revista brasileira de educação
rbe

https://doi.org/10.1590/S1413-24782025300053

Versão on-line ISSN: 1809-449X

Article

Oceanizing education: anthropological cartographies of the sea

Oceanizar a educação: cartografias antropológicas do mar

Oceanizar la educación: cartografías antropológicas del mar

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ABSTRACT

The article proposes a critical dialogue between ecological thinking and emerging anthropological cartographies of the sea to "oceanize" Brazilian education. The aim is to reflect on the potential of incorporating coastal epistemologies from the South into the educational debate. For this, we recover aspects of the trajectory of social struggles around the environmental issue in the country and focus on the recent configuration of environmental education as a field of controversies and possibilities. Then, we allow ourselves to be overwhelmed by the attraction of the current intellectual movement of the blue humanities to make visible other ways of sharing territories and maritime resources that consider the right of the multispecies communities that inhabit coastal regions. Faced with the urgency of rethinking the Anthropocene, thinking with the sea entails a gesture of openness to re-educate our attention through these blue landscapes that are more than human.

Keywords: Anthropology. Environmental Education. Blue Humanities. Oceanic Education. Post-Anthropocene.

RESUMO

O artigo propõe um diálogo crítico entre o pensamento ecológico e as emergentes cartografias antropológicas do mar como uma maneira de "oceanizar" a educação brasileira. O objetivo é refletir sobre as potencialidades da incorporação de epistemologias litorâneas do Sul Global no debate educacional nacional. Para isso, recuperamos aspectos da trajetória das lutas sociais em torno da questão ambiental no país e enfocamos a configuração recente da educação ambiental como um campo de controvérsias e de possibilidades. Em seguida, nos deixamos inundar pela atração do atual movimento intelectual das humanidades azuis para visibilizar outros modos de partilha de territórios e recursos marítimos que consideram o direito das comunidades multiespécies que habitam as regiões costeiras. Diante da urgência em repensarmos o Antropoceno, pensar com o mar enseja um gesto de abertura para que possamos reeducar nossa atenção com essas paisagens azuis que são mais-que-humanas.

Palavras-chave: Antropologia. Educação Ambiental. Humanidades Azuis. Oceanização da Educação. Pós-Antropoceno.

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RESUMEN

El artículo propone un diálogo crítico entre el pensamiento ecológico y las cartografías antropológicas emergentes del mar como una forma de "oceanizar" la educación brasileña. El objetivo es reflexionar sobre el potencial de incorporar epistemologías costeras del Sur Global al debate educativo nacional. Para ello, recuperamos aspectos de la trayectoria de las luchas sociales en torno a la cuestión ambiental en el país y nos enfocamos en la reciente configuración de la Educación Ambiental como campo de controversias y posibilidades. Entonces, nos dejamos conmover por el atractivo del actual movimiento intelectual de las Humanidades Azules para visibilizar otras formas de compartir territorios y recursos marítimos que consideren el derecho de las comunidades multiespecies que habitan las regiones costeras. Ante la urgencia de repensar el Antropoceno, pensar con el mar supone un gesto de apertura para reeducar nuestra atención con estos paisajes azules más que humanos.

Palabras clave: Antropología. Educación Ambiental. Humanidades Azules. Oceanización de la Educación. Post-Antropoceno.

PRESENTATION

We know that the sea rarely receives much attention in Brazilian school tradition. In Brazil's current National Common Curricular Base, which guides elementary education (Brasil, 2018), it appears only three or four times in nearly six hundred pages. Still, it does show up here and there in textbooks. Sometimes, it is described as the backdrop for European exploration during the 14th to 19th centuries. At other times, it is portrayed as a sacred territory hosting certain ritual practices. In natural science teaching, the sea is linked to well-founded hypotheses about the environmental conditions that enabled life to originate on Earth and its role in the evolution of life, highlighting its biodiversity. When warning about the potentially catastrophic consequences of human interference in nature, discussions also cover ocean pollution and the possible extinction of thousands of marine species. However, its portrayal in educational texts tends to be sporadic and episodic.

In all these cases, however, the sea appears as a kind of "neutral landscape" that involves a tangle of living beings and natural processes, an aqueous medium, a substrate for life, and not as the figuration of life itself. From an anthropocentric perspective, it is placed as the "stage" that sets the scene for specific human stories. This way of understanding maritime environments is associated with an intellectual tradition that is well-known and criticized in the contemporary academic world (Toren, 2013) but still little debated in schools across the country, namely: the arbitrary duality that radically opposes nature and culture — which inferiorizes the former in favor of the latter — so rooted in the modern-colonial scientific, philosophical and literary imagination (Rapchan and Carniel, 2020) and widely disseminated in curricula and school materials (Rapchan and Carniel, 2016).

The so-called blue humanities or oceanic humanities (Boomgaard, 2007; Martins and Guivant, 2017; Ballestero, 2019; Mentz, 2020) were conceived in recent years as a critical response to such modern dualities that organize Western thought (Ferwerd, 2024), which at times perceive nature as a mere substrate for the production of consumer goods — therefore something to be dominated by humans — and at times tend to romanticize it from a worldview that perceives it as an "untouched," pristine entity isolated from human societies. To this end, it proposes other ways of diving into the sea that emphasize the historical, cultural, social, and political relationships between humans and other beings from perspectives inspired by concepts of fluidity, flow, routes, and mobility, mobilizing ecologies that evoke the dynamism of relationships, coexistence, and the crossing of borders, the

co-creation of worlds where the oceans occupy a central place and evoke planetary uniqueness (Martins, 2018; Camphora, 2020; Cardoso *et al*., 2021). In this way, the relations between human collectives and the seas began to include other entities and ecosophical relations (through ecologies that mobilize inter-, multi-, and trans-species collectives), which, based on distinct cultural repertoires and forms of territorial and landscape conceptions (therefore, ecosystem management), configure places of belonging and coexistence with humans, non-humans (living or not), and superhumans, whose relations contemplate activities of production of life through fishing, art, cooking, worship, and family organization, as well as conceptions of space and time, all linked to the dynamics of memory (Woortmann, 1992; Orlove, 2002; Silveira and Buti, 2020; Teaiwa, 2020; Ramachandran, 2021; Torell *et al*., 2021; Wagner and Silva, 2021). The seas participate in the co-creation of plural worlds, but certainly also in what we call the Western world (O'Rourke and Williamson, 1999; Bauman, 2001; Gilroy, 2002; Allewaert, 2013).

In this essay, we seek to discuss how such perspectives could interact with school education in the Brazilian context in order to contribute to future debates and diagnoses (certainly with regard to forms of intervention in/with the school community), which favor the awareness of students and promote the inclusion of repertoires inspired by knowledge and practices, arts, and techniques produced by coastal populations in Brazilian basic education. The objective is to reflect on the incorporation of perceptions and knowledge originating from coastal epistemologies of the Global South to stimulate the visibility of other ways of sharing territories and so-called "maritime resources" that consider the rights of multispecies communities that inhabit the coasts as well as to promote initiatives that can mitigate the effects of global warming and environmental destruction in contemporary times.

THE "ENVIRONMENTALIZATION" OF SOCIAL STRUGGLES IN THE 20TH CENTURY

The relationships we establish with the environments in which we live have become sensitive issues for Western pedagogical thought, especially since the second half of the 20th century. In that context, historically not so distant from our own, growing awareness of the food, climate, ecological, and health risks caused by the generalization of capitalist forms of production, exploitation, and consumption on the planet intensified to the point of provoking collective feelings that we were embarking on a time of imbalances or catastrophes, in the face of which new responsibilities needed to be assumed (Stengers, 2015). Thus, the idea of an "environmental crisis" could be translated by different political actors of the period as a "civilizational crisis" that would require the deconstruction of typically modern modes of existence and the creation of other ways of knowing and relating to the complexity of the world (Leff, 2003).

In this historical trajectory marked by the internationalization of social struggles that are based on the affirmation of the connection between cultural diversity and human rights (Low, 1999), multiple forms of environmental activism emerged on the public scene of the central countries of capitalism in the Euro-North American Global North to contest the reification of certain instrumental rationality, fueled by the post-war arms race, and to pressure national states to commit to sustainable development policies that would protect their ecosystems and populations. The Club of Rome, founded in 1968, was one of these political arenas that decisively impacted the agenda and the contemporary field of environmentalism itself (Rome, 2003). After all, the widespread repercussions of its neo-Malthusian reports and statements about the ecological "limits" of economic and population growth ended up pressuring the United Nations (UN) to hold its first Conference on the Human Environment in the capital of Sweden in 1972.

Despite the numerous criticisms and controversies generated by the type of political ecology that would triumph after the Stockholm Conference (Brüseke, 2010; Giddens, 2010; Latour, 2019), its Declaration ended up becoming a relevant symbolic milestone for bringing environmental issues

closer to the global human rights agenda. In this context, the so-called environmental education appeared as a type of political-pedagogical practice that would aim to routinize knowledge and sensibilities committed to interrupting the processes of socio-environmental degradation of living conditions and valuing the interrelations that connect human beings with other beings and entities in sustainable entanglements of everyday existence. A few years later, in 1977, a new conference mediated by the UN focused primarily on the issue of education: the Intergovernmental Conference on Environmental Education, held in the capital of Georgia, a former republic of the Soviet Union.

The Tbilisi Conference was organized by partnering with the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the United Nations Environment Programme (UNEP). The expectation at the time was to establish definitions, objectives, principles, and strategies that would form a shared professional identity for "environmental experts" — mainly researchers and educators capable of solving concrete environmental problems from interdisciplinary approaches — so they could work with the different education systems (formal and non-formal) of the signatory countries (Carvalho, 2008). The pedagogical horizons of that proposal had already been outlined within UNESCO since the publication of the famous Belgrade Charter and the establishment of general guidelines for the International Programme for Environmental Education (IPEE) in 1975. The express intention was to disseminate to the most significant number of societies the understanding of the profound interdependence between the economic, social, political, and ecological spheres, as well as promote the acquisition of knowledge, values, and attitudes that would induce new positions on environmental issues.

In Brazil, the international movements of environmental activism networks formed in the 1960s and 1970s gained density and political prominence during the re-democratization process (Sader, 1988), which ended a military dictatorship that lasted 21 years in power and culminated in the drafting of the 1988 Constitution. Notably, from the global repercussions of the assassination of Chico Mendes to the political action of indigenous organizations for the end of state guardianship, through the struggles of the Landless Workers' Movement in favor of agrarian reform and the emergence of agroecological movements, as well as movements of people affected by dams, ecofeminists, or ecological preservation, the 1980s were characterized by the creation of new forms of environmental activism (Viola, 1987). These groups built institutional alliances and coalitions to pressure the Constituent Assembly and impose some of their main demands (e.g., Gabeira, 1987; Minc, 1987; Vieira, 1989).

At the end of the process, the new Brazilian legal framework included a chapter on the environment that positioned environmental education as a fundamental human right and redesigned the organization of public policies for the sector by creating the National Environmental Fund (FNMA). If the intense disputes and negotiations provoked by environmentalism in the country ended up strengthening conservative and neoliberal positions in opposition to the socio-environmental perspectives defended by some movements (Ribeiro, 2012), at least the process promoted broad public repercussion of the environmental agenda and consolidated links and commitments among different groups of activists (Viola and Leis, 1995). Perhaps this is precisely why, despite the closure of state agencies to environmental activism following Fernando Collor's victory in the 1989 presidential elections and the consequent reorganization of these movements into private associations and non-governmental organizations (NGOs), part of that political energy was able to be revived a few years later (Guivant, 1998), when the UN hosted its second World Conference in the city of Rio de Janeiro in 1992.

Known as Rio-92 or Eco-92, this Conference would offer a new structure of political opportunities that would once again transform the field in the country (Alonso, Costa and Maciel, 2007). In addition to the traditional political-party actors that had been established, it was also proposed to expand the

participation of individuals and groups as a strategy for democratization and citizenship formation (Crespo and Leitão, 1993). In this sense, one of the most vibrant spaces for civil society participation in Rio-92 seems to have been the NGO Forum (Landin, 1993). It began in May 1990 to prepare for the conference and brought together around 1,200 entities and social movements in eight national meetings. Thus, not only did an identification with the environmental issue prevail among all Brazilian social movements (Acselrad, 2010), but the dispute between conservative-neoliberal and socio-environmental positions was reestablished, and other nuances had to be produced to accommodate both national and international forces and interests.

On the other hand, the notion of sustainable development offered by the UN itself seems to have been one of these accommodation tools that sought to make environmental protection compatible with socioeconomic development. Another important change was achieved by replacing the notion of ecosystems with that of biodiversity, which began to include the protection of populations and lifestyles with "low environmental impact." In any case, the debate had already expanded with the emergence of socio-environmental issues (not just environmental ones) linked to the notion of preservation/conservation of biodiversity, understood as political dimensions related to what is known as sustainable development.

It seems to us that such forms of conciliation ended up shifting the emphasis on urban issues, characteristic of the socio-environmental movements of the 1970s, and produced an opening for themes that were typical of classic Brazilian conservationism, such as the preservation of forests, with the valorization of knowledge and ways of life of indigenous peoples and traditional populations, as was the case of extractive reserves, for example. In addition, the relative polysemy of the notions of "sustainable development," "biodiversity," "planetary citizenship," and "global responsibility," among many others promoted by the environmental education program of Agenda 21, a document resulting from Rio-92, favored the establishment of a standard grammar for actors with demands that were, in principle, divergent (Leite Lopes, 2004).

Therefore, one of the most controversial consequences of the mobilizations that led to Rio-92 seems to have been the political easing of the environmental issue with the formation of coalitions of polycentric and horizontal networks throughout the 1990s that specialized in particular themes and specific geographic areas (Alonso, Costa and Maciel, 2007). These factors probably contributed to intensifying a movement of professionalization and deradicalization of entities that were then central to the environmental debate in Brazil (Loureiro, 2003) — in a similar way to what also occurred in practically all Western European countries (Rootes, 2003). Thus, amid timid achievements for communities living in preserved environments and enormous ecological setbacks caused by the advance of neoliberal practices, many activists moved from other arenas of institutional politics to occupy the educational field (Loureiro, 2008).

WOULD IT BE POSSIBLE TO "OCEANIZE" ENVIRONMENTAL EDUCATION IN BRAZIL?

From the 1990s onwards, public education also became a territory of disputes around political-pedagogical projects that could consolidate the recent democratic experience in the country and promote ways of expanding the value of the world (Carniel, 2018). With the approval of the Law of Guidelines and Bases for National Education (LDB) in 1996, numerous meetings and conferences began to be organized until we reached the current National Policy for Environmental Education (PNEA) — established by Law No. 9,795 of 1999 and regulated by Decree No. 4,281 of 2002. In this process, environmental education was configured as an "essential" component at all levels and modalities of education, especially in teacher training courses, without being organized around a specific discipline, as it should be integrated into the various areas of knowledge in an interdisciplinary manner (Kindel, 2012). In addition, the

management body for this policy would be shared by the Ministries of the Environment and Education in an integrated and transversal manner.

However, when mapping theses and dissertations that analyzed initiatives to "environmentalize" school curricula between 2011 and 2014, Ernst Frizzo (2017) observed that several studies from the period already warned of the political and pedagogical "weaknesses" of the transversal and interdisciplinary incorporation of environmental education in basic education (e.g., Santos, 2011; Santana, 2013). This multiple face of the culture of socio-environmental sustainability, promised by educational reforms, seems to have stopped favoring the construction of a unique identity for the field precisely at a time when the most varied areas of knowledge were struggling to strengthen their presence as mandatory curricular components (Carniel and Bueno, 2018). This relegation to the background of environmental education would have weakened even the theoretical-pedagogical initiatives that sought to build the area based on multidisciplinary approaches in higher education (e.g., Barba, 2011; Cunha, 2012; Silva, 2014).

In 2012, with the holding of Rio+20 — the "empty" United Nations Conference on Sustainable Development in Rio de Janeiro (Guimarães and Fontoura, 2012) — , there were political conditions for the enunciation of environmental education as a "mandatory" content, although transversal, in all school subjects and teacher training courses in the country. This movement was organized around the formulation of National Curricular Guidelines for Environmental Education (Brasil, 2012) and promoted its inclusion in teaching material acquisition programs (Oliveira *et al*., 2021), as well as opened the possibility of offering some environmental education courses in schools with differentiated teaching modalities (Torales, 2013). However, this cumulative movement to conquer spaces in Brazilian school curricula only continued until the 2016 parliamentary coup, which overthrew the government of Dilma Rousseff (Carniel, Ruggi, and Ruggi, 2018).

Provisional Measure No. 746 of 2016, signed by Michel Temer that year and implemented by Jair Bolsonaro from 2018 onwards, began to institute a broad curricular reform that would completely change the organization and meaning of education in the country. As Carvalho (2020, p. 45) warned, these changes, which led to the formulation of the new National Common Curricular Base (BNCC), evidenced the establishment of "a policy of invisibility, erasure and silencing" for environmental issues not only in the educational field but in all sectors of government (Machado *et al*., 2021). This desire to "let the cattle pass," expressed by the then Minister of the Environment in a speech that scandalized Brazil and the world, materialized in the intensification of socio-environmental conflicts, in the lack of monitoring of environmental crimes, in the increase in deforestation, in the indiscriminate use of pesticides — many of which are banned in other countries —, in the suspension of investments in education and research, in the dismantling of environmental political organizations, among many other violations of environmental rights systematically denounced (e.g. SBPC, 2019; Levis *et al*., 2020; Observatório do Clima, 2021).

Amid this worrying political scenario, it is possible to consider (with some optimism) that the deepening of social understanding about the effects of the Covid-19 pandemic (Rapchan and Carniel, 2021), as well as the announcement that in 2025 Brazil would host the 30th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-30) in the city of Belém-PA, would put the problem of the environmental and civilizational crisis in which we found ourselves back at the center of the national public debate. However, the very idea of a crisis may not clearly express the seriousness of the ethical and political challenges we need to face, as we have become accustomed to using it to designate temporary states of illness or disorganization that can be treated or normalized. The discovery that the biosphere is endowed with agencies, associated with the evidence that the turbulence caused by climate change will not pass, suggests that we will not be able to move in the Anthropocene through mere reforms or projects to return to previous states, and

indicates the importance of taking radical measures to reverse them. As Michel Serres (2017, p. 11) observed, in a medicinal sense, critical bodily states launch the body "towards death or towards a novelty that forces it to invent" or even to reinvent itself through efforts toward change. This is why an increasingly expressive number of intellectuals are rejecting any possibility of a "cure" for the environmental crisis and are starting to address what Latour (2020a) has expressed on the subject based on the provocation that implies reflecting on "where to land" our ethical commitments and political responsibilities in the face of the intensification of a collective feeling of "end of the world"?

Among the initiatives, we can have disciplinary dialogues to broaden the understanding of the world's complexities and favor its full expression. The lands, rivers, mountains, forests, atmospheres, as well as all the animals, humans, plants, and cosmological beings that cohabit the various environments where life thrives have been defined by several environmental educators in the country as collectivities that reveal ontologies and plural modes of coexistence — involving significant places both for the critique of the naturalist paradigm that shaped the modern world (Carvalho, 2008; Loureiro, 2008; Ribeiro, 2012; Ernst Frizzo, 2017; Carvalho, 2020; Oliveira *et al*., 2021) or the critique of "ecology subjected to the market" (Ribeiro, 2012), and the demand for other ways of thinking, feeling and relating to the vital entanglements on the planet (Loureiro and Tozoni-Reis, 2016; Pereira, 2016; Silva Lopes and Abílio, 2021; Rapchan and Carniel, 2023). However, would it also be possible to include the sea in this set of political-pedagogical efforts?

Although the social sciences have historically not given due attention to the seas (Martins and Guivant, 2017), the anthropology of human-animal relations has in recent years sought to construct some maritime cartographies of the Brazilian coast based on multispecies ethnographies that focus on biodiversity relations (e.g., Diegues, 1999; Martins, 2018; Camphora, 2020; Silveira and Buti, 2020). To what extent could these studies help us consider environmental issues with and from the sea? What contributions to "oceanization" could environmental education offer to the contemporary debate? In the following topics, we intend to engage in dialogue with these questions, intending to expand the forms of understanding that blur the boundaries between humans and other beings that live by the seas and, from there, to reinforce the possibilities of inventing more peaceful, fair, inclusive, and ecocentric futures.

THINKING WITH THE SEA: HUMANS LIVE IN THE ENVIRONMENT

The relationships between humans and other living beings have received increasing attention in various areas of knowledge (Marras, 2018). From the perspective of social theories, however, it seems essential to emphasize at least three theoretical perspectives that originated at different moments in modern-colonial history but still today reflect the complexities of the social and political imaginary of and in Westernized countries. The first, strongly ethnocentric and eugenic, identified and equated village, tribal, and rural populations with certain animals considered our "ancestors" — particularly primates (Corbey and Theunissen, 1995). This perspective, firmly anchored in the colonial project, has been analyzed in its aesthetic (Allewaert, 2013) and moral (Belcourt, 2015) assumptions that associate humans and other living beings through perspectives of "savagery" and "inferiority" (Ingold, 1994). It dominated philosophy, science, and the arts until the end of the 20th century (Rapchan and Carniel, 2020). Today, these assumptions still serve as a political-ideological argument for ethnocentric and prejudiced judgments about groups of refugees (Esses, Hamilton and Gaucher, 2017), immigrants (Costello and Hodson, 2009), and populations in postcolonial contexts (Aschcroft, Griffiths, and Tiffin, 1998) that circulate in the hegemonic media and neoliberal political agendas.

The second perspective emerged at the beginning of the last century (Lachapelle and Healey, 2010). However, it gained prominence from the 1950s onwards, partly due to the impacts of field

research on primate behavior (Goodall, 2010). It expresses a double alterity through the expansion of universal conceptions of humanity (Comas and Lévi-Strauss, 1970), as well as the scientific, ethical, and consensual recognition of the existence of sociability, intelligence, sentience, and complex behavior among non-humans (Whiten *et al*., 1999) and the responsibility of science towards the future of the planet. The emergence of environmental social sciences (Little, 1999; Scoones, 1999) and ecofeminism (Birke, 2002; Beltrán, 2019; MacGregor, 2019) in the 1960s and 1970s also seem to be strongly related to the widespread diffusion of these ideas in contemporary times.

The third perspective that is relevant to the argument of this essay emerged at the end of the 20th century and extends into the 21st, indicating a growing tendency to prioritize analyses of the plurality of relationships between humans, other living beings, entities, and environments as central to the production of ways of life, socialities, and knowledge (Mullin, 1999) in the co-production of more-than-human contexts of highly variable and complex relationships. At certain times, this intellectual movement expressed a fragile and nominal pan-universalism that still needs to recognize the complexity of relationships between humans and other living beings in order to deal with the conflicts that emerge from the diversity of points of view and political interests in encounters that are indeed marked by tensions between peoples, animals, territories, resources, technologies, and rights (Neimanis, Åsberg and Hedrén, 2015). Other times, it advances in favor of a better understanding of the connections established from the perspective of speciesism in the face of racism (Olivier and Cordeiro-Rodrigues, 2017; Zelinger, 2019) and sexism (Grosfoguel, 2015; Taylor and Fraser, 2018; Salmen and Dhont, 2021) in colonial and post-colonial contexts (Mullin, 1999).

Despite the weaknesses mentioned, the favorable trend towards the emergence and continuity of research scenarios in which the social and human sciences reflect transversally on the relationships between humans and animals with sensitivity to theoretical, social, and political aspects of the environmental issue is consolidating in emerging arenas of academic production. The collection "A Bestiary of the Anthropocene" (Nova and Disnovator, 2022) is perhaps a good example of this intellectual movement that seeks to articulate culture and nature through the enunciation of new intellectual and societal horizons for scientific production in the 21st century. This is because the work offers us a classification system in which the Kingdom of Minerals, the Kingdom of Animals, the Kingdom of Plants, and the Kingdom of Miscellanies express the impacts that human centrality has produced on the world and life.

On the other hand, the possibilities raised by the critique of the Anthropocene and the fruits obtained from studies on the relationships between human beings, other living beings, and the various ecosystems allow us to observe plural disciplinary contributions resulting from inter- and multi-species approaches. For example, the relationships between humans and other wild, domesticated, habituated, confined, or protected animals have stimulated many reflection layers. Among them are the extension of the legal status of person rights to other living beings (Andrews *et al*., 2018) and the contradictory relationships between research protocols and compassion for laboratory animals (Haraway, 2008). Regarding public and collective health, the responsibilities and risks associated with zoonoses and the principle of OneHealth (Lerner and Berg, 2015) stand out. Regarding domestication processes, perceptions have emerged that domestication (of both animals and plants) is a two-way process that has also transformed humans and continues to do so in contemporary times. Furthermore, taking domestication as a mediator, other animals emerge as alterities (De Laet, n.d.), mirrors (Haraway, 2008), expressions of degeneration (Frew, 2011), or positive moral models (De Waal, 2019) according to the theoretical approach or point of view evoked.

Relationships with plants that focus on particular species point, for example, to ethical principles and connections often related to gender issues and emphasized by ecofeminism (Warren, 1990), but also to plant agencies that redefine our perception of plant life (Coccia, 2018). From the

perspective of collectivities, relationships with forests are expressed through literary or mythological narratives, corporealities, emotions, and behaviors linked to a land-based dynamic (Kohn, 2013; Melo, 2020). In other words, although they point to subjectivities and historicities, relationships with forests demand a fixed place — a spatiality of place — and seem to favor more structured rather than fluid reasoning, given the symbolic-practical links established with it, even in relation to educational practices (Iliopoulou, 2018).

On the other hand, it is still necessary to highlight aspects related to the various animal species, primarily when the question of charismatic species and themes related to conservation is raised, as well as that of non-charismatic species (repulsive, rejected, feared, hated). In any case, both perspectives extend to other living beings, whether from the figure of the umbrella species, whose conservation implies the continuity of the ecosystem and of the life of other species, or as a result of the invisibilities or negative representations that we produce with certain species (and even about other kingdoms of life), as would be the case with fungi (Tsing, 2015), for example.

The relations between humans and the earth have identified categories such as "Pachamama" and even "Gaia" (Zaffaroni, 2010; Latour, 2020b), in which the close and immediate earth, on the one hand, and the planet itself, on the other, are connected not simply by belonging, but also by various forms of connection and synergy. However, when modern sciences translate such ethical, political, and existential repertoires to offer us other ways of relating to the world, could it be that the "stability" of our relations with the earth is not reinforcing the insistence on reifying modern-colonial perspectives that are too heavily based on the fixity of bodies, time, or ideas?

The relationships between humans and the atmospheres they inhabit, for example, reveal other perceptions about air and its movements as influencers of emotions, human behavior, and states of mind. In short, the air humans breathe and the sensitivities they evoke link them to different life forms. They also indicate differences between human groups and their responsibilities for the dynamics and composition of air from relational perspectives of memory and history (Strauss and Orlove, 2021).

In this sense, it is also necessary to reflect on water. What can we learn about the relationships between humans and water? Works on rivers (e.g., Raffles, 2002), lakes (e.g., Orlove, 2002), mangroves and dams (e.g., Cardoso *et al*., 2021), irrigated systems (e.g., Pandian, 2009), rainfall (e.g., Boomgaard, 2007), glaciers (e.g., Cruikshank, 2005) highlight the many possibilities of relationships between humans and water in different contexts.

The anthropology of water is a self-declared relational field (Ballestero, 2019). The relationships between the sea, the populations that inhabit coastal areas and estuaries, and other living beings allow access to multiple layers of deep social history, including economic, cultural, social, and political dimensions (Woortmann, 1992). This same sea, for better or for worse, is one of the most complete metaphors for globalization (O'Rourke and Williamson, 1999). It can also be seen as an agent — medium and mediator — of phenomena that are simultaneously local and global (e.g., Beck and Sznaider, 2006), such as colonial slavery and its modern ambiguities (e.g., Gilroy, 2002), and contemporary refugee migrations, which have produced a dissolution of the humanity of those forced to cross the waters, nullifying their condition as people and transforming them into commodities (e.g., Reginaldo and Ferreira, 2000). The same can be considered about the relevance of the sea in international disputes or geopolitical, humanitarian, or piracy problems (e.g., Riddervold, 2018).

According to data from 2010 (Callou, 2010), fishing or maritime communities corresponded to a population of approximately 800 thousand artisanal fishermen and fisherwomen in Brazil. Depending on their region of origin, they are called *praieiros*, *jangadeiros*, *caiçaras*, or *açorianos*. Based on the records of Câmara Cascudo, Caio Prado Junior, and Gioconda Mussolini, a pioneer in studies on fishing in Brazil (Gerber, 2015), Callou's (2010) study presents an overview of the Brazilian

coast as characterized by "stretches of dense population" marked by intense, almost exclusive use of the "resources" available from an amphibious life transiting between land and water, agriculture and fishing. This spatial distribution signals both particular and extended, shared forms of relationship with the world that are found from the Amazon to Rio Grande do Sul, including the Northeast, as is the case with certain vessels (the canoe made from a single hollowed-out trunk), the iron hook (longline), salting fish, mullet fishing, and the festivals of São Pedro, São João, Santo Antônio, and dos Navegantes, among others.

Strongly marked, even today, by Portuguese colonial heritage and ancestral Indigenous and African memories (Cadorín and Cadorín, 2013), multispecies relationships in maritime contexts are present in countless narratives and are evidenced in technologies (Bocchino, 2015; Catão, 2021), in knowledge and practices (Barbosa, Vedana and Devos, 2021), in taboos and preferences (Cardoso *et al*., 2021), as well as in the folklore of the tormented souls of the dead at sea (Vasconcelos and Silveira, 2021), of the enchanted (Carvalho, 2021), or the water mothers (Martini, 2017). Thus, they demonstrate the strength of orality in these communities, marked by a lack of basic education compared to other regions more strongly influenced by the export economy, but which express sociability and partnerships between humans and other species in the face of survival challenges (Diegues, 2004; Simões-Lopes and Daura-Jorge, 2008; Silveira and Buti, 2020).

From 1970 onwards, research that extended across the entire Brazilian coastline supported the construction of the image of fishermen as "peasants of the sea" (Diegues, 1983) and, therefore, subject to internal and external pressures similar to those faced by rural workers, whose way of life was threatened by the growing modernization rapidly transforming the landscapes they belonged to. In the following decades, a socio-anthropology of fishing was consolidated (Diegues, 1999), advancing the debate — even though artisanal fishing and its protagonists remain little known in the country (Paula, 2018).

However, Wagner and Silva (2021) point out that recent works have incorporated relational perspectives that include territory, seasonality, location, and the particular ways of existence of fishing communities on a national level. Reflections on the relationships between the sea and human cultures have also revealed the importance of women in fishing economies (e.g., Harper *et al*., 2017), inequalities in access to resources in maritime ecosystems based on sexual roles (e.g., Torell *et al*., 2021), but also the potential of gender political ecology (e.g., Ramachandran, 2021). In Brazilian anthropology, works highlight the invisibility of female fishermen (Gerber, 2015), whose existence is questioned, according to the author, not only by society and the State but also by academia.

Recent work points to the adherence of researchers and artists to the pillars of contemporary open science practices, which stress the central role of reflexivity in the pursuit of interdisciplinarity for knowledge production, in addition to innovative methods associated with dialogue with the communities studied and with the public that receives the results of such research (Cardoso *et al*., 2021). This is stimulated by criticism of the disruptive anthropocentric forces of ecological homogenization promoted by plantation and global industrial imperialism.

Each of these perspectives, and all similar ones that may emerge, signal the concrete possibility of accessing, through more conscious, complete, and profound paths, forms of collective life whose dynamics and reproduction have never been restricted to humans. We can increasingly produce multispecific and sensitive analyses about being alive (Ingold, 2015). Therefore, by escaping the exacerbated anthropocentrism of the modern subject, we re-situate the place of the human in the corpus of plural (bio)socialities (something that several human collectives know well), more than human, in short, the relational possibilities offered by the pluriverse — the convivial and cosmopolitical character with the diverse of oneself, where our humanities coexist with alterities, with others-than-humans producing shared worlds, making relatives (Haraway, 2008).

In addition, it is also important to highlight the indispensable condition of water health for life and the centrality of the oceans both in the protection of local aquatic resources and in the balance of living conditions on a planetary scale. Finally, there is a particular contribution from the blue or oceanic humanities (Boomgaard, 2007; Martins and Guivant, 2017; Ballestero, 2019; Mentz, 2020) that is associated with the potential that the concepts of fluidity, flow, routes, and mobility (Oppermann, 2023) offer as analogies applicable to processes that may even become concepts and, therefore, transformations in the perspectives through which we relate to marine, river, and lake waters, coastal systems, rivers, basins, and wetlands and, of course, with the oceans from the Continental Shelf to the abyssal world.

Helmerich (2011), based on a historical, anthropological, and ethnographic analysis, observes that maritime waters, as a symbol and substance, have occupied an ambiguous position between the categories "nature" and "culture." Water's putative materiality expresses a plurality of facets since it depends on its states (solid, liquid, or gaseous), its scale (from molecular to oceanic), whether it is fresh or salty, and whether it is pure or polluted.

In this sense, as nature, it corresponds to the innumerable flow and gigantic form that surpasses us. On the one hand, it moves faster than culture, often metaphorically associated with land and stability. On the other hand, cultural practices associated with seawater refer to pleasure, sustenance, travel, or disaster.

The author argues that maritime anthropology and contemporary social theory have treated seawater as a "machine theory" (Galison, 2003) capable of generating insights into human cultural organization. For example, water as a deadly and/or life-giving agent, the negative metaphor expressed by Bauman's "liquid modernity" (2001), or even how feminist theory appropriates the concepts of flow, current, and sea, and the representation of the history of feminism through three waves and the corresponding critiques (Spigel, 2004).

Thus, trends in social sciences that propose relational models capable of offering alternatives that contrast with the dualistic and antagonistic models of nature/culture relations (Murphy, 1995; Newton, 2007) offer relevant possibilities. They question, for example, the absence of the environment in sociological approaches and consequently promote the redefinition of the human and its relations with its expanded world in contemporary contexts (Murphy, 1995; Arluke and Sanders, 1996; Carter and Charles, 2018). Overcoming the limits imposed by modern thought (Latour, 1994) on concepts applied to non-humans, spaces, and objects (Löw, 2013) or technologies (Haraway, 1991; Callon and Law, 1997), once conceived as socially inert, allows for a critical analysis of this two-dimensional dualism.

In this sense, the contribution of reflections on the relationships between human beings and water to the social sciences, in addition to enriching and strengthening ethnographic knowledge and, consequently, expanding critical-conceptual potential, can broaden our language resources, multiply our possibilities of thought, and make our references more flexible concerning non-humans and, more specifically, the sea. Now, the marine world — one of the many worlds that constitute the coexistence of life on Earth — is, in reality, a complex dimension of nature-culture, expressing the inseparability of life from non-human and human forms in the terrestrial system, crossed by tensions in the Capitalocene (Moore, 2016).

Sea waters are fluids whose state is potentially transitory, depending on factors such as temperature and mineral concentration. In other words, when we speak of water, we are referring to a substance that changes shape, is malleable, and can assume the shape of its container. This transience demands languages and references emphasizing movement, transience, displacement, and multi-locality by mobilizing concepts such as flow, current, movement, and fluctuation (Oppermann, 2023).

In these ways, the blue humanities thus have the potential to reformulate our shared cultural history (Mentz, 2020). The deterritorialization promoted by this approach shifts the relationships between humans and the world and can offer a more acute perception of ecologically disturbed contexts from less fixed references than those grounded on land, since the most fixed terrains are not excluded but are conceived in relation to water. This can favor the deconstruction of submissive references to the Anthropocene and its immensely destructive, unplanned, or even foreseen effects (Tsing, 2020) and, from there, promote awareness of other perceptions of being in the world coexisting with differences.

FINAL CONSIDERATIONS

In this essay, we seek to open up reflections that add to the contradictions and sensitivities emerging in the contemporary political and ecological debate around the need to respond to the intense and frightening socio-environmental transformations caused by climate change and global warming. This is because perhaps this is a privileged moment to observe the public expression of the conceptions of many established agents in Brazil and around the world regarding ocean waters. The seas have just become objects of interest and disputes at the last United Nations Conference in 2022 in Lisbon. A national expression of the socio-environmental conflicts that are beginning to include ocean ecosystems today is manifested in the controversies involving oil exploration at the mouth of the Amazon River.

In political terms, events like these attract attention and demand different responsibilities, including in the educational sphere. In this case, we understand that it is not exactly a matter of "taking advantage of the opportunity" to address marine ecosystems from our areas of training and activity but of allowing ourselves to be overwhelmed by the attraction of the lyrical movement of the ocean waves and discovering, in the inconstant constancy of their flows, routes, channels, and currents, renewed ways of learning and teaching with the multiple environments in which we live. Thus, thinking with the sea can be a form of overflow that has the potential to dilute disciplinary boundaries by valuing the experiences of multispecies communities that live in the rivers and flow into the Brazilian coastline, running through and involving villages, forests, communities, savannahs, cities, mountains, countries, biomes, continents, and cosmologies.

Whether the blue or oceanic Humanities will have the possibility of expanding our dialogues around the ethical, political, and intellectual production of an environmental education committed to the knowledge of the land, forests, and the relationships between humans, animals, and so many other beings that co-inhabit our planet, we do not yet know. Nevertheless, the simple opportunity to think with the sea already seems to suggest at least the formulation of new conceptual metaphors that free us from ethnocentrisms, positivisms, Westernisms, and fixity in favor of flows, routes, and movements in the world that we share with Others. After all, as Katerina Martina Teaiwa (2020, p. 602, our translation) points out, the current possibilities of intercalary and pluriversal decolonial thinking "begin with actions rooted in kinships, terrestrial and oceanic and celestial landscapes."

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How to cite this article: CARNIEL, Fagner; RAPCHAN, Eliane Sebeika; ABREU DA SILVEIRA, Flávio Leonel. Oceanizing education: anthropological cartographies of the sea. **Revista Brasileira de Educação**, v. 30, e300052, 2025. https://doi.org/10.1590/S1413-24782025300053

Conflicts of interest: The authors declare they don't have any commercial or associative interest that represents conflict of interests in relation to the manuscript.

Funding: The study didn't receive funding.

Authors' contributions: Conceptualization, Investigation, Methodology, and Formal Analysis: Carniel, F.; Rapchan, E.S.; Silveira, F.L.A. Writing – Original Draft: Carniel, F. Writing – Review & Editing: Rapchan, E.S.; Silveira, F.L.A.

Data availability statement: The research data are available within the article.

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Received on June 2, 2023
Revised on April 18, 2024
Approved on May 29, 2024

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