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A reading on the concept of nature in Henri Lefebvre's theory of the production of space

ABSTRACT

Since the end of the last century, Henri Lefebvre's theory about the production of space has been very assimilated into human geography and social sciences as a whole, although readings and interpretations are not completely complementary. Discussions about the right to the city, everyday life, and urbanization echo the debate about space promoted by the theory. However, the concept of nature present in Lefebvre's work, especially in the context of his theory about the production of space, did not always figure in the debates. It went unnoticed or deserved little attention. Nevertheless, this concept has been focused on recent decades, and more recently, conflicting interpretations have emerged on this part of his work. This article argues that understanding the production of space requires a dialectical approach to the relationship between society and nature mediated by labor and production. Thus, contradictions in capitalism lead to environmental problems and simultaneously require careful analytical treatment, as the complex tension, interactions, and mediations between humans and nature cannot be reduced to a mechanistic dualism or an antinomy. This facilitates understanding of the politicization of nature as well as the politics of space, demonstrating that the ecological crisis is at the heart of the socio-spatial debate.

Keywords: Nature, production of space, politics of space, politics of nature

Uma leitura sobre o conceito de natureza na teoria da produção do espaço de Henri Lefebvre

RESUMO

Desde o final do século passado, a teoria da produção do espaço de Henri Lefebvre foi muito bem assimilada no âmbito da geografia humana e das ciências sociais como um todo, apesar da existência de leituras e interpretações que não são totalmente complementares. As discussões sobre o direito à cidade, a vida cotidiana e a urbanização ecoam o debate espacial que aquela teoria promove. Entretanto, o conceito de natureza presente na obra de Lefebvre, notadamente no contexto da teoria da produção do espaço, nem sempre figurou nos debates. Em verdade, passou despercebido ou mereceu pouca atenção. Contudo, tal conceito vem sendo foco de análise nas últimas décadas, e mais recentemente surgiram interpretações conflitantes por parte dos intérpretes de sua obra. Neste artigo argumento que a compreensão da produção do espaço exige uma abordagem dialética da relação sociedade e natureza que é mediada pelo trabalho e pela produção, a qual revela, no capitalismo, contradições que desembocam na problemática ambiental e, ao mesmo tempo, exige um tratamento analítico mais cuidadoso, posto que a tensão complexa, as interações e mediações entre ser humano e natureza não podem ser reduzidas a um dualismo mecanicista ou uma antinomia. Deste modo, abre-se a possibilidade de compreender, juntamente com a política do espaço, a politização da natureza, evidenciando que a crise ecológica está no cerne do debate socioespacial.

Palavras-chave: Natureza, produção do espaço, política do espaço, política da natureza

Lecture sur le concept de nature dans la théorie de la production de l'espace d'Henri Lefebvre

RÉSUMÉ

Depuis la fin du siècle dernier, la théorie de la production de l'espace d'Henri Lefebvre a été très bien assimilée au sein de la géographie humaine et des sciences sociales, malgré l'existence de lectures et d'interprétations pas tout à fait complémentaires. Les débats sur le droit à la ville, la vie quotidienne et l'urbanisation font écho au débat spatial promu par cette théorie. Cependant, le concept de nature présente dans l'œuvre de Lefebvre, notamment dans le cadre de la théorie de la production de l'espace, n'a pas toujours figuré dans les débats. En réalité, cela est passé inaperçu ou a reçu peu d'attention. Cependant, ce concept a fait l'objet d'analyses au cours des dernières décennies et, plus récemment, des interprétations contradictoires ont émergé de la part des interprètes de son travail. Dans cet article, je soutiens le fait que comprendre la production de l'espace nécessite une approche dialectique de la relation entre la société et la nature qui passe par le travail et la production, ce qui révèle, dans le capitalisme, des contradictions qui conduisent à des problèmes environnementaux et, em même temps, nécessite un traitement analytique plus soigné, puisque la tension complexe, les interactions et les médiations entre les êtres humains et la nature ne peuvent être réduites à um dualisme mécaniste ou à une antinomie. De cette manière s'ouvre la possibilité de comprendre la politisation de la nature, conjointement à la politique de l'espace, tout en soulignant que la crise écologique est au cœur du débat socio-spatial.

Mots-clés: Nature, production de l'espace, politique de l'espace, politique de la nature

INTRODUCTION

The so-called "environmental issue" has become popular as a fundamental topic of political, economic and social debate in the last quarter of the twentieth century. The transformations arising from the Industrial Revolution in the 18th century have become the focus of discussions about how society relates to nature, leading to a set of academic and political interventions that, since the 1970s, have sought to draw attention to how techniques, science and industrialization affect nature and the environment. In recent decades, "a new dimension of the capitalist production of nature has considerably transformed the social relationship with the natural world" (Smith, 2007, p. 16). The debates around the Anthropocene and Capitalocene (cf. Moore, 2022; Angus, 2023), currently in vogue, exemplify these different forms that the "destruction of nature," the "ecological problems," and the "environmental issue" have been assuming in the context of several political, environmental and ecological movements that deal with topics such as climate justice, environmental racism, global warming, among others.

The various forms of conceptualizing the relationship between society and nature reflect the most varied political propositions. Harvey (2020, p. 232, free translation) is precise at this point, arguing that "the current battles fought around the concept of 'nature' and 'environment' are of enormous importance," battles that suggest differentiated political responses, since "all socio-political projects are ecological projects and vice versa." Historically, the relationship between society and nature has been based on several contributions and, currently, different scientific fields question the concepts, their relationships, and deal, in one way or another, with the social-natural dualism aiming to overcome it (Marques, 2019; Charbonnier, 2021). In Marxism, there is a long, tortuous and thorny historical trajectory of the debate on nature (Foster; Clark, 2017; Luedy; Laan, 2020; Leudy, 2021). The focus on what is conventionally called "eco-socialism" (Lowy, 2021; Saito, 2020) reflects well the vigor with which the debate around nature, the ecological crisis and the future of humanity interrelates with the political discussion, the (contradictory and, therefore, destructive) dynamics of capitalism and the alternatives to the current civilizing model.

Notably, in the recent period, at least three theoretical trends that stand out in the debate on the relationship between Marxism and ecology: i) the "school of metabolic rift" (Foster, 2005; Foster; Clark, 2020; Saito, 2020); ii) the "world-ecology" perspective (Moore, 2016, 2022); and, finally, iii), the radical geography current around the "production of nature" thesis (Smith, 2007, 2020; Prudham, 2009; Loftus, 2017). All of them have an important outreach with regard to environmental agendas through the human and social sciences.

One of the main Marxists of the twentieth century, Henri Lefebvre – who produced a rich oeuvre on various themes (Anderson, 1985), such as everyday life, the right to the city, the urbanization of society, the urban revolution and the State – has been sidelined, for some time, from the most systematic analyses on the Marxist contribution to the dialectic of society and nature. Although nature appears constantly in his oeuvre, this theme has only recently been taken seriously in his texts.

Fortunately, after important initiatives to address the issue (Smith, 1998; Janzen, 2002), some more recent works have sought to fill this previously little problematized gap (cf. Limonad, 2021; Napolenato; Foster; Clark, 2022; Napoletano et al., 2022, 2023; Scott, 2019; Paiva, 2019; Pereira, 2023a; 2023b), with some authors already considering Lefebvre as an author with a fundamental contribution to environmental sociology and, more broadly, to Marxist ecological critique (Foster et al., 2020). In this sense, Janzen (2002, p. 97, emphasis added in the original) pointed out that "it is Lefebvre's *problematic* of the *production* of space that provides a useful point of departure for thinking about space and nature in the politics of socialist ecology".

This article seeks to contribute in this regard, with the objective of analyzing how the concept of nature appears in Henri Lefebvre's theory of production of space. A methodological approach is required: although Lefebvre elaborates, in a somewhat fragmented manner, reflections on nature since the 1930s (Lefebvre; Guterman, 2018; Lefebvre, 1971), when he publishes his first books, this article focuses on the period from the late 1960s until his death in 1991; this is the period in which the theory of production of space is launched, consolidated and incorporated into his other works, even after 1974, when the book *La production de l'espace* was originally published. It is hypothesized that the concept of nature existing in Lefebvre's theory of production of space has political contours and highlights the dialectical tension between space and society, so that a politics of space must necessarily incorporate a politics of nature. In these terms, the relationship between space and nature is evidenced by dialectical logic and not by formal logic. Therefore, this constitutes an important line of reflection for thinking about contemporary ecological issues.

The text is divided into two parts, in addition to this introduction and the final considerations. First, an approach is elaborated regarding the theory of production of space and the concept of nature present in it and, in the second part, we seek to argue that the

politics of space is not separated from the politics of nature. Thus, this article is expected to foster more systematic and deeper reflection on the ecological issue in Lefebvre's thought.

THE THEORY OF PRODUCTION OF SPACE AND THE CONCEPT OF NA-TURE

Luedy (2021, p. 15) says that, in the early 20th century, Lefebvre's work features resonances of Marxist debates about nature after György Lukács' intervention in *History and Class Consciousness*. According to the author, Lefebvre, in the manner of Walter Benjamin, "represented nature as something active, open and in perpetual transcendence," and, beyond that, on the one hand, several times "treated nature as something mediated logically, discursively and practically by the human" and, on the other hand, positioned himself in defense of the thesis of the anteriority of nature in relation to the spirit, the being in relation to consciousness (Luedy, 2021, p. 15, free translation).

Lefebvre's oeuvre often shows a concern about the theme of ecology, nature and the role played by ecologists in the context of the 1960s and 1970s. In *Nature et conquêtes sur la nature*, the ninth prelude to his work on modernity, published in 1962, whose title reveals a clear interest in nature and seems to capture some of the "zeitgeist," Lefebvre says early on:

The abuses of cosmological romanticism have discredited the notion of Nature, even though (systematized) philosophy has never renounced the philosophy (ontology) of nature (it resumes today vigorously and noisily restarts a career, with Teilhard de Chardin, with the Marxist epigones of the most questionable Engels). Naturalism and naturism made this notion of Nature puerile, by both embellishing it and subjecting it to elementary scientism, taken from physics or philosophy. Finally: the bourgeois or technicist ecstasies made it unbearable: "worlds" of silence, abysses, altitudes, spaces reached by "modern" means; Nature was captured by journalism, literature and the 'mass-media,' at the same time as by the decadent ontology. They broke its charm by wanting to make it interesting; they made the concept trivial through the picturesque and verbiage (Lefebvre, 1968a, p. 155, free translation).

Lefebvre's contribution on this theme has not yet been well elucidated, despite important discussions being developed in Europe, the United States and Brazil. However, they are not yet sufficient, as the vastness of Lefebvrian work and its internal connections (not always so clear and explicit) need to be focused on by their interpreters, commentators and interlocutors.

In *La production de l'espace*, a book in which Lefebvre develops more fully his theory of production of space, nature is presented as a "raw material," the "starting point" for the consideration of social space as a **process**, that is, a producer-product. "The **raw material** of the production of space is not, as for particular objects, a particular material: it is **nature itself**, transformed into a product" (Lefebvre, 2000, p. 146, emphasis in the original, free translation). It is in this sense, for example, that in its ninth prelude, mentioned above, Lefebvre will refer to the Earth, in an attempt to encompass, on the one hand, nature as a condition and, on the other hand, as a product: "We have before us, currently, a Whole, at

once a condition of production and a product of the action, place of man and an object of enjoyment: the Earth" (Lefebvre, 1968a, p. 156, free translation).

Thus, the relationship between society and nature is established, whose fundamental element of intermediation is labor. In this process, Lefebvre will develop the relationship between society and nature historically pointing to a continuous and progressive process of production (in a broad sense) in which the idea of creation is dialectically related to production. Thus, Lefebvre will say:

Nature creates and does not produce; it offers resources to a creative and productive activity of social man. [...] 'Nature' cannot operate following the same purpose as man [...] 'Man,' that is, social practice creates works and produces things. In both cases, labor is necessary (Lefebvre, 2000, p. 85-86, free translation).

Through labor man transforms nature and transforms himself. This idea, which Lefebvre will understand as a "self-production of man," is directly based on the way Marx understands the metabolic relationship of man with nature through the labor process. Thus, in the *Economic and Philosophic Manuscripts*, Marx will maintain that man is tied to nature, since he comes from it and depends on it.

Man lives on nature – means that nature is his body, with which he must remain in continuous interchange if he is not to die. That man's physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature (Marx, 2004, p. 84).

This understanding will be clear in Lefebvre, who states: "Man emerges from nature, without being able to separate from it. Pleasure reconciles man with his foundation, nature" (Lefebvre, 1968b, p. 28, free translation). However, in addition to this dimension, Lefebvre will also be based on the way Marx defines the relationship with nature in *Das Kapital*, where the metabolic relationship is more fully presented:

Labor is, in the first place, a process in which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material re-actions between himself and Nature [...] By thus acting on the external world and changing it, he at the same time changes his own nature (Marx, 2013, p. 255).

The distancing from "nature-space" – as addressed in the context of the "history of space" that Lefebvre presents at length – is irreversible, and such transformation enables an understanding of nature in two interconnected senses: on the one hand, nature as the target of the relentless action of capital by industrialization and, later, by urbanization. Therefore, the "destruction of nature" is an element to which Lefebvre resorts to explain how the production of the abstract space of neocapitalism considerably modifies the relations with "nature-space." On the other hand, as nature distances itself, asit is incorporated as a productive force within the social relations of production and reproduction, it is transformed into images, ideologies and representations that are translated into green spaces, urban

parks, gardens, etc. That is, nature is present in the process in which space is produced and reproduced under capitalism, notably.

The famous, already classic – in philosophy and critical geography – distinction between "first nature" and "second nature" comes into play. In Lefebvre, the "first" and "second" natures will be discussed based on the *Manuscripts of 1844*, Marx's work of youth. In an interview in the early 1980s with *Villes en Parallèle* journal, Lefebvre (1990, p. 68, free translation) stated: these "two important words affected me and caused a major impact on me." He refers to the "second nature" that Marx, according to Lefebvre, "never specified," remaining "a very fluid concept." If there is a "second nature," it is because there is, of course, a "first nature," "initial and specific." Lefebvre's development of the concept of second nature points to several directions, all of which refer to human labor as a mediator of the metabolism with nature. The end of his interview reveals well how he thought about the dialectical relationship between first nature and second nature, which appears throughout his oeuvre.

The city is second nature, it is a work, it is a product that is superimposed on first nature and that uses the same elements, such as water. Water is an urban material borrowed from first nature and becomes known and used through second nature. This is an idea to think about, even if it is not functional, precisely because it is not so. Rocks and trees are first-nature materials that become second-nature materials. The concept of urban I captured it in Bologna, in the central area of the city, where there is not a single tree, it is all mineral, it is only stone and water, not a single little tree. This is second nature, totally out of the first, where the first nature penetrates into the second and flourishes; it is very beautiful. There is not yet a city where the elements, especially minerals and vegetables, are organized as a work of art. Or, if it is done, it is spontaneous, but it is not yet planned (Lefebvre, 1990, p. 68, free translation).

Since capitalism survives through the production of space, several contradictions emerge, leading to a redefinition of dialectics that no longer only involves the issue of temporality; it is to space that dialectics is linked, that is, a "dialectized space," in which diverse contradictions that emerge from historical time are produced within the scope of the reproduction of relations of production (Lefebvre, 1973a). Lefebvre will call this phenomenon "contradictions *of* space," more complex and determinant than the "contradictions *in* space," since the class struggle and the conflict would overflow from the production of things in space to space itself, that is, space would rise as the core of the conflict, of the class struggle, which would pass to a new level (Lefebvre, 1973a, 1976a, 2000).

It is in this context that "nature becomes problematic" (Lefebvre, 1973a, p. 14, free translation), since the contradictions of space have resulted in an expansion of the urban fabric, of the process of industrialization and urbanization that "devastate nature." Nature will be raised, in these terms, to the foreground of problems. As Lefebvre (2008a, p. 33-34, free translation) will say: "Associates and competitors, industrialization and urbanization devastate nature. Water, earth, air, light, the 'elements' are threatened with destruction."

The dialectics of "domination of nature" and "appropriation of nature" will support the Lefebvrian proposition. The production of space under "neocapitalism" (a term that Lefebvre routinely uses) consists in a process in which its contents are linked to the realm of exchange value, private property, state political power, abstraction. Domination, therefore, refers to "the pulverization of space, the destruction of natural space." On the other hand, the "appropriation of nature" is founded on the concept of "appropriation," one of the most important legacies of philosophy and fundamental to Lefebvrian reflection. Appropriation has as its crucial point the priority of use value in relation to exchange value, the collective production and management of space; therefore, a nature transformed in a non-destructive manner. Thus:

Domination over material Nature, the result of technical operations, destroys this Nature, allowing societies to replace it with their products. Appropriation does not destroy, but transforms Nature – the biological body and life, the time and space made available – into human assets. Appropriation is the goal, the purpose of social life. Without appropriation, technical domination over Nature tends to be absurd, as it increases (Lefebvre, 1973b, p. 164-165, free translation).

However, the "appropriation of nature" is viable – in Lefebvre's thought – only through the "production of differential space." The "abstract space" of capitalism leaves no room for the appropriation of nature; it is always commodified, capitalized, elevated to the condition of image and representation as it is destroyed. The production of a new space, based on self-management as a form of socio-political organization, revives use and use value, brings the role of users to the center of the debate, and calls for a radical change of society and, necessarily, of space; that is, for "changing life" (*changer la vie!*). Clearly, this process is not without contradictions, but it has an underlying "concrete utopia." In other words, the "appropriation of nature" in the context of a production and appropriation of differential space, undergoes a "total revolution (material, economic, social, political, physical, cultural, erotic, etc.)," which "seems close, immanent to the present. In fact, in order to change life, it is necessary to change space" (Lefebvre, 2000, p. 220, free translation)¹.

In his book *Vers une Architecture de la jouissance*, written in 1973 (discovered by Łukasz Stanek forty years later, in the possession of Mario Gaviria, a personal friend of Lefebvre), he will relate more directly the production of space and nature.

Production of space, but of what space? This question, the real question, the good question, the right approach to the problem, is gradually, slowly but surely showing up in the light of day. What space? One that destroys nature and approaches it without precaution? Or the space that orders all nature, not only resources, but all space, but without leaving it in a pure state, locating nature in reserves and parks? (Lefebvre, 2018, p. 186, free translation).

Some scholars of Lefebvre's oeuvre have provided clues regarding this theme. Gottdiener (1993) seems to have been the first to find a concern of Lefebvre in relation to nature. In a quick passage of his book *The Social Production of Urban Space*, published in the mid-1980s, Gottdiener acknowledges that Lefebvrian theory is a critique of capitalism and space that

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¹ To learn more about the idea of "revolution of space" within the framework of Henri Lefebvre's theory, see Pereira (2018).

destroys everyday life, nature, and "threatens to disrupt the ecologically regenerative processes responsible for sustaining life on this earth." That said, the world of the commodity would be a world in which "nature itself is currently threatened with exhaustion," which leads Lefebvre to develop a critical perspective on economic science and ideology, that is, he "feels that we need a revolutionary science of *design* that can preserve both urban life and nature" (Gottdiener, 1993, p. 134-135, emphasis in the original, free translation).

According to Hess (2000, p. XII), Lefebvre can be considered as one of the precursors of political ecology. His reflection on "politicized nature" is considered by Hess to be current because it shows the political extension with regard to space and, therefore, to the nascent (in the 1970s) political ecology.

Revol (2021, p. 30, free translation), in turn, understood that Lefebvre's project consisted in a social transformation in which "appropriation is the process of disalienation of man's relationship with nature, in which he becomes a subject and object of himself," which means that it deals in some way with the production and reproduction of social relations. In this sense, according to Revol (2021, p. 35, free translation), "beyond the aesthetics of everyday life, it is about redefining the relations of the human species with nature and social relations."

In general, the debates between the interpreters of the relationship between space, society and nature in Lefebvre's work are directed between those who attribute to the theory of production of space a kind of antinomy and ambiguity with regard to the integration of nature into this theory, or its place in the theoretical framework (here we note Neil Smith's intervention and the thesis of "production of nature"); while, on the other hand, a more recent branch within the "school of metabolic rift" draws attention to the need to understand Lefebvre's theorization as an open totality, in which nature and space do not cancel each other out, but are dialectically integrated within Lefebvre's theoretical corpus.

POLITICS OF SPACE AND POLITICS OF NATURE

Neil Smith – a critical geographer known for his thesis on "production of nature" – was perhaps the main problematizer of Lefebvre's perspective on the concept of nature. According to Smith (2020), there are ambiguities in Lefebvre's theorization; in the geographer's assessment, nature becomes secondary in the Lefebvrian approach. Smith even states that Lefebvre's proposition is part of a somewhat Kantian and Newtonian legacy – "Survives in Lefebvre enough of Kant" (Smith, 2020, p. 246) –, which failed in the analysis of nature. Smith will suggest that Lefebvre's approach to space and his production was extremely rich and revolutionary, but, as far as nature is concerned, his contribution was poor. Thus, space and nature constitute antinomies in the theory of production of space, this is the conclusion of Smith (1998). Smith (2020, p. 246, free translation) states that, in Lefebvre, "the ontological priority of space over nature remains intact." In the following passage, Smith presents his criticism more clearly:

[...] as much as he broke with the past in his conception of space, [Lefebvre] curiously continued to be traditional in relation to nature. While it offered an excellent platform for analyzing the history of space in relation to its modern conceptualization, Lefebvre's treatment of nature fails blatantly. The space for Lefebvre remains alive, despite the tendential and never

complete abstraction to which capitalist production submits it. In fact, the key point in his work is that a truly revolutionary politics is necessarily a politics of space. In contrast, the politics of nature is for Lefebvre the politics of miserable defeat. Nature, he tells us, is 'dying,' is 'disappearing,' suppressed by the hands of capital: its products. Nature is dying along with God. Humanity is killing them and, perhaps, as if that were not enough, it is committing suicide (Smith, 2020, p. 246, free translation).

In the preface to the English translation of *La révolution urbaine*, Smith (2008, p. XV) pointed out quite clearly that "In the context of the late 1960s, Lefebvre was well ahead of his time in his willingness not only to take environmental questions seriously but also to theorize nature while criticizing the emerging environmental movement". Despite that, Smith notes that "In clear contradistinction to his treatment of space, nature for Lefebvre seems radically closed as a venue for political change". Accordingly, a formal logic would prevail in which the relationship between space and nature would be a logical contradiction, an inconsistency so that the valorization of the theorization of space would imply a devaluation of the theorization of nature².

In Brazil, Souza (2019) showed much sympathy with Smith's critique, agreeing that nature in *La production de l'espace* was "reduced [...] to a kind of mirage" and that the "society-nature metabolism' constitutes a theme that Henri Lefebvre was far from valuing" (Souza, 2019, p. 263-264, free translation).

In general terms, Smith's critiques show a reversal of trend from the point of view of the relationship between space and nature. In the assessment of Smith (1998), Lefebvre remained associated with an external conception of nature, seeing only the idea of "destruction of nature" and not that of "production of nature." If in Lefebvre, according to Smith, there is an ontological priority of space in relation to nature, the correct thing would be to reverse this proposition and understand that space is an epiphenomenon of the production of nature, which is, therefore, broader and within the scope of social production (Smith, 1998, 2020).

If Smith was able to truly and accurately understand that the true and revolutionary politics in Lefebvre is a politics of space, he seems to have somewhat misunderstood how nature figures in the theory of production of space (cf. Napoletano; Foster; Clark, 2022). As argued by Pereira (2020), the very idea of "production of nature" has clear Lefebvrian outlines. Lefebvre himself (2000, p. 83; 130, free translation) will say that "'nature' itself, as it is presented in social life to the sense organs, has been modified, therefore, produced," whereas "producing [...] second, other and new nature [is] [...] Therefore [...] producing space." The difference lies in the fact that while Lefebvre argues that this "modified nature," "produced," is the "second nature" that, as such, does not annihilate "first nature" forever, Smith defends a "social nature" produced as part of the production process in general and, in particular, of capitalist production in which "the distinction between first and second nature is increasingly obsolete" (Smith, 2020, p. 92, free translation). Smith credits his thesis of "production of nature" as having stemmed from "production of space," thus acknowledging Lefebvre's influence on his work. However, Smith sought to draw attention to what, in his view, Lefebvre overlooked, namely the fundamental role of nature.

² On formal logic and dialectical logic, see Lefebvre (1983). On the contradiction, see Harvey (2016).

When Smith directs criticism to Lefebvre about the "death of nature" or the "disappearance of nature" being a kind of "ideology of nature," he does so without realizing that in Lefebvre this process is seen in a double criticism: one from the left and one from the right. Rightwing criticism is nostalgic, bourgeois, but no less political. Against this critique, Lefebvre will defend a leftist critique that, while understanding the dialectical – therefore conflictual – relationship between man and nature, especially within the scope of the capitalist mode of production, points to a way out that signals another politics of nature different from those proposed by the nostalgics. In other words, right-wing criticism tries to see the implications and consequences of this devastation of nature, of this destruction. In fact, there is a kind of self-destruction of nature in and by 'man,' who emerges from nature, who is born from it and turns against it to exterminate it" (Lefebvre, 2008b, p. 66, free translation).

The way Lefebvre deals with nature in his writings on the city, the urban, the production of space sharply tensions the conflictual and dialectical relationship between human beings and nature, not consistent with an abstract formalization. Nature is understood politically, and Lefebvre's reflections therefore point to the joint treatment of a politics of space in relation to a politics of nature, although this theme was developed neither very well nor in depth by him. This relationship becomes more necessary in the current context, given the vastness of the environmental issue under the anthropocene, as Angus (2023) well analyzed.

It can be argued that the society-nature relationship is present and valued throughout Lefebvre's work. In his texts on production of space, more specifically, there is a more cadenced and careful treatment of this theme. It is true that the author did not develop in detail a concept of nature in the same way he developed the concept of space, but his approach places a critical emphasis on how nature was conceived, especially in modernity, supported by modern, abstract Western reason³, and points to paths that suggest an ecological concern, based on the theoretical tools of historical and dialectical materialism.

Smith's critical examination of the conception of nature and space in Lefebvre has been questioned (Foster et al., 2020; Pereira, 2020; Napoletano; Foster; Clark, 2022). In general, Smith's understanding of nature and space in Lefebvre is alleged to be mistaken, and the idea of a vanishing nature, in the sense of "death," while space, on the contrary, would constitute "life," makes sense only in the terms posited by Smith, and which is not found in an analysis in Lefebvre's works. Central references in Marx's "metabolic rift" theme, Foster et al. (2020, p. 31) state that: "Lefebvre retained a clear conception of the contradictory interpenetration of nature and society, incorporating a deep understanding of Marx's theory of metabolic rift, which he employed as a philosophical trope in his later writings"⁴.

³ It should be noted that, in this regard, Santos (2021, p. 14, emphasis added) refers to how Lefebvre "observed the work of concealment found in modern Western reason, which erases body, pleasures, passions, instincts and dreams, as well as *diminishing the role of nature, placing it in a subordinate position*". The author also underscores – and correctly, in my view – that "the reintroduction of the dimension of the body and *physis* in critical analysis, without subordinating it to an abstract reason, finds in Nietzsche its point of support."

⁴ Foster and Clark (2017, 2020) carried out a broader examination of the treatment of ecology in Marxism and criticized the readings of Jason Moore and geographers Neil Smith, Noel Castree, Bruce Braun and Erik Swyngedouw. In a passage referring to Moore, Smith, Castree, Braun, and Swyngedouw, they state concisely: "In the one-dimensional perspective of such sociomonistic thinkers, there is no reason to analyze the interpenetration, interchange, and mediation of the relations between nature and society. Natural cycles and processes are not seen as relatively autonomous in relation to society – even by virtue of abstraction –, but are subsumed within it; they are no longer considered, therefore, a legitimate matter of analysis. In lieu of the complex dialectic between nature and society, we are left only with a 'dialectical clustering,' in which reality is reduced to a series of socially built *clusters* of things and processes" (Foster; Clark, 2020, p. 183, emphasis in the original, free translation).

These authors see in Lefebvre's work a fundamental power for understanding the contemporary ecological crisis and, although this research theme is late with regard to this author's work, it indicates ways to face ecological problems. However, it is important to emphasize that there is no antinomy between nature and space here, but rather a relationship of open totality, in which the interpenetration between nature and society, in which space appears as a "second nature," reveals the contours by which capitalism has survived (Lefebvre, 2011, 1973a; Napoletano; Foster; Clark, 2022). Thus, it is urgent to emphasize that:

His theory of the production of space was unified with a thoroughgoing critique of capital's undermining of the earth as a place of human habitation. If critical thought today has become more distant than previously from the wider ecological critique, due in part to its abandonment of the dialectic of nature and society, Lefebvre offers a powerful remedy: a way to reconnect with the ecological struggle, rooted in an understanding of the spatial and temporal rupture of nature's universal metabolism and the radical praxis this calls for as a response (Napoletano; Foster; Clark, 2022, p. 255).

The references to "geocide" (*geócide*) as "a new crime" and, in another work, to "Terricide" (*Terricide*) (Lefebvre, 1975, p. 6; 1976b, p. 256; 1976c, p. 39) raise the question of what Lefebvre wanted to describe. Lefebvre documented in his texts the possibility of the total liquidation of the planet by nuclear weapons, a self-destruction in which state rationality within the irrationality of the State system and the violence inherent in this system (weapons, energy, technique, etc.) and in the market; the horizon of destruction of "second nature" would put human existence on earth in check and "kill the planet." He wrote, in this line of reasoning, that: "The deadlines will arrive on precise dates. By the year 2000, with or without a nuclear war, water and air will be polluted to such an extent that life will become difficult on Earth" (Lefebvre, 2008a, p. 34, free translation).

It would not be an exaggeration to observe that nuclear war and the destruction of nature would be real threats to the existence of humans and of the planet itself. Obviously, this existence is placed in the mediation between society and nature in the context of a particular mode of production, which is capitalism. And it is, therefore, in the development of the productive forces, technique, science and rationality of the State within the scope of the production of "abstract space" that is located this possibility of destruction that is, in short, self-destruction.

Lefebvre realized this very clearly, and in his book dedicated to rhythmanalysis, published posthumously in 1992, a year after his death, he wrote that the fact that capitalism generates classes, rich and poor, owners and proletarians "is not enough to measure the evil power of **capital**. It is built on the contempt for life and its foundation: the body, the time of living" (Lefebvre, 2021, p. 114, emphasis in the original, free translation). But it is not only that, and Lefebvre (2021, p. 116, free translation) continues to emphasize "the deadly character of capital":

While capital generates emptiness while growing, it kills around it on a planetary scale. In general and in detail. Capital does not build. It produces. It does not edify; it reproduces. It simulates life. Production and reproduction tend to coincide in the uniform! [...] It [capital] kills nature. It kills the city, turning against its own bases. It kills artistic creation, creative capacity. It continues until it threatens the last resource: nature, the homeland, the roots. It delocates humans (Lefebvre, 2021, p. 115-116, free translation).

The planetary scale, therefore, is evident. Hence the idea of a "geocide" or a "terricide," which is quite consistent, in my view, with the idea of "killing nature." It is in this context, for example, that Lefebvre is concerned with the worldwide, worldwideness and the planetary (Lefebvre, 1976b, p. 256).

The criticism that Lefebvre directed at his contemporary ecologists was precisely due to their lack of understanding that thinking about ecology and nature without thinking about space was something that did not make so much sense. It would be a fragmenting thought. It would be necessary to have or create a theorization that encompassed the world as an open totality in which the human being and nature would constitute central elements that only left-wing criticism would be able to elucidate and, perhaps, overcome. This left-wing criticism would reveal the need to conceive a strategy, that is, the politicization of nature to, along with the politicization of space, indicate the ways to change life. "It is in this sense," says Lefebvre (2008b, p. 67, emphasis added, free translation), "that the critique of the politics concerning space and nature is a left-wing critique," which implies considering that, "from now on, *like space, nature is politicized*, because it is part of conscious or unconscious strategies".

In the preface to the third edition of *La production de l'espace* (1986), Lefebvre resumes his discussion on the theory of production of space and notes the role of ecologists with regard to the problems of nature.

Ecologists had already called attention and mobilized public opinion: territory, environment, polluted air and water, nature, this 'raw material,' material of the City, razed without scruples. This ecological trend lacked a general theory on the relationship between space and society – between the territorial, the urbanistic, the architectural (Lefebvre, 2000, p. XX, free translation).

Lefebvre did not ignore what the ecologists said, did not reproach them or marginalize them. However, he pointed out misconceptions and shortcomings in their proposals that try to understand what is now called the "environmental crisis" or "ecological crisis" without taking into consideration capital and the State, that is, silencing about them (cf. Lefebvre, 2012, p. 148, free translation).

It was observing the formation of a "planetary space" on a global scale, which reorganized the division of labor, the power of States and the interpenetration of the various levels that made Lefebvre focus on the "issue of space." It is this issue that he seeks to discuss and sees in it a "path to reach the world, the path to the formation of planetary space, covering and involving the space of nature, of Mother Earth" (Lefebvre, 1976b, p. 227, free translation). The absence of a perspective thus posited limited the scope of the ecological discussion proposed until then.

Space can studied by noting how capitalism has imposed its law during this period and at the same time on agricultural production and the historical city, but also on the most distant spaces, underwater spaces, subsoils, mountains, the most distant margins through tourism; in short, space on a world scale. I try to empirically study the convergence of all these phenomena. Ecologists touch but a small portion of them (Lefebvre, 1976b, p. 228, free translation).

The core of the issue and, therefore, of the limits of an ecological issue lies in the lack or absence of a theorization of space. How to understand and even propose solutions to the issues of the environment without an adequate conception of space, without a proposition on the concept of space that broadly addresses the issue of nature and of human beings, of society? This general trend of ecology, which is currently noted around the global environmental crisis where climate is the central focus of several scientific and political debates, largely disregards the spatial dimension and the role of politics and politicians. Lefebvre not only wants to integrate nature and ecology into his theory of production of space. In fact, it is already there, albeit not as clearly, but it is there.

This seems more evident when, at the end of his life, when addressing the theme of the "planetarization of the urban" and the "loss of the city" in the "planetary metamorphosis," Lefebvre pointed out several contradictions regarding urbanization on a global scale and production of space. In one of the last texts published in his lifetime, Lefebvre (1991, p. 17) recognized "the importance of ecological issues." He showed that the contradictions of the planetarization of the urban would extend "to the entire space," encompassing the "framework of life and the quality of the environment" that would pass "to the condition of urgency and political issue." With this, he indicated the restitution of "associative life and self-management" as forms of social organization (Lefebvre, 1991, p. 14-17, free translation).

What Lefebvre thought and wrote in this regard directly took into consideration the organization of the capitalist mode of production, its techniques, technologies, information, the State and, without thinking about such themes in a broad and integrated way, nature would become, like space, fragmented and, as a result, a radical critique of man's relationship with nature and of its destruction would be impossible. That is why the "politicization of nature," along with the "politicization of space" were part of the same project, a project of another society, another space and another society-nature relationship. If space is political, nature is, also, political! This movement emerges from the following passage, in which there is a tension between a view of nature as an object of domination and control and the need to elaborate a strategy.

Now, it is also known that nature is formed, shaped, transformed. That, *to a large extent, it is a product of action, that the very face of the Earth, that is, the landscape, is a human work*. Today, nature is still considered, according to a certain ideology, as a simple matter of knowledge and as an object of techniques. It is dominated, controlled. As it is dominated and controlled, it distances itself. Now, it is suddenly realized that in being controlled it is devastated, threatened with annihilation, while the human species, still linked to nature, is threatened with being dragged towards annihilation. Hence the need for a strategy. *This is the politicized nature* (Lefebvre, 2008b, p. 66, emphasis added, free translation).

According to Lefebvre, the problems that ecologists were concerned with could only be dealt with and fully understood in the wake of critical considerations regarding the production of space, the capitalist mode of production, and the role played by the State. Without an approach that took these factors into consideration, the result would simply be a right-wing critique, a nostalgia for a pure nature that no longer exists and was on the verge of disappearing. Hence, in his view, "pollution, the environment, ecology and ecosystems, growth and its purpose, fragment and mask the problems of space" (Lefebvre, 2008b, p. 18-19, free translation).

FINAL CONSIDERATIONS

Henri Lefebvre's reception in the "Global South" has been extremely fruitful over the past few decades. It is part of a movement of penetration of his work even in contexts in which a few years ago it was quite select. In the United States, and in the English language in general, his main works were only translated from the 1990s onward, such as *La production de l'espace* and *La révolution urbaine*, for example. Geographers, in addition to other social scientists, have contributed to an interpretation of crises, social issues and processes directly linked to the study of space, everyday life, the right to the city in the context of global urbanization, social movements and the Latin American space.

If it is correct that we understand Lefebvre's theoretical-practical production according to themes (everyday life, the rural, the urban, the State, etc.), with each of them revealing a specific focus and a "moment" proper to the reality of the capitalist mode of production, none of these moments was dedicated exclusively to the theme of nature. However, nature is present in his oeuvre. It figures as an important concept for the comprehension of the production of space, which requires a more informed, critical and dialectical reading. The most suggestive would be to understand nature as transversal in Lefebvrian's work, which is somehow approached, tensioned, brought to the light of day for problematization, despite not having been the subject of a particular research. It is the "absence-presence" in operation.

What is now called the "environmental issue" was treated by Lefebvre as an "issue of nature" that is inseparable from the "issue of space." That is because Lefebvre, attentive to the ecologists of his time, strongly criticized the manner of treating the issue of the environment – raised by several publications, scientists and multilateral organizations since the 1960s. Thinking about ecology also meant thinking about the role of the State and of capitalism, that is, the class struggle; focusing only on the "environment" (a "pseudo-concept," according to Lefebvre) would produce an ideologized effect in the sense of encompassing everything and nothing at the same time.

Lefebvre's proposition is clear: nature and its destruction must be considered based on the production of space; nature as problematic is subordinated to the problematic of space because it is the elaboration of a theory of production of space that will be able, among other things, to correctly and coherently frame the problematic of nature; since space is political, since it is the result of class struggle and the exercise of the political power of the State and of capital, there arises the need to think nature in a political and politicized manner.

Lefebvre's oeuvre and his theory of production of space provide important theoreticalmethodological tools to approach discussions that concern ecological-environmental themes. However, it is necessary to situate his work in the context in which it emerged and seek to extract the powerful *insights* regarding the analysis of how nature has been transformed and destroyed and the political responses that can be proposed. Thus, a politics of nature that tensions the contradictions of capitalism, class struggle, and private property needs to consider the production of space and the contradictions inherent in this process.

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REFERENCES

ANDERSON, P. **A crise da crise do marxismo**: introdução a um debate contemporâneo. 2. ed. São Paulo: Brasiliense, 1985.

ANGUS, I. **Enfrentando o antropoceno**: capitalismo fóssil e a crise do sistema terrestre. São Paulo: Boitempo, 2023

CHARBONNIER, P. Abundância e liberdade: uma história ambiental das ideias. São Paulo: Boitempo, 2021.

FOSTER, J. B. A ecologia de Marx: materialismo e natureza. Rio de Janeiro: Civilização Brasileira, 2005.

FOSTER, J. B., CLARK, B. Marxismo e a dialética da ecologia. **Crítica Marxista**, São Paulo, n. 50, p. 171-191, 2020.

FOSTER, J. B., CLARK, B. A ecologia de Marx e a esquerda. **O Comuneiro**, São Paulo, n. 25, 2017. Disponível em: https://www.ocomuneiro.com/nr25_03_JohnBellamyFosterBrettClark.html#_ftnref121. Acesso em: 17 ago. 2022.

FOSTER, J. B., *et al.* Henri Lefebvre's Marxian ecological critique: recovering a foundational contribution to environmental sociology. **Environmental Sociology**, Londres, v. 6, n. 1, p. 31-41, 2020. DOI: http://doi.org /10.1080/23251042.2019.1670892.

GOTTDIENER, M. A produção social do espaço urbano. São Paulo: Edusp, 1993.

HARVEY, D. A natureza do meio ambiente: a dialética das transformações sociais e ambientais. *In*: HARVEY, D. (ed.). **Os sentidos do mundo**. São Paulo: Boitempo, 2020. p. 181-244.

HARVEY, D. Introdução: sobre a contradição. *In*: HARVEY, D. (ed.). **17 contradições e o fim do capitalismo**. São Paulo: Boitempo, 2016. p. 15-22.

HARVEY, D. Justicia, naturaleza y geografía de la diferencia. Madrid: Traficantes de sueños, 2018.

HESS, R. Avant-propos: Henri Lefebvre et la pensée de l'espace. *In*: LEFEBVRE, H. (ed.). La production de l'espace. 4. ed. Paris: Antrophos, 2000, p. V-XVI

JANZEN, R. Reconsidering the politics of nature. **Capitalism, Nature, Socialism**, Londres, v. 13, n. 2, p. 96-116, 2002. DOI: http://doi.org/10.1080/10455750208565481.

KOLAKOWSKI, L., LEFEBVRE, H. Evolución o revolución. *In:* ELDERS, F. (ed.). La Filosofía y los problemas actuales. Madrid. Editorial Fundamentos, 1981. p. 214-278.

LEFEBVRE, H. A reprodução das relações de produção. Porto: Escorpião, 1973a.

LEFEBVRE, H. El Estado Moderno. **Geopolítica(s)**: Revista de Estudios sobre Espacio y Poder, São Paulo, v. 3, n. 1, 137-149, 2012.

LEFEBVRE, H. **Elementos de ritmanálise e outros ensaios sobre temporalidades**. Rio de Janeiro: Consequência, 2021.

LEFEBVRE, H. Entrevista: conversa com Henri Lefebvre. **Espaço e Debates**, São Paulo, n. 30, p. 61-69, 1990. Tradução de Manuel Rolando Berríos

LEFEBVRE, H. Espaço e Política. Belo Horizonte: Editora UFMG, 2008b.

LEFEBVRE, H. Hacia uma arquitectura del placer. Madrid: CIS, 2018.

LEFEBVRE, H. Introdução à modernidade: prelúdios. Rio de Janeiro: Paz e Terra, 1968a.

LEFEBVRE, H. L'espace: produit social et valeur d'usage. La Nouvelle Revue Socialiste, Paris, n. 18, p. 11-20, 1976a.

LEFEBVRE, H. La noción de totalidad en las ciencias sociales. **Telos**: Revista de Estudios Interdisciplinarios en Ciencias Sociales, Buenos Aires, v. 13, n. 1, p. 105-124, 2011. https://www.redalyc.org/pdf/993/99318408008. pdf. Acesso em: 4 nov. 2014

LEFEBVRE, H. La production de l'espace. 4 ed. Paris: Antrophos, 2000.

LEFEBVRE, H. Le terricide. *In:* LEFEBVRE, H. (ed.). **De l'État – 1. L'État dans le monde moderne**. Paris: Union Générale d'Éditions, 1976c. p. 39-40.

LEFEBVRE, H. Les illusion de la modernité. Maniere de voi 13. Le Monde Diplomatique, Paris, p. 14-17, 1991.

LEFEBVRE, H. L'État dans le monde moderne. L'Homme et la Société, Paris, n. 37-38, p. 3-23, 1975.

LEFEBVRE, H. Lógica formal, lógica dialética. 4. ed. Rio de Janeiro: Civilização Brasileira, 1983.

LEFEBVRE, H. Produção e re-produção. **Espaço e Economia**, São Paulo, n. 8, 2016. Disponível em: http://journals.openedition.org/espacoeconomia/2185. Acesso em: 13 jul. 2021.

LEFEBVRE, H. Sociologia de Marx. São Paulo: Forense, 1968b.

LEFEBVRE, H. El materialismo dialéctico. Buenos Aires: La Pléyade, 1971.

LEFEBVRE, H. Tiempos equívocos. Barcelona: Editorial Kairós, 1976b.

LEFEBVRE, H., GUTERMAN, N. Introdução. *In:* Lenin, V. I. (ed.). **Cadernos Filosóficos Hegel**. São Paulo: Boitempo, 2018 [1938]. p. 13-98

LEFEBVRE, Henri. A revolução urbana. Belo Horizonte: EdUFMG, 2008a.

LEFEBVRE, Henri. **De lo rural a lo urbano.** 4. ed. Barcelona: Ediciones península, 1973b.

LIMONAD, E. Por uma outra sustentabilidade: um diálogo entre Lefebvre e o pensamento decolonial. **Boletim Goiano de Geografia**, Goiânia, v. 41, p. e70787, 2021.

LOFTUS, A. J. Production of Nature. *In:* Richardson, D. *et al.* (eds). **The International Encyclopedia of Geography:** People, the Earth, Environment, and Technology. Chichester: John Wiley & Sons, 2017. p. 1-6. DOI: http://doi.org/10.1002/9781118786352.wbieg0289.

LOWY, M. Ecossocialismo: o que é, por que precisamos dele, como chegar lá. **Germinal**, São Paulo, v. 13, n. 2, p. 471-482, 2021. DOI: http://doi.org/10.9771/gmed.v13i2.45816.

LUEDY, L. Da dialética da natureza à ecologia anticapitalista: percursos da reflexão marxista sobre natureza e sociedade. *In: 45º ENCONTRO ANUAL DA ANPOCS*. **Anais [...]**. 2021. p. 1-30. Disponível em: https://www.anpocs2021.sinteseeventos.com.br/atividade/view?q=YToyOntzOjY6InBhcmFtcyI7czozNjoiYToxOntzOjEy-OiJJRF9BVEIWSURBREUi03M6MzoiMjU5Ijt9Ijt2OjE6Imgi03M6MzI6IjBiZjViNGQ2MzYwODA2NjA2MDhkN-DhhOTQwODZmODIzIjt9&ID_ATIVIDADE=259. Acesso em: 14 mar. 2022.

LUEDY, L., LAAN, V. D. Dualismo cartesiano apocalíptico ou monismo social antiecológico? As disputas entre a escola da ruptura metabólica e a ecologia-mundo. **Crítica Marxista**, São Paulo, n. 50, p. 151-170, 2020.

MARQUES, M. I. Natureza e sociedade. *In:* CARLOS, A. F. A.; CRUZ, R. C. A. (eds.). A necessidade da geografia. São Paulo: Contexto, 2019. p. 175-190.

MARX, K. Manuscritos econômico-filosóficos. São Paulo: Boitempo, 2004.

MARX, K. **O Capital**: Livro I. São Paulo: Boitempo, 2013.

MOORE, J. Antropoceno ou Capitaloceno? Natureza, história e a crise do capitalismo. São Paulo: Elefante, 2022.

MOORE, J. De Objeto a Oikeios: Geração do Meio Ambiente na Ecologia Mundial Capitalista. *In:* DUTRA E SILVA, S. *et al.* (eds.). **Ensaios em ciências ambientais**: crises riscos e racionalidades. Rio de Janeiro: Garamond, 2016. p. 167-184.

NAPOLETANO, B. *et al.* Sostenibilidad y revolución metabólica en la obras de Henri Lefebvre. **LAGJS/Ensayo/ DS**, São Paulo, n. 98, p. 1-24, Mayo 2022.

NAPOLETANO, B., FOSTER, J. B., CLARK, B. Antinomies of space and nature or an open totality? Neil Smith and Henri Lefebvre on nature and society. **Human Geographies**, Cluj-Napoca, v. 15, n. 3, p. 245-258, 2022. DOI: http://doi.org/10.1177/19427786211051384.

NAPOLETANO, B., *et al.* Henri Lefebvre's conception of nature-society in the revolutionary project of autogestion. **Dialogues in Human Geography**, Londres, v. 13, n. 3, p. 433-452, 2023. DOI: http://doi. org/10.1177/20438206221088385.

PAIVA, D. Transforming nature through cyclical appropriation or linear dominance: Lefebvre's contributions to think about the interaction between human activity and nature. *In:* LEARY-OWHIN, M. E.; McCARTHY, J. P. (eds.). **The Handbook of Henri Lefebvre, the City and Urban Society**. London: Routledge, 2019. p. 318-326.

PEREIRA, C. S. S. What place does nature occupy in Henri Lefebvre's theory of the production of space? A few thoughts. **Revista Brasileira de Estudos Urbanos e Regionais**, São Paulo, v. 25, p. 1-35, 2023b. DOI: http://doi.org/10.22296/2317-1529.rbeur.202319en.

PEREIRA, C. S. S. "Revolution of Space", autogestion and appropriation of nature in Henri Lefebvre?s political and revolutionary project. **Dialogues in Human Geography**, Londres, v. 13, n. 3, p. 453-456, 2023a. DOI: http://doi.org/10.1177/20438206231151421.

PEREIRA, C. S. S. A teoria da produção do espaço e a Geografia. *In:* SPOSITO, E. S.; CLAUDINO, G. S. (eds.). **Teorias na Geografia**: avaliação crítica do pensamento geográfico. Rio de Janeiro: Consequência, 2020. p. 107-140.

PEREIRA, C. S. S. Mudar a vida: da revolução urbana à revolução do espaço - o projeto de Henri Lefebvre. **Geographia**, Niterói, v. 20, p. 21-35, 2018.

PRUDHAM, S. Production of Nature. *In:* GREGORY, D. *et al.* (eds). **The Dictionary of Human Geography**. 5. ed. Oxford: WileyBlackwell, 2009. p. 589-590.

REVOL, C. Ritmanalisar: tecer tempos e espaços para habitar. *In:* LEFEBVRE, H. (eds). **Elementos de ritmanálise e outros ensaios sobre temporalidades**. Rio de Janeiro: Consequência, 2021. p. 25-46.

SAITO, K. **O ecossocialismo em Karl Marx**: capitalismo, natureza e crítica inacabada à economia política. São Paulo: Boitempo, 2020.

SANTOS, C. R. S. Towards a spatialized utopia: romanticism and everyday life in the Marxism of Henri Lefebvre. **Revista Brasileira de Estudos Urbanos e Regionais**, São Paulo, v. 23, p. 1-25, 2021. DOI: http://doi.org/10.22296/2317-1529.rbeur.202139en

SCOTT, N. Ecologizing Lefebvre: Urban Mobilities & the Production of Nature. *In:* LEARY-OWHIN, M. E.; McCARTHY, J. P. (eds.). **The Handbook of Henri Lefebvre, the City and Urban Society**. London: Routledge, 2019. p. 298-308.

SMITH, N. Antinomies of space and nature in Henri Lefebvre's The Production of Space. *In:* LIGHT, J.; SMITH, J.M. (eds) **Philosophy and geography II**: the production of public space. Lanhan: Rowman & Littlefield Publishers, 1998. p. 49-70.

SMITH, N. **Desarrollo desigual**. Naturaleza, capital y la producción del espacio. Madrid: Traficantes de Sueños, 2020.

SMITH, N. Foreword. *In:* HEYNEN, N.; KAIKA, M.; SWYNGEDOUW, E. (eds). **In the Nature of Cities:** Urban Political Ecology and the Politics of Urban Metabolism. Questioning cities series. Abingdon: Routledge, 2006. p. XII-XV.

SMITH, N. Foreword. *In:* LEFEBVRE, H. (ed.). **The Urban Revolution**. Minneapolis: University of Minnesota, 2008. p. vii-xxiv.

SMITH, N. Nature as accumulation strategy. **Socialist Register**, Londres, v. 43, p. 16-36, 2007.

SOUZA, M. L. **Ambientes e territórios:** uma introdução à Ecologia Política. Rio de Janeiro: Bertrand, 2019.

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