# Where the material and the symbolic intertwine: Making sense of the Amazon in the Anthropocene

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#### Abstract

Forests, and ways of relating to forests, are critical to the planet, yet largely neglected in IR. In this article, we engage with the debate on the Anthropocene and explore different forms of relationality to forests and Amazonian indigenous symbolism. Drawing mainly on political sociology, political ecology, and anthropology, we approach the Amazon basin as a site where nature, culture, resource extraction, and spirituality are enmeshed, and discuss material and symbolic meanings of the forest. The article starts by briefly reviewing discourses around the Anthropocene. It then looks at Amazonian countries with a specific focus on the classist foundations of socioecological exploitation that underpin anthropocentric attitudes and practices, and analyses the material way of perceiving the Amazon. It proceeds by addressing the diverse symbolism present in indigenous traditional knowledge; symbolism that may help in moving politics and society beyond the dominant attitudes that initiated the Anthropocene. Finally, the article offers possibilities for perceiving the forest differently and intertwining the Amazon's material and symbolic worlds.

Keywords: Amazon; Anthropocene; Forests; Indigenous Symbolism; Materialism; Relationality

## Introduction

The Amazon rainforest harbours potentially one-fourth of the world's terrestrial species, many of them endemic to the region. The forest and its ecosystems are a crucial part of the life-support system that makes the Earth habitable; losing them would have local, regional, and planetary catastrophic consequences.<sup>1</sup> The destruction of the Amazon could also trigger the next global epidemic crisis – deforestation, natural habitat loss, and extinctions as well as the trade of wildlife in the region expand the risk of future pandemics of diseases such as COVID-19.<sup>2</sup>

Concerningly, the latest science suggests that the Amazon may be close to crossing a tipping point, leading to savannisation across large parts of the forest.<sup>3</sup> The severe deforestation-driven fires that in 2019 devastated parts of the Amazon,<sup>4</sup> and that were widely covered across the world's media, awakened the international community to the global importance of the forest

At the Edge of Ecological Collapse? (New York, NY: Routledge, 2022).

<sup>4</sup>Cardil et al., 'Recent deforestation'.

<sup>&</sup>lt;sup>1</sup>Adrián Cardil et al., 'Recent deforestation drove the spike in Amazonian fires', *Environmental Research Letters*, 15 (2020), p. 121103.

<sup>&</sup>lt;sup>2</sup>Joel H. Ellwanger et al., 'Beyond biodiversity loss and climate change: Impacts of Amazon deforestation on infectious diseases and public health', *Anais da Academia Brasileira de Ciências*, 92:1 (2020), p. e20191375.

<sup>&</sup>lt;sup>3</sup>Thomas Lovejoy and Carlos Nobre, 'Amazon tipping point: Last chance for action', *Science Advances*, 5:2 (2019), p. eaba2949; Arie Staal et al., 'Hysteresis of tropical forests in the 21<sup>st</sup> century', *Nature Communications*, 11:1 (2020), p. 4978. See also Joana Castro Pereira and Eduardo Viola, *Climate Change and Biodiversity Governance in the Amazon*:

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and the crisis plaguing the region, with several world leaders showing deep concern about the situation and the erratic response to the crisis by the administration of Brazilian president Jair Bolsonaro.<sup>5</sup> Nevertheless, 2019's worst trends continued during 2020, and the pandemic made conservation particularly difficult not only in the Amazon, but also in other forest biomes around the world.<sup>6</sup> Nearly two-thirds of the Earth's original tropical rainforest, which 'is arguably the most important terrestrial ecosystem on the planet', have now been destroyed or are degraded from human activities.<sup>7</sup> The tropical rainforest crisis is both a cause and symptom of the Earth's entrance into the dangerous new geological epoch of the Anthropocene.

Forests, and ways of relating to forests, are critical to the planet, yet largely neglected in IR. In this article, we engage with the debate on the Anthropocene and focus on Amazonian indigenous symbolism with the aims of making visible other ways of seeing and relating to forests and the other-than-human beings they host, and provide insights into possibilities for thinking and acting across different Amazonian worlds, thus broadening the scope of relationality in IR. We show the significance of indigenous knowledge and symbolic forms of relating to forests and nature in the context of the planetary crises of the Anthropocene.

We depart from a short review of the Anthropocene concept and its many critical, conceptual variations, to frame the discussion and situate our contribution to the literature. We then provide an overview of the main threats to Amazonian more-than-human populations and ask what 'the Amazon' actually means. We draw mainly on political sociology, political ecology, and anthropology to discuss material and symbolic understandings of Amazonian forests, exploring the different cultural and individual variation in how people relate with other-than-human beings; and how these are mediated, negotiated, and managed through diverse materials, symbols, knowledge(s), values, and practices. By briefly looking to classist foundations of socioecological exploitation in the Brazilian, Bolivian, Ecuadorian, Peruvian, and Colombian Amazons, we examine the anthropocentric and socially unjust dimension of policies for the region, demonstrating the prevalence of the material perception of the forest as a mere provider of resources to be transformed into commodities to be consumed. We contrast this vision with that of Amazonian indigenous peoples, who, acknowledging the relational dependencies among different lifeforms, attribute a symbolic meaning to the forest. This symbolism offers possibilities for articulating a post-anthropocentric view of relationality, and becoming and being-with others in a more-than-human planet.

Finally, asking how we could attribute more symbolic than material meanings to the Amazon, we draw on Ismael Nobre and Carlos Nobre<sup>8</sup> to shed light on potential ways of harmonising co-production of knowledge and modern-traditional understandings of the forest, thus offering possibilities for perceiving the forest differently and intertwining the Amazon's material and symbolic worlds.

We argue that the planetary crises of the Anthropocene are closely linked to our inability to cross borders between human and other-than-human worlds and acknowledge the different relations between them. Our actions towards other-than-human-beings are mainly informed by a utilitarian ontology; accordingly, the human relationship to the other-than-human part of the world has predominantly been one of exploitation, not co-creation. As shall be seen through the analysis of the Amazonian case, the hegemony of a modernist, predatory developmentalist

<sup>&</sup>lt;sup>5</sup>Joana Castro Pereira and Eduardo Viola, 'Brazilian climate policy (1992–2019): An exercise in strategic diplomatic failure', *Contemporary Politics*, early access (2021).

<sup>&</sup>lt;sup>6</sup>Rhett A. Butler, 'How the pandemic impacted rainforests in 2020: A year in review', *Mongabay*, available at: {https://news.mongabay.com/2020/12/how-the-pandemic-impacted-rainforests-in-2020/} accessed 11 March 2021.

<sup>&</sup>lt;sup>7</sup>Rainforest Foundation Norway, State of the Tropical Rainforest: The Complete Overview of the Tropical Rainforest, Past and Present (Oslo, 2021), p. 3.

<sup>&</sup>lt;sup>8</sup>Ismael Nobre and Carlos Nobre, 'The Amazonia third way initiative: The role of technology to unveil the potential of a novel tropical biodiversity-based economy', in Luis Loures (ed.), *Land Use: Assessing the Past, Envisioning the Future* (London, UK: InterchOpen, 2019), pp. 183–213.

narrative has both prevented the construction of fruitful, sustainable alliances between human and other-than-human beings, and obscured indigenous deeply relational, more-than-human ontologies and knowledge, which could provide valuable lessons into how to respond to the challenges of land use in the Anthropocene. We thus seek to incite scholars and practitioners to embrace ontological pluralism and combine different worlds as a means of offering processes of sensemaking and practical responses that are more attuned to our current planetary predicament. We suggest that engaging with indigenous symbolism may help in moving politics and society beyond the dominant attitudes and practices driving multiple socioecological crises, and call for a re-evaluation of human perspectives and values regarding modernity, development, and relations to the forest, beyond its strictly material representation. In doing so, we recall the words of Henry D. Thoreau:<sup>9</sup> 'What would human life be without forests?'

## The Anthropocene: A short review

The Anthropocene – a proposed new geological epoch describing humanity's dominant influence on diverse aspects of nature and the functioning of the Earth system as a whole – has become a core concept in contemporary thinking across the humanities, natural and social sciences. Widespread recognition that humans are geological agents has led scholars from different backgrounds to engage in a debate that has given rise to diverse perspectives about the causes and consequences of the Anthropocene.<sup>10</sup>

The Anthropocene concept has led to an interrogation of the history of human/non-human nature relations. Some have challenged assumptions of low anthropogenic impacts on nature in premodern times, highlighting that humanity has been reshaping the natural world for millennia;<sup>11</sup> others have emphasised the unprecedented, planetary magnitude of contemporary environmental changes.<sup>12</sup> The idea of a planet largely shaped by humans has likewise prompted some to consider what it means to be 'natural' and 'human' in the Anthropocene, asking whether humanity is now living in a post-natural world.<sup>13</sup> Broader debate around how to respond to the Anthropocene has generated a spectrum of responses, ranging from scientifically informed models of governance to manage the Earth system and ensure that humanity avoids potential planetary tipping points,<sup>14</sup> to optimistic narratives of human detachment from the natural world through the use of high-technology,<sup>15</sup> to eco-centric conceptions of ethics, politics, and governance.<sup>16</sup>

Some, however, see the Anthropocene as a dangerous concept,<sup>17</sup> arguing that the idea of the *anthropos* as a geological agent is simplistic and reduces humanity to an abstract, homogeneous

<sup>&</sup>lt;sup>9</sup>Henry D. Thoreau, Walden, or, Life in the Woods (Boston, MA: Ticknor and Fields, 1854).

<sup>&</sup>lt;sup>10</sup>Yadvinder Malhi, 'The concept of the Anthropocene', Annual Review of Environment and Resources, 42:1 (2017), pp. 77–104.

<sup>&</sup>lt;sup>11</sup>Erle Ellis et al., 'Used planet: A global history', *Proceedings of the National Academy of Sciences*, 110:20 (2013), pp. 7978–85.

<sup>&</sup>lt;sup>12</sup>Clive Hamilton, 'The Anthropocene as rupture', The Anthropocene Review, 3:2 (2016), pp. 93–106.

<sup>&</sup>lt;sup>13</sup>Jedediah Purdy, After Nature: A Politics for the Anthropocene (Cambridge, UK: Cambridge University Press, 2015); Steven Vogel, Thinking Like a Mall: Environmental Philosophy After the End of Nature (Cambridge, MA: The MIT Press, 2015).

<sup>&</sup>lt;sup>14</sup>Frank Biermann et al., 'Navigating the Anthropocene: Improving Earth system governance', *Science*, 335:6074 (2012), pp. 1306–07.

<sup>&</sup>lt;sup>15</sup>Rasmus Karlsson, 'Conflicting temporalities and the ecomodernist vision of rewilding', in Joana Castro Pereira and André Saramago (eds), *Non-Human Nature in World Politics: Theory and Practice* (Cham, Switzerland: Springer, 2020), pp. 91–109.

<sup>&</sup>lt;sup>16</sup>Anthony Burke and Stefanie Fishel, 'Across species and borders: Political representation, ecological democracy and the non-human', in Pereira and Saramago (eds), *Non-Human Nature*, pp. 33–52.

<sup>&</sup>lt;sup>17</sup>Jason Moore, 'The Capitalocene Part II: Accumulation by appropriation and the centrality of unpaid work/energy', *The Journal of Peasant Studies*, 45:2 (2018), pp. 237–79.

unit; with the concept failing to recognise socioecological diversity and challenge inequalities and injustices within and across societies, it obscures the specific social and economic configurations that created the Anthropocene. Flagging this in particular, some contend that the crisis is not anthropogenic, but 'capitalogenic' - humanity is living in the 'Capitalocene'.<sup>18</sup> Consequently, the planet's new geological epoch should be understood in the context of the formation of the capitalist world economic system - a process intimately tied to the European conquest and exploitation of the Americas - described as 'a system of power, profit and re/production in the web of life ..., dependent on finding and co-producing Cheap Natures [that is, labour, food, energy, and raw materials]'.<sup>19</sup> In other words, this discourse sees the Anthropocene as the result of the 'extractivist world' created by 'the global capitalist system and the monumental damage and injustice done by its ceaseless need for expansion, accumulation and extraction ... at the expanse of vulnerable people and ecosystems'.<sup>20</sup> In addition to the Capitalocene, other conceptual variations include, for example, the 'Eurocene', which emphasises the role played by European elites;<sup>21</sup> the 'Technocene', highlighting the technological aspect of the new geological epoch;<sup>22</sup> the 'Plantationocene', stressing the role of the plantation economy;<sup>23</sup> the 'Anthropo-not-seen', emphasising indigenous perspectives and the role played by colonialism;<sup>24</sup> or the 'Chthulucene', considering the multiple species that inhabit the Earth and how they interact in a more-than-human world.<sup>25</sup>

The different aspects raised by the concepts described above can also be found in the work of those who have been questioning the dominant imaginary of modernity.<sup>26</sup> This literature foregrounds how originally Western ideas of scientific and technological control over an external, inert nature, and ever-expanding economic growth through unlimited access to earthly resources and the occupation of land have informed the modern conceptions of progress, autonomy, and democracy.<sup>27</sup> Those ideas have created a collective (but not universal) way of thinking and being in the world that has benefited a few nations and groups, eroded alternative modes of development, and fuelled the socioecological crises of the Anthropocene. The pact between growth and emancipation has, it is argued, been put into question by accelerating human-induced climate change and the profound degradation of the Earth's ecosystems. Breaking with the prevailing paradigms of modernity, this literature is calling for recognition of our condition as 'terrestrials' (that is, as beings coexisting with, and dependent on, all other living species on the planet – a move towards decentring the human and acknowledging nature's agency)<sup>28</sup> and the cultivation of a relational 'ethic of partnership' between humans and other-than-human-beings, based on

<sup>19</sup>Ibid., pp. 594–5.

<sup>24</sup>Marisol de la Cadena, 'Uncommoning nature: Stories from the Anthropo-Not-Seen', in Penny Harvey, Christian Krohn-Hansen, and Knut Nustad (eds), *Anthropos and the Material* (Durham, NC: Duke University Press, 2019).

<sup>&</sup>lt;sup>18</sup>Jason Moore, 'The Capitalocene Part I: On the nature and origins of our ecological crisis', *The Journal of Peasant Studies*, 44:3 (2017), pp. 594–630.

<sup>&</sup>lt;sup>20</sup>Eva Lövbrand, Malin Mobjörk, and Rickard Söder, 'The Anthropocene and the geo-political imagination: Re-writing Earth as political space', *Earth System Governance*, 4 (2020), pp. 4–5.

<sup>&</sup>lt;sup>21</sup>Jairus Grove, 'The geopolitics of extinction: From the Anthropocene to the Eurocene', in Daniel McCarthy (ed.), *Technology and World Politics: An Introduction* (New York, NY: Routledge, 2018), pp. 204–23.

<sup>&</sup>lt;sup>22</sup>Alf Hornborg, 'The political ecology of the Technocene: Uncovering ecologically unequal exchange in the world-system', in Clive Hamilton, Francoise Gemenne, and Christophe Bonneuil (eds), *The Anthropocene and the Global Environmental Crisis* (New York, NY: Routledge, 2015), pp. 57–69.

<sup>&</sup>lt;sup>23</sup>Donna Haraway, 'Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making kin', *Environmental Humanities*, 6 (2015), pp. 159–65.

<sup>&</sup>lt;sup>25</sup>Donna Haraway, Staying with the Trouble: Making Kin in the Chthulucene (Durham, NC: Duke University Press, 2016).

<sup>&</sup>lt;sup>26</sup>Bruno Latour, Down to Earth: Politics in the New Climatic Regime (Cambridge, UK: Polity Press, 2018); Carolyn Merchant, The Anthropocene & the Humanities: From Climate Change to a New Age of Sustainability (London, UK: Yale University Press, 2020); Pierre Charbonnier, Affluence and Freedom: An Environmental History of Political Ideas (Cambridge, UK: Polity Press, 2021).

<sup>&</sup>lt;sup>27</sup>Charbonnier, Affluence and Freedom.

<sup>&</sup>lt;sup>28</sup>Latour, Down to Earth.

principles such as moral consideration for both humans and other species, respect for cultural and biological diversity and the inclusion of minorities in the code of ethical accountability.<sup>29</sup>

In the next sections, we seek to advance the debate by situating the Amazon in the Anthropocene and exploring different ways of perceiving the forest, calling attention to forms of relationality that lie at the margins of modernity. We look at socioecological relations in the region and examine indigenous perspectives to provide insights on possibilities for moving away from the human-centred and exploitative values, attitudes, and practices driving the forest's destruction. We thus make a contribution to the discussion about how to respond to the Anthropocene, seeking to incite scholars and practitioners to think more deeply about indigenous knowledge and relationality in the context of forests and the Earth's new geological epoch.

#### The Amazon in the Anthropocene

The Amazon, once presumed a pristine environment little altered by humans, has in fact a long history of human settlement; archaeological studies in recent decades have consistently demonstrated that dense and complex societies inhabited the forest and profoundly altered landscapes, soil, and biota in many areas, long before European contact.<sup>30</sup> The intensity of this interaction, however, has increased significantly since colonial times.<sup>31</sup> First by European settlers and later by industrial and capitalist states and large corporations, land grabbers, petty miners, and criminally organised groups, indigenous peoples and rural peasants have been decimated or violently oppressed, forests destroyed, animal populations killed, and waters polluted over large expanses of the Amazon.<sup>32</sup>

The combined effects of severe land-use changes, destructive exploitation of wildlife, induced fires and anthropogenic climate change now threaten the ecological systems that sustain the region's rich natural heritage. Despite the fact that the Amazon may be approaching a disastrous ecological tipping point, policies for the region continue to disregard the fundamental need for a reorientation of human activities and relationships to the forest.<sup>33</sup> The commodification of nature persists; Amazonian policies remain deeply anthropocentric (that is, grounded on the fallacious assumption that the human species is separate from and superior to nature) and socially unjust. Existing policies have mainly secured the interests of both wealthier regions in the Amazonian countries and economically powerful actors who benefit from predatory approaches to development, thus perpetuating power imbalances and socioeconomic inequalities on a national level and across the Amazon, which further boost the forest's destruction.<sup>34</sup>

In Brazil, which accounts for nearly 60 per cent of the region, deforestation and forest degradation are closely linked to the country's broader development and national security paradigms that consolidated between the 1950s and the 1980s, according to which the Amazon ought to be occupied, integrated into the national territory and 'modernised'. Modernisation implied the elimination of local traditional practices and the promotion of 'progress', understood as technologically driven economic growth. As a means to address overpopulation and poverty in other regions of the country, assert Brazilian sovereignty over the forest, improve the national trade balance, and solve structural problems (for example, water shortages) in more developed regions, migration to and settlement in the Amazon were encouraged, incentive policies for

<sup>&</sup>lt;sup>29</sup>Merchant, The Anthropocene & the Humanities.

<sup>&</sup>lt;sup>30</sup>Doyle Mckey, 'Pre-Columbian human cccupation of Amazonia and its influence on current landscapes and biodiversity', *Anais da Academia Brasileira de Ciências*, 91:Suppl. 3 (2019), p. e20190087.

<sup>&</sup>lt;sup>31</sup>Anna Roosevelt, 'The Amazon and the Anthropocene: 13,000 years of human influence in a tropical rainforest', *Anthropocene*, 4 (2013), pp. 69–87.

<sup>&</sup>lt;sup>32</sup>Ibid.

<sup>&</sup>lt;sup>33</sup>Pereira and Viola, Climate Change and Biodiversity Governance in the Amazon.

<sup>&</sup>lt;sup>34</sup>M. Graziano Ceddia, 'The impact of income, land, and wealth inequality on agricultural expansion in Latin America', *Proceedings of the Natural Academy of Sciences of the United States of America*, 116:7 (2019), pp. 2527–32.

large investors were implemented and large infrastructure built in the forest – often disregarding the rights of local communities and destroying the material and ecological conditions that sustain their livelihoods. Those policies resulted in high cultural and social heterogeneity in the region and have triggered multiple and persistent conflicts among native populations, migrant settlers, and corporate loggers, ranchers, and miners.<sup>35</sup> They cemented the land uses and structural lockins that have driven deforestation and degradation over the past decades,<sup>36</sup> favouring a relatively narrow group of actors who have leveraged their financial power to influence political agendas further to their benefit and promote their exploitative vision of development.<sup>37</sup> In doing so, policies for the region have also (re)produced high economic inequalities and poverty, with scant gains in material well-being for local populations. While the rise of socioenvironmentalism in the late 1980s and the movement's political strengthening in the second half of the 2000s,<sup>38</sup> alongside growing international pressure against the Amazon's destruction, have led to the creation of protected areas, the demarcation of indigenous lands, and the promotion of sustainable development projects in the region over the past three decades, governmental development plans have continued to focus predominantly on accelerating economic growth. Consequently, growing pressures have threatened the integrity of indigenous territories and protected areas. Tensions between developmentalism and environmentalism have made evident the existence of different visions and interests within the Amazon and the Brazilian state, and the country's concern with its international image in the search for political and diplomatic gains.<sup>39</sup>

The diversity of regional cultural and socioeconomic contexts, the hegemony of the predatory developmentalist discourse, and the fact that some branches of environmentalism have tended 'to sublimate nature and consecrate science', perversely (and probably unintentionally) upholding nature's exteriority to politics and dichotomising ecological and social concerns,<sup>40</sup> have precluded the construction of broad alliances that could promote alternative development paradigms.

<sup>36</sup>See Rachael D. Garrett et al., 'Forests and sustainable development in the Brazilian Amazon: History, trends, and future prospects', *Annual Review of Environment and Resources*, 46 (2021), pp. 625–52.

<sup>37</sup>The approval, in 2012, of a reform to the country's Forest Code promoted by the powerful agribusiness lobby that largely reduced environmental protections, and the dominance of the bioeconomy agenda in Brazil by the same lobby, which is limiting the bioeconomy's potential for job creation, local development, and biodiversity conservation, in an effort to preserve the structural social and political inequalities that benefit the sector, are illustrative of such reality. See, for example, Mairon G. Bastos Lima, 'Corporate power in the bioeconomy transition: The policies and politics of conservative ecological modernization in Brazil', *Sustainability*, 13 (2021), p. 6952.

<sup>38</sup>A key factor for understanding the isolated period of strong deforestation control in the Brazilian Amazon between 2005 and 2012. See Pereira and Viola, *Climate Change and Biodiversity Governance in the Amazon*.

<sup>39</sup>Marie-Claude Smouts, Tropical Forests, International Jungle: The Underside of Global Ecopolitics (New York, NY: Palgrave Macmillan, 2003); Zhouri, "Adverse forces" in the Brazilian Amazon'; Violeta R. Loureiro, 'The Amazon before the Brazilian environmental issue', in Liz-Rejane Issberner and Phillipe Léna (eds), Brazil in the Anthropocene: Conflicts Between Predatory Development and Environmental Policies (New York, NY: Routledge, 2017), pp. 62–81; Marianne Schmink et al., 'From contested to "green" frontiers in the Amazon? A long-term analysis of São Félix do Xingu, Brazil', The Journal of Peasant Studies, 46:2 (2019), pp. 377–99; Garrett et al., 'Forests and sustainable development in the Brazilian Amazon'; Pereira and Viola, Climate Change and Biodiversity Governance in the Amazon. Similar processes have taken place in other tropical countries. On the Indonesian case, see, for instance, Anna L. Tsing, Friction: An Ethnography of Global Connection (Princeton, NJ: Princeton University Press, 2005).

<sup>40</sup>Bruno Latour et al., 'Down to earth social movements: An interview with Bruno Latour', *Social Movement Studies*, 17:3 (2018), p. 354.

<sup>&</sup>lt;sup>35</sup>For example, the conflict between rice producing landowners who arrived in the Amazon through colonisation programmes promoted by the federal government and indigenous peoples over the creation of the Raposa Serra do Sol reserve in the second half of the 2000s. The former argued that the demarcation of indigenous lands was an obstacle to regional economic development. Rice producers' conception of land was one of individual ownership, intensive agricultural use, and market-oriented production. This clashed with indigenous communities' idea of communal land tenure, subsistence economy practices, and territorial self-governance. Despite the conflict, the reserve was eventually created, but with a number of conditions, including the right of the Brazilian state to freely exploit the land and its resources in accordance with national interest. See Andréa Zhouri, "Adverse forces" in the Brazilian Amazon: Developmentalism versus environmentalism and indigenous rights', *The Journal of Environment & Development*, 19:3 (2010), pp. 252–73.

The situation in Brazil has worsened since Jair Bolsonaro took office in 2019. With an explicit anti-environmentalist agenda, and an aggressive and radical discourse against indigenous communities and their lands, Brazil's new government has weakened environmental protection laws, policies, and agencies, limited the participatory rights of civil society, and created a climate of impunity, encouraging illegal extractivist activities in the Amazon and violence against the region's indigenous peoples.<sup>41</sup> The 2019 devastating fires that plagued the region were started by cattle ranchers and loggers clearing land for crops or grazing, under the 'cloak of legitimacy' provided by the Bolsonaro administration; with two-thirds of the total area burned, Brazil was the most affected country.<sup>42</sup> Amazonian deforestation rates in Brazil increased by 30 per cent in 2019 compared to 2018, and there were 160 invasions of indigenous lands, representing an increase of 47 per cent on the previous year.<sup>43</sup>

Other Amazonian countries have struggled with the same problems and dilemmas.<sup>44</sup> In Bolivia and Ecuador, despite progressive socioenvironmental discourses and legal initiatives recognising nature's rights by New Left governments, which rose to power in the 2000s supported by social movements and indigenous communities, destructive extractivist activities have continued in the Amazon.<sup>45</sup> In both countries, widespread public support for forest extractivism to fuel economic growth and reduce poverty and inequality, as well as powerful extractive sector interests, mean that indigenous demands for emancipatory socioenvironmental change began to be seen as a threat to resource-based accumulation, which led to the repression of indigenous movements.<sup>46</sup> In the Amazon, including in protected areas, forest clearance for revenue sources like agriculture, livestock production, hydrocarbon, and mineral extraction, as well as for infrastructure building, have severely affected areas of high ecological diversity and rural and indigenous communities.<sup>47</sup> Bolivia was the second most affected country by the 2019 fire crisis, with more than 10 per cent of the total area burned.<sup>48</sup>

In Peru, infrastructure projects to facilitate extractive industry activities have also increased rapidly over the past decade and allowed access to previously remote areas of the forest by land traffickers, migrants in search of better living opportunities, who are attracted by governmental and private incentives for commercial and agro-industrial crops, as well as local residents displaced as a result of policies promoting access to land by large corporations. Traditional farming systems, which could be integral parts of a sustainable land use agenda, have been marginalised by successive governments, whose policies for the region have been promoting agricultural intensification and thus disrupting the functioning modes of Amazonian communities. In a context marked by high levels of poverty and job informality, other-than-human-beings and vulnerable rural populations, including indigenous peoples, are exploited by the logging, mining, and agriculture industries as well as by land and drug traffickers.<sup>49</sup>

<sup>&</sup>lt;sup>41</sup>Pereira and Viola, 'Brazilian climate policy (1992–2019)'.

<sup>&</sup>lt;sup>42</sup>Cardil et al., 'Recent deforestation'.

<sup>&</sup>lt;sup>43</sup>Piauí, 'Sob Bolsonaro, Invasões de Terras Indígenas Superam 2018', available at: {https://piaui.folha.uol.com.br/sob-bolsonaro-invasoes-de-terras-indigenas-superam-2018/} accessed 25 February 2020.

<sup>&</sup>lt;sup>44</sup>For a comprehensive analysis of regional power differentials and the tensions between developmentalism and environmentalism in the Amazonian countries, see Pereira and Viola, *Climate Change and Biodiversity Governance in the Amazon*.

<sup>&</sup>lt;sup>45</sup>Carolina Valladares and Rutgerd Boelens, 'Extractivism and the rights of nature: Governmentality, "convenient communities" and epistemic pacts in Ecuador', *Environmental Politics*, 26:6 (2017), pp. 1015–34; Paola V. Calzadilla and Louis Kotzé, 'Living in harmony with nature? A critical appraisal of the rights of Mother Earth in Bolivia', *Transnational Environmental Law*, 7:3 (2018), pp. 397–424.

<sup>&</sup>lt;sup>46</sup>Diego Andreucci, 'Populism, hegemony, and the politics of natural resource extraction in Evo Morales's Bolivia', *Antipode*, 50:4 (2017), pp. 825–45; Joanna Morley, "Beggars sitting on a sack of gold": Oil exploration in the Ecuadorian Amazon as buen vivir and sustainable development', *The International Journal of Human Rights*, 21:4 (2017), pp. 405–41.

<sup>&</sup>lt;sup>47</sup>Japhy Wilson and Manuel Bayón, 'The nature of post-neoliberalism: Building bio-socialism in the Ecuadorian Amazon', *Geoforum*, 81 (2017), pp. 55–65; Pierre Gautreau and Laetitia Bruslé, 'Forest management in Bolivia under Evo Morales: The challenges of post-neoliberalism', *Political Geography*, 68 (2019), pp. 110–21.

<sup>&</sup>lt;sup>48</sup>Cardil et al., 'Recent deforestation'.

<sup>&</sup>lt;sup>49</sup>Pereira and Viola, Climate Change and Biodiversity Governance in the Amazon.

In Colombia, following the demobilisation of the Revolutionary Armed Forces of Colombia (FARC) from the Amazon in the context of the peace agreement signed with the government in 2016, the region has been occupied by dissidents, criminal gangs, land mafias, cattle ranchers, new settlers, and investors in search of new land. Land hoarding and cattle ranching have grown at a rapid pace; deforestation has been rampant. Forced displacements and assassinations of social leaders and human rights defenders are on the rise; violence is mainly related to economic interests looking to exploit the Amazon's natural wealth. The Colombian government has criticised and criminalised social mobilisations against rising violence as well as attacked small farmers that deforest patches of land, leaving untouched the actors that are often behind such forest clearings, namely outsider investors and non-state actors. There currently are in the region convenient alliances between legal and illegal actors, whose endpoint is the creation of large agro-industrial areas alongside mining and energy projects.<sup>50</sup> Colombia was the third most affected country by the 2019 fire crisis, with nearly 7 per cent of the total area burned.<sup>51</sup>

The quest for predatory development, and political neglect of socioecological systems, are evident in most Amazonian countries. The anthropocentric and socially unjust governance of the Amazon – which ignores not only the enmeshed nature of the world and the existence of 'shared ties of vulnerability'<sup>52</sup> between humans, plants, and animals, but also the injustices and inequalities that perpetuate the exploitation of more-than-human natures in the region – is risking the conditions that enable life on the planet to thrive. We argue that this is happening mainly because the Amazon is seen predominantly as a source of commodities. The following section will explore this further, before suggesting alternative ways to perceive the Amazon in the Anthropocene.

## Material and symbolic worlds: Different ways of perceiving the Amazon

Before we start our analysis of the different ways of perceiving the Amazon, it is important to link our discussion to what has been called the 'relational ontological turn' in the social sciences, as the arguments and discussion that we provide here are intrinsically connected to that debate. The modes of thinking associated with such turn foreground how different onto-cosmological commitments, and specific ontological assumptions that are not universal yet have been universalised, shape not only how people engage with others and the planet but also analyses of world politics.<sup>53</sup> They raise attention to the distinct logics and relations that constitute multiple realities, or a world of many worlds;<sup>54</sup> emphasise the role of other-than-human beings in relational networks or assemblages;<sup>55</sup> and incite us to learn how 'to stand in the tensions created between worlds', as this 'can help us hone the skills we need to move more effectively between them'.<sup>56</sup> We depart from this emphasis on ontological pluralism and relationality to recognise the different ways of understanding and knowing that promote simultaneously different, embodied, and enacted ways of being.<sup>57</sup>

Following this line of thought, there are many ways of perceiving the Amazon in the Anthropocene. Some still see it as the lungs of the world,<sup>58</sup> others as a carbon sink,<sup>59</sup> others

<sup>&</sup>lt;sup>50</sup>Ibid.

<sup>&</sup>lt;sup>51</sup>Cardil et al., 'Recent deforestation'.

<sup>&</sup>lt;sup>52</sup>Rosi Braidotti, *The Posthuman* (Cambridge and Malden, UK: Polity Press, 2013), p. 69.

<sup>&</sup>lt;sup>53</sup>Tamara Trownsell et al., 'Recrating International Relations through relationality', *E-International Relations*, available at: {https://www.e-ir.info/2019/01/08/recrafting-international-relations-through-relationality/} accessed 13 December 2021.

<sup>&</sup>lt;sup>54</sup>Marisol de la Cadena and Mario Blaser, A World of Many Worlds (Durham, NC: Duke University Press, 2018).

<sup>&</sup>lt;sup>55</sup>Bruno Latour, Reassembling the Social: An Introduction to Actor-Network-Theory (Oxford, UK: Oxford University Press, 2005); Haraway, Staying with the Trouble.

<sup>&</sup>lt;sup>56</sup>Trownsell et al., 'Recrafting International Relations through relationality'.

<sup>&</sup>lt;sup>57</sup>de la Cadena and Blaser, A World of Many Worlds.

<sup>&</sup>lt;sup>58</sup>Alexander Barnard, "We are the Lungs of the World": Popular Environmentalism and the Local Politics of Climate Change in the Ecuadorian Amazon' (MA Phil. thesis, University of Oxford, UK, 2011).

<sup>&</sup>lt;sup>59</sup>Oliver Phillips and Roel Brienen, 'Carbon uptake by mature Amazon forests has mitigated Amazon nations' carbon emissions', *Carbon Balance Manage*, 12:1 (2017), p. 1.

as a development frontier.<sup>60</sup> The 2019 fire crisis was the most recent manifestation that the dominant perception of the forest is one of an exploitable commodity source. Such perception is fed by the violent paradigm of global materialism and consumerism. While much of the blame for the burning of the Amazon has rightly fallen on the predatory policies by national governments and the anti-environmentalist rhetoric of the Bolsonaro administration, the incentive for destroying the forest comes from powerful meat and soy animal feed companies (for example, JBS and Cargill) and their customers (for example, McDonald's, Sysco, Costco, Stop & Shop, Walmart/ Asda).<sup>61</sup> Seeking to draw attention to this fact, and provide insights into alternative ways of relating to the forest, next we analyse two main ways of perceiving the Amazon:<sup>62</sup> (a) a provider of resources that constitute many of the materials used in modern societies in the quest for development; and (b) the home of different symbolic other-than-human beings.

## The material world

Studies about material culture normally focus on the relationships between people and things.<sup>63</sup> There is no clear definition of the material world. Based on Hegel's dialectical materialism, Daniel Miller's<sup>64</sup> interpretation of materiality moves away from the meanings of materials to focus on how they act within the field of social relations. Here we are interested in the materials that have been manipulated and transformed by humans (that is, manufactured). Humanity has been transforming materials since the Stone Age.<sup>65</sup> As technology has progressed, humans have created increasingly sophisticated tools, objects, and goods. In modern societies, such materials are prominent in humans' lives due to the flow of resources from South to North, and from South to South (as many countries in Asia, the Middle East and Latin America emerge as new consumers), and the rise in consumption per individual.<sup>66</sup>

The values of capitalism, and its urge for economic growth, move modern societies. In this context, possessive individualism and private property are entrenched in political institutions and every individual human's worth is calculated by how much he/she produces. Consumerism is introduced from an early stage of life, and we grow up believing that happiness is inseparable from consuming as many products and services as possible. Individual progress is equal to material progress. As everything we acquire shapes our identity – 'both inwardly (how we feel about or reward ourselves) and outwardly (how we project ourselves through our material possessions)'<sup>67</sup> – one could even say that humans become what they possess. As previously seen, modern societies have been nurturing the idea that economic growth and technology development are the ultimate goals individuals and societies should aim for. Amazon.com is a clear example of how marketing tactics designed to motivate consumption can generate a global perception of the Amazon forest as a source of materials and goods that represent wealth.

<sup>64</sup>Daniel Miller, *Material Culture and Mass Consumption* (Oxford, UK: Blackwell, 1987).

<sup>&</sup>lt;sup>60</sup>Ryan Scarrow, 'Frontiers and deforestation', Nature Plants, 5:124 (2019), pp. 585-612.

<sup>&</sup>lt;sup>61</sup>Glenn Hurowitz, Mat Jacobson, Etelle Higonnet, and Lucia von Reusner, 'The companies behind the burning of the Amazon', *Mighty Earth*, available at: {https://stories.mightyearth.org/amazonfires/index.html} accessed 23 July 2020.

<sup>&</sup>lt;sup>62</sup>Because of the diverse ways of seeing the Amazon, it is difficult to build a perception of the region that can speak for the many narratives that are embedded in different social, economic, political, and cultural representations. In this article, our main aim is not to analyse each narrative and perception, but to provide insights into ways of relating to the forest that could promote more humble and reverential attitudes towards the Amazon and the other-than-human beings it hosts.

<sup>&</sup>lt;sup>63</sup>Nicholas Thomas, 'The case of the misplaced ponchos: Speculations concerning the history of cloth in Polynesia', *Journal of Material Culture*, 4:1 (1999), pp. 5–20; Rodney Harrison, 'The magical virtue of these sharp things: Colonialism, mimesis and knapped bottle glass artefacts in Australia', *Journal of Material Culture*, 8:3 (2003), pp. 311–36.

<sup>&</sup>lt;sup>65</sup>Robert Foley and Marta Mirazón Lahr, 'Lithic landscapes: Early human impact from stone tool production on the central Saharan environment', *PLoS One*, 10:3 (2015), p. e0116482.

<sup>&</sup>lt;sup>66</sup>Fridolin Krausmann et al., 'Growth in global materials use, GDP and population during the 20<sup>th</sup> century', *Ecological Economics*, 68:10 (2009), pp. 2696–705.

<sup>&</sup>lt;sup>67</sup>Kevin Morrison, Living in a Material World: The Commodity Connection (Chichester, UK: Wiley, 2008), p. 2.

Amazon.com borrowed its name from the Amazon river, to evoke how huge it would be; nowadays, on hearing the word 'Amazon', many think of the world's largest online shop before its namesake river and forest.

Modern societies still have a tendency to deny the link between the Amazon and our daily lives; almost like the forest is too far away, too wild and savage to be linked to our modern lifestyle.<sup>68</sup> However, the link between the Amazon and modern societies has long existed and intensified over the past two decades with the commodity super cycle of the early twenty-first century, which resulted largely from rising demand from emerging markets, particularly the Chinese one.<sup>69</sup> The rubber extracted from the Amazon – through the brutal enslavement of local populations – enabled the automobile revolution of the nineteenth century, which fuelled the current climate crisis.<sup>70</sup> Today, part of the minerals that allow societies to have 'high-tech lifestyles' (for example, mobile phones, laptops) come from the region, and mining has become an increasingly important driver of Amazonian deforestation.<sup>71</sup> Higher living standards all around the world have increased pressure on tropical countries, and the ever-expanding appetite for meat, leather, and other material goods has shaped such countries' relationships with both the rest of the world<sup>72</sup> and the forests that lie within their borders.

The consequences of widespread endorsement of materialism as a way of living are that we inhabit a more artificial world. As anthropologist Els Lagrou argues,<sup>73</sup>

[w]e are all undeniably enmeshed in the same vast web of Late Capitalism that infiltrates the most remote areas and aspects of our lives with its commodities, toxic substances, viruses, mosquitos and epidemics, and its implacable logic of exploitation of the seas, the soil, the territory.

In the material world, minorities are resignified as 'the poor' and 'the vulnerable' in need of elite's support and aid. On the contrary, however, these people, as observed by Lagrou, 'have the practical – but above all relational – knowledge of living otherwise, and can show us lines of flight out of the vicious circle of blind developmentalism'.<sup>74</sup> The author here highlights development ethics, assessing both the ends and means of development. As Manuel M. Costoya observes,<sup>75</sup> we first need to ask: 'How does a given development project define the human good? What moral sources, traditions, and worldviews does it draw on to elucidate this definition?' Inspired by these arguments, the next section looks at Amazonian symbolism and how this could alter hegemonic forest perceptions. Though the material understanding of forests is most prominent in modern societies, it is the symbolic one that signifies individuals' way of thinking and their values. Consequently, it is such understanding which could provide insights into how to respond to the socioecological challenges of the Anthropocene.

#### The symbolic world

People are surrounded by an infinite number of symbols. A symbol refers to its object through interpretive concepts and values; it is a learnt relationship. The symbolic world then signifies

<sup>&</sup>lt;sup>68</sup>Smouts, Tropical Forests, International Jungle.

<sup>&</sup>lt;sup>69</sup>Morrison, Living in a Material World.

<sup>&</sup>lt;sup>70</sup>Manuela Picq, 'Rethinking IR from the Amazon', *Revista Brasileira de Política Internacional*, 59:2 (2016), p. e003.

<sup>&</sup>lt;sup>71</sup>Laura J. Sonter et al., 'Mining drives extensive deforestation in the Brazilian Amazon', *Nature Communications*, 8 (2017), p. 1013.

<sup>&</sup>lt;sup>72</sup>Timothy Randhir, 'Globalization impacts on local commons: Multiscale strategies for socioeconomic and ecological resilience', *International Journal of the Commons*, 10:1 (2016), pp. 387–404.

<sup>&</sup>lt;sup>73</sup>Els Lagrou, 'Copernicus in the Amazon: Ontological turnings from the perspective of Amerindian ethnologies', *Sociologia & Antropologia*, 8:1 (2018), p. 134.

<sup>&</sup>lt;sup>74</sup>Ibid.

<sup>&</sup>lt;sup>75</sup>Manuel M. Costoya, 'Latin American post-neoliberal development thinking: The Bolivian "turn" toward Suma Qamaña', *The European Journal of Development Research*, 25:2 (2013), p. 2.

the way of thinking of different cultures, and the representation of their values. Culture is formed when non-material representations, like signs, linguistics, and ethics, combine with material things to form perspectives and habits. Culture is based on the myths and stories that are present in our lives nearly from the moment of birth. Such myths and stories generate the beliefs, norms, and values that enable a network of strangers to cooperate effectively.<sup>76</sup> The symbolic world represents shared meanings (for example, red as a symbol for stop) through cultural transmission (information inheritance), by which societies have gathered a great and multifaceted set of cultural attributes, using different types of language (oral, written, signs) as their main tool.<sup>77</sup>

Culture is a questionable concept and the separation between nature and culture has contributed to the diffusion of ontologies that ratify the forces that drive modern thought and the socioecological crises of the Anthropocene. The assumption that other-than-human beings are unalterable 'givens' is still considered common sense. As observed by Brazilian indigenous leader Ailton Krenak,<sup>78</sup>

[a]t a certain moment in history, the 'civilized place' of humans conceived the idea of nature; it needed to name that which had no name. Thus, nature is an invention of culture, it is the creation of culture, and not something that comes before culture. And this had a huge utilitarian impact! 'I separate myself from nature, and now I can dominate it'.

Accordingly, the different meanings one attributes to things vary significantly depending on who is perceiving those things.

Meaning, according to Owen Flanagan,<sup>79</sup> 'is a matter of whether and how things add up in the greater scheme of things'. The particular meanings one attributes to things influences the way one thinks about reality. At the same time, how we perceive things in terms of wrong and right (that is, values) and the contradictions that generates, also serve as guidelines on how to behave. Contradictions are the engines of cultural development, responsible for the creativity and dynamics of the human species.<sup>80</sup> Differences in thoughts, ideas, and values impel people to reflect, re-evaluate, and criticise in a process called cognitive dissonance in psychological studies. Leon Festinger<sup>81</sup> proposed that humans tend to become psychologically uncomfortable with contradictory values and ideas, and become motivated to reduce the cognitive dissonance. Learning from different ways of perceiving the Amazon then encourages us to question the suppositions we have about the forest, and how the notions we create based on such suppositions are situated in the Anthropocene. It also means widening our perceptions relative to these diverse forms of seeing the Amazon, to discover what is veiled by those notions and suppositions.<sup>82</sup>

The challenges of land use in the Amazon are so evident and pressing in the Anthropocene that they demand an urgent and comprehensive rethinking of our perceptions in relation to the forest. This implies changing 'categories and the relations between nature and culture, thought and being, human and world'.<sup>83</sup> The symbolic operational characteristics of indigenous groups, like social order, stories, and ceremony have an important role in this scenario.<sup>84</sup>

<sup>&</sup>lt;sup>76</sup>Yuval Harari, Sapiens: A Brief History of Humankind (New York, NY: Harper Collins, 2014).

<sup>&</sup>lt;sup>77</sup>Joseph Henrich and Richard McElreath, 'The evolution of cultural evolution', *Evolutionary Archaeology*, 12 (2003), pp. 123–35.

<sup>&</sup>lt;sup>78</sup>Ailton Krenak and Maurício Meirelles, 'Our worlds are at war', *e-flux Journal*, available at: {https://www.e-flux.com/journal/110/335038/our-worlds-are-at-war/} accessed 13 December 2021.

 <sup>&</sup>lt;sup>79</sup>Owen Flanagan, *The Really Hard Problem: Meaning in a Material World* (Cambridge, MA: The MIT Press, 2007), p. xi.
 <sup>80</sup>Harari, *Sapiens*.

<sup>&</sup>lt;sup>81</sup>Leon Festinger, A Theory of Cognitive Dissonance (Stanford, CA: Stanford University Press, 1957).

<sup>&</sup>lt;sup>82</sup>Cristina Y. A. Inoue, 'Worlding the study of global environmental politics in the Anthropocene: Indigenous voices from the Amazon', *Global Environmental Politics*, 18:4 (2018), pp. 25–42.

<sup>&</sup>lt;sup>83</sup>Lagrou, 'Copernicus in the Amazon', p. 134.

<sup>&</sup>lt;sup>84</sup>David Maybury-Lewis, Akwe-Shavante Society (Oxford, UK: Oxford University Press, 1967).

Examples of symbolism include the meanings attributed to plants and rivers by indigenous peoples. Human–animal engagements have been extensively studied in Amazonia,<sup>85</sup> but human–plant relations continue to receive less attention.<sup>86</sup> Our intention here is to make the symbolic perspective of these engagements more visible, to awaken the possible relations that emerge.

The Yanomami, for example, believe the world is the forest. Their symbolism relates to 'dreams, spirits, animals, and other beings associated with the land', which they call *Urihi* with its image, *Urihinari*, being the spirit of the forest.<sup>87</sup> The forest is a sentient being that feels pain and complains; its trees sob and cry when cut down. It also sustains 'a complex cosmological dynamic that encompasses interrelationships between humans and other beings'.<sup>88</sup> This understanding is similar across different indigenous groups, in which land is conceived as a supranatural and a natural being, and 'plays a sacred and vital role for the continuation of life'.<sup>89</sup> 'Within this complex symbolic representation of land ..., [its] characteristics, properties, qualities and dynamics were and still are assessed in sophisticated ways, taking advantage of its potential for agricultural use and overcoming constraints.<sup>90</sup>

With this perspective, as Narciso Barrera-Bassols et al.<sup>91</sup> analyse,

land has to be fed, nourished and cured, the same as any other living being, because land health is central to the success of fertilization and the continuation of life. ... Soil health maintenance needs the active participation of other living beings, such as humans, animals and plants, and that of substances, such as water, air and vitamins.

Different indigenous peoples' stories teach that there must be reverence amid the components that are linked and cooperate so that life is possible, and that knowledge can be acquired through such connections.<sup>92</sup> The Tukano, who live in the Brazilian and Colombian Amazon, see nature, animals, and human beings as interconnected and dependent. They believe all were created at the same moment.<sup>93</sup> As explained by Cristina Y. A. Inoue,<sup>94</sup> '[i]nitially, human beings could marry animals, because humans were created through a mix of forest and animals', so all beings have the same blood as humans.

The samauma tree (*ceiba petranda*), one of the largest trees in the world, has been named differently across the Amazon (namely, queen of the forest, the mother of humanity, the tree of life, the stairs to the sky), but its symbolism is similar: it is seen as a host of diverse lives, a connection between the material and spiritual worlds, the great mother. The Manxineru in the Western Amazon believe that rivers, trees, and animals have souls, and that humans are named by the animals. The Xerente, in Central Amazon, also believe that all beings and things possess a soul that is protected by spirits who are able to influence their daily lives.<sup>95</sup> Similarly, for the

<sup>87</sup>Inoue, 'Worlding the study of global environmental politics in the Anthropocene', p. 26.

<sup>&</sup>lt;sup>85</sup>Eduardo Kohn, 'How dogs dream: Amazonian natures and the politics of transspecies engagement', American Ethnologist, 34:1 (2007), pp. 3–24; Carlos Fausto, 'A blend of blood and tobacco: Shamans and jaguars among the Parakaná of eastern Amazonia', in Neil Whitehead and Robin Wright (eds), Darkness and Secrecy: The Anthropology of Assault, Sorcery, and Witchcraft in Amazonia (Durham, NC: Duke University Press, 2007).

<sup>&</sup>lt;sup>86</sup>Theresa Miller, 'Maize as Material Culture? Amazonian Theories of Persons and Things', available at: {https://www. anthro.ox.ac.uk/sites/default/files/anthro/documents/media/jaso3\_1\_2011\_67\_89.pdf} accessed 28 September 2020.

<sup>&</sup>lt;sup>88</sup>Ibid.

<sup>&</sup>lt;sup>89</sup>Narciso Barrera-Bassols, J. Alfred Zinck, and Eric Van Ranst, 'Symbolism, knowledge and management of soil and land resources in Indigenous communities: Ethnopedology at global, regional and local scales', *Catena*, 65:2 (2016), p. 126.

<sup>&</sup>lt;sup>90</sup>Ibid.

<sup>&</sup>lt;sup>91</sup>Ibid., pp. 128–30.

<sup>&</sup>lt;sup>92</sup>Valéria M. C. de Melo, 'Diversidade, Meio Ambiente e Educação: Uma Reflexão a Partir da Sociedade Xerente' (Master's dissertation, CIAMB/UFT, Goiânia, Brazil, 2000).

<sup>&</sup>lt;sup>93</sup>Inoue, 'Worlding the study of global environmental politics in the Anthropocene'.

<sup>&</sup>lt;sup>94</sup>Ibid., p. 37.

<sup>&</sup>lt;sup>95</sup>Ibid.

Katukina, living in the Southwest Amazon, everything on earth has *yochī*.<sup>96</sup> *Yochī* can be roughly translated as spirit, a vital force that animates beings; as such, it is more than a force that animates the body, it is also what gives particular characteristics to beings.<sup>97</sup> The Kaxinawa, who are part of the same linguistic group (Pano) as the Katukina, endorse this statement: 'the spiritual or the vital force permeates every living phenomenon on Earth.'<sup>98</sup>

In addition to beings, some elements also have *yochī*, such as water, fire, medicines, excrement, and body fluids.<sup>99</sup> This key concept is present in several Pano cosmologies (Katukina, Kaxinawá, Yawanawá, Amawáka, Kaxaraí, Kaxinawá, Korúbo, Marúbo, Matís, Matsé, Nukini, Poyanawá, Yaminawá) and appears in different ways (*Yuxin/Yochī/Yushin/Yoshi/Yoshin*) with slight conceptual differences.<sup>100</sup> 'It is a category through which the spiritual dimension (or *yuxinity*) is not something that transcends the human; it is not outside nature or the human, on the contrary it permeates life in different dimensions (terrestrial, aquatic and celestial).<sup>101</sup> Regarding this symbolic intertwining, 'like the concept of *xapiripë* among the Yanomami, *yuxin* presents an aspect of indiscernibility between human and other-than-human beings; a common molecule with different characteristics, depending on the matter/body it animates'.<sup>102</sup>

Such a concept also holds for the Kayapó, a group that belongs to the Jê linguistic family, living in the south of the Amazon River and along Xingu River and its tributaries. They believe that 'all beings possess a 'soul' or 'energy' known as *karon*. ... animals and plants each have a master spirit who must be appeased through ritual performances ... [to ensure] a continued ecological, cosmological and societal "balance".<sup>103</sup> Maize (and its *karon*) works as mediatory 'balancing agent'.<sup>104</sup> According to Kayapó myth, 'the supernatural being in control of maize is either Mouse or Rat ... [, who] assists the people in perceiving maize as food, because prior to his arrival it was seen as inedible ...[,] a rotten wood'.<sup>105</sup> For the Araweté people, living in the Eastern Amazon, 'the masters of maize are *azang* spirits that control its growth.<sup>106</sup> As shown by Theresa Miller,<sup>107</sup>

[t]he Araweté do not perceive a need to engage in direct perspectival relationships with these spirits, choosing instead to focus on encounters with the gods, or *maï*, during the maize beer festivals. Maize still plays a central role in this engagement, serving as the mediator between shamans and the supernatural *maï*.

Moving to human-animal relationships, the *jibóia* (*Boa constrictor tibia* and *Boa constrictor amarali*) is a being full of symbolism. According to some indigenous groups, it was the first animal on Earth and must be respected for its ancient knowledge. The Kaxinawá call it *Yube*. They

<sup>&</sup>lt;sup>96</sup>Edilene Coffaci de Lima, 'Com os Olhos da Serpente: Homens, Animais e Espíritos nas Concepções Katukina Sobre a Natureza' (PhD dissertation, USP, São Paulo, 2000).

<sup>&</sup>lt;sup>97</sup>Graham Townsley, 'Ideas of Order and Patterns of Change in Yaminahua Society' (PhD dissertation, Cambridge University, Cambridge, UK, 1988).

<sup>&</sup>lt;sup>98</sup>Els Lagrou, 'Uma Etnografia da Cultura Kaxinawá: Entre a Cobra e o Inca' (MA dissertation, PPGAS/Universidade Federal de Santa Catarina, Florianópolis, Brazil, 1991), p. 28.

<sup>&</sup>lt;sup>99</sup>Els Lagrou, A Fluidez da Forma: Arte, Alteridade e Agência em uma Sociedade Amazônica (Kaxinawa, Acre) (Rio de Janeiro, Brazil: Topbooks, 2007); Oscar Calavia Sáez, O Nome e o Tempo Yaminawa: Etnologia e História dos Yaminawa do Rio Acre (São Paulo, Brazil: Editora UNESP, 2006).

<sup>&</sup>lt;sup>100</sup>Ruth D. B. Lopes, 'Lições da Cobra: Uma Leitura da Etnologia Pano' (Master's dissertation, UFF, Rio de Janeiro, Brazil, 2010).

<sup>&</sup>lt;sup>101</sup>Ibid., p. 59.

<sup>&</sup>lt;sup>102</sup>Ibid., p. 56.

<sup>&</sup>lt;sup>103</sup>Miller, 'Maize as Material Culture?', p. 78.

<sup>&</sup>lt;sup>104</sup>Ibid.

<sup>&</sup>lt;sup>105</sup>Ibid., p. 78.

<sup>&</sup>lt;sup>106</sup>Ibid., p. 79. <sup>107</sup>Ibid.

<sup>10.</sup> 

believe that to see it and its transformational world, one needs to see through its eyes and become *Yube.*<sup>108</sup> In the process of becoming *jibóia*, the Kaxinawá ritually consume the heart and tongue of *jibóias* to acquire, for example, the powers of hunting.<sup>109</sup> Traditions are similar across different communities: Peru's Yaminawá eat the *jibóia*'s tongue and excrement; while the Yaminawá of Cabeceira do Rio Acre suck its tongue.<sup>110</sup> For the Yawanawá and Katukina, the appearance of a *jibóia* in one's path means a call for initiation.

As Viveiros de Castro,<sup>111</sup> Descola,<sup>112</sup> and others point out, indigenous peoples sometimes take animals as beings endowed with humanity, in what has been called anthropomorphism.<sup>113</sup> The attribution of human attributes, feelings, and intentions to other-than-human beings has ancient roots; examples of animal-shaped works of art are the earliest evidence of anthropomorphism. Although anthropomorphism is widely used in literature to describe indigenous symbolisms and their relations to other animals, its conceptual genealogy is Western, and its application may be reducing such relations to human psychological understandings of other-than-human beings and worlds. The way in which Amerindians conceive the notion of humanity differs greatly to that in Western thinking. As Edilene Coffaci de Lima<sup>114</sup> analysed, among the Pano groups, the frontier of humanity does not coincide with the limits of human beings. The relationships that the Katukina establish with animals and spirits are similar to those that they establish among themselves; humanity extends beyond human attributes.<sup>115</sup>

It is critical here to understand that 'despite the frontiers of humanity being extended to other-than-human beings, they do not lead to complete undifferentiation.<sup>116</sup> To reduce the misunderstandings of the proper translation of indigenous humanity, 'it is necessary to comprehend the indigenous context, its cosmologies and symbolisms.<sup>117</sup> Crucially, the need to understand such ideas of humanity in context depends on understanding the context in which these ideas and signs belong. We then believe it is appropriate to reflect on how to use the concepts of nature, culture, society, and humanity, while interpreting (and, most of the time, translating) indigenous peoples' sayings about their symbolic system.<sup>118</sup> For this, it is appropriate to highlight the constitutive and fundamental differences between the contexts from which these peoples come, and the context from which we come to interpret/translate them. Our own concepts and semiosis are merely instruments of interpretation and translation. It is through such a reflection that anthropologist Stewart Guthrie<sup>119</sup> proposed that anthropomorphism originated from the brain's predisposition to recognise the presence or signs of humans in natural phenomena. In such an attempt to identify ourselves with other-than-human beings, however, we risk missing the fact that such beings are diverse in their own forms, misconstruing natural diversity and emphasising anthropocentrism even more.

Indigenous symbolic meanings of other-than-human beings go far beyond anthropomorphism. Indigenous peoples' symbolism reflects multiple realities and understandings rather than single ones. Yet, they are human beings and as such their interpretations of the natural world

118Ibid.

<sup>&</sup>lt;sup>108</sup>Lagrou, 'Copernicus in the Amazon'.

<sup>&</sup>lt;sup>109</sup>Lagrou, A Fluidez da Forma.

<sup>&</sup>lt;sup>110</sup>Calavia Sáez, O Nome e o Tempo Yaminawa, p. 479.

<sup>&</sup>lt;sup>111</sup>Eduardo Viveiros de Castro, A Inconstância da Alma Selvagem e Outras Ensaios de Antropologia (Rio Grande do Sul, Brazil: Cosac and Naify, 2002).

<sup>&</sup>lt;sup>112</sup>Philippe Descola, The Spears of Twilight: Life and Death in the Amazon Jungle (London, UK: Flamingo, 1997).

<sup>&</sup>lt;sup>113</sup>Davi Kopenawa and Bruce Albert, *The Falling Sky: Words of a Yanomami Shaman* (Cambridge, MA: Harvard University Press, 2010).

<sup>&</sup>lt;sup>114</sup>Edilene Coffaci de Lima, 'A onomástica katukina é Pano?', *Revista de Antropologia*, 40:2 (1997), pp. 7–30. <sup>115</sup>Ibid.

<sup>&</sup>lt;sup>116</sup>Lopes, 'Lições da Cobra', p. 17.

<sup>&</sup>lt;sup>117</sup>Ibid.

<sup>&</sup>lt;sup>119</sup>Stewart Guthrie, Faces in the Clouds: A New Theory of Religion (Oxford, UK: Oxford University Press, 1995).

are limited to subjective representations and semiosis. Our point here follows Eduardo Kohn's<sup>120</sup> argument that

we are colonized by certain ways of thinking about relationality ... [that are framed by] our assumptions about the forms of associations that structure human language. And then, in ways that often go unnoticed, we project these assumptions onto nonhumans. Without realizing it we attribute to nonhumans properties that are our own.

Our translations and interpretations – as Western scientists – are further limited. When we think about animism, for example, we tend to relate it directly to indigenous traditions, while in reality the term was first coined by British anthropologist Edward Burnett Tylor<sup>121</sup> to describe a 'belief in innumerable spiritual beings concerned with human affairs and capable of helping or harming human interests'. Both anthropomorphism and animism relocate humans as central, as if we are the ones that have the best attributes, so other beings are like us or are originated from us.

Such reflections help us to see that dominant ideas about human/non-human generate an ontological division between nature and culture in the currents of thought and symbolism to which they join. Such dichotomies, and the myths they generate, are at the roots of the Anthropocene.<sup>122</sup> It is important, therefore, to make explicitly that the great nature/culture divider (as well as other dualisms arising; that is, matter/spirit, humanism/animism, object/subject, universal/particular), placed as an ontological sharing of hierarchical domains in anthropological and sociological thinking, has had the effect of making it difficult to perceive other conceptions of nature and society. The eminently anthropological understanding of cultural diversity was based on the concept of a unique and common nature. According to different Amazonian perspectives, however, there is no separation between nature and humans or culture. This is reflected in the notion of multinaturalism or perspectivism, widely accepted as pivotal to understanding biosocial diversity.<sup>123</sup> Animals, plants, fungi, bacteria, and other beings and elements of the natural world have inherent agencies in these perspectives, endowed with intentionality and sociability and their own culture.<sup>124</sup> Nature is not a realm defined by animality in contrast with culture as a province of humanity.<sup>125</sup> The Kayapó relationship with maize is an example of such perspectivism; they as humans need the assistance of Mouse/Rat, the mythical master or 'owner' of maize to engage with it.<sup>126</sup>

Perspectivism then proposes that the human condition is hosted in the point of view that moves between a diversity of beings in relation to each other. This means that different beings (human or non-human) 'come into being through the relations that enable them and they, in turn, are able to establish'.<sup>127</sup> They are not only *jibóia*, or humans, or trees, or maize. They are not just spirit, or soul, or energy either. Their relationships, and diversity of forms, and the metamorphosis they go through, are what make the place (that is, forests) that they also are. Intervening in one being in the 'meshwork of relationships', to use Tim Ingold's

<sup>&</sup>lt;sup>120</sup>Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley, CA: University of California Press 2013), p. 21.

<sup>&</sup>lt;sup>121</sup>George K. Park, 'Animism', *Encyclopedia Britannica*, available at: {https://www.britannica.com/topic/animism} accessed 28 September 2020.

<sup>&</sup>lt;sup>122</sup>Whitney J. Autin, 'Multiple dichotomies of the Anthropocene', The Anthropocene Review, 3:3 (2016), pp. 218-30.

<sup>&</sup>lt;sup>123</sup>Philippe Descola, Par-delà Nature et Culture (Paris: Gallimard, 2005); Eduardo Viveiros de Castro, Os Pronomes Cosmológicos e o Perspectivismo Ameríndio (Rio de Janeiro, Brazil: Museu Nacional, 1996), pp. 115–44; Viveiros de Castro, A Inconstância da Alma.

<sup>&</sup>lt;sup>124</sup>Fernando Santos-Granero, 'Introduction: Amerindian constructional views of the world', in Fernando Santos-Granero (ed.), *The Occult Life of Things: Native Amazonian Theories of Materiality and Personhood* (Tucson, AZ: University of Arizona Press, 2009).

<sup>&</sup>lt;sup>125</sup>Eduardo Viveiros de Castro, 'Cosmological deixis and Amer-Indian perspectivism', *The Journal of the Royal* Anthropological Institute, 4:3 (1998), p. 469.

<sup>&</sup>lt;sup>126</sup>Miller, 'Maize as Material Culture?'.

<sup>&</sup>lt;sup>127</sup>Marisol de la Cadena, 'Runa: Human but not only', Journal of Ethnographic Theory, 4:2 (2014), p. 255.

metaphor,<sup>128</sup> will affect all other beings. This means that humans and other-than-human beings cannot be disentangled from each other – unless they become something else in a simultaneous process.<sup>129</sup> As Theresa Miller<sup>130</sup> points out, the Kaxinawá, for example, continue engaging with maize even after it is eaten. 'Maize lives inside the human male body until the man's semen, made of maize itself, creates a child inside the mother's womb.'<sup>131</sup> This reflects the importance of embodiment within the Amazonian meshing. Some relationships, such as those between a Kaxinawá man and the maize he consumes, are so entangled that one cannot dissociate the 'person' from the 'thing'. Indeed, as argued by Miller,<sup>132</sup> 'the Amazonian meshwork ... [does] not create distinct categories of "persons" or "things", instead recognizing that fusion and fission among various beings is not only possible but often desirable in Amazonian societies.'

Finally, it is important to note that humans and other-than-human beings use signs that are not necessarily symbolic, and such signs cannot be entirely bounded by the symbolic.<sup>133</sup> It is then crucial to explore the very different non-symbolic properties of other semiotic forms, by learning to understand how being human is also the result of what is outside human cultures.<sup>134</sup> As Thoreau<sup>135</sup> did in his time, different indigenous peoples in the Amazon are mourning for the fact that trees, animals, and elements – immortal living spirits as themselves – are vanishing because humans have failed to see their true value and the interconnection between them. They have continuously protested for alternative ways of living. So, how can things change? How can we use the Anthropocene as an opportunity to change the way the Amazon is predominantly being seen?

# Discussion

The last section explored indigenous deeply relational ways of seeing, and existing in, the world. As demonstrated, these rest on the assumption that humans and other-than-human beings 'coexist in a constant exchange and complementarity'.<sup>136</sup> If we focus on the more-than-human relations that constitute multiple realities, rather than on fixed, separate, and only human entities, we can 'learn to see and apply [planetary] interconnection as the primordial condition of existence'.<sup>137</sup> This is key in helping us navigate the Anthropocene. In this light, flexibility in integrating indigenous understandings into Western cognitive systems is fundamental if we want to move in new directions in perceiving, and relating to, the Amazon. Here, we build on Nobre and Nobre<sup>138</sup> to analyse the conflicts and reciprocities of the material and symbolic worlds, discussing different possibilities that arise when changing the predominant lenses through which the Amazon is seen.

To allow for such a change, the authors argue that we first need to acknowledge our failures, what we call the conflicts of the material and symbolic worlds. These include: (a) conceptual failures, like perceiving the Amazon merely as a commodity source, and a lack of imagination to create alternative, socially inclusive, and ecological pathways; (b) knowledge failures (research and information challenges), including difficulties in integrating indigenous knowledge into other systems, reduced funding for research into biological resources that only indigenous peoples are aware of; (c) implementation failures (policy and governance challenges, and entrepreneurial

<sup>&</sup>lt;sup>128</sup>Tim Ingold, Being Alive: Essays on Movement, Knowledge and Description (New York, NY: Routledge, 2011).

<sup>&</sup>lt;sup>129</sup>de la Cadena, 'Runa'.

<sup>&</sup>lt;sup>130</sup>Miller, 'Maize as a Material Culture?'.

<sup>&</sup>lt;sup>131</sup>Ibid., p. 82.

<sup>&</sup>lt;sup>132</sup>Ibid.

<sup>&</sup>lt;sup>133</sup>Kohn, How Forests Think.

<sup>&</sup>lt;sup>134</sup>Ibid.

<sup>&</sup>lt;sup>135</sup>Thoreau, Walden, or, Life in the Woods.

<sup>&</sup>lt;sup>136</sup>Trownsell et al., 'Recrafting International Relations through relationality'.

<sup>&</sup>lt;sup>137</sup>Ibid.

<sup>&</sup>lt;sup>138</sup>Nobre and Nobre, 'The Amazonia third way'.

capacity), including the failure of Amazonian countries' governments to recognise the rights of indigenous peoples, the risks of current development policies, and the inefficient implementation of technological innovations; and (d) media failures (including advertising).<sup>139</sup>

Establishing a new vision for the Amazon then depends on how we address such failures and focus on solutions that can promote more conscious uses of the Amazon's ecological diversity. This new vision will require us to recognise that all knowledge systems have limitations and that merging technical, local, and traditional thinking is indispensable to establish sustainable land-use practices.<sup>140</sup> The main advantage of this is intertwining different perceptions about the Amazon's material and symbolic worlds, what we call the reciprocities of such worlds. As argued by Boaventura de Sousa Santos,<sup>141</sup> '[t]he scientific knowledge that brought us here will not be able to get us out of here, we need other knowledges, we need other conceptions of time, we need other conceptions of productivity, we need other conceptions of spatial scale.' Opening our minds 'to see the in-between possibilities of coexistence among different forms of being'<sup>142</sup> is thus essential.

Few of the biological functions of Amazonian biodiversity are known by Western science; others are being researched for their nutritional, structural, and biochemical properties. As Nobre and Nobre<sup>143</sup> show, one example is that of the *Euterpe oleracea* palm, commonly known as *açaí*. *Açaí* is sold extensively globally, 'even with the operational challenges of being a fresh, minimally processed fruit'.<sup>144</sup> *Açaí* has also other uses: its oil has powerful anti-aging properties<sup>145</sup> and is also used to treat cancerous lesions;<sup>146</sup> its pulp contains anthocyanin that helps to identify bacterial plaque on teeth;<sup>147</sup> its seeds have been used to produce polyurethane for a natural plastic.<sup>148</sup>

There are many other examples<sup>149</sup> that confirm the value of indigenous knowledge and their advanced traditional methods. There are, however, issues related to reciprocity and intellectual property, when companies explore medicinal plants and indigenous knowledge without developing fair benefit-sharing mechanisms.<sup>150</sup> It is important, in this sense, to generate the enabling conditions for reciprocal relations to flourish by respecting indigenous peoples' rights. Indigenous peoples have been studying – as they themselves call it – other-than-human worlds for centuries. They say we should learn how to listen to other-than-human beings and that they speak in a language (what some may refer to as plant and animal intelligence) that we cannot directly perceive or comprehend when not immersed in nature.<sup>151</sup> They research different

<sup>146</sup>Victoria Montes-Fuentes, 'Terapia fotodinâmica mediada por nanoemulsão à base de óleo de açaí (*Euterpe Oleracea Martius*) para o tratamento de melanoma in vitro e in vivo' (PhD dissertation, Universidade de Brasília, Brasília, Brazil, 2014).

<sup>147</sup>Alessandra F. N. Domingues et al., 'Pigmentos antociânicos do açaí (Euterpe Oleracea Mart.) como evidenciadores de biofilme dental', in J. Pessoa and G. Teixeira (eds), Tecnologias para inovação nas cadeias Euterpe (Brasília, Brazil: Embrapa, 2012).
<sup>148</sup>Evanildo da Silveira, 'Plástico de açaí', Revista Pesquisa FAPESP, 260 (2017), pp. 56–7.

<sup>149</sup>Kaoru Yuyama et al., 'Camu-camu: Um fruto fantástico como fonte de vitamina C', Acta Amazonica, 32:1 (2002),

<sup>&</sup>lt;sup>139</sup>Ibid.

<sup>&</sup>lt;sup>140</sup>Paul Sillitoe, 'Knowing the land: Soil and land resource evaluation and indigenous knowledge', *Soil Use and Management*, 14 (1998), pp. 188–93.

<sup>&</sup>lt;sup>141</sup>Boaventura de Sousa Santos, 'Epistemologies of the South and the future', From the European South, 1 (2016), p. 22.

<sup>&</sup>lt;sup>142</sup>Amaya Querejazu, 'Why relational encounters?', International Studies Perspectives, 22:1 (2021), pp. 8–11.

<sup>&</sup>lt;sup>143</sup>Nobre and Nobre, 'The Amazonia third way'.

<sup>&</sup>lt;sup>144</sup>Ibid., p. 191.

<sup>&</sup>lt;sup>145</sup>José A. Portinho, Livia M. Zimmermann, and M. R. Bruck, 'Beneficial effects of Açaí', *International Journal of Nutrology*, 5:1 (2012), pp. 15–20.

pp. 169–74; Paulo Carvalho, *Cumaru-Ferro*, Comunicado Técnico 225 (EMBRAPA, 2009); Vanessa Kimura et al., 'The effect of Andiroba oil and Chitosan concentration on the physical properties of Chitosan emulsion film', *Polímeros*, 26:2 (2016), pp. 168–75.

<sup>&</sup>lt;sup>150</sup>P. E. Rajasekharan and K. Souravi, 'Indigenous knowledge and intellectual property rights', in Sabu Abdulhameed, N. S. Pradeep, and Shiburaj Sugathan (eds), *Bioresources and Bioprocess in Biotechnology* (Singapore: Springer Nature, 2017), pp. 125–42.

<sup>&</sup>lt;sup>151</sup>Maria Fernanda Gebara, 'Why We Should Learn How to Listen to Other Than Human Beings', Forestless, available at: {https:// forestless.net/2020/07/19/why-we-should-learn-how-to-listen-to-other-than-human-beings/} accessed 2 October 2020.

plant and animal diets to understand such language, and most of their knowledge come from such 'studies'.<sup>152</sup> Western science has already recognised the role plants have to play in our own evolution.<sup>153</sup> Some argue that we will only be able to change our behaviour in the direction needed to shift and overcome catastrophic ecological risks with the help of plants.<sup>154</sup> Yet this indigenous ability to learn from nature and apply such knowledge to build solutions is being threatened by some of the negative consequences of the Anthropocene.<sup>155</sup>

As Lily Ling<sup>156</sup> argues, humans should be able to resonate with other-than-human beings. This may encourage political solidarity with those who remain invisible as well as help in the advancement of epistemic justice and knowledge co-production.<sup>157</sup> Ling also emphasises 'interbeing', or ethics with compassion, since 'you are in me and I in you.'158 Generally, as Kohn notes, 159 humans are unable to see a plurality of worlds in which people are linked to a broader spectrum of life, 'or how this fundamental connection changes what it might mean to be human'. The first steps towards perceiving these multiple worlds are to abandon our received ideas about what the forest means (for example, source of commodities, lungs of the world, carbon sink), acknowledge and address our failures, start learning the symbolic meanings of the forest and move beyond the human. This expanded view of the Amazon is hard to visualise because social and natural sciences – whether anthropocentric or ecocentric, humanist, or post-humanist – still work in separate rooms and sometimes conflate meanings (either epistemic or ontological) with attributes that are unique to human beings. We usually try to find meaning that serves us. What we need to recognise is that there is symbolism that is extralinguistic and exists beyond the human.<sup>160</sup> In so doing, we will be able to reformulate the current notions and meanings, allowing different types of knowledge to share the 'science' stage.

Modern perceptions of the Amazon rest firmly on utilitarian ontologies. The common shared meaning of the forest as a resource and service provider has become the foundation upon which policies for, and the politics affecting, the region are framed. If we start interpreting different perceptions and knowledges of the forest, we may be able to open the necessary space to embrace deeper ontological meanings of the Amazon and its beings, where multiple realities are performed and enacted through a plurality of cultures and other-than-human beings. As argued by Tamara Trownsell et al.,<sup>161</sup>

looking at how others live according to distinct ontological assumptions, we can ... open ourselves up to being unsettled by other ways of thinking ... [and] begin to offer more

<sup>&</sup>lt;sup>152</sup>Robin Kimmerer, *Braiding Sweetgrass* (Minneapolis, MN: Milkweed Editions, 2013); Ligia Duque Platero, 'The Muká Diet of the Yawanawá Indigenous People in Acre, Brazil', Chacruna, available at: {https://chacruna.net/muka-diet-yawanawaindigenous-people/} accessed 2 October 2010; Leopardo Yawa Bane, 'My Degree is from the Forest', Chacruna, available at: {https://chacruna.net/my-degree-is-from-the-forest/} accessed 2 October 2020.

<sup>&</sup>lt;sup>153</sup>Michael Marder, 'The time of plants', in Michael Marder (ed.), *Plant-Thinking: A Philosophy of Vegetal Life* (New York, NY: Columbia University Press, 2013), pp. 93–117.

<sup>&</sup>lt;sup>154</sup>Michael Pollan, How to Change Your Mind: What the New Science of Psychedelics Teaches Us About Consciousness, Dying, Addiction, Depression, and Transcendence (New York, NY: Penguin Press, 2018).

<sup>&</sup>lt;sup>155</sup>Tom Phillips, "We are on the eve of a genocide": Brazil urged to save Amazon tribes from Covid-19', *The Guardian* (3 May 2020), available at: {https://www.theguardian.com/world/2020/may/03/eve-of-genocide-brazil-urged-save-amazon-tribes-covid-19-sebastiao-salgado} accessed 2 October 2020.

<sup>&</sup>lt;sup>156</sup>Lily Ling, The Dao of World Politics: Towards a Post-Westphalian Worldist International Relations (London, UK: Routledge, 2014).

<sup>&</sup>lt;sup>157</sup>Inoue, 'Worlding the study of global environmental politics in the Anthropocene'.

<sup>&</sup>lt;sup>158</sup>Ling, The Dao of World Politics, p. 21.

<sup>&</sup>lt;sup>159</sup>Kohn, How Forests Think, p. 6.

<sup>&</sup>lt;sup>160</sup>Gregory Bateson, *Mind and Nature: A Necessary Unity* (Creskill, NJ: Hampton Press, 2002); Terrence Deacon, *The Symbolic Species: The Co-evolution of Language and the Brain* (New York, NY: Norton, 1997); Jesper Hoff Mayer, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs* (Scranton, PA: University of Scranton Press, 2008).

meaningful processes of sensemaking. ... [I]t is not necessary to choose 'either/or' as we have been socialized to think ... [; it is possible to think of] worlds in terms of 'both/and'.

This could conceive a mix of innovative and traditional meanings to the forest, engaging with the different worlds (symbolic and material) that need to be intertwined to move forward into more inclusive and realistic ways of perceiving the Amazon in the Anthropocene. In this process, relationality provides a valuable conceptual and analytical tool. If we 'start from/with relations' – and equipped with a more-than-human conception of relationality – we might not only acknowledge our enmeshment in and dependence on nature, but also 'become more versatile across a multiplicity of realities that stem from ways of being and knowing that emerge through distinct primordial assumptions about existence'.<sup>162</sup> This capacity to think about, and engage with, tensions created between worlds is critical to the development of alternative, more robust approaches to the socioecological crises facing life on Earth.

# Conclusion

This article argued for the recognition of the different ways through which we engage with the diverse beings that are part of the forest relational meshwork, and called for openness to the possibilities that can emerge from the encounter of diverse forms of knowing and relating to the planet. The last section showed how açaí is a great example of the many possibilities of combining local knowledge with modern technological tools and cutting-edge research in reciprocal ways, illustrating the intertwinement between the material and symbolic worlds.

As demonstrated, the prevailing understanding of the Amazon has been dominated by the study of how the forest could better serve us. We need to start finding creative forms through which we can also serve the forest, in reciprocal ways. After all, considering Thoureau's question 'what would human life be without forests?', if we were to vanish tomorrow, forests would be probably fine. The fact that if the forests vanished, we would not thrive, reminds us of our dependence on them and should cultivate an appreciation of their value. Speaking of multiple and reciprocal knowledges means considering multiple and reciprocal worlds (material, symbolic, others) and species and recognising that there are plural realities, cultures, perspectives, and subjective representations.<sup>163</sup>

In an attempt to highlight such plurality and honour indigenous perspectives and representations of forests and the other-than-human beings they host, we conclude with an indigenous myth that tells the story of açaí. The story tells of a time, long ago, when food was short and insufficient for everyone among an indigenous group. Their chief then resolved that all children born from that day on would be sacrificed, to avoid population increase of his people. One day the chief's daughter, Iaçã, gave birth to a lovely girl who also had to be sacrificed. Iaçã was grief stricken, staying in her oka (house) for days, and crying all night. She asked Tupã – an indigenous god – to show her father another way to help the tribe, without sacrificing children. One full moon night, Iaçã heard a child's cry, and approaching the door of her oka, she saw her beautiful smiling daughter at the roots of a palm tree. She froze, then hurled herself towards her daughter, embracing her, before her daughter mysteriously disappeared. Iaçã, inconsolable, cried till she collapsed. Her body was found the next day, embraced by the palm tree. Her face was smiling, and her black eyes looked to the top of the tree, now laden with dark berries. Her father ordered the men to pick the fruit, which gave a reddish juice he named açaí (Iaçã reversed) after his daughter. He fed his tribe and, from then on, revoked his order to sacrifice children.<sup>164</sup>

<sup>&</sup>lt;sup>162</sup>Ibid.

<sup>&</sup>lt;sup>163</sup>Arturo Escobar, 'Thinking-feeling with the Earth: Territorial struggles and the ontological dimension of the epistemologies of the South', *Revista de Antropología Iberoamericana*, 11:1 (2016), p. 13.

<sup>&</sup>lt;sup>164</sup>Portal Amazônia, 'Lenda do Açaí', available at: {https://portalamazonia.com/amazonia-az/letra-l/lenda-do-acai} accessed 2 October 2020.

This myth, and what it tells about survival, awakens the fact that all kinds of life and beings, in some sense or other, represent what came before them. They are the product of the history of all the other beings, as everything originates from other things, in a constant process of re- and co-creation. This type of acknowledgement is crucial in the Anthropocene, and may be the only way to guarantee our own survival. We therefore call for openness to such perceptions regarding the forest, so we do not need to sacrifice our own children, not to mention our species.

Indigenous relational ontologies, and the idea of relationality more broadly, provide valuable insights for thinking the Amazon otherwise, making visible the more-than-human relations that constitute the region and upon which life depends, and the multiple realities that coexist in the forest. To avoid misleading, dangerous characterisations of the Amazon as a mere source of commodities fuelling 'modernisation' and 'development', it is critical not only to recognise the symbolic and highly advanced knowledge that indigenous peoples and other-than-human beings have to offer, but also to think and act across different worlds. By engaging difference, and accepting that tensions and ontological conflicts can be productive and constructive, we may allow for articulating diverse and contradicting views and new perceptions to emerge. This will make us better equipped to interrogate problems and identify the limitations and strengths of distinct forms of knowledge and, departing from them, co-create new, creative, and inclusive ways of responding to, and existing in, the Anthropocene. This is crucial to overcome the tensions between developmentalism and environmentalism addressed in this article and forge the necessary alternative development paradigms to fight inequalities and poverty, promote the well-being of Amazonian populations and protect the forest's other-than-human beings, thus safeguarding the Amazon's resilience.

We need to learn how to ensure the intertwining of material and symbolic worlds. Otherwise, we risk missing the forest for its trees.

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