

**CAPITALISM, NATURE AND COVID-19: THE BIOLOGICAL CRISIS IN THE  
SOCIAL CRISIS**

***CAPITALISMO, NATUREZA E COVID-19: A CRISE BIOLÓGICA NA CRISE SOCIAL***

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SOCIAL***



Letícia LUCIANO<sup>1</sup>  
e-mail: leticia.luciano@unesp.br

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<sup>1</sup> São Paulo State University (UNESP), Araraquara – SP – Brazil. Department of Social Sciences. Bachelor's degree in Social Sciences.

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**ABSTRACT:** Significant environmental challenges characterize the 21st century. The social crises, arising from or amplified by these problems, provide a portrait of the complexities of our time. This article analyzes how the spheres of the natural and social environments are interconnected, refuting the old conception of a "society separate from nature," as both feed into each other. The COVID-19 pandemic is an example of a biological crisis embedded within a broader social crisis: the crisis of capitalism. Both ecological and social issues result from the complex interaction between society and nature.

**KEYWORDS:** Capitalism. Nature. COVID-19.

**RESUMO:** O século XXI é caracterizado por desafios ambientais significativos. As crises sociais, decorrentes ou amplificadas por esses problemas, oferecem um retrato das complexidades de nossa época. Este artigo analisa como as esferas do meio natural e social estão interligadas, refutando a antiga concepção de uma "sociedade separada da natureza", uma vez que ambas se retroalimentam mutuamente. A pandemia da COVID-19 é um exemplo da crise biológica inserida em uma crise social mais abrangente: a crise do capitalismo. Tanto as questões ecológicas quanto as sociais resultam da interação complexa entre sociedade e natureza.

**PALAVRAS-CHAVE:** Capitalismo. Natureza. COVID-19.

**RESUMEN:** El siglo XXI se caracteriza por desafíos ambientales significativos. Las crisis sociales, derivadas o amplificadas por estos problemas, ofrecen un retrato de las complejidades de nuestra época. Este artículo analiza cómo las esferas del medio natural y social están interconectadas, refutando la antigua concepción de una "sociedad separada de la naturaleza", ya que ambas se retroalimentan mutuamente. La pandemia de COVID-19 es un ejemplo de la crisis biológica insertada en una crisis social más amplia: la crisis del capitalismo. Tanto los problemas ecológicos como los sociales resultan de la interacción compleja entre la sociedad y la naturaleza.

**PALABRAS CLAVE:** Capitalismo. Naturaleza. COVID-19.

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## Introduction

The 21st century is marked by environmental crises of various origins and with diverse consequences. According to the scientific consensus, issues such as the climate and energy crises, deforestation, and the pollution of rivers, lakes, and oceans are becoming increasingly evident. Despite the specific differences between regions and the agents responsible for each problem, there is a noticeable structural crisis of nature and the environment, concurrent with the intensification of contemporary social conflicts. In this context, it is necessary to question: does the environmental collapse result from purely relative issues originating from the ‘natural sphere’?

With the socio-historical legacies arising from the COVID-19 pandemic and its entanglement with the capitalist mode of production, the following idea will be developed: the natural environment and the social environment are not separate or “pure” spheres, but interact in ways that result in structural modifications. The specific manner in which the capitalist mode of production relates to nature will be examined based on Karl Marx’s concept of nature, as analyzed by Rodrigo Duarte in his work *Marx e natureza em O Capital* (Marx and Nature in *Capital*). This concept takes into account the logic of capital, which is always invasive, imperative, and relentless, and how this specific dynamic of interaction with nature gives rise to various social and biological phenomena. Chuang’s (2020) text, *Contágio Social: Coronavírus e a luta de classes microbiológica na China* (Social Contagion: Coronavirus and the Microbiological Class Struggle in China), will be used as support to reflect on capitalism and nature in the contemporary world, as well as their diverse consequences and phenomenological reach. The work *A gente precisa lutar de todas as formas: Povos Indígenas e o enfrentamento da covid-19 no Brasil* (We Need to Fight in Every Way: Indigenous Peoples and the Confrontation with COVID-19 in Brazil) will also be used to analyze another country’s perspective in the same context, focusing on socio-environmental aspects.

The objective is to understand the interconnection between the natural and social spheres, more specifically between nature and contemporary capitalist society. By mobilizing Marxian thought, it is intended to demonstrate that this interconnection has been inherent to capitalism since, at least, the form analyzed by Marx in the 19th century. The records related to the COVID-19 pandemic aim to illustrate how this interconnection manifests in contemporary times, highlighting its concreteness. It is important to emphasize that adopting the Marxian perspective does not imply a moral critique of the relationship between capitalism and nature,

but rather the demonstration that this interconnection results from the historicity attributed to the concept of nature within the capitalist system.

### The Natural and Social Environments

Human beings inhabit the environment in which they live. The construction of a house, as we know it today, in its various forms and compositions, has an origin; its material is not pre-formed. The bricks and other materials used in the construction of modern urban houses undergo a series of manual and/or industrial processes before they can shelter most of the population daily. These different substances are extracted and modified by human activity—a definition Karl Marx employs when conceiving part of the concept of labor within the capitalist system. To inhabit planet Earth, not only in contemporary times but also in capitalist societies, involves much more than simply occupying a given space; it entails appropriating that space by extracting and transforming its resources and attributes to meet human needs, such as food, production, and reproduction.

Unlike past eras, today, the entire planet is subjected to a specific mode of production. In other words, we interact and relate to nature in a specific way to implement this systemic and structural capitalist model. Even though there are countries that are explicitly communist or socialist, the hegemony and impact of capitalism are so intense that such countries—like China, Vietnam, Laos, North Korea, and Cuba—still suffer external interference from the dominant economy, whether in the economic, social, or biological realms, as will be addressed in this discussion. However, this does not imply that all ongoing environmental problems stem exclusively from the capitalist system, nor that there are no resistances or spaces for struggle. The goal here is to highlight how society appropriates the natural environment for global production, considering the majority of countries within this system. As will be shown, this mode of organization has a name and as demonstrated, a specific dynamic.

The text *Contágio social: Coronavírus e a luta de classes microbiológica na China* (Social Contagion: Coronavirus and the Microbiological Class Struggle in China), by a Chinese Marxist collective, describes in a synesthetic way how the logic of capital invades and infiltrates, creating capillaries deep within the most distant forests, even shaping and enabling the existence and propagation of viruses.

[...] First, it serves as an instructive opening in which we can review substantial issues regarding how capitalist production relates to the non-

human world on a more fundamental level—how, in summary, the “natural world,” including its microbiological substrata, cannot be understood without reference to how society organizes its production (because the two are, in fact, inseparable). At the same time, it serves as a reminder that the only communism that deserves such a name is one that encompasses the potential for a fully politicized naturalism (Chuang, 2020, p. 20, our translation).

The fact is that the ‘natural sphere’ is already subordinated to a fully globalized capitalist system that has managed to alter the foundations of the global climate system and devastate so many pre-capitalist ecosystems that what remains no longer functions as it once did. [...]. The reality, then, is that it is inappropriate to think of these areas as the “natural periphery” of a capitalist system. Capitalism is already global and totalizing. It no longer has a limit or boundary with any non-capitalist, natural sphere beyond it [...] (Chuang, 2020, p. 46, our translation).

The Chuang Collective elaborates on the idea that the origin of the COVID-19 pandemic was not strictly a biological misfortune of nature, arising solely from “natural” combinations and mutations, but rather a consequence of the subordination of the natural world to our mode of production. The collective outlines the class struggle scenario in China, more specifically in the city of Wuhan, known, along with three other Chinese cities, as a “furnace” due to its intensely hot and humid summers. However, in the manifesto, this designation takes on a new meaning, referring to the location of factory operations as “The Furnace,” a scorching environment due to the concentration of steel industries within a concrete hub. As they assert: “Beyond the four furnaces, then, lies a more fundamental furnace underlying the industrial centers of the world: the evolutionary pressure cooker created by capitalist agriculture and urbanization” (Chuang, 2020, p. 23, our translation).

Reflecting on the concept of nature can be complex, as its definition spans various fields of knowledge, theoretical perspectives, and cultural understandings. The term itself carries a multiplicity of meanings. In Western thought, nature has always been key to the development of knowledge, both in the natural sciences and in the humanities, and, for the most part, the starting point concerns the relationship between humans and nature. To discuss this concept from a Marxian perspective, it is necessary, above all, to elaborate on the historicity of nature. When addressing Karl Marx and his social theory on the workings of capitalism, one cannot ignore his historical-dialectical materialist method, which implies analyzing the subject in question in the light of history in order to understand its social dynamics.

Rodrigo Duarte, in his work *Marx e a Natureza em O Capital* (Marx and Nature in Capital), addresses the relationship between nature and history, highlighting the difference between natural history and historical nature, that is, between the history “traversed” by nature and the “historicity” as a “natural quality” of society. His starting point for such differentiation is passages from Marx and Engels’ writings in *Ideologia Alemã* (The German Ideology), with particular emphasis on one:

We know of only one science, the science of history. History can be examined from two sides, divided into the history of nature and the history of men. However, the two sides cannot be separated; as long as men exist, the history of nature and the history of men will condition each other reciprocally. The history of nature, the so-called natural science, is not our concern here; but as for the history of men, it must be examined (Engels; Marx, 2007, p. 86-87, our translation).

The geographical article *História Natural, História da Natureza e História Ambiental: três histórias sobre uma grande ideia* (Natural History, History of Nature, and Environmental History: Three Histories of a Great Idea), by Freitas (2014), also suggests the existence of a “history of nature” (beyond environmental history, as explicitly stated in the title), the content of which addresses how Western thought has approached the idea of nature throughout its development. Duarte explains that in natural history, the focus is on the entire biological, physical, and chemical trajectory of living beings, plants, and minerals throughout planetary existence. In other words, it is the path traced by nature and the evolutionary journey that has a history to be told and systematized. According to Freitas’s article (2014), in natural history, before it became what we now call the natural sciences, the term was used as an umbrella encompassing all aspects of the natural world within a vast area of knowledge, without the necessary specifications. It was in the late 18th century that Georges Cuvier (1769-1832), in his work *Quadro elementar da história natural dos animais* (Elementary Outline of the Natural History of Animals), presented a more widely accepted definition, in which natural history, or as he himself calls it:

‘Natural science’ or physics aims to study the mobile and extensive beings we call bodies. This science is divided into general natural history and particular natural history. The former considers the common properties of most beings in isolation and examines each of their properties. Particular physics or particular natural history aims to apply the laws recognized by the various branches of general physics, specifically to the numerous and varied beings that exist in nature, in order to explain the phenomena presented by each of these beings. In a



single view, general natural history encompasses all-natural bodies and the common result of all their actions in the great whole of nature, determining the laws of coexistence of their properties. It establishes, among the different bodies, degrees of similarity, which allows them to be classified. General natural history can only be completed once the particular natural histories of all natural bodies have been finished (Cuvier, 1798, p.1 – 4, our translation).

Thus, it is possible to affirm that until the mid-19th century, the core of natural history and its definition revolved around a descriptive and enumerative construction. With the deepening of studies about the natural world and the efforts of thinkers to discover the internal structures of various species, as well as the functioning and formation of bodies and the chemical and biological dynamics, natural history also became classificatory. Furthermore, before the 20th century, it began to become individualized, specified, and divided, as the term “natural history” became obsolete due to its generality and the standardization of knowledge. Thus, natural sciences emerged, each with its specificity. On the other hand, the idea of nature was developed and used in various ways throughout the historical trajectory of society and knowledge, which Freitas (2014) refers to as the *History of Nature*.

In general terms, it can be stated that natural history revolves around the physical and corporeal question, while the history of nature refers to the study of the relationship between human beings and nature from a sociological perspective. Although it permeates other fields of the humanities, such as philosophy and geography, in the latter, it involves the study of the social relationship between the individual/group and the environment. Revisiting Duarte’s characterization, historical nature is precisely what interests us in making the fundamental connection between Marxian/Marxist thought and ecology. The meaning attributed to the word “nature” refers to what is natural, based on the Latin term *natura, nato*. In other words, human beings are naturally historical, possessing a historical origin. The use of the term *nato* does not imply innate, as if human beings were born with history embedded in their supposed “spirits,” but rather that, as social beings, they are native to history, just as history is native to human beings.

In this sense, not only do human beings have a historical nature, but nature itself does as well. That is to say, rivers, seas, plants, animals, and minerals possess a historical nature, as they maintain a dialectical and intimate relationship with human activity in their environment. Their changes, effects, and crises are, to a large extent, the results of human action on the planet Earth, an action that, in turn, is also historical. In *História e Consciência de Classe: Estudos sobre a dialética marxista* (History and Class Consciousness: Studies in Marxist Dialectics),

Georg Lukács points out that history serves not merely as a descriptive tool for the socio-historical context surrounding an object, in this case, a social relationship to be studied, but as the very root of which all social relations derive. With this, Lukács offers a rich interpretation of Marx's historical-materialist dialectical method, explaining how dialectics is historical and how history is movement, construction, and process.

[...] a historical critique. It primarily dissolves the fixed, natural, and unrealized character of social formations; it unveils them as historically arisen and, as such, subject to historical becoming in all aspects, thus as formations predestined for historical decline. Therefore, history does not occur merely within the scope of validity of these forms, according to which history would mean only the change of contents, people, situations, etc., with eternally valid social principles. [...]. Rather, it is precisely the history of these forms, their transformation as forms of human social organization, as forms that, initiated from objective economic relations, dominate all relations among men (and thus also the relations of men with themselves, with nature, etc.) (Lukács, 2003, p. 135- 36, our translation).

Nature has been and continues to be part of society's historical and dialectical process. This implies that nature is not purely biological, geographical, physical, or chemical; its analysis and study are not limited to “natural” aspects, because, in society, nothing is purely natural, including nature itself, in terms of its functioning or developments, but also its historical aspect. Thus, nature is also historical and social.

The dialectical relationship between the natural and social environment does not imply that it occurs between diametrically opposed poles or extremes. The explanation of historical nature (both of human beings and nature) reveals the view that nature and history are not contradictory and separate concepts, as if the only circumstance in which they interacted were in a “yin and yang” figure. Both are simultaneous. That is, neither Natural History nor the History of Nature should dissolve into the perspective of the historical nature of society, the “history of humanity,” or vice versa, because, in reality, the history of humanity is also the history of nature—not only as it has been described until now, but in the sense that nature constitutes human history, being intrinsically linked to our subsistence and mode of production.

As mentioned, nature has historicity and constitutes the stage on which social life develops, not merely as a backdrop or setting but also as both medium and content. The way we interact with and act upon nature has not always been the same, both chronologically and geographically, due to various social and cultural reasons. Thus, according to each mode of production and reproduction, the rhythm and dynamics between society and nature change and



possess their own specificity. The mode of production in a given society refers to a systemic aspect, the result of a historical and social construction. The interaction between human beings and nature has always existed, as our origin is planetary, but this interaction changes according to the historical period. In the early stages of humanity, the alterations made to the environment by humans were minimal and limited to what was necessary for subsistence. With the advent of agriculture, a mutation occurs: gradually, the individual's action upon nature grows and intensifies. More than that, with the emergence of the capitalist system and the incorporation of agriculture into this mode of production, the need for production to extract surplus value arises, in line with the capital's incessant search for profit.

In capitalism, it is important to emphasize that this relationship, just like the relationship between human beings and nature, after all, human beings construct their history, is mediated by industry, which, in turn, is driven by the logic of capital. This mode of production is not merely about the individual's activity in the physical environment but, above all, about the action of capital upon nature.

### **The Meeting of Two Corners of the World**

The intrinsic need of capitalism to relentlessly pursue the creation of surplus value and capital accumulation, combined with the process of appropriation of nature, inevitably results in an excess of "extraction" and the use of natural resources, beyond what is necessary to meet human needs and the planet's limits. This does not imply endorsing the view of so-called "radical environmentalists," who argue that the only solution to environmental problems is to entirely abandon technologically developed life, but rather to uphold the perspective that the production and reproduction of society should not be guided by the logic of capital. In the 21st century, when we speak of "human needs," we refer not only to physiological needs.

Colonialism, led by the countries of the Global North—referred to as "developed" nations, as exemplified in the work *Modo de vida Imperial: sobre a exploração de seres humanos e da natureza no capitalismo global* (Imperial Lifestyle: On the Exploitation of Human Beings and Nature in Global Capitalism), has already highlighted its characteristics of both human and environmental exploitation and domination. Ricardo Junior de Assis Fernandes Goncalves, in *Capitalismo extrativista na América Latina e as contradições da mineração em*

*grande escala no Brasil* (Extractivist Capitalism in Latin America and the Contradictions of Large-Scale Mining in Brazil), emphasizes that:

Since the European conquerors set foot on the soils of the American continent and the Caribbean islands at the end of the 15th and beginning of the 16th century, history has continually illustrated pages of conflicts and genocide of the indigenous peoples, depletion of fertile soils, metals, and precious stones (Gonçalves, 2017, p. 4, our translation)

The colonial logic is intertwined with the logic of capital. The expropriation of lands, forests, soils, lakes, animals, and people is an ancient history that persists and impacts indigenous peoples to this day. In Brazil, this process unfolded over centuries, transitioning from complete domination and slavery to stigmatization, exclusion, neglect, and tutelage.

With the advent of capitalism, the State emerged as an instrument of the system for reproducing and disseminating the interests of the dominant class. Since its establishment, the State has appropriated discussions about the rights and duties of Brazil's indigenous peoples, justifying its actions under the idea of tutelage. According to Celia Correa, an indigenous Xakriabá activist from Minas Gerais and current federal deputy for the Socialism and Liberty Party (PSOL), in her dissertation titled *O Barro, o Genipapo e o Giz no Fazer Epistemológico de Autoria Xakriaba: Reativação da Memória por uma Educação Territorializada* (The Clay, the Genipapo, and the Chalk in the Epistemological Making of Xakriabá Authorship: Reactivation of Memory through a Territorialized Education), state tutelage, disguised as protection and care, aims to dominate and imprison, even denying access to public policies “with authority.”

When we discuss the process of tutelage, it becomes evident that the State, since its inception, has always operated with an institutional arrangement grounded in Western legal parameters, appropriating our traditional justice systems in order to exercise and perpetuate colonial domination, taking control of our lives and matters that concern us. Although there are significant processes that express resistance from indigenous peoples, the Brazilian State has not incorporated legal standards to end tutelage, as we still live under systemic tutelage from a political structure perspective. This is evident when we are subject to decision-making processes regulated by the National Congress, through the ruralist bench, as we can observe in the repeated tutelary and racist speeches, recently made public in the debate over the so-called “temporal framework” (Correa, 2018, p. 64, our translation).

Genocide, in general, is a term that, within the context of Brazilian Portuguese, refers to “the murder of a people by the government,” motivated by ethnic, racial, cultural, or other factors. This act can occur directly, through physical violence, or indirectly, as when there is negligence in public policy. Tutelage, in addition to being a strategy of control, can be associated with a mechanism for state-sanctioned genocide, activated by the State when it is convenient. The very characterization of Indigenous peoples by the State constitutes an erasure of these peoples, as they are often classified as “brown” or are not counted at all by health agencies or for statistical purposes. This generates difficulties, for example, in the allocation of public health resources meant for this population.

As a result of the COVID-19 pandemic, thousands of Brazilians lost their lives, but indigenous peoples, due to their isolation and increased vulnerability to infections, became even more exposed to the virus. Furthermore, the Brazilian population was denied access to vaccines, which were already available, for months due to the political interests of former President Jair Messias Bolsonaro, who contributed to the scientific denialism surrounding vaccination. According to the website of the Socio-Environmental Institute (ISA):

COVID-19 spread among indigenous peoples. We show how the Brazilian State was not only negligent but helped the virus spread. Three cases were the most common: health professionals who brought the virus to villages, gold miners and land grabbers who increased invasions during the pandemic, and Indigenous people who became infected when seeking emergency aid in the city (ISA, 2020, our translation).

In other words, hundreds of years later, history repeats itself, now with *neocolonialism* and *neo-extractivism*. The virus, originating from the other side of the world in the industrial furnace, stemming from capitalist appropriation of nature and the large industries that exploit natural resources and their toxic mixtures, reaches the peoples of Latin America once again. And now, when they should have the protection supposedly offered by the State, or the infallible and democratic biotechnology of the major pharmaceutical companies holding vaccine patents, these peoples died in 2020 as they had died in 1500.

*A Gente Precisa Lutar de Todas as Formas: Povos Indígenas e o Enfrentamento da covid-19 no Brasil* (We Need to Fight in Every Way: Indigenous Peoples and the Fight Against COVID-19 in Brazil), is a descriptive and detailed analysis of the impacts of the pandemic on Brazil’s indigenous peoples. The study provides dates of the first deaths, reliable and precise

sources, underreporting of deaths, governmental negligence, Indigenous meetings, and assemblies, as well as reports from miners and land grabbers during the pandemic.

On the 9th, a 15-year-old Yanomami youth also died from COVID-19. In a statement, the APIB (Articulation of Indigenous Peoples of Brazil) reported that this was the third Indigenous life lost to the new coronavirus in less than a month, denouncing that only this case was registered by SESAI (Special Secretariat for Indigenous Health) because the individual was a 'settled' Indigenous person. The document also highlighted the existence of illegal mining activities near the young man's village, reinforcing the need to protect indigenous territories and remove invaders from the Yanomami Indigenous Land, which has been facing a new gold rush (Alarcon; Pontes, 2022, p. 48, our translation).

The cause of death during the COVID-19 pandemic cannot be attributed solely to the viral action on the human body. Contagion is not only biological but also social. The cited text highlights the relationship with nature and its consequences for the indigenous peoples of territories targeted by illegal mining. Brazil has long been contaminated by the logic of exploitation and domination of nature, initially by the colonial imperative and today by the colonial/capitalist imperative.

On one hand, Wuhan, as a manifestation of the great industry of the 21st century, is the stage for industries producing electric and hybrid cars. Ironically, the proposed benefit of these products is clean mobility, which would cause less harm to nature and, consequently, to life itself. However, their production mode continues to contribute to the deterioration of both, with an environment conducive to dangerous biological mutations and unpredictable consequences resulting from the relentless exploitation of workers, as suggested by Chuang (2020). On the other hand, in Brazil's forests, large-scale fires occurred in 2020 that, instead of the humid heat of the Chinese furnace, brought dry heat, forming a smoke screen that, along with the chaos of COVID-19 in the country, highlighted the genocide of Indigenous populations and/or those near deforestation zones, as a consequence and contribution (in the logic of capital) of illegal extractivism and mining.

### **Final considerations**

Duarte's reading of the concept of nature in Marxist thought allows for a deeper analysis of the relationship between society and nature, understanding it as more than a mere interaction. It enables the recognition of the fallacy of a strict separation between these two domains, both

as objects of study and as ways of interpreting the world. The history of nature and the historical nature of society corroborate this position.

However, it is not enough to merely highlight the intrinsic relationship between the natural environment and the social realm; one must also recognize that, since they are inseparable, both are shaped by a historical dynamic specific to the mode of production, which spreads and infiltrates beyond the economic sphere, potentially affecting an entire ecosystem in addition to the social form. Capitalism not only alters the natural environment but also operates without restraint, as the logic of the system is accumulation, which implies the relentless invasion and transgression of natural boundaries to sustain constant production, aiming to achieve the overarching goal of capitalist functioning.

Brazil's forests are not so different from the 'great furnace.' Despite the contrast between the green on one side and the gray on the other, divided by nearly half the circumference of a blue ocean, both territories share the same exposure to the risk of life, which is not confined to these geographic spaces. Each of them can be the stage for the beginning, middle, and end of the production of biosociological catastrophes. The continuous alteration of nature by large industry results in unpredictable consequences for the health of the planet, living beings, and social relations, such as the working conditions of the proletarians in Wuhan, the lives of the inhabitants, and the environment conducive to the development of harmful viruses, or the genocide of the Brazilian and indigenous populations due to COVID-19 and the 'gold rush' (and many other minerals and deforestation) in the years 2020, 2021, and 2022.

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