

Neo-extractivism, mining, and vulnerability of indigenous peoples as an expression of persistent colonialism in Brazil

Neoextrativismo, garimpo e vulnerabilização dos povos indígenas como expressão de um colonialismo persistente no Brasil

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ABSTRACT This essay argues that the most recent threats of vulnerability against indigenous peoples, intensified in the context of the COVID-19 pandemic, reflect a persistent colonialism. This is updated in the context of Brazil's semi-peripheral insertion into the capitalist, neoliberal, and globalized world-system as an exporter of commodities produced by the two strategic sectors of neo-extractivism, mining and agribusiness. The neo-extractivist model benefits mainly transnational groups and national elites with great economic and political power, in addition to the financial sector. Moreover, it establishes connections with the underworld of inferior and illegal circuits linked to sectors such as mining, and ranges from practices of violence to money laundering with the participation of local groups that, in recent times, have been assuming growing political and institutional power. Such groups are part of the complex mosaic of the strengthening of far-right ideologies in recent years on the national scene, which have been gathering alliances. This essay is based on collaborative research experiences in recent years with the Munduruku people in the Middle Tapajós region, along with reflections on the current expansion of the anti-indigenous political agenda.

KEYWORDS Indigenous peoples. Mining. Environmental economics. Ecological development.

RESUMO O artigo, em forma de ensaio, defende que as ameaças de vulnerabilização mais recentes contra os povos indígenas, intensificadas no contexto da pandemia de Covid-19, refletem um colonialismo persistente. Este se atualiza no contexto da inserção semiperiférica do Brasil no sistema-mundo capitalista, neoliberal e globalizado como exportador de commodities produzidas pelos dois setores estratégicos do neoextrativismo, a mineração e o agronegócio. O modelo neoextrativista beneficia principalmente grupos transnacionais e elites nacionais com grande poder econômico e político, além do próprio setor financeiro. Além disso, estabelece conexões com o submundo dos circuitos inferiores e ilegais vinculados a setores como o garimpo, e incluem desde práticas de violência até a lavagem de dinheiro com a participação de grupos locais que, nos últimos tempos, vêm assumindo crescente poder político e institucional. Tais grupos fazem parte do complexo mosaico do fortalecimento de ideologias de extrema-direita nos últimos anos no cenário nacional, que vêm reunindo alianças. O artigo tem por base experiências de pesquisa colaborativa nos últimos anos com o povo Munduruku na região do Médio Tapajós, com reflexões sobre a atual expansão de agenda política anti-indígena.

PALAVRAS-CHAVE Povos indígenas. Mineração. Economia ambiental. Desenvolvimento e meio ambiente.

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Introduction: neo-extractivism and gold mining as expressions of persistent colonialism

This essay presents a trajectory in recent years of the authors' research and reflections on the threats posed to the indigenous peoples in Brazil in the past decades, in view of the neo-extractivist development model based on economic sectors as mining and agribusiness. Our main argument is that the most recent vulnerability processes, intensified during COVID-19 pandemic, reflect the existence of a persistent colonialism updated in the context of the semi-peripheral insertion of Brazil in the capitalist, neoliberal and globalized world-system¹, which is expressed in the development model.

This model simultaneously intensifies the exploitation of labor and common goods, which in the hegemonic techno-political discourse are reduced to the category of 'natural resources', with the export of mineral (e.g., ore/steel and gold) and agricultural (e.g., soy and animal protein) commodities. It benefits mainly transnational groups and national elites, besides the financial sector that funds it and takes advantage of the intense and increasingly unregulated capital flows. Furthermore, the connections with the underworld of lower and illegal circuits (by means of illegal mining prospection networks) ranges from practices of violence to money laundering with the participation of local groups, which in recent times have been acquiring growing political and institutional power. Such groups are part of a complex mosaic of far-right ideologies that in the past years have been gaining strength and gathering alliances in the national scene.

Our central argument is that neo-extractivism and its articulation both with neoliberal and far-right groups create important hindrances for the construction of more sovereign, democratic, inclusive, sustainable, and healthier alternatives for economic and social development in Brazil and Latin America. We believe that there is a deep connection in local, national and global scales

between the current Brazilian development model, the ecosystemic degradation of biomes, as the Amazonian and the Cerrado, and the violation of human and constitutional rights of traditional peoples and communities and peasants, as well as peripheral urban workers. The vulnerability processes of the indigenous peoples, manifested in legal setbacks, fragilization of public policies, violence, and health problems have been aggravated in the current COVID-19 pandemic, but in order to be understood they must be related to the neo-extractivist model.

Our conceptual framework is based on three interdisciplinary fields of knowledge: collective health, political ecology, and the post-colonial approaches, especially the Epistemologies of the South^{2,3}. In our theoretical perspective, the various current global crises are part of a broader civilizatory crisis of the Eurocentric modernity. Such crises involve the limits of the State, law and science that compose the three strategic axes of social emancipation achievement pursued by the Eurocentred modernity in the past centuries, through either the liberal utopia and the constitution of capitalist markets, or the socialist utopia and the idea of reformist or revolutionary construction processes of a communist society.

For the analysis of this complex picture, we have been studying in an integrated way four dimensions of (in)justice: social, sanitary, environmental, and cognitive. The two first dimensions are well known in the field of collective health; the environmental injustices have been aggravated by the degradation of ecosystems associated to the dissemination of several global ecological risks, such as pollution and climate changes, and the processes of (de)territorialization related to the development model. The intersection of social and environmental injustices leads to certain territories, groups and social classes being the first to suffer, and more intensely, the negative consequences of economic development. More than being vulnerable, these groups are made vulnerable through historical processes that are superimposed onto colonialism, structural racism, social inequalities from dependent capitalism, and environmental risks.

As to cognitive (in)justice, especially important to understand the persistence of violence against the indigenous peoples, it is a central concept of the Epistemologies of the South. It analyzes the struggles for social emancipation in the Global South drawing on the ontological and epistemic dimensions often disregarded in critical approaches on social emancipation. The search for cognitive justice requires understanding the social, sanitary, and environmental justices involving traditional peoples and communities, beyond capitalist exploitation and developmentist alternatives, with redistributive and sustainable policies. Cognitive justice brings to the fore existential dimensions related to alternative conceptions of economic development, labor, nature, health, and spirituality, among others. In several countries and multicultural regions of the Global South, especially in Latin American countries as Ecuador, Bolivia, and more recently Chile, most indigenous peoples have been inscribing in the political panorama other ways of conceiving the world and society; hence, they are tensioning a sort of democracy that incorporates knowledge, skills and experiences historically undervalued by the colonial States.

Social transformation and emancipatory health promotion, therefore, require intercultural and interdisciplinary dialogues involving the interaction of knowledge, experiences and practices originating both from science and from ancestral and traditional systems. This is a precondition for, beyond avoiding violence, overcoming radical exclusions and being able to recognize the contribution of the indigenous wisdom to surmount the numerous ongoing crises, in the direction of the necessary civilizatory transition to post-capitalist and post-colonial societies.

To advance in this discussion, during the past years we have been carrying out collaborative studies and dialogues with the Munduruku people in the Middle Tapajós region, in a context of resistance in face of the threats produced by gold prospection activities. Especially, the effects of mercury contamination and infrastructure expansion, such as the waterway and road corridor for the transportation of soy and corn produced

in the Center-West and North regions. With the start of COVID-19 pandemic, since 2020 we have articulated our analyses with this severe health problem. A first contribution in this sense was a report published by Fiocruz COVID-19 Observatory⁴. The present essay is largely based on this report, with the contribution of ongoing research with the Munduruku people.

The remaining of the essay is organized in the following topics: we discuss the maintenance of a historical pattern of colonialism and subalternity of the Brazilian society concerning the traditional peoples, as the indigenous and those of African descent. Provocatively, and related to the theme of gold prospection, we denominate gold-standard the history of radical exclusions in the Brazilian society: a white society, of European descent, educated drawing on the knowledge of western linguistic and cultural references, seeing the world from the perspective of the Global North, i.e., from the colonizer's viewpoint, so-called economically liberal (though State and private initiative perform in an increasingly articulated way), but conservative in behavior, and which is silent about and ashamed of its Amerindian and African roots. This pattern, in the recent years of neoliberalism and neo-extractivism, has been intensifying a political anti-indigenous policy. There have been innumerable institutional and legislative setbacks, which include enabling the exploitation of Indigenous Lands (Terras Indígenas – TI) and the Milestone (Marco Temporal) thesis that is under discussion at the Supreme Federal Court (Supremo Tribunal Federal – STF).

Next, we discuss how the expansion of mining, gold prospection and effects of the neo-extractivist development model express the continuity and aggravation of persistent colonialism in the Brazilian indigenist policy. This is illustrated in the following topic, with the presentation of the case of the Munduruku people in the Tapajós region, in the state of Pará (PA). This people has been suffering with innumerable effects of gold prospection in the region, including recent violence surges and life threats against their leaders. We conclude

this essay with some reflections on the strategic importance of the defense of health and of the indigenous territories for the future of democracy, environmental sustainability, and the necessary civilizatory transition. We believe that the change from the neo-extractivist development model will need the deepening of interdisciplinary and intercultural dialogue between academia, social movements, and the entire Brazilian society with the indigenous peoples' social struggles.

The political anti-indigenous agenda and recent setbacks during COVID-19 pandemic

For the Epistemologies of the South, the end of the colonial regime did not imply the end of colonialism³. This is articulated with two other axes of domination and oppression of modernity, i.e., capitalism and patriarchy, whose consequences mark the relations between the Brazilian society and the groups that originally inhabited the territory currently called Brazil, but who are placed in a subaltern position and are discriminated for their ethnical and racial characteristics. Because they are distant from what we have named the Brazilian society's gold-standard, the indigenous peoples and those of African descent, besides the peasants, become more vulnerable to innumerable types of violations of their fundamental rights, and therefore must carry out social struggles more vigorously, seeking to have them be respected.

In the past decades, the logics of radical exclusion, violence, and subalternity have been accentuated by the neo-extractivist model pushed by sectors such as mining and agribusiness, and infrastructure construction, such as hydroelectric plants, roads, waterways and ports. It is in this context that neo-extractivism can be understood as the development model inserted in a subaltern way in the international

economy, based on the appropriation of natural resources and supported by little diversified productive networks. However, currently the transits are not only in the form of merchandise but also financial assets, because in the merchandise and future markets are traded both present extractions and those that will be performed in the future, i.e., there is also speculation about the capacity of multinational economic groups to impose their interests over the territories⁵.

Due to the speed of changes in the expectations and pressure over corporations and governments, neo-extractivism intensifies environmental degradation and makes even more vulnerable the peoples who live with and depend on nature. As the workers living in precarious conditions in urban peripheries without sanitation, proper dwelling and adequate transport, and as the health professionals, these peoples and social groups are especially vulnerable to various health risks, including COVID-19 pandemic⁴.

Regarding the present pandemic and the indigenous peoples, recent studies indicate their greater vulnerability⁶. Organizations of indigenists, environmentalists, human rights, public health, religious, and even Public Prosecutors have made a stand on the urgency for national coordination of measures to avoid the expansion of the epidemic and its more severe and short-term consequences. However, some measures were partially implemented under the civil society's strong pressure, and to some extent acknowledged by the STF. In face of the institutional fragility, several measures are being autonomously implemented by indigenous organizations, such as the Articulation of Indigenous Peoples of Brazil (Articulação dos Povos Indígenas do Brasil – Apib) in partnership with universities and non-governmental organizations. They have been responsible for the creation of networks of health protection, surveillance and care that seek to integrate popular and techno-scientific practices.

These disputes acquire a political-ideological character when the presidency of the

Republic, the National Congress and sectors of the Judiciary are not capable of establishing and coordinating a minimum agenda of action. Hence, there is the confluence of various factors that expand the vulnerability of the Brazilian indigenous peoples to COVID-19 and other processes that threaten their lives.

After the 1988 Federal Constitution, several pressures continued to threaten the rights conquered by the traditional peoples and communities. The attempts to enable mining and gold prospection activities in the indigenous territories had as landmark a lawsuit filed by deputies and senators of the State of Roraima (RR) to suspend a homologation ordinance signed by the then President Luiz Inácio Lula da Silva in April 2005. It created an area of 1.7 million hectares destined to the exclusive usufruct of the Wapixana, Ingaricó, Macuxi, Patamona and Taurepangue peoples, under the denomination of Raposa Serra do Sol Indigenous Land (TI Raposa Serra do Sol), and the demarcation affected mainly rice producers.

At that time, the STF specified 19 conditions that defined the bases for the legitimacy of the demarcation process and one of them had especial relevance, the so-called Milestone thesis, which established that the indigenous peoples should have been on the territory under dispute on the date of the 1988 Federal Constitution promulgation⁴. Although the STF had stated that this would not be a binding decision, i.e., that it would only be applicable to that specific case, it was appropriated by other institutions of the State of Roraima and is being used as a pretext to deny the demarcation of indigenous lands of peoples who throughout history have been expelled or compulsorily transferred from their traditional territories. This interpretation was recently assumed by the Attorney General's Office Opinion 000/2017, that established the Milestone thesis as a parameter to be followed by the National Indian Foundation (Fundação Nacional do Índio – Funai) in all demarcation processes thereafter. This position was questioned both

by the Federal Public Prosecutor's Office and the indigenous movement together with indigenist partners, having been interpreted as a concession of the then President Michel Temer to the interests of agribusiness and mining. STF Minister Edson Fachin suspended the effects of the opinion on May 7, 2020 through an injunction order; soon, the STF will decide about the Milestone thesis, which has been mobilizing various manifestations of the indigenous organizations and their partners.

Since then, other threats to the fundamental rights of the indigenous peoples have arisen. Besides the daily struggle for survival in the context of the greatest sanitary threat of this century, the indigenous peoples are also mobilized around the Bill of Law No 191/2020 (Projeto de Lei No 191/2020 – PL) proposed by the government of President Jair Bolsonaro, who has been taking actions with the purpose of deconstructing the indigenist territorial policy in force. Already in the first month after his administration's inauguration, he published a provisional measure on the reorganization of the Executive Branch that transferred Funai to the Ministry of Agriculture – a ministry that has historically favored agribusiness. The National Congress vetoed this action, which was later suspended by STF. However, attempts have continued to submit the indigenous territories to the agribusiness logic. This occurred at the opening of the United Nations General Assembly held in September 2019, when President Jair Bolsonaro gave space to supposedly 'indigenous farmers' not recognized by peers in the indigenous movement as leaders of their peoples.

Among the main criticism against the PL 191/2020 is the fact that it excludes from the list of TIs all those that are still at some stage of the administrative demarcation process and, therefore, have not been homologated yet. This is in consonance with the recent Funai Normative Instruction No 9/2020 (Instrução Normativa No 9/2020 – IN), which also restricts TI categories to those already homologated for the emission of declaration

of boundaries and in response to official consultations about the existence or not of TI in a certain area. The PL reduces even further the rights of indigenous peoples by permitting in their territories mining, gold prospection, agriculture using transgenics, and constructions for hydroelectric uses. If this law is approved, it will actually transfer to the Executive branch the National Congress' constitutional prerogative to authorize mining and gold prospection in TIs. It will also prevent the indigenous peoples' power of veto over these issues, limiting the consultation to a formal process of compensation negotiation. The PL also presumes the immediate authorization of all mining requests made previously to the TIs homologation. According to the Socio-Environmental Institute (Instituto Socioambiental – ISA), this would directly affect 237 TIs (175 not homologated and 62 homologated) over which there are 3,843 requests for prospection and mining at the National Mining Agency (Agência Nacional de Mineração – ANM). At a first moment, about 25 indigenous groups in voluntary isolation or of recent contact would also be affected.

Besides the effects of PL 191/2020 and IN/Funai/9/2020, which most directly benefit the interests of miners and gold prospectors, presently the indigenous peoples face another important attempt to flexibilize their territorial rights, namely the Provisional Measure No 910/2019. It aims to 'modify the legal systematics concerning land regularization of the occupations in land situated in areas belonging to the State'. This measure was not voted and was substituted by PL No 2633/20, which was approved by the House of Representatives on August 3, 2021, and awaits the appreciation of the Federal Senate. The PL No 2633/20 expands the size of State lands that can be regularized without previous inspection of the National Institute of Colonization and Agrarian Reform (Instituto Nacional de Colonização e Reforma Agrária – Incra). The agribusiness representatives in the National Congress name it the 'PL of Land

Regularization', whereas environmentalists, social movements and indigenous peoples name it the 'PL of Land Grabbing'. At the time of the closure of this article, it awaited to be voted by the Federal Senate.

This project, as well as the provisional measure that preceded it, was considered by the Federal Public Prosecutor's Office as a 'stimulus to public land grabbing' with the potential to expand deforestation, intensify rural territorial conflicts, and hamper even further the agrarian reform policy in Brazil. According to several entities, despite the evident unconstitutionality of the PL, its approval by the National Congress would enable Incra to issue titles for areas currently in the process of demarcation, thus consolidating an agenda that is anti-indigenous, as well against other vulnerable groups, such as *quilombolas*, traditional communities and peasants.

The situation is even further aggravated due to the increasing fragilization of governmental agencies working in the indigenous territories, as Funai, the Brazilian Institute of Environment and Renewable Natural Resources (Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis – Ibama), and even the Special Secretariat of Indigenous Health (Secretaria Especial de Saúde Indígena – Sesai). The Apib and other civil society organizations have been denouncing this process, occurring precisely during COVID-19 pandemic, when resources are needed to enable the institutions to effectively work on the care of the indigenous populations. These peoples are threatened both by COVID-19 and other pre-existing diseases like malaria, but also by other health problems resulting from the exposure to sub-products of gold prospection and mining, especially the chronic mercury intoxication.

Mining and gold prospection in indigenous territories are not legalized yet, but only due to the lack of the necessary regulation, although it is presumed in the Federal Constitution. The PL 191/2020, which intends to do so, considers the licensing of these activities in TIs as an

exclusive prerogative of the State. In this way, it alienates the indigenous peoples from their right to previous, free and informed consultation as presumed in the International Labor Organization (ILO) Convention 169, currently incorporated in the Brazilian legal system. This turns the indigenous peoples vulnerable in times of economic and social crises, making them assume the costs of development that is said to be necessary to create jobs and generate income for the entire national society, at the same time as there is no serious debate on the alternatives for a more sustainable and socially fair development.

Mining and gold prospection affect the indigenous territories not only through direct impacts related to the loss of territory, deforestation, water pollution, decrease or degradation of agricultural land, or the decrease of the variety and availability of wild animals and other resources of the forest, fields and water sources, important in their diet and health self-care. Those activities also propel several others that are necessary for their maintenance, such as civil construction, generation and transmission of electric energy, mining transport system (e.g., ore pipeline, railways and waterways), manufacturing industry (e.g., steel industry), and export infrastructure (e.g., ports and port complexes). All these enterprises intensify the impacts on the territories situated in the areas of direct influence of mines, and on the territories of indigenous peoples and traditional communities, many of them located thousands of kilometers away from where the ore is extracted.

In the case of gold prospection, the exploitation activities articulate with other informal economies, often marginal and illegal, named by Milton Santos as lower circuits of capitalism⁷. These activities aggravate the processes of vulnerabilization and violence related to the extraction and commerce of gold and involve firearms, drugs and prostitution. Furthermore, mercury is a highly toxic metal used in the process of gold concentration, which contaminates rivers and fish, hence the indigenous

and riverside populations. The mercury used in gold prospection is from foreign origin and is bought mostly illegally, thus not complying with the Minamata Convention on Mercury, of which Brazil is a signatory⁸.

Therefore, the perspective of allowing these activities inside the indigenous territories may have effects that update the colonial policies of extermination, which the entire legal system elaborated during the past century sought to avoid. If today the indigenous peoples have reached a precarious legal balance with the indigenist legislation in force, which grants rights whose effectiveness is greatly hampered, flexibilizing this legislation in the benefit of the broader society, especially the economic groups that maintain the neo-extractivism, is a strong threat to the way of life and means of subsistence of the indigenous peoples.

The case of the Munduruku of Tapajós: conflicts and threats related to gold prospection

The territorial conflicts presently lived by the Munduruku people in the basin of the Tapajós River, in the state of Pará, especially those concerning gold prospection, are significant examples of how the activities related to the developmentist and neo-extractivist model undermine the indigenous daily life structure. The first element to be considered in this type of conflict is the way the various agents who interact in a given geographic space see it.

For the Munduruku, the Tapajós is simultaneously a territory and an inheritance bequeathed to them by *Karosakayban*, a fundamental divinity of their cosmovision. On the other hand, for the Brazilian State, the Tapajós is the main river in a hydrographic basin, the Tapajós-Teles Pires, which begins in Sorriso, state of Mato Grosso (MT), and has its mouth at the Amazon River, nearby the town of Santarém, state of Pará (PA). For

several economic actors, water is seen as a natural resource, potential basis for hydroelectric plants and navigation means with the implantation of a waterway, and as part of the so-called Mineral Province of Tapajós (Província Mineral do Tapajós – PMT), an auriferous area of approximately 100 thousand square kilometers considered as one of the largest submersed gold-fields in the world⁹.

The same river can be a fundamental part of the way of life of a given people, irreplaceable by any other due to its cosmological and sacred character, or solely a source of wealth and natural resources for firms and corporations, with the support of the modern State in the structuring of development. Wealth extracted from it is turned into commodities, reserve value or exchange value in international markets under the world-system's central countries hegemony¹.

The Munduruku people tend to identify as their opponents in the conflicts the most visible agents in the territory, i.e., gold prospectors, firms in the gold prospection chain seated in towns like Itaituba and Jacareacanga (PA), and even the Brazilian State. This one systematically assumes the role of tutelary, intermediation and regulation of interests of economic development projects, or still by omission in the surveillance of gold prospection, especially the illegal activity. However, the activity of gold prospection only becomes economically viable when there are global exchange circuits that articulate different scales of higher and legal economic gold circuits with lower circuits, often illegal. Those are complex dynamics, not much visible on the local level where the gold prospection is performed, and this hinders the Munduruku people's capacity to influence decision-making processes that affect them.

Occasional and strategic alliances with national and international academic groups and ecological movements help to prevent the continuity of certain enterprises, such as the São Luiz do Tapajós Hydroelectric Plant, or amplify the denunciations of the Munduruku people. However, they have little influence

over the international gold market, with its prices defined by economic macro-determinants, many of them made invisible by the way they operate and integrate with the lower circuits, ignoring the fate of Amazonian peoples and ecosystems.

These multiple scales of the environmental conflict and the hindrances the Munduruku people face to act beyond the nearest territorial scale turns the effects of their actions also limited, at the most, to the national arenas of decision. Occasionally, they make incursions to the country's capital Brasília, where they join other peoples in strategic moments of discussion of territorial legislation (as the Milestone thesis), environmental legislation or gold prospection regulation. On the other hand, Brazil has limited influence over the definition of global rules of mineral markets, although it possesses some of the largest world reserves and is an important player in this market. It is a different position from that of the oil market, because the Organization of the Petroleum Exporting Countries (OPEC) operates as an active pressure agent. In the case of the gold market and other commodities, the most powerful consumer countries are hegemonic in price definition, stimulating the competition between producer countries.

The lack of sovereignty is a persistent paradox in societies that are wealthy in certain commodities, but are subaltern for being inserted as peripheral in the capitalist world-system, also characterized as dependent capitalism¹⁰. Due to their low technological and social development, besides their colonial inheritance, such countries must import other essential goods, including food, which drives them to successive economic and social crises resulting from periodical fluctuation of international rates of those commodities. This was a strong characteristic of the Brazilian economy during the colonial and post-independence periods until the mid-twentieth century, when the country started the industrialization process with some margin for less dependent developmentist policies.

With the expansion of the neo-extractivist model by the end of the twentieth century and its continuity in the present, there have been recent barriers to more autonomous strategies of progressive administrations, for example, the relation South-South and the insertion of Brazil in the Brics. This risk is increasingly present due to the current aggravation of the process of national de-industrialization, the iniquities of the international commerce of commodities, and the role of imperial action of the United States of America in the dispute of geopolitical control of the Americas in face of the Chinese growth. In this sense, the political and economic relevance of neo-extractivist key-sectors (agribusiness and mining) represents a huge challenge for the resumption of more sovereign and less dependent policies for Brazil and the entire Latin America.

In the case of the Munduruku territory, it is estimated that gold prospection already occurred since the early European colonization fronts initiated the explorations in the region in the sixteenth century. Although in the early periods it was an artisanal activity, with pans and manual resources, the gold prospection activities were intensified as from 1970, when new technologies were introduced, enabling its spatial expansion and the intensification of the extraction of gold powder. Since then, mercury became an essential element in this process. As important as the large vessels and heavy machinery currently used in gold prospection in the Tapajós region, this rare metal, which appears naturally in the liquid state, is easily aggregated to the gold powder, forming a composite named amalgam, which is later warmed up for the separation of gold. However, mercury is also a toxic metal for most living beings, including humans, as it accumulates on the animal fat after bioaccumulation and bio-magnification processes. The outcome is that animals who occupy the highest positions in the food chain, including indigenous and riverbank human groups, receive high doses of mercury through feeding mainly of fish, triggering health problems such

as neuropathies and liver disorders, besides impacts on child development¹¹. Besides the communities that live alongside rivers, the gold prospectors themselves are contaminated during the work process, especially during the amalgam burn.

In general, the economy of gold prospection is structured in two very distinct classes. Gold prospectors are often poor or impoverished, and work informally. Differently from mining companies and legal gold commerce, gold prospectors are distant from the higher circuits of power and the formal gold market, which is fed by the lower and often illegal circuits. The horizon of the artisanal gold prospection is limited and short-term for the prospectors, who are driven by the immediate subsistence of their families; but gold prospection maintains a political class formed by equipment owners, who hire the prospectors, negotiate prospection fronts and carry out the initial phase of gold commerce. This more powerful class of 'gold prospectors' involves local entrepreneurs with increasing expression in the region's political structure and even nationally¹².

Therefore, the gold prospection workers, often natives of the indigenous peoples and riverbanks communities, end up subordinated to local entrepreneurs who finance and organize an activity that is increasingly mechanized and expensive. Dependent on technology such as bulldozers, vessels, fuel, mercury and other high-value inputs, local gold prospectors would hardly be able to pay with their own means¹². Thus, while a large number of workers in the gold prospection activity are able to earn hardly enough for their own subsistence, there are firms and natural persons who illegally accumulate licenses and make significant profit, connecting local elites with the global gold market, using circuits that often involve illegal activities such as drug traffic, firearms, prostitution networks, and alcohol distribution. Therefore, on a local level, the neo-extractivism of gold prospection reproduces the inequalities and injustices that

characterize this market on a global level in the relationship between the countries involved, but it aggravates the aspects of violence and spoliation typical of the colonial pattern that persists and is re-updated.

The gold prospection economy is structured on the margins of the law and the formal economy, takes advantage of the social image of the gold prospector as a worker who serves his family and of gold prospection as an almost artisanal activity that can generate wealth on the short term, in a symbolic dimension of metals and precious stones exploitation. It was this perspective that in 1983 justified the creation of the Tapajós Gold Prospection Reserve (Reserva Garimpeira do Tapajós) by the Ministry of Mines and Energy (Ministério de Minas e Energia – MME). Although the activity is still intensive in the use of local labor, nowadays it corresponds increasingly less to this recurrent narrative. On the one hand, national and local political groups maintain it mobilized in order to legitimate the attempts of gold prospection regularization in TIs; on the other hand, the main beneficiaries of a possible approval of the various PLs would be the economic groups that are active in the region and mining multinationals such as Vale, AngloGold Ashanti and Kinross, giants of this market operating in several countries.

For this reason, although in the past many Munduruku were active in gold prospection, and presently some members of the ethnic group still take part in subaltern positions in the chain, as from the years 2000 they started to publicly denounce the impacts of the activity and of mercury in the TIs that had already been demarcated (Munduruku and Sai Cinza TIs, on the High Tapajós), but especially those that are in the process of demarcation (Indigenous Reserves Praia do Mangue and Praia do Índio, and Indigenous Lands Sawré Bapin, Sawré Jaybu and Sawré Muybu, on the Middle Tapajós).

A landmark of this struggle occurred in 2012, when the Munduruku held gold prospectors and workers of Funai, with the purpose of making pressure on the Brazilian government to recognize the problem¹³. Since then,

the strategies of action of the Munduruku on the theme have been multiplied and diversified, ranging from articulations with the Federal Public Prosecutor's Office in the state of Pará (Ministério Público Federal no Pará – MPF/PA), to collaborative research projects with health institutions, such as Oswaldo Cruz Foundation (Fiocruz). Other projects involve archaeological research conducted by Munduruku students of the Universidade Federal do Oeste do Pará (Ufopa)¹⁴ and the production of documentary films, such as the recent 'Fio da Meada', by the Brazilian filmmaker Silvio Tandler, with the co-scriptwriting by two researchers of the Núcleo Ecologias, Epistemologias e Promoção Emancipatória da Saúde (Neepe/Fiocruz).

On the other hand, such strategies of certain Munduruku groups to resist the gold prospection co-exist with other groups of the same ethnicity who maintain some level of agreement with gold prospectors. According to Sposati¹¹⁽⁴⁶⁾, there are villages in the municipality of Jacareacanga, on the High Tapajós, where the money from gold prospection, due to informal agreements with leaderships, financed

A house of support in Jacareacanga. Ensured the generation of energy for the village. [...]. The youth that studies outside the village was maintained with the monthly payment of gold prospection, and all that was of all the community.

Those different strategies of survival in face of the devastation caused by gold prospection, which range from agreements to direct actions against gold prospectors, including articulations with the State, the civil society and the media, cause tension in the daily life in the Munduruku territories because they establish areas of dispute, both intra-ethnic and inter-ethnic. In other words, they cause friction in the necessary internal articulation at moments when the external pressure requires collaborative action. This does not mean that there is a radical separation between the

various villages: if the issue of gold prospection divides them, other issues mobilize articulations, such as the struggle for the demarcation of the territories and against the construction of dams along the Tapajós River basin. Due to geological characteristics, the Tapajós and Teles Pires rivers have many waterfalls, which makes them advantageous for the installation of small hydroelectric power plants. A recent survey made by the Munduruku and their allies identified 43 points along the basin that are considered by the Brazilian State as having great potential for this type of power plant, which could together generate up to 30 MW¹⁵.

The multiplicity of conflicts within the Munduruku people's territory poses the need of a minimal degree of internal agreements, so even with the tensions produced by gold prospection on several dimensions of daily life, they continue to build mechanisms of political cohesion in face of the various forces that pressure them. There are, however, periods when the correlations of political and economic forces produce rupture in this tense internal balance and in the relationship with gold prospectors, and violence takes the place of negotiation and public denunces.

This is what happened in November 2012, when Adenilson Kirixi Munduruku was murdered. The case became a symbol of the Munduruku's struggle for their territory, and initiated a long period of tensioning. The Munduruku denounced many times the State's leniency towards the investigation and judgment of the case, and the truculence of the Federal Police that under the allegation of combating illegal gold prospection caused violence in the High Tapajós villages, as during the so-called Eldorado Operation¹⁶ (Operação Eldorado), when the indigenous leader Adenilson Kirixi Munduruku was murdered.

The most recent situation of violence occurred on March 25, 2021, when a group of gold prospectors, some of them belonging to the Munduruku people, invaded and set fire on the sites of three Munduruku associations: Munduruku Wakobor n Women's Association

(Associação das Mulheres Munduruku Wakobor n), Da'uk Association (Associação Da'uk) and Arikico Association (Associação Arikico); in the last one also functioned the Munduruku Ipereg Ayu Movement (Movimento Munduruku Ipereg Ayu) and the High Tapajós Munduruku Indigenous Council (Conselho Indígena Munduruku do Alto Tapajós – Cimat), as denounced by these entities in an open letter publicized on that occasion¹⁶. This event occurred in the wake of the intensification of gold prospection in the Munduruku territory and the political strengthening of pro-gold prospection groups due to the federal government's public signalization that the activity would be legalized and that Ibama's surveillance actions would be weakened.

This type of situation points to the complexity of the political and territorial context of the region, where since the colonial times the State's actions have contributed to the fraying of intra-ethnic relationships and to an increasing process of vulnerabilization of the Munduruku people that exposes them simultaneously to environmental risks and violence, which many times is fratricidal. This is the effect of an indigenist policy that does not recognize the indigenous peoples' autonomy to decide about their own future. On the contrary, it pressures them towards the difficult dilemma between abandoning their way of life and becoming incorporated into the activities that destroy their territories, at times despite their own people's collective decisions; or towards an uneven and difficult confrontation, that leads them simultaneously to conflicts with powerful State and social forces. Although officially the indigenous people's extermination is not affirmed as a State policy as in the colonial period, political actions and omissions have been leading to the same outcomes, which became more obvious with the COVID-19 pandemic, but also occurs with innumerable actions in the region, such as the support to gold prospection, mining, agribusiness, and land grabbing, which are behind the neo-extractivist model.

Final considerations: the present crisis requires surpassing the neo-extractivist development model

We believe that the defense of territorial and health rights of the indigenous peoples implies a deepening of the interdisciplinary and intercultural dialogue between the academia and the entirety of the Brazilian society with these peoples, not only to defend the sustainability of ecosystems and preserve the environment, but also to prepare with more clarity for the necessary civilizatory transition, in face of the various ongoing crises and injustices. We understand that the present picture of environmental degradation and threats to the rights of indigenous peoples in regions as the Amazonian is deeply linked to the neo-extractivist model, in which gold prospection is inserted. This case is especially relevant to understand the specificity of neo-extractivism and its political, economic, sanitary and environmental consequences.

With the end of the Bretton Woods agreement in 1971, gold stopped being a financial backing of the international financial system to become a commodity¹⁸. At the first moment, this turn caused a strong increase on the price of gold and a run to the various auriferous reserves in the world, including in Brazil and the Tapajós region by means of artisanal gold prospection, which incorporates investments in its mechanization that amplify the socio-environmental impacts. As this process was poorly regulated by the State and had intense participation of economic agents from the lower circuits of capitalism, neo-extractivism involving illegal gold prospection has strong connections with illicit activities, which results in an even more violent dimension of its expansion.

Since gold is a wealth source with economic, political and symbolic expression that assumes growing influence in politics and within the government, tensions and contradictions are generated between the modernizing and developmentist vision of the State and the setbacks of

neo-extractivism in the continuity of what we name persistent 'gold-standard' colonialism in the region. The violence and spoliation characteristics of the radical exclusions and the abyssal lines of colonialism³ assume contours similar to those of the previous centuries in the Americas, now in the twenty-first century, colliding with the civilizatory claims of the Democratic State based on the Rule of Law.

In this sense, neo-extractivism is linked to the expansion of social fascism and extreme-right groups that unite not only racist, authoritarian and negationist forces with those of the financial capital and representatives of neo-liberalism, but also with those based on activities of the lower circuits, such as gold prospection and commerce, land grabbing, private security and extermination groups. In the urban context, there are similar expressions of the lower circuits, growing in not only the narco-traffic, but also in militias and political-ideological groups that contradictorily propagate the use of violence against criminality and are opposed to groups that defend human rights.

We believe that by discussing the economics and the political ecology of neo-extractivism in Brazil, we can contribute to the understanding of economic, political and cultural dynamics that disembody into the abyss of social fascism in the country, especially after the unconstitutional impeachment of former President Dilma Rousseff in 2016. At the time, without much clarity, there was a growth of far-right groups that reached unprecedented political-institutional power since the latest presidential election, with the support of political forces such as the agribusiness, which shortly before were part of the coalition government of the Workers' Party (Partido dos Trabalhadores – PT). Along this article, we sought to present elements to connect the neo-extractivist model and the recently ongoing political-institutional changes that are clearly and markedly anti-indigenist.

Therefore, the present democratic, socio-environmental and sanitary crisis requires, besides the antiracist struggle, the struggle for economic and technological sovereignty and, furthermore,

the struggle for alternatives to the developmentist and neo-extractivist model. It is about struggles for cognitive justice that require new forms of thinking and feeling, articulating reason and affection, using the heart (*coracionar*)², and this is part of the challenges of the academia in this and in the next generations.

The challenges to overcome such problems are not easy, but demand necessarily a transition to economies and ways of social organization with more harmony between society and nature. The case of the indigenous peoples and the struggle of the Munduruku for the demarcation of their lands and in facing the gold prospection represents more than an isolated case of resistance. We can learn with them how to reinvent other forms of territoriality, public policies and more solidary economies in the direction of possible futures that are more fair, inclusive and sustainable, tough difficult to imagine in the present developmentist, neo-extractivist and conservative scene. Therefore, we suggest that all who read this essay watch the mid-length film ‘Garimpo, natureza e conflitos ambientais no Médio Tapajós’¹⁹ (‘Gold prospection, nature and environmental conflicts in the Middle Tapajós’, free translation) (<https://bit.ly/3J89WCa>), produced in partnership between Neepes/Fiocruz,

Pariri Association (Associação Pariri) and the audiovisual producer Couro de Rato. It brings the voices of the Munduruku themselves with their wisdom, so that we can all understand what is presently at stake at the Tapajós River.

A way of making this problem explicit was recently formulated to us by the Munduruku in a fieldwork, by means of the following question: why do the *Pariwat* (white men) kill and die so much for gold if we do not see its application in products that are used in daily life? The Munduruku know that the ornamental use in neck chains and bracelets represent only a slight amount of the gold extracted from the region. So, where is this gold being taken to and what interests do they serve? Answering this question to the Munduruku also means answering to ourselves: until when and what must we do to stop killing and dying for material wealth that prevents life on the planet and happiness to so many human beings?

Collaborators

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References

1. Wallerstein I. The capitalist world-economy. Cambridge: Cambridge University; 1979.
2. Porto MFS, Rocha DF, Fasanello MT. Saúde, ecologias e emancipação: conhecimentos alternativos em tempos de crise(s). São Paulo: Hucitec; 2021.
3. Santos BSS. O Fim do império cognitivo. Coimbra: Almedina; 2018.
4. Rocha DF, Porto MFS. A vulnerabilização dos povos indígenas frente ao COVID-19: autoritarismo político e a economia predatória do garimpo e da mineração como expressão de um colonialismo persistente.

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- te. Observatório Covid-19 Fiocruz, 2020. [acesso em 2021 ago 14]. Disponível em: <https://www.arca.fiocruz.br/handle/icict/41407>.
5. Gudynas E. Diez tesis urgentes sobre el nuevo extractivismo. In: Centro Andino de Acción Popular – CAAP e Centro Latinoamericano de Ecología Social – CLAES. Extractivismo, política y sociedad. Quito: Centro Andino de Acción Popular: Centro Latinoamericano de Ecología Social; 2009.
 6. Santos RV, Pontes AL, Coimbra JR, CEA. Um “fato social total”: COVID-19 e povos indígenas no Brasil. *Cad. Saúde Pública*. 2020 [acesso em 2021 ago 14]; 36(10):1-5. Disponível em: <https://doi.org/10.1590/0102-311X00268220>.
 7. Santos M. O espaço dividido. São Paulo: EdUSP; 2008.
 8. Brasil. Ministério Público Federal. MPF reafirma incoerência de parecer da AGU sobre marco temporal e demarcação de terras indígenas. MPF Notícias. 2018 ago 15. [acesso em 2020 maio 11]. Disponível em: <https://bit.ly/2SU2dzt>.
 9. Coutinho MCN. Província mineral do Tapajós: geologia, metalogenia e mapa previsional para ouro em SIG. Rio de Janeiro: CPRM; 2008.
 10. Fernandes F. Capitalismo dependente e classes sociais na América Latina. Rio de Janeiro: Zahar; 1972.
 11. Wasserman JC, Hacon SS, Wasserman MA. *Mundo e Vida*. 2001; 2(46):46-53.
 12. Coelho MC, Wanderley LJ, Costa R. Garimpeiros de ouro e cooperativismo no século XXI. Exemplos nos rios Tapajós, Juma e Madeira no sudoeste da Amazônia brasileira. *Confins. Revista franco-brasileira de geografia*. 2017 [acesso em 2021 ago 14]; 33. Disponível em: <https://doi.org/10.4000/confins.12445>.
 13. Sposati R. Por que a Polícia Federal matou Adenilson Munduruku? *Brasil de Fato*. 2012 nov 27. [acesso em 2020 maio 11]. Disponível em: <https://bit.ly/3NoVPKU>.
 14. Rocha B, Lourdes R. Na Amazônia, as bibliotecas estão sendo incendiadas. *El País*. 2020 jun 4. [acesso em 2021 abr 10]. Disponível em: <https://bit.ly/3ruBjfl>.
 15. Munduruku AK, Chaves KA. “Precisamos estar vivos para seguir na luta”: pandemia e a luta das mulheres Munduruku. *Mundo Amazônico*. 2020 [acesso em 2021 ago 14]; 11(2):179-200. Disponível em: <https://doi.org/10.15446/ma.v11n2.88662>.
 16. Oliveira RM. O jabuti e a anta: povo Munduruku, hidrelétrica, conflito e consulta prévia na bacia do rio Tapajós. *Amazônica Revista de Antropologia*. 2020 [acesso em 2021 ago 14]; 12(2). Disponível em: <http://dx.doi.org/10.18542/amazonica.v12i2.7947>.
 17. Associação das Mulheres Munduruku Wakobor n, Associação Da’uk, Associação Arikico, Movimento Munduruku Ipereg Ayu e CIMAT. Denúncia da queima do escritório. *Apib Oficial*. 2021 mar 25. [acesso em 2021 dez 20]. Disponível em: <https://bit.ly/3smO3co>.
 18. Andrade MLA, Cunha, LMS, Gandra GT. Ouro: de lastro financeiro a commodity. *BNDES Setorial*, Rio de Janeiro, 2020; (11):27-46.
 19. Neepes/Fiocruz; Associação Pariri Munduruku; Produtora Couro de Rato. Garimpo, natureza e conflitos ambientais no Médio Tapajós: Diálogos Interculturais. YouTube, Canal Neepes em Movimento. [acesso em 2021 dez 20]. Disponível em: <https://bit.ly/3J89WCa>.

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