Municipal or Metropolitan Master Plans - by the adoption of Macrozones and Macroareas.

volatilizes itself in the relations between objects and their orbits of organizational correlations distributed by the logic of interdimensional totalities.

Initially, it is critical to determine the scope of the problem. It is considered, in the reading of the foundational realities of the inquiry, the concept of spatial content, or what we can treat as a "unity of coherences", systemic in divisible (but, interrelated) environments. This arrangement of forces correlated in certain contexts is the matrix of the investigation; that is, the valve that triggers its pertinence as relevant thematic in the development of the research paths to be shared.

It is a question of the constitution of a dialectic structure that allows, from its systemic applicability (transition between contents and scopes), to identify the spatial components and their scales of importance as the background of the analysis and its propagations by the "pendularity of opposites" in order to qualify the forms of reading and recognizing realities in force in the territories under study. In this way, the possibility of amplifying the ways of reading the realities (historical processes of appropriation of certain territories and their environmental conformations) is based on the transition between the vectors of life force interacting in environments that can be cutout for identifiable reasons (physical, biotic and anthropic, simultaneously convergent), that can define limits or perimeters of delimitation of units.

They are the coherences that give the totality of the parts that integrate, where one clearly reads its phenomenological configuration, deciphering the reasons of its historical trajectory in the unveiling of the contemporary movements.

It is understood, from the outset, that the boundary of the parts of a given space is not understood as a heavily demarcated barrier or split to the point of breaking inexorably between the two separated sides. The dividing line or cutout line between two parts or more of a compartment arises from the interrelated analysis between pertinences and continences of those contexts to be divided, defined after a thorough combination between

the structuring elements of these units, and which lend totality to these parts.

This ordering of contents by importance and meaning in the general context of territories of interest, beyond the possibilities of delimitation of each scope of connectivity, does not isolate or freeze each portion in an intra territoriality, as can be seen in several technical planning works or in studies of environmental impact⁵ (both by legal determination), for example, but it guarantees a pulsation in the exchange of relational ambivalences between the organicity factors of the medium that have different connections at different distances.

Considering this conceptualization, the division between the parts can not establish the rupture for the specific detail of each one. The notion of the cutout definition by this concept, allows to operate the unit of coherence and its interconnection with variable units, articulating the "integrated coherences".

On the understanding of "integrated coherences", or what we can define as a "thesis of integrality", there is a need for technical organization of territorial recognition methods from the prospection of disciplinary matrices in analytical grids that result from the territorial readings (of compartments to be delimited or already delimited) that obey three specific and overlapping fields:

System of Static Elements: considering the need to understand the physical and biotic structures that make up the "geographic crib", or the support of Landscape – geomorphology, vegetation cover (natural and agricultural), climatic structures (aquifers), fixed ocuupation structures and linearities (road, logistics systems), large structural equipment;

⁵ See the Single Annex Book (Caderno Anexo Único) - Article 1 of Board Decision No. 217/2014/1, dated 06/08/2014, prepared and approved by the Environmental Company of the State of São Paulo (Companhia Ambiental do Estado de São Paulo - CETESB). This booklet integrates the Manual for the Preparation of Studies for Licensing with Environmental Assessment (Manual para Elaboração de Estudos para o Licenciamento com Avaliação Ambiental), which addresses, among many aspects, the subsidy aspects to the process of elaboration of EIA Environmental Impact Studies (Estudos de Impacto Ambiental - EIA) and its respective RIMA Environmental Impact Report (Relatório de Impacto Ambiental - RIMA). Chapter 5 - Areas of Influence, pages 99-103.

b) System of Dynamic Elements: considering the need to understand the biotic and anthropic structures, or the living plots that cohabit in the conformations of the compartments of static physical supports - mobilities, flows intensities, uses and forms of urban and non-urban occupation, socioeconomic structure, cultural structures, administrative political variables, faunal connectivity, historical processes;

c) System of Elements and Contexts in Conflicts: considering the need to understand the ruptures resulting from the transitions between fixes and dynamics, or the tensions between human groups and or between them and the biotic constraints and the landscape - detection of the points or structures that present environmental or socioeconomic potential conflict (or both simultaneously verified), sustaining capacities, impacts of different orders, ruptures or divergences thematic or relational.

The reading of the matrices and their corresponding interactive crosses, allows the delineation of the significant structures of the territory for the definition of the larger scale or what we can denominate as the greater territorial delimitation for a study or technical action, as for the subsequent scales of approximation according to the prerogatives that the work requires. The delimitation of a large scale⁶ results from the crossing of the information and verifications of the territories and their domain amplitudes (Physical, Biotic and Human Structures) resulting in what we can call the first field of integrated knowledge (content and interrelations). This primordial dimension presupposes the greater unity built as a reference for dialectical operation, where the dividing line (as interlocution between what is inside and what is outside), establishes the cohesive unity between universes of approximation. What is outside this cutout becomes a set of

parameters of dialogue and inference, such as parameterizing or pondering the basis of questions. If we can establish this, we would say the universe outside of the larger scale cutout, established by the initial analysis, behaves like an Antithesis that targets the choices of the paths that will occur in the internal universe of the same cutout.

The same applicative practice of matrices can be continued in the process of detailing the contents of units of study, each one considering the set of coherences that compose them, tending more and more to the particularities. This exercise of propagated and interacting cutouts propitiation the logic of integrality allied to inseparability, strengthening unitary wholes and its correlations with the "great scale", and between this and the Whole, translated as the mechanics between totalizations. The concept of the dividing line is not the split, but the notion of dialogue by the evidence of cohesive particularities.

The points of interest or the lines of delimitation of the cutouts are obtained by successive overlaps of information mapped and recognized in the territory and its scale variables. The verification of the marks that will compose the demarcation line of the compartment of interest boundaries results from the simulations and definitions of physical and environmental elements, allied to economic and historical vectors, considering their uniform or heterogeneous content, in layers of verification and denial, feeding the dialectical process of the probabilities of results until the confirmation of a design synthesis.

It is important to mention that this practice applies to two reflexive conditioning factors of the field of Architecture and Urbanism, that this study intends to contemplate: a) applicability of the planning instruments and projects (or territorial programmatic actions) for the understanding and technical operation in territories of large scale and its propagations; b) the applicability of the dialectical processes of consolidation of projects and their scalable moorings or in projects to be revealed in territories of interest, by approximate and confirmatory processes (program and architectural conformation).

⁶ By convention we will adopt the term "large scale" for the first and largest among scales of the interest cutouts for any study or designing or processes of planning that is chosen by the dialectical logic between different space systems managed by the operator. This dialectic of comings and goings between continental scales, sometimes intrinsically deep, sometimes transcendentally marked, is anchored in the coherent connections between the duality of reading and the development steps of a proposal. From now on, it is the conceptualization of: the greatest scale desired for the beginning of a process of interaction with the environment for different forms of action, being able to vary, from only one urban block, to an interplanetary route.

Some actions in the field of planning and environmental impact assessments evaluations are already dictating the legal regulations of approval and management, but deserve a more careful look.

The determination of governmental environmental organisms that format and manage processes of approval and environmental licensing in the state of São Paulo, according to state and federal laws, establish regulations for the preparation and follow-up of EIA Environmental Impact Studies and their respective RIMA Environmental Impact Reports. An important step of this study is the definition of cutouts delimitation of areas of influence (three scopes of influence make up the environmental studies⁷), which should contain in each coverage the recognition of the environmental components that may suffer, in order of amplitudes, the relative impacts to the evaluated enterprise in question.

The cutouts for studies of territories considering their prerogatives of recognition of support for the correlation between object with potential of impact, as well as the evaluation of forms of mitigation or compensation of those impacts for purposes of legal approval and their execution, are fundamental to verify the coverages and its contents, and to determine after this understanding or "diagnosis", dimensional factors to correct any possible damages to the environment in the precepts of the law - the "rite" of evaluation and licensing.

The methodology of cutouts of Areas of Influence for Environmental Impact Studies is a legal determination and component of the normatives that regulate the analysis and approval documents, therefore, it has a relevant role in this In the last years, this aspect of disbelief in planning, especially in the urban plans (Municipal Master Plans and their operational and political forms) has been a critical line of several authors (VILLAÇA, 1999) – architects and urbanists – and also of political groups that see in the management of the territory an opening for dissimulation of actions that could dialogue with the different inhabitants as a democratic tool and amplifier of possibilities of society emancipation by the clear reading of its space, especially in the possibility of appropriation propagation of these means and of the operational political mechanisms of induction of new actions, configuring concrete relation of dispute and, perhaps one day, of balance between such differente and opponent factors. Learning to read the territory before its riches and multiplicities can be a possibility of revelation to the society as a whole of the collective reality, a fundamental ingredient for appropriation of the territory as a political content.

Architecture and Urbanism approach, ultimately, as a single field, establishing multiple variations and multi polarities of production and theoretical foundation.

FINAL CONSIDERATIONS

The present work problematizes the division of space that should not be understood here as particularization of fragments or segments of size and content. On the other hand, the need to recognize the space structure as indivisible by the integrality of the knowledge fields, although pulverized in their own intrinsic coherences, forces the researchers to point to the confluence of interdisciplinary ties increasingly evident. In this sense totality

reading process and evaluating the environment and its consequent change. However, neither the criteria that elected the prerogatives of choosing their scopes of cutout between the years 1980 to 2014 (year when new institutional parameters were set), nor after determinations of the new rules of approval and licensing - which must strictly integrate the content and format of EIA RIMA today - point to processes that are really essential and indisputable in the light of these technical limitations of influence of these areas.

⁷ Three areas of interest by amplitudes make up the line of analysis of territories which are submitted to the potential impacts resulting from projects that are influential in the environment, namely: Directly Affected Area (Área Diretamente Afetada - ADA) - or one that is directly linked to actions with direct impact of the enterprise, or in your area of insertion; Area of Direct Influence (Área de Influência Direta – AID) - or one that receives from the directly affected area the influences of the impacts of the enterprise in a larger cutout and; Area of Indirect Influence (Área de Influência Indireta – AII) - or one that can receive impacts derived from the other two areas of influence according to their coverage in the territory, extrapolating the boundaries of intervention.

is the question to be dealt with, but it is not the "fetter" that imprisons the decision-making line of reflection.

However, the notion of totality, which in our case greatly supports the cohesion of space theory, retakes the idea of sequential totalizations in successive and complementary temporal maturations (even by historical dissonances), giving the method the possibility to separate sections containing and carrying with them the force of the Whole by the detection of the peculiar records.

For this work the subdivision of space must obey principles that approximate the variation of the architecture and urbanism actions to the object and the scale of coverage of this object or, even more, between the sense of the places and their correlations of amplitudes, encompassing the problems of human actions materialized or not in space (intangible history).

Besides the article seek to contribute to the theoretical discussion of different scientific fields the methodological discussion collaborates to the problematization regarding the criteria definitions in establishing the Areas of Influence for Studies of Environmental Impact, that despite having legal determination of approval and licensing and component of the norms which regulate the approval documents follow with weaknesses in the establishment of their limits.

The methodological proposal of subdivision of space does not focus on thematic decisions in confinement (monothematic coherences), but on the intersection of the themes of space defined by the coherences articulated in systems of vital exchange (pluri-semantic coherences).

BIBLIOGRAPHICAL REFERENCES

AB'SÁBER, Aziz Nacib. O sítio urbano de São Paulo. In: Aroldo de Azevedo (org.). *A cidade de São Paulo*: estudo de geografia urbana. São Paulo: Companhia Editora Nacional p.169-243, 1957. (Coleção Brasiliana. vol.14)

ARISTÓTELES. Metafísica. São Paulo: Edipro, 2015.

DANTAS, Aldo; MEDEIROS, Tásia H. L. *Geografia Ratzeliana e seu contexto*. Brasília: Programa Universidade a Distância UNIDIS Grad/Ministério da Educação/SEED, 2008. (Colaboram diretamente nesse estudo a Universidade Federal do Rio Grande do Norte UFRN, e Universidade Estadual da Paraíba UEPB).

DIEGUES, Antônio Carlos. *O mito moderno da natureza intocada*. São Paulo: HUCITEC, 1996. 169 p.

GOMES, José C. Entrevista: Retto Junior, A.S., Constantino, N. R. T., Enokibara, M. Revista Vitruvius, 2005.

GREGOTTI, Vittorio. Território da arquitetura. São Paulo: Perspectiva, 1972.

MODESI-GALTTIERI, May C. [et al.] (org.) *A obra de Aziz Nacib Ab'Sáber*. São Paulo: Beca Ball, 2010.

MORAES, Antônio Carlos R.; COSTA, Wanderley M. *Geografia crítica*: a valorização do espaço. 2. ed. São Paulo: Hucitec, 1987.

MORIN, Edgar. *Introdução ao pensamento complexo*. trad. Eliane Lisboa. 5. ed. Porto Alegre: Sulina, 2015.

MORIN, Edgar. Os sete saberes necessários à educação do futuro. São Paulo: Cortez; Brasília, DF: UNESCO, 2000.

POPPER, Karl. R. A lógica da pesquisa científica. São Paulo: Cultrix, 2001.

RODRIGUES, Cleide. Morfologia original e morfologia antropogênica na definição de Unidades Espaciais de Planejamento: exemplo na metrópole paulista. *Revista do departamento de Geografia*, São Paulo, v. 17, p. 101-111, 2005.

SANTOS, Milton. *A natureza do espaço*: técnica e tempo. razão e emoção. São Paulo: HUCITEC, 1996.

SARTRE, Jean Paul. Search for a method (196). New York: A Vintage Book, 1968.

SILVA, Jonathas Magalhães Pereira da; MANETTI, Claudio; TANGARI, Vera. Compartimentos e unidades de paisagem: método de leitura da paisagem aplicado à linha férrea. *Paisagem e Ambiente: Ensaios*, n. 31. p.61-80, 2013.

SILVA, Jonathas Magalhães Pereira da. Para que serve a morfologia urbana. Revista de Morfologia Urbana. Revista da Rede Lusófona de Morfologia Urbana. v. 4, n. 2; p 119-121, 2016.

SILVA, Jonathas Magalhães Pereira da. As unidades de paisagem como método de análise da forma urbana: reflexões sobre sua incorporação pelo campo disciplinar da arquitetura e urbanismo. *Cadernos do PROARQ* (UFRJ), Rio de Janeiro, v. 20, p. 71-93, 2013.

VILLAÇA, Flávio. O processo de urbanização no Brasil. In DEAK, C.; SCHIFFER, S. R. (org.). O processo de urbanização do Brasil. São Paulo: EDUSP, 1999.

WHITEHEAD, Alfred North. An enquiry concerning the principles of natural knowledge. Cambridge, Mass: Cambridge University Press 1919.

Claudio Manetti
Pontificia Universidade Católica de Campinas PUC-Campina, Faculdade de Arquitetura Urbanismo
m 136, s/n, Rod. Dom Pedro I - Parque das Universidades, Campinas - SP, 13086-900
CV: http://lattes.cnpq.br/9757392947811691
Orcid: https://orcid.org/0000-0002-6394-1276

claudiomanetti@uol.com.br.

Jonathas Magalhães Pereira da Silva
Pontifícia Universidade Católica de Campinas, PUC-Campinas, Faculdade
de Arquitetura Urbanismo
m 136, s/n, Rod. Dom Pedro I - Parque das Universidades, Campinas - SP,
13086-900
CV: http://lattes.cnpq.br/8639950603854048
Orcid: https://orcid.org/0000-0002-8186-9626
jonathas.silva@puc-campinas.edu.br

34

Editor's Note Translation: Isabela Sollero Submission: 05/03/2018 Acceptance: 11/03/2019