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Sustainable Development in the Brazilian Amazon: Meanings and Concepts^{1,2}

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Abstract: Social, political and economic relationships in the Amazon are mediated by nature and government policies, programs, and regulations, including environmental education policies, which have disseminated the concept of sustainable development in over recent years. Based on these elements, this study explores the social representations that give meaning to the concept of sustainable development among elementary teachers in the Amazon region. Adopting an ethnographic approach and drawing on the theory of social representations, we conducted a qualitative descriptive study with 121 teachers with a degree in pedagogy using questionnaires, group discussions and participant observation. The findings show that nature, environmental problems and Amazon culture exert a strong influence on representations of the concept of sustainable development.

Keywords: The Amazon; sustainable development; social representations; environmental education policies

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Desarrollo sostenible en la Amazonía brasileña: Significados y conceptos

Resumen: En la Amazonía, las relaciones sociales, políticas y económicas están mediadas por la naturaleza y por los programas, acciones y regulaciones implementadas por el Estado en la realidad cotidiana. Entre estas regulaciones se encuentran las políticas públicas educativas en Educación Ambiental, las cuales, en los últimos años, ha difundido el concepto de desarrollo sostenible. Con estos elementos, esta investigación tiene como objetivo principal: conocer las representaciones sociales que, elaboradas por docentes en el contexto de la Amazonía brasileña, dan significados al concepto de desarrollo sostenible. Metodológicamente, la investigación fue construida en base a la Teoría de las Representaciones Sociales, enfoque etnográfico, a partir de la colaboración de 121 docentes con formación en Pedagogía. Para recopilar la información adoptamos cuestionarios, dos grupos de discusión y observación participante. La investigación indica que la naturaleza, los problemas ambientales y la cultura amazónica ejercen una fuerte influencia en la representación del concepto de desarrollo sostenible.

Palabras-clave: Amazonía; desarrollo sostenible; representaciones sociales; políticas de Educación Ambiental

Desenvolvimento sustentável na Amazônia brasileira: Significados e conceitos Resumo: Na Amazônia, as relações sociais, políticas e econômicas são mediadas pela natureza e pelos programas, ações e regulamentações implementadas pelo Estado na realidade cotidiana. Entre estas regulamentações estão presentes as políticas públicas educativas de Educação Ambiental, as quais, nos últimos anos, tem difundido o conceito de desenvolvimento sustentável. Com esses elementos, esta pesquisa tem como objetivo principal: conhecer as representações sociais que, elaboradas por docentes no contexto da Amazônia, dão significados ao conceito de desenvolvimento sustentável. Metodologicamente, a pesquisa foi construída com base na Teoria das Representações Sociais, abordagem etnográfica, a partir da colaboração de 121 docentes com formação em Pedagogia. Para coletar as informações adotamos questionários, dois grupos de discussão e a observação participante. A pesquisa indica que a natureza, os problemas ambientais e a cultura amazônica exercem uma forte influência na representação do conceito de desenvolvimento sustentável.

Palavras-chave: Amazônia; desenvolvimento sustentável; representações sociais; políticas de Educação Ambiental

Current Contexts in the Amazon: A Shift in Environmental Policy

The year 2019 marked two decades since the creation of Brazil's National Environmental Education Policy, introduced by Law 9.795 on April 27, 1999. However, 2019 was a bleak year for the environment in Brazil, with the signing of Executive Order 870 (EO 870) on January 1, 2019. Clearly revealing the Bolsonaro administration's stance on the environment, this instrument has placed a huge obstacle in the way of pushing forward crucial issues on the environmental agenda (Andrade, 2019; Bourscheit, 2019). This radical shift in environmental policy is by no means immediate; on the contrary, it has been in the making over recent decades. Built upon the subtleties of discourses in national and international environmental policy, it is the materialization of a political project whose purpose is to secure domination in all its forms (Lima, 2016; Porto-Gonçalves, 2017a).

This project includes the ideological shift driven by UNESCO in the Decade of Education for Sustainable Development (2005-2014)³ and its effects on environmental education agendas. Within the Brazilian context, several researchers have highlighted the potential impacts of the document Decade of Education for Sustainable Development (DESD), approved in Johannesburg in 2002. These impacts play out across the social issues that underpin democratic concepts and practices, such as justice and citizenship, and across the field of environmental education (Reigota, 2007; Diniz, 2016). This is because the concept of sustainable development adopted in the document is "projected as a goal of 'holistic and transforming' educational processes, but treated superficially, without addressing the intrinsically controversial nature of the term, which for many is a contradiction in terms" (Diniz, 2016, p. 49). This contradiction is increasingly incoherent, especially when the myth of perpetual economic growth is propelled with total disregard for the principles of environmental protection. EO 870 is an example of this disregard, signaling the "extinction of the Department of Environmental Education and transfer of the Brazilian Forest Service and Rural Environmental Registry to the Ministry of Agriculture" (Andrade, 2019, p. 11).

Based on the argument of economic efficiency and downsizing, the recent steps taken by the current government are strong evidence of the dismantling of everything that has been achieved over the last few decades in the realm of environmental policy. EO 870 has completely undermined the autonomy of the Environment Ministry, stripping it of some of its key powers and functions related to the management of complex issues (Bourscheit, 2019; Machado & Moraes, 2019). In this regard, Andrade (2019, p. 211) highlights "core environmental public policies; ... responsibility for combating deforestation, forest fires and desertification... stripping the powers of IBAMA [the country's environmental agency] and Anvisa [Brazil's health protection agency], vesting environmental licensing and pesticide authorization powers in the Agriculture Ministry". With significant implications for the Brazilian Amazon, these backward steps reflect the economic interests and political agendas that prevail in the region.

Driven by hegemonic forces, historically, economic interests in the Amazon have enabled time and time again the agendas of *imperialism*, *Eurocentrism* and *the patriarchy* – the ultimate representation of appropriation and violence against humans and nature in all its forms (Andrade,

³ In December 2002, the United Nations General Assembly adopted resolution 57/254, creating the United Nations Decade of Education for Sustainable Development (2005 – 2014). As part this process, UNESCO recommended the development of an Action Plan that emphasized the role of education as an essential driver of change towards sustainable development. Likewise, at the Fifth Ministerial Conference "Environment For Europe", held in Kiev in 2003, the Ministers and Heads of delegation of States undertook a commitment to promote the recommendations set out in UNESCO's United Nations Decade of Education for Sustainable Development (2005-2014): international implementation scheme (Gutiérrez & Benayas, 2006).

2017) – meeting the demands of the current version of *capitalism*, in which the interests of nation states succumb to the commodification of nature. Between the toing and froing and jostling for power, these demands, are articulated in extremely aggressive processes of *domination* of human labor and time and *appropriation* of nature for financial gain (Porto-Gonçalves, 2017a). Within this context, especially after the 1970s, "the Brazilian Amazon was converted into a complex issue, with different dilemmas and challenges to be addressed" (Andrade, 2018a, p. 1).

In this regard, the materialization of environmental education policies is an urgent challenge, especially in relation to the inextricably linked issues of *climate change* and *deforestation*, the latter of which is chiefly the result of the development of mega projects in the region (Nobre, 2014; Brondízio, 2016; Lima, 2016). Curbing the deforestation of the Amazon and its impacts on climate change requires an environmental impact mitigation and adaptation plan guided by past experiences and future expectations. In other words, it requires a plan that includes education policies tailored to reality. As Nobre (2014, p. 6) points out, "accumulated deforestation and degradation constitute the most serious contributing factor to climate change, making the development of a wide-scale effort to replant and restore the destroyed forest necessary and inevitable".

Any plan designed to address the drivers of environmental degradation should encompass the government's political and economic agendas, media and communication, and, more particularly, formal and non-formal education processes. With regard to education, more specifically environmental education, it is important to recognize the accumulation of experiences that have characterized the construction and consolidation of this scientific *field* of environmental activism in Brazil over the past four decades. A field that was consolidated in the face of a "significant increase in the [prominence] of the theme of specific EE policies, with a strong emphasis on research oriented towards social transformation" (Kawasaki & Teixeira, 2018, p. 102). For these reasons, environmental education in Brazil is considered a point of reference, not only because of the quantity of *in-formation* produced, but also due to the potential and quality of the analysis and interpretation of political, social, economic, and environmental dynamics and conjunctures (Carvalho, 2016; Kawasaki & Teixeira, 2018; Reigota, 2007).

Today, this scientific *field* of environmental activism seeks to *resist* the hegemonic onslaught, in particular the ideology present in the DESD. To this end, it constantly reinvents itself as a strategy of disobedience and political and epistemological resistance to keep it bases faithful to emancipatory social struggles in defense of the environment and strengthening of citizenship. The notion of scientific field used here may be understood as "a social universe like others, constituted, as elsewhere, of capital, power, relations of power, struggles to preserve or transform these relations, and strategies for maintaining or subverting interests etc." (Bourdieu, 1996, p. 88). An example of the subversion of interests is the wide dissemination of the concept of education for sustainable development by international hegemonic policies. This ideological shift has received a barrage of criticism from renowned environmental educators in Brazil (Diniz, 2016; Reigota, 2007; Sato, 2005). However, the criticism has not been enough to demystify the *sustainability "dispositive"*, which "permeates us through its multiple strategies, urging us to speak its language and mold our attitudes to its discourses" (Sampaio & Guimarães, 2012, p. 401).

This process of ideological transition gradually silences the more critical concepts of environmental education, emphasizing the principles established by the DESD in an attempt to mute the principles of environmental preservation (Diniz, 2016). In parallel, other concepts of environmental education have begun to gain force nationally, fixing its bases in the social imaginary (Machado & Moraes, 2019). Such concepts include the 'developmentalist' ideology advocated since the *Brundtland Report*, which, three decades after its publication in 1987, remains a constant presence

in the discussions disseminated by various sources of information, social media and education policies, including those directed at the Amazon (Sampaio & Guimarães, 2012; Andrade, 2017).

Thus, positioning oneself against the developmentalist ideology means, among other things, playing an active role in promoting the transformation of reality in the Amazon, collective emancipation, and social and environmental rights, acknowledging the relevance of cultural diversity and territory. This is because "one cannot understand the fate of the Amazon and, above all, that of Amazonians in a situation of subalternation, whilst ignoring the territorial tensions played out across the region" (Porto-Gonçalves, 2017a, p. 51).

Territorial and environmental tensions in the Amazon are fiercely fueled by discourses of hate, the violation of human rights, commodification of nature, genocide of tribal people, and ecocide (Vicuña, 2019), characterizing the environmental injustice imposed on the region. In this regard, the notion of environmental injustice may be understood as "disproportionate exposure to environmental risks of populations less endowed with financial, political and informational resources" (Acselrad, 2013, p. 63).

Against this backdrop, "environmental challenges lie at the center of the contradictions of the modern-colonial world. After all, the idea of progress and the current version of the idea of *development* is a strict synonym for the domination of nature!" (Porto-Gonçalves, 2017b, p. 61). Within this process of domination and restricted view of development "the state betrays the poor by taking the side of the rich, be they national or foreign" (Martínez-Alier, 2007, p. 276) to propel diverging interests. Considering these interests, this study examines the social representations of the concept of sustainable development among elementary school teachers in the Amazon. The relevance of this objective extends beyond the concept itself, insofar as we explore the context at the DESD associated with the influences inherent to the region.

Contextual and Epistemological Research Perspectives

Ever since the arrival of the Europeans in 1500, the territoriality of the Amazon was converted into a stage for the struggle between diverging powers and interests. As Andrade (2018b, p. 299) points out, on one side stand *indigenous peoples*, "who have historically lived in the region and respect its biodiversity". On the other, we have the invaders, who through their "unwanted presence, secured through the control of sailing techniques, gunpowder, cannons and lead shot", imposed Europe's laws and with them its culture, language religion and customs, which are hostile to indigenous ancestry (Andrade, 2017, p. 55). The conflicts generated over more than five centuries of *invasion*, *appropriation* and *violence* in the Brazilian Amazon have left a profound political, cultural, economic, and environmental impact. However, "the mythical Amazon rainforest is vastly greater than humanity is able to see" (Nobre, 2014, p. 37).

Despite the array of problems in the Amazon, the region "is much more than a geographic museum of endangered species conserved in protected areas or a mere carbon sink, referred to as dead mass in the climate treaties" (Nobre, 2014, p. 37). Ignorance of the potential of the Amazon and its inhabitants, who are often discouraged from studying the environmental challenges facing the region in schools and universities, prevails (Clement & Higuchi, 2006). In other words, the dominant powers impose strategies that seek to uproot territories and concepts. Through dispositives – especially education policies – these concepts become deeply rooted in the social imaginary, becoming part of local culture. From a historical and cultural perspective, underpinned by the logic of modernity, these impositions are converted into processes of domination of women, men and nature, as a way of ensuring the homogenization of thought, thus wiping out the processes of resistance that constitute the identity of the peoples of the Amazon (Porto-Goncalves, 2017a).

These strategies undermine the knowledge is power premise, whereby those who "know" the Amazon fight to conserver the forest, biodiversity, multiculturality and natural heritage. In the Amazon, this knowledge is built upon American Indian epistemologies that recognize the "sacred value of nature in indigenous beliefs" that have survived the European invasion (Martínez-Alier, 2007, p. 23). In order for the sacred value of nature to gain visibility in other spaces, "it is vital to ensure that the scientific knowledge of the determining role the forest plays in ensuring a 'friendly' climate and of the effects of deforestation on the generation of an inhospitable climate reaches society and becomes common knowledge" (Nobre, 2014, p. 32).

We conducted a qualitative descriptive study adopting an ethnographic approach that draws on the theory of social representations (TSR) put forward by Serge Moscovici and Denise Jodelet. From an epistemological point of view, it is worth highlighting that the TSR emerged in 1961 in France with the publication of *Psychoanalysis: Its image and its public* (Duveen, 2010). The TSR received scientific recognition mainly due to the work of Moscovici (2010, p. 216), who defended the following hypothesis: "To represent means at one and the same time both to make absent things present and to present things in such a ways as to satisfy the conditions for argumentative coherence, rationality and the normative integrity of the group" (Moscovici, 2010, p. 216).

Using the TSR as the main point of departure, the fieldwork was carried out in elementary schools in Castanhal, State of Pará in 2014. According to the most recent census, the city has a population of 149,918 inhabitants (IBGE, 2010) and 62 elementary schools.

We adopted the following selection criteria based on school location, professional activity and academic background: 1) schools located in urban areas, due to the difficulties in accessing schools located in rural areas; 2) first to fourth grade teachers, since were interested in concentrating on a specific professional activity; and 3) teachers with a degree in pedagogy, to avoid variations across the sample. In this regard, according to the TSR, academic background influences the formation of social representations and therefore helps shape the way an individual understands a particular social object, in this case the concept of sustainable development. Thus, to understand social representations, we must study not only culture, but also the context within which individuals are embedded and their professional activity, understanding that representations "are mental tools, operating on experience itself, shaping the context in which the phenomena are seized" (Moscovici & Marková, 2010, p. 345).

A total of 29 schools and 133 teachers⁴ met the selection criteria and 22 schools and 121 teachers accepted to participate in the study. The fieldwork was conducted in three stages: *a*) administration of questionnaires with the 121 teachers; *b*) two discussion groups with seven and eight teachers, respectively; and *c*) participant observation of two teachers in their school activities. The study design emphasized the triangulation of the data collection methods, where triangulation "does not mean being restricted to three angles of understanding, but rather, and above all, working from various angles, broadening the contexts of the emergence of the phenomenon in question and enriching understanding" (Macedo, 2009, p. 102). The three methods used questions addressing the three dimensions that characterize the process of formation of social representations: information, field of representation, and attitude (Moscovici, 2010).

The use of three different methods gave us access to a large volume of information. However, this article focuses on questions related to the field of representation, with the understanding that the data obtained "suggest the idea of an image or social model with a concrete and limited content of propositions relating to specific aspects of the object of representation"

⁴ Data provided by the Castanhal City Council Department of Education.

(Moscovici, 1979, p. 46). We analyze the responses to two specific questions asked in the questionnaires and discussion groups: what do you understand by sustainable development? To what extent do you think the current challenges in the Amazon are linked to sustainable development? For analysis purposes, the recurring structures used by the respondents to assign meaning to the concept of sustainable development were grouped into distinct categories based on the theoretical construct of environmental education in the literature, including: environmental management, preservation of nature, present and future human needs, and development and progress (Diniz, 2003, 2016; Sampaio & Guimarães, 2012). We focused on the discursive fragments related to the challenges that the teachers linked to/disassociated from the concept of sustainable development: discursive elements that transform the concept into something easy to apply (Jodelet, 1985; Moscovici, 1979, 2010).

Social Representations of Sustainable Development in the Brazilian Amazon

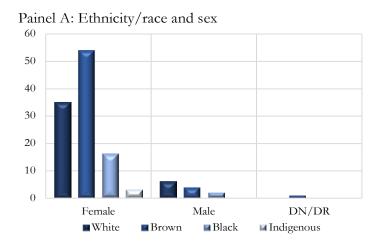
'Developmentalist' ideology is spelled out in the *Brundtland Report* (published in 1987) and Chapter 36 of Agenda 21, and was later enshrined by UNESCO in the DESD (UNESCO, 2005). The approval of this document in Johannesburg was justified by the need to "obtain a feasible action plan" (Diniz, 2003, p. 33). The supporters of this plan stated that "the educational responses to the environmental crisis must be situated in a new phase characterized by the adoption of policies, programs and pedagogical practices that enable all members of society to work together to build an enduring future" (Caride et al., 2007, p. 309). This was thus the decisive point in creating the necessary bases for a shift in ideology and, thereafter, shifts in environmental and environmental education concepts, policies and programs. Only a few years after the end of the DESD, it is interesting to explore the meanings assigned to the concept of sustainable development by a group of elementary school teachers in the Amazon.

Teacher Profile

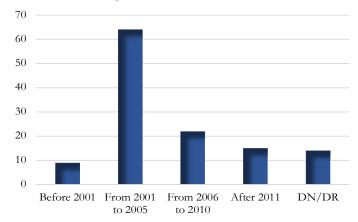
The *space-time* of the diffusion of environmental education – and its related themes – in the context of the Brazilian Amazon requires us to consider distinct, though not necessarily antagonistic, informative worlds. On the one hand, there are institutional educational spaces in which an array of information and social representations circulate as a result of the public policies and norms established by the context (Spink, 1993). On the other, there is social reality and the "materialization" of life in the Amazon, where the elaboration of different social representations is not restricted to metaphysical questions – scientific knowledge (Moscovici, 2010). On the contrary, "a knowledge for other inhabitants of the city, thus linking the formation of intellectuals with the everyday life of their surroundings" is created from dialogicity and the various influences of context (Spink & Alves, 2011, p. 339). Hence, everyday life gives meaning to the life of a city's inhabitants and is therefore conceived as the "space-time where things happen and affect us. It is also, and for this very reason, the space-time of intervention and research" (Alves et al., 2012, p. 55). Thus, in the process of recognizing social representations of sustainable development, the profile of study participants, particularly the potential influence of characteristics such as gender, race, academic background and professional activity, is important.

Graph A in Figure 1 reveals the race-ethnic and gender differences among the teachers, reflecting the situation at national level (Carvalho, 2018). Graph B shows that 52% of the participants completed their degree in pedagogy between 2001 and 2005 and 31% after 2006, or in the period running up to and during the implementation of the DESD (2005-2014), respectively. Graph C, shows that 55% of the teachers had more than a decade of teaching experience and that there was a low teacher turnover rate, since 95% of the participants have permanent contracts.

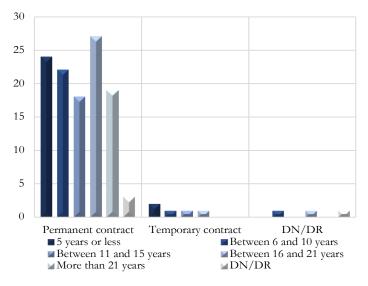
Figure 1
Teacher profile



Painel B: Year of graduation



Painel C: Employment contract



Source: Authors' elaboration (2019).

These results are important for this study because, according to the TRS, the profile of the participants influences the construction of the individual as a social subject, resulting from different lived social experiences, including ethnic-racial and gender relations, social inclusion and occupation (Moscovici, 2010).

The results shown in Figure 1 suggest that at some time during their degree and/or professional activities the teachers had access to books, texts and documents addressing the concept of sustainable development. This probability broadens our horizons of interpretation, insofar as the TSR suggests that "a subject is not merely the product of social determinants and neither an independent producer, as representations are always contextualized constructs resulting from the conditions under which they emerge and circulate" (Spink, 1993, p. 303). These conditions include the wide dissemination of the concept of sustainable development through education policies over recent years in Brazil (Diniz, 2016; Sampaio & Guimarães, 2012). Paradoxically, deforestation in the Amazon has grown exponentially, associated with the implementation of mega mining and hydroelectric projects and the expansion of the agricultural frontier (Brondizio, 2016; Lima, 2016; Nobre, 2014). These elements suggest that the data cannot be analyzed in isolation, making it necessary to take into account existing relations between teacher profile and social representations.

Current Challenges in the Amazon: Social Representations of Sustainable Development

Since the publication of the *Brundtland Report*, the idea that "the sustainability discourse emerges with good intentions... new words, ... new ideas, programs and promises" (Gutiérrez-Pérez & Benayas, 2006, p. 22) has gained currency. Among these promises is UNESCO's proposal to promote education for sustainable development, revealing the contradictory faces of hegemonic interests, which seek to 'educate' subjects to be producers and consumers more than citizens (Meira & Caride, 2006). Despite the criticism directed at the concept of sustainable development (Reigota, 2007; Sampaio & Guimarães, 2012), the term has assumed a prominent position in education policies and international human rights agendas, representing a model for an ideal society, irrespective of regional particularities and the singularities of communities. With regard to singularities, we now turn our attention to the findings related to the abovementioned questions.

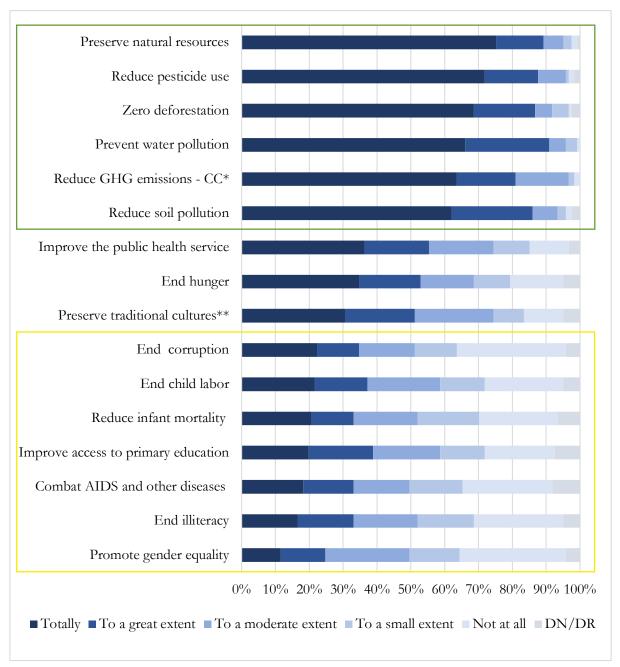
The challenges shown in Figure 2 are part of reality in the Amazon. Obviously, some issues are more perceptible than others, depending on the symbolic value assigned to each one and reflecting – or not – the perceptions of the study participants. These perceptions are also the product of the interrelations and interdependencies depicted in the discourses promoted by the media, especially those related to the following environmental issues: deforestation and climate change, water and soil pollution, and pesticide use. Some of the teachers perceive these relations, suggesting that "Brazilian society is still in its infancy when it comes to these issues, there is still a major lack of awareness about this topic among the public" (P97⁵). The findings also show that the participants understand that sustainable development is "conserving the environment using just what is necessary, reducing environmental impacts, and preserving species" (P109).

The challenges in Figure 2 are presented in decreasing order of linkage to facilitate interpretation. Subsequently, we established a guiding thread in order to perform a subjective analysis of the other aspects involved in the process of *objectification*. The notion of objectification adopted here "suggests the idea of an image or social model with a concrete and limited content of propositions relating to specific aspects of the object of representation" (Moscovici, 1979, p. 46).

⁵ Code used to identify the teachers in each data collection method.

Figure 2

The link between current challenges in the Amazon and sustainable development



Note: *Climate Change. **Indigenous peoples, *Quilombolas*, *Caboclos*, river peoples and other traditional and rural communities.

Source: Study data.

For this reason, we do not propose to conduct a detailed analysis of each of these challenges, but rather explore the figurative nucleus that enables the teachers to organize and capture images; in other words, the discourses that facilitate the materialization and communication of the concept of sustainable development in the collectively shared reality (Moscovici, 2010). With regard to this aspect, when asked what they understood by sustainable development, a little over 10% of the participants mentioned that they were not sure about the concept due to lack of information/awareness and almost 10% did not know or preferred not to answer. Other participants suggested the following:

It's learning to deal with the environment, to preserve it. Sustainable development is a way of trying to live together without compromising future generations. It's me maintaining my reality with a view to the future, producing or working while being aware of today and tomorrow. (G1-P1)

The findings suggest that the study participants associate sustainable development in the Amazon with nature and its elements. The teachers tended to detach social issues from sustainable development, with biophysical aspects receiving the highest levels of agreement. The following excerpt exemplifies this association: "being part of the environment, in the role of education for raising awareness about the preservation of natural resources, because the survival of humanity, future generations, depend on them" (P22). The findings show that the most perceptible environmental problems in the region lie within a "zone of intersection", showing that social reality in the Amazon has a significant influence on the teachers' understanding of the concept. This zone appears to be formed by the teachers' longings for better public health services, an end to hunger in the region, and the preservation of the life and culture of traditional peoples. With regard to the latter, one respondent reiterates:

To achieve sustainable development in the Amazon it is necessary to broaden action plans and education projects that address environmental education in schools, so that activities don't just focus on nature, but also other topics that need to be discussed, for example, the survival of Indians. (P6OC)

With regard to these longings, data from a survey conducted by the National Confederation of Industry show that only 1% of people living in Brazil's North Region – where the Brazilian Amazon is located – rated the public health system as good, while 75% said it was very poor (CNI, 2018). In turn, the discourses related to ending hunger reveal economic and environmental contradictions that characterize the development model adopted in the region. In this respect, Brondízio (2016, p. 2) suggests that in the Amazon "the prospects of expanding mining concessions are ... aggressive, while the prospects of addressing the region's most pressing social needs and changing social reality are, at best, limited". The preservation of the culture of traditional peoples can be interpreted as a historical and cultural demand and, therefore, a process of resistance that characterizes the identity of Amazonians in the face of successive domination attempts (Andrade, 2019).

Meanings Assigned to the Concept of Sustainable Development

According to Andrade and Caride (2016, p. 35), political protagonism and resistance in the Amazon are just one of the cultural components constructed over the centuries, which "envision other political, social and environmental perspectives. Initially, this identity was built around the struggle against colonial hegemony, by which the movement pushed for rights and freedom...". In turn, these movements "have survived for the same reasons; that is, for the fight against a development model based on the exploitation of natural resources, the debasement of culture and

subjectification of the peoples of the Amazon" (Andrade & Caride, 2016, p. 35). Based on these arguments, the analysis of the data sought to unveil the meanings assigned to the concept of sustainable development.

The findings suggest a certain resistance against the hegemonic developmentalist logic. Perhaps, due to their Amazon identity, the teachers, especially those of indigenous descent, find it difficult to assign meanings to the concept of sustainable development. In this respect, responses included "I don't know what it means" (P68) and "I don't have much information on the subject, but I believe it has something to do with reforestation" (P108). In this regard, it is worth highlighting that 55% of the teachers have more than 10 years of professional experience, suggesting that they have daily contact with books and other educational materials that address environmental issues. Moreover, the recognition of lack of information on the subject may indicate resistance to the use and applicability of the concept precisely because the teachers do not recognize its legitimacy. In this respect, it is also interesting to note the symbolic elements that the teachers used to construct meanings; that is, the interrelations and situations that reflect reality in the Amazon.

I am part of the environment that is being destroyed on a daily basis. We need make people, our children, more aware of the need to care for what is ours in order to have future lives. Sustainable development yes, but, above all, respect for people and other forms of life, using them not to get rich, but because we need to for our survival. (P102)

With regard to resistance to the use of the concept, it is interesting to observe that the term sustainable development has been incorporated into school curriculums and teacher training programs since the end of the last century (Diniz, 2016; Reigota, 2007). The commitments undertaken by the Brazilian government have a direct impact on people's lives. One such commitment is educational reform to meet 'developmentalist' aims (Sampaio & Guimarães, 2012). However, the incorporation of the concept of sustainable development into school curriculums and teacher training programs, questioned by environmental educators in Brazil (Meira & Caride, 2006), goes against the interests of the peoples of the Amazon, who have learned from their experience of colonization that development does not always have a positive connotation (Porto-Gonçalves, 2017b). In this regard, one of the teachers states: "I'm saddened by the reality of development that the world has implemented, where money and profit are priorities" (P32). With regard to the colonial conception of development, we agree that:

Des-envolver⁶ is to remove the involvement (autonomy) that each culture and each people has in their space, in their territory; it is to subvert the way in which the men (and women) of each people relate to each other and nature. It is not just separating men (and women) from nature, but also separating them from themselves, individualizing them. It is a modern version of the Roman maxim *divide et impera* and, at an even deeper level, as they develop, each one (of the "deterritorialized") is involved in a new configuration of society, the capitalist society. (Porto-Gonçalves, 2017b, p. 81)

Some of the concepts and representations identified in the data suggest severe criticism of the concept of education for sustainable development as a possible response to the logic of colonial development. The findings also suggest the following representation of sustainable development: "economic development with environmental balance, using nature to our favor without destroying

⁶ Here the term *des-envolver* is a play on the Portuguese words *desenvolver*, which means develop, and *envolver*, which means involve.

it; but what we see is a lot of talk and little practice, economics speaks louder and all we have left are the environmental problems" (P72). It is interesting to observe that despite the fact that the teachers relate the concept of sustainable development more to nature and less to social issues, how they understand and conceive the object of study involves a series of elements encompassing both questions. With regard to *social issues*, the importance of education for raising awareness constitutes a figurative nucleus, while with respect to *nature*, images of environmental problems enable a certain acceptance of the concept, which is more present in the teachers' discourses. In one such discourse, the teacher stressed that "to achieve sustainable development it's first necessary to improve the health service and public security and access to environmental education, and implement mechanisms to control water pollution and conserve forests" (P67).

This therefore suggests that the teachers combine concepts of the environment and environmental education, especially those with a long tradition in the history of environmentalism – *naturalist, conservationist and resolutive* concepts – to assign meaning to sustainable development. These concepts are perceivable in statements such as "not harming the environment is a way of living in harmony with it, taking what we need for our livelihoods, but conserving it" (P15). In short, the ideas presented also reveal the echoes of age-old discourses and preservation practices and co-existence with and respect for nature; that is, the ancestral indigenous beliefs in belonging to and caring for nature dating back over 17,000 years (Andrade, 2019). In this regard, "treating nature separately from the life/culture of the peoples is a horizon of meaning ignored by most of the peoples/cultures who have historically inhabited the Amazon" (Porto-Gonçalves, 2017a, p. 16). Thus, "in the technical-cultural practices of the peoples of the Andes/Amazon, the soil, forest, rivers, lakes and lagoons are conditions of life... of meanings for life" (Porto-Gonçalves, 2017a, p. 16).

The relationship between indigenous peoples and their territoriality has been documented by important indigenous leaders like *Yamomani Davi Kopenawa*: "I wish white people would stop thinking of our forest as being dead and placed there at random. I want to make them hear the voice of the *xapiri* [animal or ancestral spirits], who play there endlessly, dancing over their shining mirrors. Maybe then they might want to defend it with us" (Kopenawa & Albert, 2015, p. 65). He goes on to say: "I also want their sons and daughters to understand our words and be friends with ours, so they don't grow up ignorant. Because a forest that is completely devastated will never be reborn" (Kopenawa & Albert, 2015, p. 65). Although the number of indigenous teachers in our sample was small (three self-identified as an indigenous person), the presence of the naturalist concept may influence the elaboration of social representations of the concept of sustainable development. At the same time, it is likely that the ancestral knowledge of the different indigenous nations is also present in the messages that are elaborated, understood and put into practice by these teachers, due to the social and historical context in which they are embedded.

That said, the findings reinforce that geographical context – in this case the exuberance of rivers and forests in the Amazon region – influences the formation of social representations (Moscovici, 2010). Within this context, the conservation mindset inherited from indigenous ancestors is increasingly wise in the face of the aggressive appropriation of Amazon (Porto-Gonçalves, 2017a). Historically, when indigenous peoples lost their land, they also lost their identity (Andrade, 2019), which may be one of the reasons why only a small number of the teachers self-identified as an indigenous person. However, despite questioning peoples' ethnic belonging and discrediting their ancestral knowledge, hegemonic powers have failed to detach them from the laws of the forest. That is why the premise put forward by Davi Kopenawa is so pertinent: "my words do not have another origin. Those of white people are very different. They are ingenious, it's true, but they lack wisdom" (Kopenawa & Albert, 2015, p. 65).

Some Reflections on the Study

This study explored the social representations that give meaning to the concept of sustainable development formed by teachers in the Amazon after the end of the DESD. We sought to identify the discursive elements that the teachers employed to make this concept applicable in everyday reality in the Amazon. Our findings show that the teachers tended not to reproduce the "official" hegemonic concept of sustainable development present in international environmental treaties and documents on sustainable development. These findings are interesting from a TSR perspective, especially considering the influence of access to information on the process of construction of social representations. Considering the degree taken and number of years of experience of the majority of the teachers in this study (obtained during or soon after the DESD), this suggests that the focus on sustainable development in pedagogy degree courses, curriculums, and educational material is limited.

The difficulties the teachers had in representing the hegemonic concept of sustainable development may be partially explained by *resistance* to hegemonic impositions, highlighting the influence of context on the formation of representations, in this case the Amazon region, in which cultures and identities are forged from indigenous knowledge and ancestrality rooted in caring for the Earth. The findings show that, among other aspects, the living nature of the Amazon and more perceptible social problems in the region influence teachers' representations of the concept. Although the teachers do not explicitly employ more critical concepts of sustainable development, which intersect with key issues such as citizenship, democracy, justice, peace, diversity, human and environmental rights, health, equality, and solidarity, they implicitly incorporate these concepts into their representations by using symbolic elements from Amazon culture to potentiate the meanings assigned to the concept.

The identification of symbolic elements of the Amazon culture is particularly relevant, especially considering the current political and economic context that make the Amazon a key object of interest of capital. We understand that these findings may also be associated with a number of aspects not addressed by this study. However, they may be partially explained by the history of environmental education in the Brazilian context, in which counter-hegemonic political elements are part of the environmental agenda and struggles. This study suggests that the developmentalist discourse is a reality in the teachers' social imaginary. However, the teachers systematically use concepts that constitute the traditional line of thinking in the field of environmental education to assign meaning to sustainable development; that is the ideas of preservation and conservation that underpin *naturalist* concepts. In this regard, we recommend a broader interpretation of study data to include other factors such as the diversity of traditional knowledge and ancestrality in a specific region, which in turn influence the lens through which subjects see the world and environmental problems.

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