

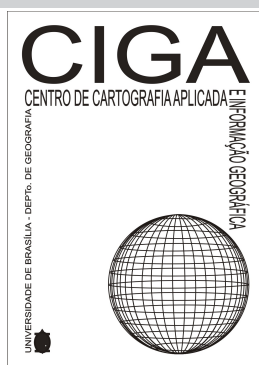
Artigo

## THE CHALLENGE OF UNDERSTANDING NATURE IN MILTON SANTOS'S WORK

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p. 21-29

revista



T - T - T

Electronic Magazine:  
Time - Technical - Territory,  
V.4, N.1 (2012), 21:29 ISSN:  
2177-4366

DOI: <https://doi.org/10.26512/ciga.v4i1.16322>

Como citar este artigo:

PELUSO, M. L. THE CHALLENGE OF UNDERSTANDING  
NATURE IN MILTON SANTOS'S WORK.

Revista Eletrônica: Tempo - Técnica - Território, v.4, n.1 (2013),  
p. 21:29 ISSN: 2177-4366.

DOI: <https://doi.org/10.26512/ciga.v4i1.16322>

available in:

<http://inseer.ibict.br/ciga/index.php/ciga/article/viewFile/171/130>

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## THE CHALLENGE OF UNDERSTANDING NATURE IN MILTON SANTOS'S WORK

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**Resumo:** Pretende-se, neste artigo, discutir a maneira como Milton Santos teoriza o conceito de Natureza e como ela se integra à totalidade espacial. Duas perguntas norteiam o texto: “Qual o lugar da Natureza no jogo histórico das superestruturas e da infraestrutura, na formação econômica e social?” e “Pode-se conhecer integral e racionalmente a Natureza no atual período técnico-científico-informacional”? A premissa é de que a Natureza é uma constante preocupação de Santos, mas seu sentido na totalidade não é imediatamente visível, e deve por isso ser escavado em seus trabalhos. A ideia do artigo é contribuir para a reflexão sobre os caminhos de Milton Santos, sem chegar a resultados definitivos, mas contribuir para novas reflexões.

**Palavras-chave:** Milton Santos; Natureza; totalidade espacial; período técnico-científico-informacional.

**Abstract:** It is intended, in this article, to discuss how Milton Santos theorizes the concept of Nature and how it is integrated to the spatial totality. Two questions guide the text: “What is the place of nature in historic game of superstructure and infrastructure, in the economic and social formation?” And “Is it possible to know the nature fully and rationally in the current technical-scientific-informational period?” The premise is that Nature is a constant concern to Santos, but its meaning in the totality is not immediately visible, and should therefore be deepened in his work. The idea of this article is to contribute to the reflection about the ways of Milton Santos, without reaching definite results, but contribute to new thinkings.

**Keywords:** Milton Santos; Nature; spatial totality; technical-scientific-informational period.

**Resumen:** La intención de este artículo es discutir cómo Milton Santos teoriza el concepto de Naturaleza y cómo ella se integra a la totalidad espacial. Dos preguntas guían el texto: a) ¿cuál es el lugar de la Naturaleza en el histórico juego de superestructura y infraestructura en la formación económica y social? y b) puede conocerse plenamente y racionalmente la Naturaleza en el período técnico-científico-informacional de la actualidad? Nuestra premisa es que la Naturaleza es una preocupación constante para Santos, pero su significado en la totalidad no es inmediatamente visible, y por lo tanto se debe adentrar en su obra para captar su significación. La idea de este trabajo no es llegar a resultados definitivos sino contribuir a la reflexión y a nuevas formas de pensar sobre los caminos teóricos de Milton Santos.

**Palabras clave** Milton Santos - Naturaleza - totalidad espacial - período técnico-científico-informacional.

## Introduction

The work of Milton Santos is a renewed source of reflections and stimuli for all who research the current problems, whether or not geographers. It is a challenge and at the same time a pleasure, talk of the concepts that he developed throughout his intellectual work. Space was the major concern of Santos, theorized by society and nature in various times and in various ways with new approaches to key issues of Geography.

Among the many theorizations of Santos as choice we intend to present in this article a little discussion about the way he approaches the concept of Nature and how it integrates into space. The question is “why “Nature”? Because it is a key concept in Geography, appearing from the early geographers who sought to systematize the field of studies of this subject. Geography studies the way society produces the space from the relations between men and nature and the relations between men themselves in different moments of the history of culture and civilization. Such scientific bias is not random, but results from the social division of scientific work, whereby the geography was up to work with the contact area between nature and society, a very rich task, which, however, originates discussions and controversy to this day today.

The choice of theme has proved a difficult task, though rewarding, due to the complexity of the thought of Santos, and to the many voices that intersect in his writings and the volume of his publications. Therefore, new choice must be made and it comes to the bibliography to be consulted, which is crucial for determining the theme. It starts with the questions raised by reading and several readings of Chapter 1 of the book “Sociedade e Espaço” titled “Sociedade e espaço: a formação social como teoria e como método”<sup>1</sup>. Other questions come from the Prologue of the book “Espaço e Método”, entitled “Uma palavrinha a mais sobre a natureza e o conceito de espaço”.

In the first work, Santos proposes to incorporate the space into the structures of social-economic formation, calling it “social-economic and spatial formation” because “the space reproduces the social totality insofar as these transformations are determined by social, economic

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<sup>1</sup> This chapter was published as an article in the scientific magazine “Antipode”, Volume 9, issue1, pages 3-13, February 1977. It can be reached in the site <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8330.1977.tb00077.x/abstract>.

and political needs” (SANTOS, 1979, p. 18)<sup>2</sup>. In the second work, Santos, early on, writes: “The essence of space is social. In this case, the space can not only be formed by things, geographic, natural and artificial objects, which together give us the Nature.” (SANTOS, 1985, p. 1). What would mean the statement? How Nature is not part of society? The question is relevant, especially when Santos distinguishes some paragraphs before, “social ingredients and 'nature“ (SANTOS, 1985, p. 1).

Two questions can be asked. The first is “What is the place of nature in historic game of superstructure and infrastructure, in the economic and social formation?” The second question can be thus formulated: “Is it possible to know the nature fully and rationally in the current technical-scientific-informational period?” We start from the premise that nature is a constant in the works of Milton Santos, but its sense in totality is not immediately apparent, and should therefore be deepened in his texts. The answers to be deepened are not meant to reach definitive results about the nature/society totality, but intend to raise new issues and new questions to be researched, and to contribute to the reflection about the Nature in Milton Santos way.

There will be some subjectivity in what will be developed, contrary to that which the master Santos recommended, when he wrote in “O Estado-nação como espaço, totalidade e método” (SANTOS, 2002, p. 44): “however, in a very close level to the researcher the possibility of error in the choice of variables increase by the risk of subjectivity”. However, what can you do? Despite the search for objectivity, we always fall into the trap of choosing the variables. Therefore, to make the text as objective as possible, we will follow two ways: the first discusses the historicity of nature and the second, the knowledge of nature as an expression of reason. Perhaps in the second path underlies the question of truth, but we can not say for sure that the question has a clear answer. After all, it is always necessary to leave room for further questioning.

## **1. The historicity of Nature in the work of Milton Santos**

Writing in 1982 in the collection “Novos rumos da Geografia brasileira”, Santos writes about the contribution of Marxism to the new geographical times, and emphasizes

This critical contribution can only come from an authoritative knowledge of categories and an area also seated in history, especially of its present data. Out

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<sup>2</sup> Author note: the quotes were freely translated by the author.

there, the risk is high to reach conclusions that deviate from the real instead of allowing its interpretation (SANTOS, 1982a, p. 133).

In this sentence, I believe, there are two important aspects that interest me: the knowledge sitting in history, and the knowledge as an interpretation of reality. If we consider that knowledge is seated in history, the knowledge of Nature is also seated in history; if knowledge is the interpretation of the real, Nature must be understood within the real-total of the present.

However the concepts cannot be static and “it is essential to consider the new historical conditions, both infrastructural as supra-structural [...]” (SANTOS, 1982, p. 134). Therefore, I make the following question: is nature itself that changes, or is its concept that varies? I can answer with reasonable certainty: to Milton Santos what is Nature depends on its position as an element of dynamic spatial totality and its relation to the other elements. I am inspired by Milton's own words when he writes:

What interests us is the fact that in every historical moment each element changes its role and position in the temporal system and in the spatial system, and, each time, the value of each must be taken of its relationship with the other elements of the whole. (SANTOS, 1985, p. 9).

Talking about the historicity of Nature we have to remember always and again, that we are facing a second Nature set by society. I believe that the analysis can also deal with another angle and despite the short time to develop it, it is worth trying.

It is important to consider the interaction and interdependence between the elements of space as does Santos in 1985. At this moment, he works Nature as “ecological environment” and considers Nature as “the set of territorial complexes that constitute the physical basis of human labor” (SANTOS, 1985, p. 6). The elements of the space are seen from the perspective of labor and production, for which Nature is a support in the technical-scientific period.

If Nature can only be understood within the real-total of the present - “The history is the today of each actuality” (SANTOS, 1994, p. 90) – it means that Nature has also a history, but within the space-temporality of men. It is what Santos (1994, p. 15) calls “successive Nature Systems”, which happen when men withdrew from their environment everything they needed and complete their transformation into Social Nature (SANTOS, 1994, p. 16) in the technical-scientific-informational period.

We have, then, in these systems, the passage of natural Nature, even now second nature to the artificial nature-object:

Our world provides, therefore, a new system of nature, a nature that, thanks precisely to the ecological movement, knows the summit of his its denaturalization (SANTOS, 1994, p. 90).

Denaturalization because, taken by the media, the discourse of the environment exaggerates aspects of nature that interest the media itself and man misses the notions of the whole, of the entire history, of the system of things, of the permanent given for life and labor. The historic Nature is transformed into nature spectacle (SANTOS, 1992).

In 1997, Santos returns to the historicity of nature, showing the previous and the now, and now, a nature converted into an object, when then he reinforces ideas that he had developed earlier:

In the beginning, all were things, while today everything tends to be objects, since the things themselves, gifts of nature, when used by men, from a set of social intentions, become also to be objects. Thus nature becomes a real object system and no more a system of things and ironically it is the very ecological movement that completes the process of denaturalization of nature, giving it a value (SANTOS, 1997, p. 53).

In this passage of Santos' reflections shows a clear transition from a magical concept of Nature, where were projected human characteristics in the nature (DUARTE, 1986) to the appropriate nature to labor in manufacturing, which is a resource for the production of goods. So, nature was transformed into a resource, as Milton wrote at various times, and as such, divisible, transformable and monetized. It changed its position in the space-time system and its relationship now is no longer to provide gifts to satisfy human needs, but taken by the technical and the social division of labor, it is a feature of the production process and a moment of the production modes times (SANTOS, 1997).

The concept of nature has changed: it is no longer subject - the Nature of primordial times that we will never know, and acquired the status of object - the nature of current urban period in which the city is the most perfect place in the predominance of techniques. So, it ceased to be the First Nature and became, forever, second nature. Santos (1997, p. 203) writes that the old distinction between first nature and second nature should be relaxed, because "nature that has already been modified by man also is first nature," considering that "production is not more action of the labor on the nature, but labor on the labor."

It can be said, therefore, that the role of the nature changes in the production process, Nature element as in the whole system is also no longer the same nature. However I do not want categorically to conclude, and I will leave this answer open to make reflections about the thing itself

- the nature - or its value - nature to the mode of production. In the superstructure and infrastructure historic game, nature now becomes a resource to labor.

## 2. The knowledge of nature as an expression of reason

In the second part, we intend to discuss how Santos deals with the reason in his work, analyzing what he writes about nature. I will do it using only two works, “Pensando o espaço do homem”, the 1982 book, and “A Natureza do espaço. Técnica e tempo; razão e emoção”, the 1997 book. Here, the key categories for discussion are ideology and symbol. It seems to me that in these two books, ideology and symbol, though they look similar, are part of a spatio-temporal context that make them quite different.

In the first book, in 1982, ideology and symbol fetishize man and reality, but it seems that one can still get to the truth if possible unveil them, to ideology and symbol, showing its falsity and overcome them. In the second book, ideology and symbol has been incorporated in such a way to the reality that became the truth itself and the fetish becomes the reality.

We will see in a few quotations how the transition occurs. In 1982, Milton Santos discusses the ideology and symbol as concealers of reality, such as appearance, which hinder and even hinder, know the truth. “Object” for him “has two faces: the true, that does not surrender easily to the observer, and the visible face, framed by ideology” (SANTOS, 1982b, p. 23). Knowledge, now, is to find the essence beneath appearances, is to find the hidden face of the object.

Then, when he discusses the functional architecture of the Bauhaus and its ideological modernity of an order directed to the requirements of production, which turns everything into exchange value and in manufactured objects that refuse nature as a model, Santos calls it “architecture as *mass-media*, pregnant with symbolism and intentions “(SANTOS, 1982b, p. 24). Therefore, “defetishizing man and space means lead the symbols that cover the true Nature” (SANTOS, 1982b, p. 25). At the end of the sentence Santos refers to Ernst Cassirer, in an endnote chapter.

It is interesting to note the dialogue that Santos establishes with Cassirer. I would say that it is a dialogue of opposition, in which he uses an author to write the opposite of him, because Cassirer considers the symbol the true distinction of man, the essential qualitative change that made him human, when he writes:

Man has, as it were, discovered a new method of adapting himself to his environment. Between the receptor system and the effector system, which are to be

found in all animal species, we find in man a third link which we may describe as the symbolic system. (CASSIRER, 1994, p. 47/48).

The symbolic dimension makes man live in a new dimension of reality, considering that “man lives in a symbolic universe” (CASSIRER, 1994, 48). For Santos, however, and here I am making an interpretation - I recognize - what distinguishes man is the rational thought, allowing to know the reality beyond the symbol and beyond ideology and also can be added beyond the commodity fetishism.

The nature, free from ideology, symbol and fetish, would be known in its status of element of the totality, free from subjective; known by the reason in the real-concrete of a world without ideology and without symbolism. I see here that ideal of reason, in which knowledge would be able to bring the world, the nature, the society before man and unveil them fully (FIGUEIREDO, 1993).

In the second book, the 1997 one, Milton Santos did not give up seeking the truth and knowing the real-concrete in all its fullness, but now, the ideology and the symbol become part of reality, no longer hide it. Or maybe just to hide it? Santos does not discredit the reason, but it is no longer the illuminist and philosophical reason that allows us to understand the world and nature, but a tamed reason that produces “a rationality according to ends and means, obedient to the instrumental reason, to formalized reason, deliberate action by others, informed by others” (SANTOS, 1993, p. 91). The reason loses the autonomy of knowing.

If, in 1982, the ideology and the symbol were out of reality and sought fetishize it, in 1997,

The ideology produces symbols, created to be part of real life and that often take the form of objects. Ideology became at the same time, an essence element and an existential element, at the end of the twentieth century (SANTOS, 1997, p. 102).

What is the reason in 1997? It is the hegemonic reason of techniques, the universal reason imposed by the global order, which imposes operational rationality of organization (SANTOS, 1997, p. 272). The technical reason that transforms nature always in second nature, continually overwhelmed by the mode of production that dominates everything and everyone, men and nature. But, dialectically, the same instrumental reason produces a counter-reason, “objectively, one can also say that, from this hegemonic rationality counter-rationalities are installed in parallel” (SANTOS, 1997, p. 246).

Dialectically also the reason has shifted from the center to the periphery, to the counter-rationality of the poor, the migrants, the excluded, the minorities, so that



[...] from an economic point of view, (the counter-rationality stays now) among the marginal activities, traditional or newly marginalized, and, from a geographical point of view, in the less modern and more 'opaque' areas, made irrational by economic uses (SANTOS, 1997, p. 246).

The reason shifted to other forms of rationality, “parallel, diverging and converging rationalities at the same time” (SANTOS, 1997, p. 246). And then, to finish, I wonder if we can still know the nature as an element of the real-concrete in all its reality and concreteness, or if we can only know it as ideology and symbol, as a resource and ecological environment in which it changed in today's globalized world, technical-scientific-informational.

### 3. Can we conclude with new questions?

Some questions can be posed now for conclusion: can man really know the Truth? Can men really know the Nature? Will the new rationality allow us the real interpretation of Nature or will lead us far away from it? These are questions that remain for further reflections.

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