The Impact of the COVID-19 Pandemic on Human-Nature Relations

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Abstract

This paper presents a preliminary evaluation of the unfolding COVID-19 pandemic and its implications for human-nature relations and global environmental politics more broadly. We focus on the different, often competing perspectives of anthropocentrism and ecocentrism as normative frameworks for interpreting and reacting to such a disruptive global phenomenon. First, we consider how the anthropocentric norm has justified an unequal and exploitative relationship between humans and non-human nature, and has created the conditions necessary for pandemics to arise. We then present a case for ecocentrism through a brief exploration of the concepts of ecological wholeness and bio-regionalism. Finally, we identify the emerging state of a global anthropocentric inertia, and consider how the response to COVID-19 may actually perpetuate, rather than reduce, the destructive divisions between humans and the environment. In the process, the essay also identifies and examines various intersecting lines of inequality running across species, politico-economic communities (Global North and Global South), and classes that have been exposed or exacerbated by the pandemic.

Key words: COVID-19; environmental politics; human-nature relations; anthropocentrism; ecocentrism

Introduction

The global spread of COVID-19, the respiratory infection caused by a novel coronavirus, is producing devastating health effects and unprecedented global socioeconomic disruption. The disease, first detected in the Chinese city of Wuhan in December 2019, is classified as 'zoonotic', meaning it was originally transmitted from an animal to a human (WHO, 2020a). The original source is believed to be a Wuhan 'wet market' which sold live wild and domestic animals and seafood (WHO, 2020a). Complex social, environmental, economic and political systems amalgamated to provide the necessary conditions for the virus to evolve into the global crisis that it did. Indeed, some of the defining characteristics of the modern world are those that enabled COVID-19 to produce such devastating effects. The purpose of this essay is to examine the COVID-19 pandemic as it pertains to global environmental politics and environmental ethics, while mounting an analysis and critique of the hierarchical and exploitative structure of inter- and intra-species relations. The anthropocentric roots of this hierarchy are the focus of the first section, where we connect the emergence of COVID-19 with ongoing environmental exploitation, driven by the ingrained anthropocentric norm. Having recognised the limitations of anthropocentrism in responding to COVID-19, we then present a case for an ecocentric response, using concepts of ecological holism and bioregionalism to highlight the strengths of this approach. Finally, we explore the emerging state of a global anthropocentric inertia, considering ways in which responses to COVID-19 widen destructive divisions between humans and the environment.

The Anthropocentric Norm

Humans have always shaped, and been shaped by their environment. Viewing nature as an entity separate and inferior to humans is particularly longstanding in Western cultures (Boslaugh, 2013). This dominant philosophical framework is known as anthropocentrism, which places human beings above the rest of nature and perceives value as human-centred.

Anthropocentrism views non-human nature in terms of its utility to humans, justifying the exploitation of the natural environment for the benefit of humankind (Doyle et al., 2016). This prevailing view is being challenged by the COVID-19 pandemic, which the United Nations' environment chief described as "nature sending us a message" (Carrington, 2020). However, before we consider some of the ways in which humans are and should be responding to that message, it is important to understand how the anthropocentric norm has led us to where we are today. This is particularly evident in the link between environmental degradation and the COVID-19 pandemic.

Environmental destruction derived from the exploitation of nature has created opportunities for dangerous pathogens to be transmitted from animals to humans, with data linking almost half of new zoonotic diseases since 1940 to human-induced environmental change (Roston, 2020). Studies show that by 2019, nearly 50% of the world's terrestrial landmass had been converted from natural habitats into agricultural land (Bloomfield et al., 2020). Land-clearing for agriculture and livestock production as well as logging, mining and the wildlife trade are bringing people into closer contact with wild species than ever before (Calma, 2020; UNEP, 2020). Changes in land use also reduce biodiversity, weakening ecosystems and removing the natural restraints preventing pathogens from spilling into human populations (Johnson et al., 2020). Human behaviour and demographic factors significantly increase these risks (Jeffries, 2020). In 2018 alone, 1.4 billion people travelled internationally (UN World Tourism Organization, 2019). Population density in cities continues to increase, with over 55% of the world's population now living in urban settlements (Ritchie & Roser, 2019), and animal product consumption has been rising rapidly since the 1950s (Raphaely & Marinova, 2016). Factors such as these have created a global environment highly conducive to the spread of zoonotic diseases and, when viewed holistically, are the reason that COVID-19 evolved into a global crisis of such magnitude.

The impact of anthropocentrism is global, but not equal. The impact of anthropocentric values and practices (the anthropocentric norm) differs across populations, particularly between so-called developed and developing nations, that is, between the Global North and the Global South. Developing regions, with higher population densities and rapidly changing land-use patterns, are most susceptible to zoonotic outbreaks (Ahmed et al., 2019; Jones et al., 2008). Zoonotic diseases can be 'poverty traps' for vulnerable populations, which are less able to cope with the health and economic implications of a pandemic (Grace et al., 2017). In addition, demand for wood and minerals from developed countries contributes to the environmental degradation that drives disease in poorer nations (Vidal, 2020; Wiedmann & Lenzen, 2018). In light of this, Oxfam (2020) argues wealthy countries have a responsibility to provide aid to nations more vulnerable to COVID-19.

The pandemic has also brought global attention to 'wet markets', a catch-all term for marketplaces selling fresh produce which are popular in many regions around the world. Wet markets, particularly those selling live wild animals, can present a heightened risk of cross-species pathogen transmission and were temporarily banned in China following the COVID-19 outbreak (Samuel, 2020; Vidal, 2020). In February, the Chinese government banned the sale of wild animals for consumption, but exempted animals used for traditional medicine and provided taxation incentives for wildlife exports (O'Keeffe & Xiao, 2020). As COVID-19 spread through the Global North, several politicians and media figures sought to place blame on China, with many criticisms incorporating racist inferences about Chinese people, their food consumption habits or hygiene practices (Zhang & Xu, 2020). Attacks and calls to ban wet markets have grown in Western countries, often fuelled by cultural insensitivities or misinformation (Beech, 2020). Across many countries wet markets provide essential sources of food for millions of people and are an important outlet for small farmers to sell their produce (Standaert, 2020). Experts note that the enforcement of heightened sanitation and

hygiene standards would be a more appropriate response than a sweeping ban (Vidal, 2020). UN biodiversity chief Elizabeth Mrema argued a ban on the live wildlife trade would be advantageous, but conceded that criminalising the trade could merely force it underground where hygiene standards are poorer (Greenfield, 2020a).

In addition to the regulation of wet markets, preventing habitat and biodiversity loss caused by deforestation has also been labelled a priority to reduce the risk of future pandemics (Roston, 2020). Global Forest Watch estimates that tree cover has decreased by 9% globally since 2000 (GFW, 2020) and biodiversity is declining at the fastest rate in human history (Armstrong et al., 2020). The UN Convention on Biological Diversity was due to meet several times in 2020 to negotiate a new global framework to protect land and oceans (Greenfield, 2020b), but ironically meetings were postponed due to COVID-19 (Uwaegbulam, 2020). Ultimately, the pandemic serves as a reminder that human health is deeply reliant on healthy ecosystems. As Elizabeth Mrema noted "if we don't take care of nature, it will take care of us" (Greenfield, 2020a).

Despite considerable research demonstrating how environmental degradation creates conditions conducive to the spread of zoonotic diseases, little has been done by governments globally to end environmental exploitation. A number of complex factors are responsible, including the influence of vested economic interests over government policy, an excessive focus on short-term consequences in politics, and a lack of international cooperation or public impetus for change (Doyle et al., 2016). However, some eco-philosophers point to the ingrained anthropocentric norm as constraining effective action against environmental exploitation (Crist & Kopnina, 2014; Feltz, 2019). The anthropocentric norm has become deeply embedded in global society and institutions, driven by a Western cognitive framework that conceptualises humans as fundamentally different and superior to non-human nature (Kopnina et al., 2018). This 'cognitive belittlement' rationalises environmentally destructive

behaviours, resulting in the physical displacement of non-human nature and loss of biodiversity. Crist and Kopnina (2014) argue these ideational and physical dimensions of anthropocentrism are self-reinforcing. Physical displacement over the natural world reinforces the cognitive conviction of human superiority, in turn justifying increased human domination over non-human nature.

The Ecocentric Proposition

The anthropocentric norm that explains much of our current predicament regarding COVID-19 fails to account for the possibility that the solution to the current crisis might require embracing an ecocentric approach. Indeed, if it is true that "a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community [and] wrong when it tends otherwise" (Leopold, 1949, p. 224), what conclusions should be drawn about the moral nature of a pandemic which has the potential to restore balance in the biotic community by limiting human activity and population? COVID-19 makes a convincing contribution to the merits of ecocentric approaches to human-nature relations, that is, relations between humans and non-human nature. Ecocentrism is a holistic perspective that recognises how systems can be viewed on many levels. Proponents of holism and ecocentrism "assign moral rights to ecosystems and not just to individuals within these" (Williams, 1998, p. 17). By deriving from non-human nature yet having a profound impact on the human population, COVID-19 has reaffirmed that humans, their institutions and systems are not removed from non-human earth systems, or 'the ecological whole'. Moreover, one component of the ecological whole cannot flourish at the expense of the majority. This realisation has profound implications for the way that humans engage with the wider ecosystem.

COVID-19 has presented society with a 'problem of many hands'. In the field of global environmental politics and environmental ethics, this is a concept often applied to climate change, and is used to explain why, cognitively, individuals are reluctant to take

action in situations “in which a large number of individuals are causally involved, but in which the role of individuals in isolation is rather small” (van de Poel et al., 2011, p. 51). Discourse around the ‘problem of many hands’ draws on debated philosophical notions of individual and collective rights and responsibilities. Varied effects of, and responses to, COVID-19 at the global, state, community and individual levels lay bare the vulnerabilities inherent to societies which, in the atomistic framework of anthropocentrism, locate the greatest moral value in the (human) individual. Indeed, COVID-19 has been an exercise in determining the extent to which it is appropriate to curtail individual freedoms in response to a mutually recognised threat to the collective (Human Rights Watch, 2020). The challenge is to extend this collective responsibility beyond human beings to the ecological whole.

Additionally, the worldwide proliferation of COVID-19 has led many to call for a reconnection with indigeneity, ‘the local’, and bioregionalism - defined as living contained within “a geographical area whose boundaries are roughly determined by nature rather than human beings” (Haenke as cited in Williams, 1998, p. 18). The necessity of these human-nature relational shifts could be further reinforced as global food systems increasingly falter in the coming months. Chief economist of the United Nations Food and Agriculture Organisation, speaking on the urgency of maintaining the globalised food system, asserted that during this pandemic the global food system “just needs one big trader to make a decision [to disrupt the supply of staple crops] and that will affect everywhere” (Torero as cited in Harvey, 2020). Ecocentrists and bio-regionalists would see the irony in using this argument in defence of the globalised food system, as any system so vulnerable to synchronous failure must be inherently flawed. COVID-19 has aptly demonstrated what has been understood by environmental scientists for decades: there is resilience in regional diversity (Leslie & McCabe, 2013).

The Anthropocentric Inertia

Despite the case for dealing with COVID-19 using an ecocentric approach, responses to the pandemic have often reinforced problematic anthropocentric values. This has created a state of anthropocentric inertia, where political, scientific and medical communities continue to undermine humans' interdependence with nature as they address the consequences of the pandemic. Ironically, as we have discussed so far, humans catalysed the pandemic by doing just this. While human-induced environmental destruction directly contributed to the spread of COVID-19, anthropocentric attitudes have created a discourse of 'war' against the virus and nature more broadly (Varma, 2020). The virus has consistently been positioned as the 'invisible enemy' and this militaristic rhetoric shifts accountability away from humans, placing the blame on other forms of nature and legitimising a 'war' against them (Naumova, 2020). In March 2020, in response to reports stating that COVID-19 emerged in bats, the Indonesian government culled hundreds of bats to prevent the virus spreading (Tsang, 2020). Similar actions were attempted and advocated for in other countries: in Peru, members of the Culden village unsuccessfully attempted to set fire to and eliminate a nearby bat colony (Durán, 2020), while conservative Australian politician Tim Smith called, also unsuccessfully, for Melbourne's Yarra Bend colony to be removed (Hall, 2020). Although COVID-19 likely originated in bats, humans have continuously brought themselves into close contact with them through trade, consumption and habitat destruction, allowing the 'invisible enemy' to emerge (Naumova, 2020; Wardrope, 2020). Bats are vital to the ecosystems they inhabit and their unique role benefits both human and non-human nature. They pollinate over 500 plant species, their faeces acts as an effective fertiliser (Alagona, 2020), and they help to regulate agricultural crop growth by preying on insects (Hoffmaster et al., 2016). By adopting discourses that blame nature for the problems caused by human activity, and legitimising

ongoing environmental damage as a result, we continue to endanger our own livelihoods and those of broader ecosystems.

Though COVID-19 has emphasised the damage that humans cause when we fail to observe our interconnection with nature, potential solutions to the virus still perpetuate hierarchies that prioritise human survival at the expense of non-human life. The Chinese Government initially suggested the use of Tan Re Qing to combat COVID-19: an injection containing bear bile (Fobar, 2020). Tan Re Qing is a common Chinese medicine that treats respiratory and viral infections, including bronchitis and influenza with which COVID-19 shares symptoms (Qiao et al., 2019), however the process of extracting the bile ingredient causes severe suffering and infection in bears (Fobar, 2020). Animal rights activists have rightly pointed out the irony of attempting to cure a disease that emerged through the exploitation of wildlife by further mistreating animals (Briggs, 2020). Meanwhile, there have been similar controversies over the use of (non-human) animal testing in the trials of potential COVID-19 vaccines. Many in the medical and scientific communities have emphasised the necessity of using animal testing, warning that moving to human trials too early could result in unknown or dangerous side effects, adding to the trauma of the pandemic (Deb et al., 2020; Komesaroff et al., 2020). The promising Oxford University vaccine, for instance, was initially tested on rhesus monkeys (Newey & Nuki, 2020). However, the ethics of animal testing are highly contested - more than 115 million animals are used in research each year (Akhtar, 2015), and many experience health complications, long-term suffering and even death (Bailey & Balls, 2019). Advocates against animal testing argue that, since animals cannot consent to taking part in trials, using them in research denies them agency, exacerbates human-nature divisions and justifies the exploitation of nature for human gain (Baka, 2020; Hepworth, 2010). Thus, the search for a method to prevent COVID-19 continues to reinforce

the complex ethics surrounding the value of non-human life and whether it can and should be sacrificed to protect human life.

While anthropocentrism values all humans above nature, humans themselves are not equal (Kopnina et al., 2018). The state of anthropocentric inertia that has emerged in response to COVID-19 not only sees humans continuing to devalue and exploit the environment, but how this exploitation also increases human inequalities. Although these inequalities are pervasive worldwide, the case of Brazil is particularly useful to understand how human-nature divisions have perpetuated hierarchies *between* humans during the pandemic.

In recent years, Brazil has seen historically high levels of environmental destruction, particularly in the Amazon rainforest. The country has the second highest rate of deforestation worldwide (FAO, 2020), and in 2019 the Amazon lost a record 1,218,708 hectares of native vegetation (MapBiomas, 2020). Largely responsible is Brazil's president, far-right populist Jair Bolsonaro, who denies the existence of climate change and has faced global condemnation for prioritising economic growth at the environment's expense (Duarte, 2020; Zimmerman, 2019). As of December 2020, Brazil also has the second highest rate of COVID-19 deaths and the third highest number of confirmed cases (WHO, 2020b). Despite this, Bolsonaro has not only downplayed the pandemic's severity, but has taken advantage of the crisis to continue his "war on the environment" (Remnick, 2020; Zimmerman, 2019). He has continued to weaken environmental protection measures, reduce Indigenous land rights and ignore illegal mining, farming and land grabbing in the Amazon (Rubaii & Junior, 2020). As a result, the Amazon has seen a 12 year high in deforestation (ABC News, 2020), with the rate of deforestation increasing by 51 percent in the first trimester of 2020 compared to the same period in 2019 (Garrett & Cammelli, 2020). Though deforestation was a catalyst for COVID-19's emergence, Bolsonaro's actions show that leaders with dangerous anthropocentric attitudes continue to ignore this, ultimately worsening the crisis.

Bolsonaro's response to the pandemic, paired with his efforts to increase environmental destruction, has not affected all Brazilians equally - Brazil's Indigenous population has been made uniquely vulnerable. In the Americas, 90 percent of pre-colonial Indigenous populations have been wiped out due to infectious diseases and the COVID-19 pandemic risks a repeat of history (Watts, 2020). More than 50 percent of Brazil's First Nations people have been infected with COVID-19, across more than 146 Indigenous groups (APIB, 2020b; Charlier & Varison, 2020); in what the Indigenous organisation Articulation of the Indigenous Peoples of Brazil (APIB) described as an "unprecedented humanitarian crisis" (APIB, 2020a). As of December 1, there have been 40340 confirmed cases and 881 deaths (APIB, 2020b), with the mortality rate of Indigenous people approximately twice the national average (de Castro et al., 2020). Furthermore, previous and ongoing deforestation in the Amazon has worsened the crisis (de Castro et al., 2020). In multiple cases, the virus has spread to Indigenous communities through interactions with illegal miners and loggers, who have been able to trespass Indigenous land more easily during the pandemic due to loosened restrictions and land clearing (Palamin et al., 2020; Laudares, 2020). Deforestation is also increasing rates of displacement among Indigenous people who live in and near the Amazon, who are forced to move to urban areas where the virus is more prevalent (Laudares, 2020). Therefore, we can see how the consequences of COVID-19 and environmental destruction inform one another, exacerbating the vulnerability of Indigenous people.

It is important to acknowledge that Indigenous people are not inherently more vulnerable than those who are non-Indigenous. It is the long-lasting legacy of European invasion - which still informs political, economic and social structures and decisions – that renders them more susceptible to crises like COVID-19 (Charlier & Varison, 2020). As the APIB emphasises, Indigenous people are not only facing a pandemic: "we are facing the

neglect of the State, fighting for the right to live" (APIB, 2020b). In his neglect of First Nations people, Bolsonaro has vetoed sections of a law that obligated the government to provide additional sanitary equipment and clean water, and guarantee hospital beds to Indigenous communities, calling the provisions "unconstitutional" (Paraguassu, 2020). Meanwhile, the government declared that urban Indigenous people will no longer receive support from the federal Indigenous health service, SESAI, further denying Indigenous people their right to adequate health care and self-determination (Angarova, 2020). In many ways, Bolsonaro's treatment of Indigenous people mirrors his anthropocentric and exploitative treatment of the environment: he sees both as having little or no agency, and believes both are undeserving of protection (Rubaii & Junior, 2020). The current situation in Brazil exposes the brutality of hierarchies that place certain humans above others, and how they are perpetuated by anthropocentric attitudes that treat nature just as poorly.

Despite this, Indigenous people have and will continue to engage in powerful acts of resistance in the face of crises. It is critical to acknowledge the agency of Brazil's Indigenous people, who have fought to draw attention to the impact of the pandemic on their communities and have developed new platforms for solutions to emerge (APIB, 2020b). Indigeneity is not homogenous, and these forms of resistance do not necessarily represent the experiences and perspectives of all Indigenous people in Brazil, let alone across the globe. However, in several cases, Brazil's Indigenous communities have responded to the pandemic in ways that place value on humans and non-human nature, aiming to protect both. For example, technicians from the Kuikuro community developed a contact tracing app to alert members of the Ipatse village, part of the Xingu Indigenous territory, to the spread of COVID-19 (Berman, 2020). Working with a collective of Indigenous and non-Indigenous organisations, and led by the Kuikuro Indigenous Association (with no government support), the app was built using pre-existing technologies designed to monitor wildlife, map cultural

and ancestral sites, and help protect the Amazon from threats of fire, deforestation and pollution (Berman, 2020; People's Palace Projects, 2020). The technology has now also successfully reduced the community transmission of COVID-19 in Ipatse (Dias, 2020), emphasising that human development and technology can simultaneously protect humans and the environment. While First Nations people may not necessarily identify as ecocentric, Indigenous and ecocentric perspectives often share similarities in that they regard the relationship between humans and nature as something holistic, interconnected and mutually supportive, rather than hierarchical (DesJardins, 2015; Kusmer, 2020; Sangha et al., 2017). Thus, the Kuikuro community's initiative is one of many ways that we can gain insight into how Indigenous perspectives offer our world the opportunity to reconsider its current anthropocentric approach to the COVID-19 pandemic, allowing us to see the potential for a more equitable future.

Conclusion

Humanity's degradation of nature, resulting in widespread biodiversity loss, has heightened the threat of zoonotic diseases such as COVID-19 occurring in humans. The COVID-19 pandemic has exposed damaging inequalities between humans and non-human nature, as well as between humans in the Global North and Global South. Focusing on short-term fixes to rebuild economies after COVID-19, without considering long-term environmental damage, will only compound the threat of future crises. We must shift our perspective towards ecocentrism, recognising that our economy and society are embedded within and deeply reliant on our natural ecosystem. Solutions are within reach, but require a fundamental change in our approach in order to meet human needs within the natural ecological boundaries of our planet.

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