

Ecological Urbanism: metabolic rift and phantasmagoria

Victor Garcia Figueirôa-Ferreira

Doctoral candidate, UFSCar, Brazil
victor.figueiroa@estudante.ufscar.br

Tatiane Borchers

Doctoral candidate, UFSCar, Brazil
tatiane@estudante.ufscar.br

Ricardo Augusto Souza Fernandes

Professor Doctor, UFSCar, Brazil
ricardo.asf@ufscar.br

ABSTRACT

This article seeks to contribute to the argument that Ecological Urbanism is a movement or a valid concept to promote resilience, sustainability and a socio-environmental diversity that values localities, presenting a resistance to hegemonic processes and patterns of a globalized urbanism. In this sense, a literature review and analysis was carried out regarding ecological urbanism itself, as well as the metabolic rift, in order to contribute to its ecological aspect and the phantasmagoria to approach its urban side. Defending the use of historical materialism in the analysis of urban space and the city, as well as the social, political, cultural and economic relations that permeate urban ecologies.

KEYWORDS: Ecological Urbanism. Metabolic Rift. Phantasmagoria.

1. INTRODUCTION

Ecological urbanism addresses "new old themes" as Fernández (2016) points out, since the discussions that it brings to the level of planning and design are present, for some time, in the historical-material urban process. Would ecological urbanism be a viable instrument to give a new perspective to the urbanity and the city from themes such as sustainability, resilience, green infrastructure, landscape and urban political ecology among others? Mostafavi and Doherty (2016b) - the editors of the book that initiated broader discussions on the topic - consider the city, under the lens of ecological urbanism, as a multiplicity of "instruments and with a worldview that is fluid in scale and disciplinary focus." But the question that remains is, what urbanism and for whom does it modify and construct spaces? Without a social, political, economic and cultural questioning, ecological urbanism is in danger of, in reverse of Urban Political Ecology (GANDY, 2015), focusing too much on sustainability and greening, overlooking and disregarding the historical materialistic context and the dynamism of urban environments, extolling sustainable development without questioning the need or the structure of development and its real sustainability.

The creation of urban ecological enclaves (HODSON; MARVIN, 2010; ROSS, 2011) should be avoided, *i.e.*, ecological and sustainable islands without integration to the urban fabric, which serve as an instrument for gentrification, insertion of the local and global real estate speculative financial capital, or are relegated to oblivion. This paper argues for the need of a perception about the regional, national and international dynamics of cities, as they exist within a highly integrated global space of capital flows, differ in their access to ecological resources, as well as in their ecological impact (HODSON; MARVIN, 2010).

To better work, within ecological urbanism, the socio-economic and politico-cultural aspects - especially for this study in the Global South and Brazil - some points are addressed: (i) the need to incorporate the concept of a metabolic rift in the analyzes of ecological urbanism to guard against patterns and strategies that promote socio-environmental inequality; (ii) the need to incorporate a historical-material analysis of local, national and international dynamics and forces; and (iii) to what kind of urbanism do urban transformations and interventions contribute and to whom?

The central argument is that ecological urbanism is a valid movement or concept to promote resilience, sustainability and a socio-environmental diversity that values localities, thus presenting a resistance to hegemonic processes and patterns of a globalized urbanism. At the

same time, if distorted, it can provide a tool for the intensification of the capitalist logic of production of urban space, creating a predatory and discriminatory phantasmagoria of green Arcades (BENJAMIN, 1999; FENTON, 2020; GOEBEL, 2011).

The present paper is organized as follows. Section 2 outlines the objectives of the paper, while in section 3, the research methodology is presented. Following that, the results, *i.e.*, the analyzes around the concepts of ecological urbanism, metabolic rift and Benjaminian phantasmagoria are carried out in section 4. The conclusions are presented in section 5.

2. OBJECTIVES

The aim of this study is to bring ecological urbanism closer to the concept of metabolic rift, as well as to the writings and concepts of Walter Benjamin, bringing the historical materialism perspective to this field of studies.

3. METHODOLOGY

The methodology of this work is composed of the following stages: (i) bibliographical review in scientific databases of articles and books about the themes relevant to this work; (ii) bibliographical review and analysis in order to identify possible connections and confluences between the analyzed themes, conceptual elaboration and propositions.

In step 1, searches were performed in the Scopus database, using terms related to ecological urbanism, metabolic rift and Walter Benjamin's phantasmagoria. Publications in Spanish, English, and Portuguese were maintained. In step 2, the main articles and books returned in the searches were individually analyzed and, if pertinent, selected for further consideration. Finally, a theoretical synthesis was made corresponding to each theme and its confluences.

4. RESULTS

4.1 Ecological Urbanism

Ecological urbanism needs to be critical to the future of the city and provide instruments, techniques, and means to adapt to the challenges that threaten humanity and its urban habitat, as well as its needs for health, well-being, and security (SPIRN, 2014). It must escape from the *status quo* and to do so "requires a new sensibility - one that has the capacity to incorporate and accommodate the inherent conflictual conditions between ecology and urbanism" (MOSTAFAVI, 2010). From these outlines, some guiding principles of ecological urbanism and its focus disciplines (urban planning and design) can be listed: (i) cities as part of the natural world; (ii) cities understood as ecosystems; (iii) cities as habitats; (iv) connected and dynamic urban systems; (v) each city has a particular structure and context; and (vi) urban design as an important tool (SPIRN, 2014). This list does not comprise all aspects of ecological urbanism, but serves as a reference.

On the other hand, ecological urbanism conceptually has a strong engagement with the concept of ecosophy (GUATTARI, 1990), which is the principle that an ethical-political articulation between the environment, social relations, and human subjectivity serves as an instrument to clarify the challenges and their possible solutions towards a global movement of ecologically conscious practices. This concept is a response to the depoliticized structuralism and postmodernism that, coupled with a predatory neoliberal economic structure, removes from the notion and understanding of the world any significance of human intervention (GUATTARI, 1990; MOSTAFAVI; DOHERTY, 2016b). This subjective and hegemonic structure of understanding is constantly reinforced by sociocultural and political-economic forces in order to form a cohesion (GRAMSCI, 1999) averse to the sensibility necessary to envision an "authentic political, social and cultural revolution, reshaping the objectives of the production of both material and immaterial assets" (GUATTARI, 1990).

The structuralism and postmodernism criticized by Guattari (1990) are still present today, both in immaterial spaces of human subjectivity and in the city's materiality. The task for ecological urbanism is clear, it must present alternatives to the present hegemonic structure, besides addressing the fragility and unsustainability of urban ecosystems, it needs, as a *sine qua non* condition, to address the production system of urban space itself, as well as the hegemonic processes that fall upon human subjectivity. As Milton Santos (2008) states, space is the materialization of social relations, past and present, as well as a subordinate and subordinative structure. Conforming to technocratic issues disconnected from an ecosophical approach is to prepare the field for the current hegemonic structures to sow it in order to raise their monoculture of accumulation by dispossession (GANDY, 2015; HARVEY, 2005, 2015; HODSON; MARVIN, 2010; MOSTAFAVI, 2010; MOSTAFAVI; DOHERTY, 2016a, 2016b; ROSS, 2011; SONN; SHIN, 2020; SPIRN, 2014; THATCHER; O'SULLIVAN; MAHMOUDI, 2016).

However, it is necessary to avert at all costs a potential tautology regarding ecological urbanism needed sensitivity, as it is both necessary for the proposition and fruition of plans and projects guided by ecological urbanism, as well as its aim. The sensibility that creates, has the difficult and necessary task of translating the possibilities and potentialities through the examination of the past and present, and of the social relations and forces in a dialectic relation with the urban space. The sensibility to be created, must be one of counter alienation, *i.e.*, it must be active in the process of production and reproduction of space. Drawing a parallel with Lefebvre's (1991) conception of space, these sensibilities are cause and result, product and producer.

In sum, ecological urbanism, in the mirror of Guattari's (1990) conception of ecosophy, should manifest itself as a project or a global political agenda that seeks to develop an urban planning that is subordinate and subordinated to human subjectivity, that promotes ecologically sustainable cities and not economically and socially predatory ones, as well as reformulates the notions and the production system itself as its sociocultural and political-economic dynamics. And, its guiding objective is to curb and, as far as possible, reverse the ecological impact that human civilization exerts on the planet.

4.2 Metabolic rift

The current economic system and its production structures have as one of its consequences the disturbance of metabolic interactions between human beings and nature, *i.e.*, it prevents the existence of a complete metabolic cycle where there is an extraction consistent with the return capacity and recovery of natural resources. Thus, there is a prolonged but perceptible process of planned and consented destruction in order to maintain a logic of self-propulsion, where the surplus accumulated in one stage becomes the investment fund for the next. Nature, the human being and the land, are nothing more than objects for sale. Therefore, the current production system undermines nature, the urban space, and its dwellers (CLARK; FOSTER, 2009; FOSTER; CLARK, 2004; MARX, 2013, 2015, 2017; SAITO, 2021).

The metabolic rift arises within this scenario where prevails the logic of transferring natural resources (in the most diverse forms), from the periphery to centers of transformation and consumption, which have no obligation to return to the point of origin the (renewable) waste generated, thus feeding it back into the system. The most classic example is given by Mariátegui (2007), when writing about the exploitation of guano and saltpeter in Peru, he demonstrated how the extraction of natural fertilizers of high value culminated not only in a process of aggressive exploitation and socio-environmental destruction, but also in the Nitrate War (or Pacific War). In this example, we can see how the global processes of natural resource transfer, allowed the concentration of ecological resources in some economies within the flow of international capital, while others have their potential development hindered. While London benefited from the British "High Farming" fed by Peruvian nitrates, the cities of the Latin America country reaped the spoils of the predatory system (FOSTER; CLARK, 2004; HODSON; MARVIN, 2010; MARIÁTEGUI, 2007).

This same logic of global transfer applies at the regional and local level, where resources (human and natural) are exploited and consumed by an urban center free of the responsibility to coexist in harmony with the ecosystems that sustain it. This maxim is true for, not exhaustively, food production, pluvial and fluvial waters, air quality, waste management, and labor force. To understand the metabolic dynamics of the city is to rethink how it relates to the environment and nature, not only in its surroundings, but internally.

What are the rifts that exist between the center and the periphery of the same urban agglomeration, and how can urban planning and design be applied in order to remedy such processes? This is the main question that must be asked by those who seek to apply ecological urbanism to the materiality of the urban space, as well as to analyze and question the connections at the regional and global level and the role that ecological urbanism has towards human subjectivity. For, the underpinning is that, without addressing subjectivity, even high quality and innovative interventions may find themselves in oblivion or serving a purpose other than the one intended (ABARCA; MORAES, 2019; FOSTER; CLARK, 2004; GANDY, 2015; HARVEY, 2005, 2015; HODSON; MARVIN, 2010; ROSS, 2011; ZIMMER, 2010).

4.3 Phantasmagoria, urbanity and innovation

Benjamin's phantasmagoria originates from Marx, who, in turn, used it to describe the fetishistic character of commodities. Benjamin, however, was interested in the conditions of commodity display, where the representative value of the commodity was emphasized and confused with its real value. The luxury commodity or the space in which it was displayed was given a phantasmagorical fetishistic character where the possibility of possession was something distant or impossible. Such a commodity could satisfy, or appear to satisfy, any kind of need from the stomach to the imagination. In their fetishistic role, urban spaces, networks, and infrastructures materialize and keep alive the utopian dream, something distant to be desired at all costs, and the higher the cost within this logic the more value this promise of a future possesses (BENJAMIN, 1991, 1999, 2007, 2009; KAIKA; SWYNGEDOUW, 2000; MARX, 2013).

As Kaika and Swyngedouw (2000) conclude, "the symbol of a possibility for a better world is turned into a fetish of a fragmented material realization of that better world and, as such, an object of desire *per se*". Therefore, this fragment is a commodity and is permeated by the production logic of the economic system that surrounds it. Bringing this to ecological urbanism, one should avoid the creation of phantasmagorical green enclaves that bring to the present time the Arcades of Paris, which like other materializations of future promises, were subverted becoming idols worshiped in themselves, symbols or mythological expressions of a past vision of the future. In other words, interventions, plans and projects of an ecological urbanism may, if phantasmagorical, represent only the outdated vision of a promise that never came to fruition, or they may serve as a fomentation for the anguish always present in humanity that cultivates phantasmagoria. Anguish that materializes in the incessant and insatiable search for the new that represents in its essence a reality that has always been present, in which novelty or innovation are incapable of formulating solutions that free humanity from the anguish it seeks to escape (BENJAMIN, 1999).

Today's Arcades are all the objects and materializations present in the urban environment or that are confused with it, whose function is to serve as a symbol (or idol, depending on the time) of something new and innovative, of a better and happier world, without anguish. These are all initiatives that emphasize the mythical sustainable development, and rest "on various forms of behavioral, organizational, or technological changes that effectively obscure the underlying dynamics of environmental degradation" (GANDY, 2015). Or that prophesy the future in the form of innovative solutions and, through a cohesive force, control or dictate subjectivity, perceptions of space, the individual, and the city, causing them to buy into the phantasmagoria.

Is ecological urbanism then doomed to be an agonizing and endless search for the hope or promise of a better and ecologically sound future? No, as long as it is aware of this possibility and analyzing history in a materialistic manner understands the pitfalls and dangers of the innovative materialization of old utopias. The awareness of addressing "new old themes" as Fernández (2016) points out, is paramount to avoid the fruition of the mythical anguish that preys humanity, its habitats, its subjectivity and its ecologies. It is argued finally, following Hodson and Marvin (2010), the need to develop a debate on the causes and consequences of

ecological urbanism in order to avoid the creation of new eco-technical and purely speculative and financialized urban products as a response to ecological and economic crises.

5. CONCLUSION

This article sought to bring closer ecological urbanism and the concept of metabolic rift, as well as the concept of phantasmagoria worked by Walter Benjamin. To this end, a literature review was conducted on the three themes, weaving considerations about how the last two can corroborate with the first in the improvement of urban spaces and its ecologies. In a succinct way, this study sought to demonstrate some challenges inherent to any urban initiative and made use of Walter Benjamin's writings to raise a discussion that seeks to prevent the creation of green enclaves of restricted access and little impact within cities. To contribute to the ecological aspect, the concept of metabolic rift was presented as a viable approach for better analysis and understanding of the urban processes in local, regional, and global levels.

Ecological urbanism cannot represent or materialize the fragments of an eternal promise, nor means for the deepening of the metabolic rift. It must provide solutions capable of escaping, competing with, and subjugating the hegemonic production logic of the space, the human being itself, and their subjectivities. To do this, a historical materialistic awareness of the processes inherent to the ecosystems at work (environment, social relations and human subjectivity) is required by those who plan and design the city and the urban space.

Acknowledgments

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) – Finance Code 001.

REFERENCES

ABARCA, A. L. F.; MORAES, L. M. Ecologia Política Urbana No Estudo Da Cidade Segregada Latino-Americana. **RDE-Revista de Desenvolvimento Econômico**, 2(43), 2019.

BENJAMIN, W. **Über den Begriff der Geschichte**. Em: **Gesammelte Schriften**, I, 3, (p. 1223 - 1266), Frankfurt: Suhrkamp Verlag, 1991.

BENJAMIN, W. **The Arcades Project**. Belknap Press of Harvard University, Londres, 1999.

BENJAMIN, W. **Illuminations**. New York, US, Editora: Schocken Books, 2007.

BENJAMIN, W. **One way Street and Other Writings**, London, England, Editora: Penguin Modern Classics, 2009.

CLARK, B.; FOSTER, J. B. Ecological imperialism and the global metabolic rift: Unequal exchange and the guano/nitrates trade. **International Journal of Comparative Sociology**, v. 50, n. 3-4, p. 311-334, 2009.

FENTON, R. P. Decolonizing Benjamin in the Tropics: The long history of Guayaquil's arcades. **Singapore Journal of Tropical Geography**, v. 41, n. 3, p. 367-383, 2020.

FERNÁNDEZ, L. Urbanismo y ecología en Buenos Aires: un recorrido por la planificación urbana en su contexto ecológico-regional. **urbe. Revista Brasileira de Gestão Urbana**, v. 8, p. 12-27, 2016.

FOSTER, J. B.; CLARK, Brett. Ecological imperialism: The curse of capitalism. **Socialist register**, v. 40, 2004.

GANDY, M. From urban ecology to ecological urbanism: an ambiguous trajectory. **Area**, v. 47, n. 2, p. 150-154, 2015.

GOEBEL, R. J. Benjamin's Arcades Project today: From the European metropolis to the global city. **Journal of Postcolonial Writing**, v. 47, n. 5, p. 488-496, 2011.

GUATTARI, F. **As três Ecologias**. Campinas: Papirus, 1990.

GRAMSCI, A. **Cadernos do Carcere, Volume 1: Introdução ao Estudo de Filosofia, A Filosofia de Benedetto Croce**. Rio de Janeiro: Civilização Brasileira, 1999.

HARVEY, D. **A brief history of neoliberalism**. Oxford University Press, USA, 2005.

HARVEY, D. **Paris, capital da modernidade**. São Paulo: Boitempo Editorial, 2015.

HODSON, M.; MARVIN, S. Urbanism in the anthropocene: Ecological urbanism or premium ecological enclaves?. **City**, v. 14, n. 3, p. 298-313, 2010.

KAIKA, M.; SWYNGEDOUW, E. Fetishizing the modern city: the phantasmagoria of urban technological networks. **International journal of urban and regional research**, v. 24, n. 1, p. 120-138, 2000.

LEFEBVRE, H. **The production of space**. Blackwell: Oxford, 1991.

MARIÁTEGUI, José Carlos. **7 ensayos de interpretación de la realidad peruana**. Caracas: Fundación Biblioteca Ayacucho, 2007.

MARX, Karl. **O Capital-livro 1-capítulo 1: A mercadoria**. Boitempo Editorial, 2013.

MARX, K. **Manuscritos econômico-filosóficos**. Boitempo Editorial, 2015.

MARX, K. **O capital-Livro 3: Crítica da economia política. Livro 3: O processo de circulação do capital**. Boitempo Editorial, 2017.

MOSTAFAVI, M. Why Ecological Urbanism? Why Now?, Harvard Design Magazine: Design Practices Now, n. 32, v. 1, 2010.

MOSTAFAVI, M.; DOHERTY, G. **Ecological urbanism in Latin America**. *Revista Brasileira de Gestão Urbana*, 8(1), 7-11. 2016a.

MOSTAFAVI, M.; DOHERTY, G. **Ecological urbanism**. Zurich: Lars Müller, 2016b.

ROSS, A. **Bird on fire: Lessons from the world's least sustainable city**. OUP USA, 2011.

SAITO, K. **O ecossocialismo de Karl Marx: capitalismo, natureza e a crítica inacabada à economia política**. São Paulo: Boitempo, 2021.

SANTOS, M. **Por uma geografia nova: da crítica da geografia a uma geografia crítica**. São Paulo: Editora da Universidade de São Paulo, 2008.

SONN, J. W.; SHIN, H. B. Contextualizing accumulation by dispossession: The state and high-rise apartment clusters in Gangnam, Seoul. **Annals of the American Association of Geographers**, v. 110, n. 3, p. 864-881, 2020.

SPIRN, A. W. Ecological urbanism: A framework for the design of resilient cities. In: **The ecological design and planning reader**. Island Press, Washington, DC, 2014. p. 557-571, 2014.

THATCHER, J.; O'SULLIVAN, D.; MAHMOUDI, D. Data colonialism through accumulation by dispossession: New metaphors for daily data. **Environment and Planning D: Society and Space**, v. 34, n. 6, p. 990-1006, 2016.

ZIMMER, A. Urban political ecology: Theoretical concepts, challenges, and suggested future directions. **Erdkunde**, p. 343-354, 2010.