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INTRODUCTION: PHILOSOPHICAL EXAMINATIONS OF THE ANTHROPOCENE

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The term "Anthropocene" refers to a new state of the planetary system that is largely the result of the cumulative impact of all human activities on the planet's key bio-physical and bio-chemical cycles. Thus, the concept of the Anthropocene (Crutzen and Stoermer 2000) is based on the knowledge of the impact of human activities on the transition of the Earth system from the relatively stable geological-climatic epoch of the Holocene to the unstable and therefore unpredictable epoch of the Anthropocene (Zalasiewicz et al. 2011). It was the Holocene epoch, with its stability and predictability of meteorological cycles, that enabled the emergence of agriculture, and thus ultimately civilization, including on its current global scale. Global industrial civilization, whose emergence was made possible by the massive use of technologies built on the combustion of fossil fuels, has thus contributed significantly to the removal of the environmental conditions that made its planetary spread possible. Humankind has thus become a geophysical or geo-bio-physical force by its sheer numbers, its technologies, and its often unintended side effects. In other words, the cumulative impact of human activity on planet Earth is so extensive that humanity has effectively begun to influence planetary geological, climatic, and evolutionary processes on a scale that allows geology and the Earth sciences to conclude that the Holocene has ended and a new, geologically identifiable epoch in Earth history has begun.

There is already extensive empirical evidence for these processes. Among the most comprehensive is the *Sixth Assessment Report of the IPCC* (IPCC 2023), which summarizes the results of extensive planetary observations, measurements, and modeling of the causes and consequences of changes in the climate system prior to 2022. Thus, it does not yet include the dramatic changes in atmospheric CO_2 and methane concentrations, the rise in global mean ocean and atmospheric temperature, and the series of other changes in the planetary system that have occurred during 2023 (Ripple et al. 2023). Thus, the processes observed since March 2023, when the concentration of greenhouse gases in the atmosphere and the increase in global ocean and atmospheric temperature ceased to be linear, can even be referred to as an abrupt acceleration of climate change. The record scale of forest fires in Canada, as well as

the worst drought in the Amazon in known history, coupled with an unprecedented heat wave (Nogrady 2023), are a consequence of the acceleration of these processes. However, a long-awaited study suggests that these processes will not only continue but also accelerate in the future (Hansen et al. 2023). One of the reasons for this is the sharp reduction in aerosol emissions from shipping, which have so far been shown to buffer part of the warming effect of greenhouse gases. One consequence of these processes is that billions of people are at risk of temperatures exceeding survivability limits (Veccelio et al. 2023). What was only a hypothetical threat or a theoretical model a few years ago is becoming a reality.

However, the climate system is not the only planetary cycle on whose stability the environmental preconditions for the existence of an organized human society at the planetary level depend. The Planetary Boundaries framework has identified nine planetary cycles, or processes, that are key to maintaining the state of the planetary system that allows humanity to function safely (Rockström et al. 2009). Efforts to quantify the parameters of a safe operating space for humanity have resulted in the recognition that six of the nine planetary boundaries have already been crossed (Richardson et al. 2023), and if the criterion of fairness "which must also enable access to resources for all and distributive and procedural fairness" is also applied to quantify the boundaries of the Earth system (Rockström et al. 2023, 103), as many as seven planetary boundaries have been crossed. The Earth system is thus significantly dislocated from the state of dynamic equilibrium that characterized the Holocene, and the consequences of this situation are already significantly affecting social, economic, political, and cultural institutions and processes around the world. However, the concept of Planetary Boundaries focuses primarily on identifying and quantifying the parameters of key planetary systems and processes at a level that allows human societies to function safely. However, considerably less attention is paid to the social, economic, political, and cultural systems that are key to understanding the causes of the devastating impact of human activities on the planetary system. At the same time, however, they are also the most vulnerable to the consequences of the Anthropocene. In this regard, U. Brand et al. (2021) point out that a just socio-ecological transformation necessary to overcome highly unsustainable societal relations with nature is needed to formulate societal boundaries linked by the principle of collective self-limitation.

It can be agreed that, in a broader context, the Anthropocene is both the result of human cultural evolution and a situation in which many evolutionarily emergent cultural and social institutions, practices, and processes are proving to remain unsustainable Anthropocene traps (Jørgensen et al. 2023). Many of these processes and institutions are derived from philosophical conceptions of humans, society,

history or politics that nevertheless originated in the Holocene state of the Earth system. They thus arose in a situation of relatively stable planetary conditions, with a significantly lower population and abundance of most natural resources. But none of this can be taken for granted anymore. The Anthropocene is thus also a challenge to philosophy as a form of self-understanding of the human, society, its institutions, processes, imperatives, and values to rethink their starting points.

Although contemporary philosophical research on the concept of the Anthropocene and its socio-philosophical and political-philosophical, but also historical-philosophical and cultural-philosophical causes and possible consequences is already extremely developed, the question – What are the actual possibilities of philosophy in the Anthropocene state of the Earth system? – can still be considered as relevant. An exploration of possible answers to this and a number of other follow-up questions leads to a number of tentative hypotheses. First of all, the necessity of transdisciplinary research is confirmed. This means that philosophical research on classical and completely new problems must necessarily take into account the findings of the natural sciences, especially the Earth system sciences. Simply put, philosophically informed concepts of humans, society, morality, politics or economics cannot continue to ignore physical laws, natural limits, or planetary boundaries. At the same time, however, various forms of reductionism must be avoided. These have contributed significantly to the emergence of a situation in which extensive knowledge about the devastating impact of anthropogenic activities on the partial components of the planetary system has long failed to elicit a significant response in the decision-making sphere of contemporary complex societies, let alone in the need to seek ways of identifying and defining and implementing societal boundaries. The primary effort of philosophy should be to reflect on the complexity of socio-environmental reality and the developmental trajectories of the processes, structures, and phenomena that characterize it. This is precisely what this supplement volume of the journal *Filozofia* attempts to do. It presents a wide range of possible philosophical approaches not only to grasp this complexity but also conceptual proposals for possible solutions to problems related to the Anthropocene.

This publication is one of the outputs of the project VEGA no. 2/0072/21 *Tasks of Political Philosophy in the Context of Anthropocene*, and therefore among the studies in this volume, there is a predominance of those that explore the possibilities of political thought to find adequate responses to the challenges of the Anthropocene as a scientific concept but also of the climatic, demographic, social and economic regime of the post-Holocene planetary system.

In the first text of this supplement volume "Principles of Environmental Political Philosophy," Břetislav Horyna formulates the background and basic premises of the

concept of environmental political philosophy. He discusses how the issue of the environmental preconditions for the existence of society can be integrated into political processes, or at least into political thought. It is precisely these areas of human activity, related to the organization of society and its relations with the environment that make its existence possible, that prove inadequate to the threats and risks that they largely generate themselves.

João Ribeiro Mendes looks at this problem from a different perspective in the following article "Thinking Planetary Thinking." He points out that the ongoing changes in the relationship between humanity and planet Earth, signify a profound transformation in the human condition. They are so vast and complex that their theoretical and philosophical reflection can be referred to as a "planetary turn." It interprets planetary thought in the context of liminality characterizing the Anthropocene era and suggests how it can become the starting point and guide the transition from the Anthropocene to the post-Anthropocene era.

In an article titled "Can Humanity Survive the Anthropocene? It Depends on Who We Think We Are," Graham Parkes explores how far the concepts of humanity articulated by ancient traditions of thought and the modern line of Western thought ranging from Cartesianism to libertarianism are related to humanity's ability to survive in the climatic regime of the Anthropocene. He juxtaposes this predominantly Western tradition of thought with a non-Western, predominantly Chinese one. He concludes that the image of humans in Chinese philosophy allows us to think of ourselves as nodes in a complex web of interrelations with our fellow human beings, the biosphere, and the rest of the Earth System. He sees this type of thinking as the inspiration for thinking that makes it possible to cope with the existential risks that humanity faces in the Anthropocene.

Mark Coeckelbergh returns to the possibilities of Western political thought in the Anthropocene in his essay "Freedom in the Anthropocene: Bringing Political Philosophy to Global Environmental Problems." In the text, he updates and develops some of the ideas of his recently published book *Green Leviathan or the Poetics of Political Liberty* (2021), focusing on the topic of political freedom in the light of climate change and AI in the Anthropocene. He points out that AI provides unprecedented possibilities in identifying and managing the risks of the Anthropocene arising from human behavior, but also the possibility of its misuse to enforce green authoritarianism. This risk leads to the need to think about freedom in a broader context, especially in relation to justice.

The question of freedom is also central to the article "Capitalism, Communism, Environmentalism, and the Ideology of Freedom." Edward Sankowski and Betty J. Harris point out that over the past century, at least part of the philosophical-political

discourse has been shaped by the dichotomy of capitalism and communism and their conflicting concepts of freedom. The authors critique this dichotomy from an environmentalist perspective. Then, they identify several kinds of environmentalism, which they also distinguish according to the way in which they formulate the question of freedom.

Anna Mravcová's study also remains in the realm of political thought. In "Global environmental citizenship in the context of the Anthropocene and deepening environmental crisis" she examines the significance of the concept of environmental citizenship. She stresses the unifying potential of the classical concept of citizenship, which she argues has great potential in formulating principles of environmental citizenship in the context of the Anthropocene. In conjunction with political environmental responsibility, she sees the concept of environmental citizenship as a possible starting point for necessary changes in the organization of society facing the risks of the Anthropocene.

The seventh text "Nuclear Power in Times of International Insecurity and Environmental Crisis" examines the question of to what extent the concept of state sovereignty should be considered as one of the prerequisites or, on the contrary, as an obstacle to the solution of the environmental crisis. Tomáš Korda's study is based on a parallel between the instability of the natural and international environment. Finally, he formulates a thesis according to which a renaissance of nuclear energy can make it possible to achieve a certain degree of energy self-sufficiency without the serious damage to nature that is associated with energy relying on fossil fuels.

The role of the state and with it the possibilities of democratic sovereignty in the process of not only effective but also fair green transformation of contemporary societies is explored by Alessandro Volpi in his study "Climate Activism, Sovereignty, and the Role of States: Envisioning Post-Liberal Climate Governance." He draws on a critique of "neoliberal environmentalism" that questions the state's capacity to address the causes and consequences of environmental devastation. It analyzes the "Return to the state" in climate movements and points out that a similar turn can also be observed in global economic institutions reports and economic theories. A democratically conceived state sovereignty should be able to distinguish between public and private interests, while at the same time having sufficient legitimacy to implement a green transformation of society in a way that does not benefit only the privileged classes.

In "Deconstructing the Anthropocene with Speculative Cosmology," the ninth contribution of this volume, Elise Lamy-Rested proposes a deconstruction of the philosophical foundations of the Anthropocene based on Whitehead's philosophy or cosmology. She examines the implicit philosophical underpinnings of the

Anthropocene concept, in particular the anthropocentric notion of humans as beings essentially different from other living beings. This otherness is mainly related to the ability of humans to develop and use technology. Finally, Whitehead's cosmology is presented as a suitable tool for deconstructing the philosophical foundations of the Anthropocene concept.

Sarah Hicks and Dominika Janus in the article "Ecological Catastrophe an Existential Risk? Disillusioned Ideals for a Bold, New Future" evaluate the concept of longtermism. They criticize the approach characteristic of this concept, which is to prioritize the potential long-term benefits to future generations over the interests of those currently alive when trying to address the threat of global environmental catastrophe. They take the view that this technocratic approach is unethical because it means sacrificing a significant proportion of the current human population for the sake of the descendants of those who currently have sufficient economic and political power to ensure that they are not among the victims of climate change.

This supplement volume concludes with the essay "A *Rasa* Sensibility for Ecological Aesthetics as a Challenge to the Anthropocene" in which Anish Mishra considers a non-anthropocentric ecological aesthetic experience from the perspective of Indian aesthetics. He focuses on the concept of *rasa*, which in Indian aesthetics refers to the essence of emotion felt in an aesthetic experience.

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PRINCIPLES OF ENVIRONMENTAL POLITICAL PHILOSOPHY

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HORYNA, B.: Principles of Environmental Political Philosophy
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Defining the problem: how political philosophy becomes environmental political philosophy. It is assumed that political philosophy is not represented by a purely conceptual analysis of basic political categories (justice, equality, freedom, etc.), but by everyday and habitual political decisions and the actions that follow them. The aim of transforming political philosophy is to articulate it as an instrument of change in the management of society. At the present time (Anthropocene) nature cannot exist as a technological program. A closed, clear, obvious and unambiguous ontological determination of nature is not admitted in its specifically capitalist construction. Context triumphs over nature, and it is only the context of the appreciative economy that puts the terms "nature" and "value" in context.

Keywords: Political philosophy – Environmental philosophy – Neoliberalism – Global governance – Inequality – Reasonable society – Environmental order

Introduction

The question to be considered here is how political philosophy can become environmental political philosophy. Let us presume that political philosophy is represented by more than a purely conceptual analysis of basic political categories (justice, equality, freedom, etc.), because the purpose of environmental political philosophy is not to provide the conceptually normative ideas resulting from such an analysis. On the contrary, attention shifts towards regular, everyday, ordinary political decisions and the associated negotiations which take place without the need for individual justification. Explicative progress lies in the systematic integration of environmentalist perspectives into political decisions, whether or not they are to be accepted or rejected. The goal of the transformation of political philosophy into environmental political philosophy is therefore to make it act as a tool to change the organization of society. It can be understood as a *project of social organization*.

These processes take place in the environment of complex modern capital-dominated societies, which can be collectively labelled using the historical term "capitalism." I am basing this on a negative determination of capitalism: capitalism is

not merely a system of (re)production, exchange and rent-seeking. It very quickly escaped its theoretical conception as represented by classical political economy and became a social, intensely aggressive order. The attempt at a coherent totalitarian whole, undisturbed by external regulations and adhering to the ideal of autonomous economies (exclusive market self-regulation) was so successful throughout the 20th and 21st centuries, that it managed to subjugate political democracy.

The totalitarian whole of capitalism also includes the living and natural environment. It has taken the natural conditions of life, with their cultural transformations (nature and culture), and embodied them in the form of a single complex artificial global environment of material bodies acting independently and capable of constructing our human, organic and technical world. In our current historical configuration, nature has disappeared as a fact of its own, existing independently of human thought and action. Instead, it has become a program without an alternative, replicating our technocratic view of things; its purpose is not to protect the natural world or develop culture as a form of human survival, but to create a construct wherein nature and culture mutually implode. Nature becomes the outcome of social relations, the product of cultural actions, whose multiple layers correspond with its diverse forms. Cultural action based upon these social relations is perspectivist, and for it nature cannot exist otherwise than as a technological program. A closed, clear and unambiguous ontological determination of nature is not permitted in its specifically capitalist construction.

I. On the Road to Decivilization

We assume that terms such as HP growth, productive investment, balanced budget, privatization, rising productivity, debt, fiscal policy, inflation, liquidity, conjuncture, social and income inequality, consumption and consumerism, and profit have meanings that should help in the self-definition of Western societies in the 21st century. If we attempt such a self-determination, we discover that in the current context, the "world" is made up of a globalized capitalist structure, characterized by a) a steady decline in economic growth, b) a permanent increase in debt, c) a consistently widening inequality in the area of income and wealth distribution. These tendencies, described among others by W. Streeck (2013, 2021), are entirely ignored by the verbal idolatry of the Washington consensuses, Chicago Ordo-liberalism and other "scientific" programs for the preservation of economic and political neoliberalism. Its trend towards disintegration could be seen in the early crises of the 21st century; from 2008 onwards it, however, entered a more permanent state with serious geoeconomic and geopolitical repercussions.

Western societies, built on the neoliberal doctrine, are losing their hegemony in the very globalized capital world that they have created and made their own to

dominate others. All the forces they are capable of unleashing, in this radical process of loss of power and hegemonic world domination, are spent on saving what remains: first and foremost military supremacy, allowing them to keep the other civilizations and cultures in a perpetual state of tension. The final bastion of hegemonialism is the threat of war, of large-scale military conflict, repeatedly bringing back militarism as one of our tools of civilizational self-understanding, along with all its constitutive antagonisms. The last normative justification for militarism, allowing it to act as a legal power and maintain hope for the hegemonic position of the West, was best expressed by Pierre Bourdieu's "principle of sufficient unreason."[1] We have no real reasons for the further militarization of Western civilization: but even that is enough for us to continue carrying it out and present it as legitimate power overcoming the geoeconomic forces of today's mundane order. The West's historical reasoning, devastated by colonialism, is incapable of thinking otherwise because it functions as a phenomenon of power, always thinking the same thought: achieve dominance regardless of victims.

Militarism also puts into stark relief the fact that neoliberalism is not one of the theories interpreting the premises on which today's capitalism is based. Neoliberalism is an oligarchic economic practice of corporate capitalism that has deeply permeated the political systems of Western countries and adapted them to its needs. Most noticeable is its stranglehold that has immobilized politics and, instead of serving as a tool for governing society, has transformed it into an entertainment spectacle, causing institutional (power, police) protection of the market economy from the political interference of the (democratically elected, legitimate and traditional) public. Neoliberalism did not bring about the *depoliticization* of the economic and social environment; quite the opposite, the institutional clutter associated with the transfer of collective decision-making irresponsibility in economic policies from national to supranational bodies and back gives the illusion of multiple democratic checks. Neoliberalism has caused the *de-democratization* of economic governance, which has spread to the elimination of political democracy from the totality of decisive social processes. Central banks have a more important position than governments, which are their own subject of economic policy, regardless of the fact that they escape any (democratic) checks and answer to no one. The issue is not just with nation states, but also supranational communities: The EU has no common economic policy, but has placed members of the eurozone under a single central bank. This neutralizes policies (the entire sphere of "the political," but especially economic policy) in individual states,

[1] See Bourdieu (2001, 119) ("Prinzip des zureichenden Nichtgrundes").

without contributing to the stated goal of achieving overall stability, which disappeared under the rule of the free market.

Utilizing the de-democratization of societies in favor of a banking technocracy, which would ensure the rule of likeminded, centrally organized experts, isolated from the public, was another failed attempt to reformulate the theory and practice of governance (the exercise of power). Like the state sponsored mercatocracy, nurtured by economic schools divorced from social reality (Friedrich A. von Hayek, Milton Friedman, etc.), even expert technocracy cannot overcome the stagnation of an excessively centralized, globalized capitalism. All that remains is to forge new paths to world government: this happens both theoretically, for example, with concepts of so-called *global governance*, as well as practically, by mass militarism. For corporate capitalism to save itself, it must sacrifice a significant portion of itself on the expenses of the military-industrial complex conceived as its shield. Militarism holds corporate capitalism alive; militarism is, however, incompatible with environmentalism, which means that environmentalism is incompatible with capitalism.

Political philosophy itself, oriented towards the critical analysis of governance in late modern societies, will never reach the holders of accumulated power (banks, national agencies deciding economic policy, reserve funds, meetings of top political representatives, etc.). This limited finding concerns the economic neutralization of democracy, as corporate capital overcomes democracy and replaces it with other (coercive, forceful) forms of plutocratic control of the employee classes. If the subject of research in political philosophy remains our current market conformist (i.e. extinct) democracy, then it loses its purpose: it's closing statement could be that the capitalism of post-industrial countries has successfully and efficiently destroyed and removed all institutions that might have slowed it down by limiting its "free" operation (beginning with the free self-regulating market). The causes and course of the process whereby capitalism "ends its historical existence in the form of a self-reproducing, sustainable, predictable and legitimate social order" will continue to elude us (Streeck 2015, 10).

Another factor is the most dangerous aspect of corporate capital, its lack of basis in theory or doctrine; all it requires is the primitive instinctive desire for accumulation, possession, and self-enrichment. If it were governed by a theory with explicitly formulated premises, it would be amenable to a critical analysis of what it does and how, its doctrinal basis, its goals, assumptions and expected consequences. But where simple instincts are at play, argumentation becomes pointless: our instincts are immune to criticism. Usually, when we come across such an apparently visceral approach without reason or reflection, it is in cases of open intolerance – of hatred towards eaters of pork, wearers of headscarves, believers in another god, those with another skin color – with

no theory behind them.[2] But corporate capital is not intolerant, just as it is not even tolerant; it stands outside these categories and is not subject to the criteria of normative (practical) philosophy. It is based on instinct, which by far precedes any doctrinal expression. This is also why it is incomprehensible and untamable via theory, like any power without form. The lack of shape and form of corporate capital represents the limits of critical theory, beyond which it becomes symbolic. Capital has learned from the mistakes that accompanied the work of groups leading to both Washington consensuses and other accords: unlike them it does not formulate the theoretical principles and tenets of its operation. It increases its effectiveness by being inexpressible through premises, therefore formally unamenable to criticism, because it reaches no conclusions. It is pure imperialism, into which it passes, just as Oswald Spengler wrote in 1933, the gradually disappearing *Occident*, making way for an old-new empire.

The spread of pure imperialism is an identical process to the spread of decivilization. In its basic outlines, this can be described as the disintegration dynamics of cultures, societies, publics and subjects in the context of regressive modernism. If cultures or societies disintegrate, there is still hope the original potencies in will evolve into alternate forms, just as the cultures destroyed by evangelizing European colonialism transformed into new and today largely distinct cultural formations (typically Central and South America, Sub-Saharan Africa, etc.). If the same disintegrative process touches the autonomy of the subject, an entirely different situation arises. Cultural anthropology (Norbert Elias) has above all devoted itself to the constitution of the autonomous subject, which may be considered the fundamental feature of the process of civilization. Decivilization, conversely, is defined through the demise of the autonomous subject (the danger of social decline pushing the negative processes of individualization in post-neoliberal capitalism operates permanently and *en masse*). Decivilization is the sediment of regular confrontational practice in the environment and becomes habitual: it strips us of the need to think and make decisions, and significantly suppresses the role of affect so that in the end we do not know why we

[2] Behind the often fanatical manifestations of intolerance and disrespect for others stands simple visibility: others express their differences, display their otherness, just as those who belong display visible signals of their belonging. Anti-Islamists know nothing of Islam, the Koran or Sharia; if someone told them a Muslim wants to go down "the path to the water-hole" (the content of the word "sharia"), they would have no idea how to interpret this. But they will strictly condemn visible signs (clothing, behavior, customs). An example from a similar context would be the Jesuit missionaries to China in the 17th century; under the influence of the missionary method of accommodation (Matteo Ricci), they went so far as to dress themselves in Mandarin garb and, following the customs of the imperial court, soon enjoyed the favor and respect of the Chinese. In ancient Rome the visible (derogatory) mark of the first Christians was the cross, and so on. This is not, however, superficiality, but rather the significant and culturally distinctive ability of visible symbols to stand in for theories and create networks of clear and simple relations.

act the way we do. Habitual behavior can be taken so far that it equates mindless indecision with freedom; this depends on the imaginings of freedom that seep into societies in an absorbable media form. Decivilized behavior eliminates rational and value-rational behavior, at the core of these is the choice of appropriate means to achieve the chosen goal or goals.

II. The Ecological Modernization and Revitalization of Capitalism

Inequality kills. Capitalism is the source of deep, irreparable social inequality between people. Capitalism therefore kills. A revitalized capitalism will renew its powers, among other things its ability to kill. Is this syllogism too simple? Possibly, yes, as the situation is much more complicated. Because it is not just inequality that kills but even the egalitarian mass consumption of capitalist commodity production that is consuming the planet, all its riches and resources, as if they were the hereditary and structural property of the profit-accumulation system. We are just as equally being killed by the egalitarian principle of private property, derived from commodity thinking; that anything on this planet is tradable, because it can become a privately owned capitalist commodity (solar energy, wind, water, even the atmosphere – traded in the form of emissions permits, but also human thought, fantasy, talent, and art). We're being killed by a system created for the protection of capitalism's global hegemony: all the military technology actively being deployed twenty-four hours, seven days a week (spy satellites, patrol bombers, atomic submarines, aircraft carriers, armored fighting vehicles) produce an immense amount of pollution, whose parameters are state secrets that avoid even scientific measurements, statistics and predictions. Apart from the relativizing the results of scientific studies concerning the current environmental burden on planet Earth,[3] this once again demonstrates that the interests of capital have a higher degree of protection than the interests of people in restoring nature and the environment we live in.

Inequality arises as the result of very specific economic and social mechanisms. The different views there are of inequality don't result from inequality itself, but rather from different theoretical analyses of these mechanisms, i.e. the acceptance of various premises related to the existence of inequality. There is a general consensus concerning the principles of social inequality; similar agreement can be found in the belief that the factors responsible (not exclusively, but significantly) for social inequality cannot be

[3] When the Kyoto Protocol was drafted in 1997, the USA obtained an exception that they would provide no information on the consumption of oil products and pollution caused by the US military. During the presidency of Donald Trump, subsequent to the withdrawal from this treaty, partial information did come to light, but since 2020 this situation has once more become an information blackout. As a result this means all the "Green Deals" and similar attempts, whose very purpose is to annoy the public and incite them against any warning voices, are the games of politicians and exercises in political powerlessness.

blamed on individuals, among whom there are those advantaged or disadvantaged at the starting line. Here, half a century earlier, the field opened for normative philosophers such as John Rawls to investigate whether it was possible to create just conditions for the entry of each individual into economic and social relations. Similarly, research into the mechanisms of distribution began to appear in politico-economic theories, followed by direct state intervention in the production process and functioning of the market, that would question the current accumulation of profits by the owners of capital. After those fifty years (Rawls' primary work was published in 1972) the result is unambiguous and measurable: inequality has incomparably deepened at the mundane, regional and national level and is now considered irreversible. With this fact in mind, I find it difficult to acknowledge that Rawls' theory of justice, Habermas' theory of communicative action, Dworkin's theory of constitutional law or Held's theory of democracy are in principle anything more than evidence of the failure of sociological, philosophical and political science research in the political sphere.

Given how strong, impenetrable and politically-aligned the system of power is that such a small sliver of the economically advantaged have created in their defense, this conclusion can be considered plausible. For political philosophy, this primarily means shifting its focus to the problems of survival in a situation of deteriorating economic (income) and social (especially in healthcare, schools and security in illness and old age) inequality within liberally globalized capitalism. The world economic order, as it has been formed since the end of the Cold War, does not require the world's poor; it cannot monetize them, and, on the contrary, they represent a burden to be gotten rid of. Against these attempts, political philosophy may once more ask the question of unconditional basic income, new taxation systems, the transfer and allocation of resources and investments. But clearly, no direct results are to be expected; pushing through such proposals might be possible at a transnational political scale, but this would require international politics to actually function as a geo-economically aware geopolitics, instead of being overwhelmed with repeated military escalations and threats of war.

From the position of environmental political philosophy, the problem of inequality is expanded and significantly complicated by that fact that social and economic inequality is further compounded by the inequality in living conditions and that of the natural environment. Here it is no longer important whether or not the lower income classes earn twice, ten times or a thousand times less than the rich, or whether or not investment in the poorest countries will be one quarter or one half of a percent more than military investment: the decisive factor is the *tendency* to create conditions incompatible with leading a good (above all healthy) life. In parallel to the spread of environmental risks, we can see a decrease in life expectancy, an increase in mortality

from commonplace diseases, with the health of the entire broader population being under threat. In countries with high levels of inequality, this tendency is many times stronger than in the relatively more stable countries (in Europe, for example, Scandinavia). Some of the economic statistics of inequality may surprise or frighten us because they paint a completely different picture of the world that we live in than the one created by excluding uncomfortable truths. The fact that women own only 2% of global assets will probably take many people's breath away.[4] But we have to remind ourselves that the mass extinction of human populations due to environmental risks is already under way and will not be stopped by a progressive tax, Kuznets Curve, sustainable growth or other academic idea. Alarm at this state of affairs will alternate with expert criticism that is ultimately toothless; it lacks any plan to put these ideas into practice, and it is not even capable of formulating a sufficiently attractive utopia to appeal to the broader disaffected social classes. Today, nobody is bothered by this criticism, least of all the people who know their actions will lead to human death and yet who continue on just as before. They can always just spit out the phrase "humanitarian crisis," to obfuscate both the crimes and the perpetrators.

Frequently, discussions of ways to stop these risky asymmetric processes presume that change will come via a greening (ecologisation) of capitalism, i.e. the further development of the potential of artificial human cultures, specifically those elements enclosed within the boundaries of the economic system. "Greening" can be understood as a process of capitalist transformation, in other words the discovery and implementation of a new form of capitalist economic reproduction of everyday societies, which will meet certain environmental and social criteria known in advance. People are looking for new forms of reproduction of capitalist societies because all the current attempts have led to today's parallel ecological and economic crises (Dörre 2014). The subject of change is modern capitalist pro-growth society, which means much more than just replacing the primary parameters of economic activity, but rather a more complex reversal of the principles we use to paint our picture of the world and our place

[4] Cf. Schmelzer, Passadakis (2011, 25). This fact should presumably lead to a change in thinking concerning gender issues. It may be important how airplane passengers address each other, whether or not greetings are gendered and what more neutral terms we can replace *he, she, it* or *der*, *die*, *das* with. It may be proper to fire even a Nobel Prize Winner from their job if they disregard the prominent role of women in the history of modern physics. Nevertheless (in my purely private opinion) much greater concerns could be raised tackling the *global socio-economic* situation of women, which is deteriorating in proportion to the increase in global inequality. Women's dependence on the real owners of capital and the wealth they extract is deepening. In the interest of women, deglobalization, the capability of politico-psychological reaction to the neoliberalism embedded in our economic relations, as well as the derived protective measures for women (i.e. half of humanity), should stand against the *real-life* erosion of their sovereignty. Backed by two percent of global wealth, this will, however, be incomparably more difficult than carrying on with our current squabbles, supported conversely by all the people this does not harm.

within it. From its very beginnings, capitalist modernism has been fixated on escalation, carrying on from the Post-Enlightenment correlation between the rationalist entitlements of humanity to subjugate all available natural resources (i.e. the right to sustained culturalization of the natural environment) and emancipating oneself from nature's power (progress). When escalation – i.e. the logic of escalating relations between capital and nature – became a structural factor in the continuous dynamization of capitalist society, it was titled "growth."

"Growth" is the sum of the processes of economic, ecological and social reproduction taking up an increasing percentage of natural resources and providing them for capital use, whose form and contents represent a decisive civilizational factor. We can see growth as primarily economic (the accumulation of goods production and maximization of consumption), which in its own interest (capital accumulation) creates tools to stabilize itself and thereby also stabilize a pro-growth society: it creates a technical and technological civilization which has, through the gradual assimilation of all other civilizations, taken control of the globe and established the capitalist society of global imperialism. Its solidification of power (police, army and the so-called security forces complex) will play a primary role in any attempt at reform, including efforts at greening. But even before that, there is another problem associated with the operation of pro-growth economies: Is it possible to stabilize modern capitalist society in some other way than through economic growth?

The first answer that comes to mind is of course politics. But the question is how can politics be possible, when we are in an environment of a global capitalist political economy, characterized by a decline in the political power of nation states, the substitution of politics for dictatorships of post-election coalitions, populism, loss of regulatory ability in the social sphere and an orientation towards self-preservation at a supranational political level (the EU in Europe, the African Union, ASEAN in Southeast Asia, the Eurasian integration of Central Asian republics and Russia, or China, founded on multi-vector politics, UNASUR the Union of South American Nations, etc.). While in all parts of the world there are undoubtedly many reasons to develop robust alternatives to the valorization economies of corporate capitalism, there are incomparably fewer practically viable options. Politics (if it is to be understood as the activity of the political parties in government or opposition) is not promising in this respect because it is not actually politics.

The political philosophy of the Anthropocene can enter into transformative discussions (similarly about the "greening" of capitalism) to the degree it is able to formulate its normatively strategic intentions in capitalist societies undergoing multi-level economic, social and environmental crises, without being dependent only on government policy analyses. It will therefore first need to form a *conception* of the

social relations requiring change. At the same time, this is not about establishing the prerequisites for its own political action, meaning ensuring practical and social effectiveness of contextual knowledge theses. Many activities (resistance movements, alternative movements, etc.) lack a clear context they can relate to through their critical activities, yet cannot be denied a certain effectiveness. Political philosophy cannot, however, be confused with civil resistance movements; it cannot "mobilize the masses," but rather its purpose is to achieve as broadly and profoundly as possible, an understanding of the immanent dynamics of capitalism, the contradictions it grows from, the causes of social conflict, the source of capitalism's vast ability to regenerate even after catastrophic systemic crises, the logic of its adaptability to ever new (almost continuously in crisis) environments, the potential means of transformation and possibilities for the suppression of capitalist hegemonialism, all determined from the perspective of environmentalism.

If politics, democracy or a combination of both are not enough to deal with our environmental problems, does repoliticization offer a better chance? Society free from the dictates of accumulation and economic growth is undoubtedly one of the primary ideals of environmentalism. But is this idea sufficiently political not to fall between the flotsam and jetsam of responsibilities, moral turns and new solidarities overflowing the already turbid polemics concerning degressive growth? We're looking for a way to process the polyvalent crisis of economic growth and social stagnation, and at the same time we can't rule out that this pathway will lead through a new repoliticization of social relations requiring change. Redistribution, whose various forms are at the center of the vast majority of our current disputes and professional polemics, is not a political, but rather a politico-economic and socio-political factor. We can set it aside in our next discussion, but this only moves us onto the next problem: what is the element capitalism has depoliticized (pushed out of or stifled through politics) that is required to revive political philosophy in the direction of active environmentally reconstructive action?

Looking back at two centuries of the development of European and then Euro-Atlantic civilization, we can see there was an explosion in economic growth with no historical equivalent. The evolution of societies is commonly explained using the variation – selection – retention scheme, but the development of modern capitalism was different: a discontinuous change, relatively localized according to changes in the flow of capital. These then corresponded to the qualitative diversity in production and the dynamics of capitalist innovation, which have been and are the most abrupt in economic history. In the processes of social (not only economic) innovation, ever new products, forms of organization and reorganization, technologies, needs and interests constantly emerge. In Western Europe, the original location of that "Faustian system," as capitalism is sometimes referred to due to its inherent dynamics, between the years

1820 and 1998 the real gross social product grew by an average of 1.51% *per capita* each year (Maddison 2001, 28). Staggering numbers – with staggering consequences that are nothing to celebrate. Whatever that one and a half percent growth means (as any economic figure it is somewhat uncertain and easy to manipulate), it has its price: fossil fuels consumed, raw materials, minerals, megatons of poisonous substances in the air, soil and water, the spread of desertification, warming, mass death (namely women and children) by starvation and illness – basically that thing we call "our world." It has become a means of payment, a universally tradeable currency whose value rises alongside the use-value of the world, of which there is less and less due to capitalist consumption.

The factor we are looking for to take further active effect in the environmental reconstruction of political philosophy is a dynamic – a dynamic of transition to a new, normatively fundamental level of mundane social environmental integration. Capitalism has its own dynamic and will therefore probably better understand the dynamic of environmental change over revolution; the revolutionary aspects of the contemplated greening of capitalism consist of returning it to its primary and basic purpose of satisfying profane human needs. However, the more dynamic the necessary individual steps are before human societies make their way to this origin, where a new history of work, money, capital, stability, culture and nature can begin to be written, the higher will their added value be in limiting the severity of ecological damage.

III. The Environmental Philosophy of a Politically Rational Society

Repoliticization is not the same as political radicalization. Repoliticization is a new and practical use of reason: to know the things we are capable of because we have done them ourselves. For the same reason, our current politico-economic order is knowable and changeable; because we have made capitalism, we can learn to rationally understand it and find alternatives to it. Corporate capital is the most serious obstacle to a rational noetic comprehension of its own capital production and reproduction, the internal and external forces that keep it moving and the principles forming the politico-economic subject of the illegitimate usurpation of economic power. Overcoming this obstacle, i.e. achieving a rational insight into the principles of factual and symbolic power of 21st century corporate capitalism is a necessary condition for the development of political economy's science-based environmental utopianism. It's not enough to say money rules the world: there's another someone who rules the money.

Corporate capitalism is power. Power needs not appeal to reason, for it asserts itself as will, regardless of rational justification. It remains, as an instinct, a will, an urge and a force, a *fascinosum* whose influence remains undiminished, despite all efforts. To put forward a proposal to limit corporate capital (in the name of saving the

environment or humanity, the reason no longer matters very much) will be, as all previous research into the changes collectively described as the Anthropocene, most likely necessary; but this will not be possible without new methods of revision, without innovative methodological implications of environmental political philosophy and without its hypothetical-argumentative reconstruction, based on experiences we as yet lack.

The principles for the transformation of political philosophy into environmental political philosophy can be formulated under the following points:

1. The principles that make the transformation of political philosophy into environmental political philosophy possible are its competences, which cannot be assumed by other humanities or social sciences in the current conditions. Environmental political philosophy is a) competent with respect to contemporary economic and political ambivalences because it incorporates the methods and insights of ecological political economy; b) competent with respect to economic and political transformation because it is able to formulate normative and reflexive principles for substantial and radical social change; c) It is competent to carry out an environmental analysis of European modernity and contemporary (post-industrial) capitalist modernity because it is able to analyze hegemonic political projects and economic exclusivist theories; d) It is normatively competent because it is able to articulate values with a very broad social reach, especially in the area of practical, ecologically acceptable ways of living well.

2. Environmental political philosophy can thus be considered competent to develop environmental-ecological policy, but it is not competent concerning the future. The future belongs to the future, and to talk about it is misguided. Environmental political philosophy has no future dimension.

3. Environmental political philosophy does not create an ideal theory, which is considered by representatives of contemporary political theory and scientific theory as alienated from reality, authoritarian, ideological and non-political. This usually means Rawls' conception. This is not to say that environmental political philosophy denies the relevance of normative theory to the practical problems of politics, environmentalism and ecological political economy. It formulates practical recommendations and focuses (under partially idealized assumptions about the responses of individuals, groups, classes, and societies to environmental stresses) on improving interpersonal coexistence and achieving the "good life" on a prosaic scale.

4. Environmental political philosophy necessarily pursues particularistic interests because it is situated in the historical context of the power conflict between labor and capital. It does so on the basis of falsifiable findings of the social sciences (political economy, sociology, political science) and its own attitudes and preferences derived

from findings formulated in environmentalist research (IPCC reports, etc.), i.e. it exploits empirical limitations. Therefore, it cannot be defined as an ideology.

5. An environmentalization of political philosophy that could trigger a degressive ecological reform of capitalism does not rely on any "green growth," "green economy," "economically balanced growth," on new technological solutions (digitalization), decarbonization, etc. These are self-delusions; unless they are accompanied by economic and political framework conditions, such as ecological tax reform, a strict and sanctioned cap on resource consumption and emissions, a different type of rationality evident in cultural change (the reduction or elimination of statist consumerism, a significant reduction in working hours, the reduction and elimination of social inequality, strengthening of the role of labor in the relationship between labor and capital, rebuilding the economies of economically underdeveloped countries), there can be no question of a permanent and stable economic system.

6. Normative political theory identifies as correct a policy that guarantees every individual the right to free self-determination; because such a determination goes beyond the realm of human privacy, self-determination is defined in terms of the correlation between private and political autonomy. Because it is an interval, we cannot define political theory (or democracy) simply as the domination through power (albeit achieved through electoral success) of the universal over the particular and vice versa.

7. The way of life of the global North, which presupposes a fundamentally unrestricted and politically, forcefully and legally secured access to resources, nature, living space, labor and the possibility of its exploitation anywhere in the world, is considered imperialist by environmental political philosophy.

8. Among the options offered by current economic and political practice (a) business as usual guided by neoliberal policies of social austerity, b) progressive solidaristic productivism based on economic degression and social democratic economic policy, c) socio-ecological transformation), environmental political philosophy opts for socio-ecological transformation.

9. Environmental political philosophy is open to the principle of environmental justice. It is unacceptable that the individuals, nations and cultures that have been and/or still are most affected by the problem of global capitalist social inequality should bear the enormous additional costs of dealing with the immediate consequences of ecological pollution and the climate crisis; this task belongs to those most responsible for these risky impacts on planet Earth, i.e. the global North.

10. Environmental political philosophy makes universal claims based on general, rationally mediated norms; however, agreement on norms also takes into account the possibility of preserving dissent, especially in relation to the claimed universality.

11. Environmental political philosophy does not think of the outcome of its ecological, economic and political activities as a "coming democracy"; its actions are essentially a rational experiment whose outcome cannot be accurately predicted.

12. Environmental political philosophy is very reticent about many of the activist moves that are thematized in the context of a degrowth economy (communal housing and rural squats, consumer-producer cooperatives, permaculture and subsistence organic farming, alternative non-monetary commodity exchange systems, including political proposals for the creation of multiple levels of confederal direct democracy); it understands the term "degrowth" in Giorgos Kallis' moderate intention.[5]

13. Environmental political philosophy not only considers the concept of "growth" in an economic sense but also understands it in the spirit of Harald Welzer's social psychology as a "mental infrastructure" (Welzer 2011). That is, the consumerist actions of individuals and the pro-growth orientation of society are anchored deep in psychic and socio-psychological structures where they take shape as culture-wide dimensions; the critique of growth then naturally appears as a critique of a two hundred year-long and successful social model for which there is no adequate replacement.

14. Environmental political philosophy is not applied moral theory. Moral judgments are only possible on the basis of moral criteria that are demonstrably (de)formable. Extra-moral or amoral explanatory factors are not relevant for moral judgments. The origins and causes of moral phenomena are revealed by genealogical analysis, but this does not constitute an argument for the moral relevance of moral attitudes. Only propositional theorems serve that purpose.

15. Environmental political philosophy is indeterministic. It understands the role of regulatory ideas in the real life of individuals and societies, and places particular emphasis on the idea of the "good life." The "good life" is not a moral norm, but an alternative kind of human action that is based on standards of rationality.

16. Environmental political philosophy requires a new anthropology of work. Driven by corporate capital, *Homo laborans* does not perform work but merely enters into a perpetual, ongoing state in which each step in the making of a product builds on the previous one, and the previous one serves the next, becoming the preliminary act in a chain of repeated activities. Work is a false notion that never ends with the satisfaction of a given need but operates as an unrestricted and endless activity without any specific production goal; its purpose is the continuous production of "value."

[5] Kallis (2011, 878): "Sustainable degrowth is a multi-faceted political project that aspires to mobilize support for a change of direction, at the macrolevel of economic and political institutions and at the micro level of personal values and aspirations. Income and material comfort is to be reduced for many along the way, but the goal is that this is not experienced as a loss of well-being."

17. The transition to an environmental order (i.e., an order with a civil, non-criminal relationship to planet Earth) is an act of structural rationality, thus precluding any form of anarchism. Environmental political philosophy justifies cooperation as a tool to create the environmental order, although it understands the objection that cooperative action is always a manifestation of irrationality (it may go against the best interests of the individual involved). Environmental political philosophy is the theoretical foundation for this; it relies on the experience that at the level of *civil relations*, contracts (even if partially enforced by state sanctions) are honored reliably enough to make cooperative action worthwhile. Environmental political philosophy seeks agreement, cooperation in the formulation and achievement of economic and environmental goals, and the creation of a social order that can be unbiasedly defined as a culture of trust.

Conclusions

With a growing awareness of environmental threats, clearly visible from the second decade of the 21st century, an unsettling notion is permeating consumer complacency: we are ever more thoroughly and mercilessly scuttling the boat we are sailing on and have no backup. We remain societies of the controlled, but the paradox of those kept in cages is cooperation, solidarity and partnership. Partnership under threat is beginning to be the hallmark of social discourses outside of the politically distorted mainstream media, outside the official speeches of politicians, who, ensconced within their megalopathic visions, lack the sensitivity required for simple progressions of thought in the worlds of both consumption and work. So long as the movement of Western – as well as large non-Western – societies continues in the current direction, towards a culture of negative emotions, where socio-economic problems resonate, where there is a loss of opportunities, where people are exposed to a general pointlessness or even superfluousness, where militarism and the constant threat of war with no concept of peace and self-discipline are the basic or perhaps only form of social self-actualization and individual self-determination, then perhaps environ-mentalism may become the shared way of life between partners in danger.

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THINKING PLANETARY THINKING

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MENDES, J. R.: Thinking Planetary Thinking
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The term "planetary turn" was coined in 2015 to describe a significant and ongoing shift in the relationship between humans and the Earth, which has been unfolding since the late 20th century. Despite its profound significance, this transformative process lacks a comprehensive theoretical framework, necessitating the development of a new perspective. The planetary turn has brought about substantial changes in our connection with the Earth, particularly in terms of our existence and our efforts to understand it from a planetary standpoint. Addressing the challenges posed by planetary issues requires a distinct mode of thinking. This article begins by offering a concise explanation of the concept of the "planetary turn," followed by an exploration of a significant consequence of this shift: a profound transformation in the human condition. Additionally, an argument is presented, asserting that this transformation unfolds within the crucial context of liminality characterizing the Anthropocene era. The final section delves into Chakrabarty's ideas on the development of planetary thinking, that can provide guidance as we navigate the transition from the Anthropocene to the post-Anthropocene era, aiming to surpass the current state of liminality in the human condition.

Keywords: Planetary Thinking – Global Thinking – Planetary Turn – Anthropocene – Human condition – Liminality – Dipesh Chakrabarty

I. The Planetary Turn

The significant influence of human activities on the Earth System, ranging from local to global levels, prompted Paul Crutzen, a Dutch atmospheric chemist, and Eugene Stoermer, an American limnologist, to declare the end of the Holocene epoch and the dawn of a new era known as the Anthropocene (Crutzen – Stoermer 2000).

According to several scholars, the transition from the Holocene to the Anthropocene, where humans have become a geological force, has unfolded in multiple stages (Crutzen – Steffen 2003; Steffen – Crutzen – McNeill 2007). The first stage commenced during the mid-eighteenth century with the advent of the Industrial Revolution, coinciding with the belief in the possibility of the complete mechanization of the world. The second stage emerged in the mid-twentieth century with the onset

of the Great Acceleration, a period characterized by human activities driven by the global economic system, becoming the primary catalyst for changes in the Earth System. In the third stage since the mid-last decade, there is global recognition of the significant impact of human activities on the Earth System. This has created an urgent need for regulation, mitigation, and rectification of these effects.

The increasing recognition of the alarming transformations unfolding in the Earth System and their implications for human civilization(s) has gained considerable traction, often referred to as the "planetary turn." This term signifies an unforeseen and abrupt shift in our comprehension and relationship with the planet. Initially, our focus was predominantly on the global aspect, but the planetary dimension has unexpectedly taken on greater importance.

In the preface of their co-edited book titled *Planetary Turn*, Amy Elias, professor of U.S. English studies at the University of Tennessee, and Christian Moraru, professor of U.S. English studies at the University of North Carolina, provided the following description of the concept:

> Insofar as they can be traced back to the voyages, "discoveries," and displacements of the early Renaissance, our intellectual challenges, no less than the world realities generating them, are not new; their pervasiveness and intensity are. … In the thick of things at the dawn of the third millennium, we have no unobstructed view of where we stand. What is apparent to many, however, is … [that] something is happening. Something is afoot. And this something seems to fit neither the global, neocolonialist models of modernity nor Marxist teleological diagnoses of capitalist globalization … This is what, critically and theoretically speaking, the planetary turn strives for: a decisive reorientation toward the unfolding present and its cultural paradigm. (Elias – Moraru 2015, vii – viii).

The excerpt uses the expression "planetary turn" to describe the complex situation we have been facing since the late twentieth century and the early twenty-first century, characterized by a profound and transformative shift in our relationship with the Earth. Despite this significant historical process, we lack a theoretical framework that can help us comprehend and navigate this transformation. As a result, we find ourselves in a state of disorientation and uncertainty about the future. In essence, we lack the necessary intellectual tools to fully grasp the implications of the planetary turn.

Over time, we have regarded the planet as an enduring and inconspicuous backdrop, accommodating our activities and enabling the construction of our human world. However, this perception is no longer tenable. The escalating exploration and depletion of Earth's resources on a global scale have unveiled the active nature of the

planet, almost as if it possesses a certain agency, thereby posing substantial threats to our very existence. In essence, the Earth System has become an unpredictable terrain that surpasses our ability to control it.

II. The New Human Condition: Living in Liminality

A. On the Notion of the "Human Condition"

The term "human condition" typically denotes a set of prerequisites that enable individuals to live a uniquely human existence, encompassing a range of experiences that set them apart from animals and other non-human entities. However, it was not until the advent of existentialist thinkers that the term truly became a category in philosophical discourse. Jean-Paul Sartre, in particular, employed it in his essay *L'existentialisme est un humanisme* as a substitute for the concept of "human nature," which the existentialists regarded as a detrimental fabrication (Sartre 1946, 67 – 68). Sartre not only distinguishes the human condition from human nature but also from the historical context. According to him, irrespective of specific historical circumstances, there exist certain unalterable limits for human beings. In essence, these limits define our humanity in any historical setting: existing in the world, engaging in productive activities, interacting with others, and being mortal. These "limits" can be seen as the horizons of existence, without which human existence would be impossible. They are the elements that give meaning to our existence.

Undoubtedly, the essay *The Human Condition* by German philosopher Hannah Arendt remains the most important and influential philosophical work on the subject. While it is impractical to delve into the intricacies of her arguments here, I will offer only a few concise remarks. According to Arendt, the most general condition of human existence is to be transient, inevitably marked by birth (natality) as its beginning and death (mortality) as its end. She asserts that these three activities have a crucial role in maintaining this condition: (a) labor, ensuring the survival of the species beyond individual life; (b) work, securing the permanence and durability of the material world; and (c) action, preserving memory and history (Arendt 1958, 7).

Arendt draws a distinction between the vital condition that we share with other living beings, enabling us to inhabit Earth, and the existential condition that involves living in a world shaped by human agency.[1] In a way, the notion of the human condition encompasses both the vital and existential aspects of our existence. But as she also asserted:

[1] For Arendt, the "world" is a constructed and embedded reality imbued with meaning. What I am trying to emphasize is that we have a vital condition (what we do to stay alive) and an existential condition (what we do to build a meaningful life, even if we adhere to absurdism).

> The world, the man-made home erected on earth and made of the material which earthly nature delivers into human hands, consists not of things that are consumed but of things that are used. If nature and the earth generally constitute the condition of human *life,* then the world and the things of the world constitute the condition under which this specifically human life can be at home on earth (Arendt 1958, 134).

In Arendt's perspective, the World is thus a human construct formed by utilizing raw materials extracted and appropriated from the Earth, metabolized, and partially returned to it as waste.

Despite this, she consistently maintained the perspective that the Earth (or Nature, i.e., the Biosphere) and the World are fundamentally different and separate in their essence. In her own words: "we changed and denaturalized nature for our own worldly ends, so that the human world or artifice on one hand and nature on the other remained two distinctly separate entities" (Arendt 1958, 148). Therefore, it can be inferred that she placed a primary emphasis on the existential condition while overlooking the significance of the vital condition.

What is novel in the Anthropocene is that the vital condition has undergone a change that poses a threat to the existential condition, or, in other words, it profoundly transforms the human condition. How has this transformation come about? To address this question, I will contend that the Anthropocene represents an age marked by liminality, which has consequently brought about a change in the human condition. This change involves a state of existence characterized by living in liminality.

B. The Anthropocene as a Liminal Age

There are those who view the Anthropocene as nothing more than the final phase of the Holocene (e.g., Davies 2016), while others interpret it as humanity's ultimate era that leads inevitably to extinction (e.g., Haas 2016). Both perspectives may contain elements of truth, but I am inclined to believe that we are currently in a post-Holocene Anthropocene epoch, which is characterized by the significant human impact on the Earth's ecosystems. Moreover, I assert that this era is transitional in nature. As a result, I argue that the Anthropocene can be interpreted as a liminal geocivilizational condition.

Derived from the Latin word "liminaris," which signifies the threshold of a door, the term "liminal" carries the connotation of a space that exists between two places (in a spatial sense) or a phase of transition between two stages of a process (in a temporal sense), as commonly defined in standard dictionaries.

Furthermore, apart from its general connotation, "liminal" also possesses a technical meaning that is particularly relevant to our discussion. This more specialized meaning was initially introduced by the French folklorist Charles-Arnold van

Gennep (1873 – 1957) in his influential 1909 publication entitled *Rites de passage*. Van Gennep employed this term to describe the intermediate element within the triadic structure of the rites of passage, a subject that he extensively examined and analyzed (van Gennep 1969). However, due to various historical circumstances, van Gennep's scientific contributions were largely overlooked and faded into obscurity until the 1960s when his aforementioned work was translated into English and caught the attention of cultural anthropologist Victor Turner.[2]

Turner rediscovered and expanded upon van Gennep's work (Turner 1967). He utilized the concept of "liminality" not only to identify transitional periods in social life but also to comprehend human responses to liminal experiences and how individuals adapt to this state, thereby introducing psychological and existential dimensions. Moreover, Turner extended the application of the concept beyond the restricted context of ritual transitions in small-scale societies to encompass broader contexts, including large-scale societies and even civilizations.

According to Turner, situations of liminality are marked by ambiguity, as individuals no longer identify with their familiar pre-liminal state but have not yet embraced the desired post-liminal state. In addition, there is confusion as individuals struggle to establish the appropriate behavioral norms in this transitional phase. Furthermore, uncertainty prevails as individuals lack certainty regarding the outcome or successful completion of the transition.

More recently, American scholar Gregory Fried, without making any reference to the concept's past, uses it to describe the anthropocenic situation in which we find ourselves (Fried 2018, 85 – 87). He does so through an interesting analogy. According to him, humanity is currently in a situation identical to that of Odysseus in Ogygia, as described by Homer in the *Odyssey*, when he was on the verge of embarking on a journey back to Ithaca. The dangerous seas between the two islands, the mythical and the real, placed Odysseus in an identical liminal situation to the one we face in the Anthropocene, which can be considered a transitional period between the Holocene and the post-Anthropocene.[3]

C. The Liminal Geocivilizational Condition

We find ourselves positioned within a precarious temporal and spatial realm, straddling the boundaries of different epochs. This transitional state emerges as the familiar and reassuring Holocene era gradually fades away, while the arrival of the post-Anthropocene era remains elusive and undefined.

[2] For the vicissitudes of Gennep's career and work reception, see Thomassen (2009).
[3] Literally, it is the epoch that will come after the Anthropocene, assuming we survive the Anthropocene and assuming significant geological changes occur on Earth.

Amidst this phase of transition, ambiguity becomes pervasive. The certainties of the past progressively diminish, leaving us grappling with uncertain and undefined realities of the future. In this era of the Anthropocene, characterized by its liminality,[4] our existence is infused with a feeling of unpredictability and doubt.

Within the realm of liminality, we observe the gradual dissolution of previously stable ecological patterns.[5] Climate change serves as a disruptive agent, unsettling well-established weather patterns and leading to the escalation of extreme weather events such as intensified hurricanes, wildfires, and floods. The alarming rate of biodiversity decline compounds these disturbances, resulting in the destabilization of complex ecosystems that have thrived for numerous generations. As a result, the fundamental underpinnings of our existence – the delicate interconnectedness of life – experience a profound reconfiguration.[6]

At the same time, we confront the repercussions of our own behaviors. Our impacts on the Earth, encompassing sprawling urban centers, transformed landscapes, and industrial infrastructure, leave indelible, enduring marks on our planet's fabric. Our relentless pursuit of growth takes its toll as we face the consequences of pollution, deforestation, and the depletion of natural resources, all of which disturb the delicate balance of nature.

Some scholars draw parallels between our present circumstances and Karl Jaspers' notion of the Axial Age (Jaspers 1949, Jaspers 1953)– a significant period in human history spanning from the 8th to the 3rd centuries BCE (e.g., Szerszynski 2017). Jaspers' concept can be interpreted as describing a liminal or transitional age, characterized by profound transformations and shifts in human thought, culture, and spirituality. During this epoch, new philosophical and religious ideas emerged, challenging established beliefs and paving the way for future developments. The (second) Axial Age (if we are going to assume that we are already in it) can be seen as a liminal stage positioned between the old and the new, marking a transition from one worldview to another. It represents a critical juncture of change and reorientation in the course of human history.

[4] Some authors do claim that the Anthropocene is part of the Holocene, a late Holocene, a sort of transitional state for something radically different. However, the Anthropocene as a late-Holocene hypothesis seems somehow incoherent because, in that case, we would have to recognize the Holocene as both climate stable and climate unstable at the same time.

[5] There might be an assumption that many features of contemporary Earth-system behavior are rather characteristic of being in the liminal zone between stable regimes, e.g. around tipping points (see e.g. Williamson – Bathiany – Lenton 2016). It is indeed a tempting view. However, the notion of "tipping points" and its implicit irreversibility seem to undermine it.

[6] Even if we are in liminality, there are some hints, e.g. we can no longer assume a stable relationship with the Earth System, or what Chakrabarty calls a "relation of mutuality" with it. That is a major change in our condition.

III. The Need for a Planetary Thinking

The first people to explicitly point out the need for planetary thinking were perhaps Martin Heidegger and Kostas Axelos. Heidegger clearly stated this in the famous interview, "Nur noch ein Gott kann uns retten," he gave to the magazine *Der Spiegel* in 1966 (only published posthumously in 1976) (Heidegger 1976), when he stated in his characteristically gnomic style: "to the mystery of the planetary domination of the un-thought essence of technicity corresponds the tentative, unassuming character of thought that strives to ponder this unthought [essence]" (Heidegger 1981, 60, my translation). Axelos, in the same vein, and greatly influenced by the former, in the essay *Future Way of Thought: On Marx and Heidegger*, also published in 1966 – composed of texts originally written in German and French – stated that planetary technology requires a new, a future way of thinking that in itself is planetary (Axelos 1966, Axelos 2015 especially part III).

Both Heidegger and Axelos, like Arendt, shared concerns about our increasing uprootedness from Earth caused by the planetarization of technology. However, none of them fully realized the new anthropocenic circumstances we live in, of a highly unstable and increasingly insecure relationship with our planet. Furthermore, while they acknowledged the need for a new approach, they did not offer a comprehensive outline of its specific content.

The Indian historian Dipesh Chakrabarty has taken on a prominent role in his efforts to articulate the key characteristics of planetary thinking. This form of thinking is crucial in addressing the challenges brought about by the Anthropocene and the substantial transformations in the human condition. The subsequent two subsections will be dedicated to a reflective exposition of his ideas on this subject.

A. Globalization is Modernity Becoming Hypertelic

Chakrabarty put forth two significant assertions within the domain of philosophy of history. The first claim is that the globalization revealed the planetary, indicating that we are not witnessing the conclusion of the capitalist globalization project, but rather "the arrival of a point in history where the global[ization] *discloses* to humans the domain of the planetary" (Chakrabarty 2021, 80). In other words, "[t]he global[ization] discloses the planetary" (Chakrabarty 2021, 207) in a more concise formulation.[7] In this sense, according to him, the planet, seen as an idiosyncratic entity capable of becoming disruptive and threatening to all our vital and existential projects, has always remained latent, yet unexplored in this regard, or has never been fully incorporated into the realm of humanistic thought.

[7] The title of the Postscript of Chakrabarty (2021) is "The Global Reveals the Planetary. A Conversation with Bruno Latour."

The second claim is that we are all living now at the cusp between the global and the planetary (Chakrabarty 2021, 207), i.e., that "[t]he age of the global as such is ending. And yet the quotidian is about both invoking the planetary and losing sight of it the next moment" (Chakrabarty 2021, 85). According to him, the global was the culmination of a historical process that began in the fifteenth century "that includes European expansion and the development of a technology that can make the sphere we live on into a globe for us" (Chakrabarty 2021, 207). The planetary, on the other hand, began in the beginning of the 20th century with the Haber-Bosch process of artificial nitrogen fixation in the biosphere, the main disruptor of the natural biogeochemical cycle of nitrogen.

By considering both of these assertions together, we can infer that Chakrabarty portrays the present era as liminal. This depiction suggests we find ourselves in a transitional space-time, existing between the global(ization) and the planetary. This transitional period acts as a bridge, linking the conclusion of one epoch to the emergence of another.[8]

Chakrabarty's assertion is that the Anthropocene signifies a transitional phase from the Global(ization) to the Planetary. More specifically, it is a time when these two realms are intricately intertwined in a relationship characterized by mutual endangerment.

This transition is occurring because Globalization (and the Anthropocene) does not signify the fulfillment of the project of Modernity as an emancipatory civilizational process. Instead, it is an unintended and unforeseen circumstance that has surpassed its intended objectives, or as French sociologist Jean Baudrillard would describe it, has become hypertelic. It results from a "fatal strategy" (not a trivial strategy), a strategy that was successful up to a certain moment and to a certain extent, but later generated an unplanned and undesired excess (Baudrillard 1983, 30).

B. Prodromes to Planetary Thinking

"The sense of the 'end of the world as we knew it' is intensifying," declared Hanusch, Leggewie, and Meyer, and "this could be the 'planetary' moment that moves beyond the earth – [i.e., the Global] and human-centered ideal of globalization" (Hanusch – Leggewie – Meyer 2021, 7, my translation).

As mentioned in the first part, the absence of a conceptual framework hampers our capacity to understand and navigate the transformative changes that arise from these new, liminal circumstances. As a result, we encounter a sense of ambiguity, confusion, and disorientation concerning the future.

[8] The use of the term "cusp" aligns with the notion of "liminal," indicating a point of transition between two distinct states or the dividing line between two significantly different elements. For instance, when we refer to being "on the cusp of adulthood," it signifies the phase of moving from youth to adulthood.

To overcome this peculiar and challenging situation, establishing a planetary thinking is imperative. In Chakrabarty's work, specifically in chapter 3 entitled "The Planet: A Humanist Category," we discover valuable insights that provide essential guidance for this undertaking (Chakrabarty 2021, 68 ff.).

Chakrabarty acknowledges that he is not the first to embrace a "planetary turn." He draws inspiration from Gayatri Spivak's concept of "planetarity" (Chakrabarty 2021, 71).[9] He embraced in particular Spivak's notion that planetary thinking must be approached distinctively from global thinking, which is characterized as a view from nowhere. Instead, it should be rooted in a perspective that encompasses multiple viewpoints from below, interconnected to attain a more comprehensive comprehension of the state of the planet. In her own words: "The globe is on our computers. No one lives there. The 'global' notion allows us to think that we can aim to control globality. The planet is in the species of alterity, belonging to another system; and yet we inhabit it, on loan" (Spivak 2015, 291).

In furtherance of the examination of the contrasting aspects between planetary thinking and global thinking to comprehend their distinctive nature, Chakrabarty elucidated five more essential characteristics that set them apart, while also acknowledging their complementary nature: "For all their differences, thinking globally and thinking in a planetary mode are not either/or questions for humans" (Chakrabarty 2021, 85).[10]

Chakrabarty argues that our relationship with the planet has undergone a radical transformation. It can no longer be structured in terms of mutuality, as previously suggested by thinkers like Heidegger using the term "Earth" to denote the place we inhabit, or Arendt using the term "World" to represent the existential space, or even the concept of "Globe" embraced by Globalization theorists. He emphasizes, "to encounter the planet in thought is to encounter something that is the condition of human existence and yet remains profoundly indifferent to that existence" (Chakrabarty 2021, 70).

According to Christophe Bonneuil, this "implies an encounter, without a will to power, with a 'radical otherness' " (Bonneuil 2023, 2, my translation). However, it is precisely this viewpoint that we struggle to let go of in our prevalent global thinking – our perception of the planet as a realm over which we have complete dominance and control, spanning across the terrestrial, maritime, and aerial dimensions. In other words, this corresponds to a reform of the project of Modernity and renouncing our attempts to become, as Descartes aptly put it in his *Discours de la méthode*, "the masters and possessors of nature" (Descartes 1966, 168, my translation).

[9] The Indian literary theorist and feminist critic originally explored the notion in Spivak (2003).
[10] For this, see also Bonneuill (2023).

As Chakrabarty argued back in 2009 in his well-known article "The Climate of History," (cf. Chakrabarty 2021, chapter 1) the category of historical understanding must be reconsidered. The emergence of the Anthropocene era has necessitated a shift away from relying solely on short-term perspectives to organize our lives. While individuals generally think in terms of years or decades, professional historians are trained to explore longer timeframes that encompass centuries or even millennia. These longer temporal extensions are inherent to the realm of global thinking.

Nowadays, however, we are regularly confronted with explanations from natural historians that establish connections between current ecoclimatic disruptions and enduring patterns and trends that span millions or billions of years. These explanations delve into temporal scales that go far beyond our typical short-term perspectives, exposing us to the vastness of deep time. "The global," he said, "refers to matters that happen within human horizons of time – the multiple horizons of existential, intergenerational, and historical time – though the processes might involve planetary scales of space" (Chrakrabarty 2021, 86).

In planetary thinking, these different historicities – of individuals, societies, civilizations, and the Earth (and life within it) – can no longer be assumed as separate, but instead need to be integrated. This integration calls for close collaboration between the natural sciences and the humanities, which has yet to be fully realized.

Another aspect identified by Chakrabarty concerns the association of global thinking with a human-centric worldview, specifically that of capitalism and globalization, while planetary thinking reflects an emerging planet-centric worldview. "The globe," he states, "is a humanocentric construction; the planet, or the Earth system, decenters the human" (Chrakrabarty 2021, 3).

Global thinking, as Chakrabarty describes it, is rooted in a humanocentric perspective. It views the world through the lens of human interests, often prioritizing economic growth, human welfare, and technological advancements. In this paradigm, the Earth is seen as a resource to be exploited for human benefit, often leading to environmental degradation and social inequalities.

On the other hand, planetary thinking signifies a shift toward a planet-centric worldview. It recognizes the Earth as an interconnected system where human beings are just one part of a larger, complex web of life. Planetary thinking acknowledges the interdependence of all living organisms and emphasizes the need for sustainable practices that consider the well-being of the entire planet, rather than just human interests.[11]

[11] One might argue that there is more than the biosphere to be considered. However, I believe that our current aim is to maintain the stability of the biosphere. We have learned from the previous five major extinctions that the planet lacks moral sensibility. We can extend the same concern to the

Global thinking faces the problem of sustainability. In contrast, planetary thinking is challenged and involved in the habitability problem, whose "central concern is life – complex, multicellular life, in general – and what makes *that*, not humans alone, sustainable" (Chrakrabarty 2021, 83). The two problems obviously co-exist, but the second one is not only centered on humans but involves other species and even all life on Earth. "the planetary mode of thinking," says Chakrabarty, "asks questions of habitability, and habitability refers to some of the key conditions enabling the existence for various life-forms including *Homo sapiens*" (Chrakrabarty 2021, 87).

The connection between these two issues appears to be clear. Sustainability conditions habitability. The extent, intensity and acceleration of the global exploration and extraction of planetary resources, the amount of negative externalities generated by these processes, and the poor recycling and slow renewal of the natural resources provoked the now entangled problems of sustainability and habitability. This is why Chakrabarty stated:

> the humanocentric idea of sustainability will have to speak to the planet-centric idea of habitability. For if my proposition that the intensification of the global has made us encounter the planet is true, then the age of the *purely* global that European empires and capitalism created and that theorists have pondered and historians documented and analyzed since the 1990s is now over. We live on the cusp of the global and the planetary (Chrakrabarty 2021, 204).

Devising solutions to these two intertwined problems entails reforming current political and economic institutions, all designed on human-centered assumptions, and ultimately refounding politics itself in a new philosophical understanding of the human condition: "We increasingly see how hopelessly humanocentric all our political and economic institutions still are. The political eventually will have to be refounded on a new philosophical understanding of the human condition" (Chrakrabarty 2021, 196).

An additional aspect to consider pertains to the moral referential associated with these two modes of thinking. Global thinking is driven by a set of values aimed at shaping global existence, forming the basis for geopolitical governance. Conversely, planetary thinking, "has nothing moral or ethical or normative about it" (Chrakrabarty 2021, 90). As clarified by Bonneuill, "since the forms of habitation of our planet by life

ongoing sixth extinction. The ecological dimension takes priority. In their excellent book, Clark and Szerszynski (2021) address the crucial question in Chapter 2, "Who speaks through the Earth?" and argue that social thinkers have a significant role in addressing Anthropocene issues. However, at the end of the day, the solutions to major Anthropocene problems must be provided by natural scientists and engineers.

have been multiple, no state of virgin nature, no past geological state (whether it be the Holocene, the Paleozoic, etc.) can be designated as a reference state to be regained" (Bonneuill 2023, 2, my translation).

In the following table, we can depict the distinct aspects of the two forms of thinking: global thinking in recession and planetary thinking in emergence, based on the Chakrabartian conception.

Form of Thinking Aspects	Global Thinking	Planetary Thinking
Standpoint	View from nowhere, detached from specific perspectives (katascopic)	Rooted in multiple perspectives from below (anascopic)
Relationship with Planet	Views the Earth as a resource to be exploited for human benefit	Recognizes the planet's indifference to human existence
Historical Understanding	Relies on short-term perspectives and focuses on human-centric historical time	Considers longer temporal scales and the integration of different historicities
Worldview	Human-centric: prioritizes economic growth and human welfare, often leading to environmental degradation	Planet-centric: emphasizes the interdependence of all living organisms and sustainable practices
Problem Focus	Emphasizes the significance of sustainability, primarily directing attention to fulfilling human needs	Places priority on the issue of habitability, taking into consideration the conditions required for diverse forms of life
Moral Frame of Reference	Guided by a set of values shaping global existence and geopolitical governance	Non-existent; yet to be conceived

Global Thinking vs Planetary Thinking: Dipesh Chakrabarty's conception

I conclude with the words of Yuk Hui, a philosopher of technology from Hong Kong, who has also been engaging in thinking planetary thinking:

> The planetary reveals itself as a gigantic force, which is both danger and hope. It remains the task of thinking to analyse it and develop an intimate relation with it. Thinking has to become a *planetary thinking*, one that takes the planetary as its own condition and exposes its limits (Hui 2020, 868).

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CAN HUMANITY SURVIVE THE ANTHROPOCENE? IT DEPENDS ON WHO WE THINK WE ARE

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PARKES, G.: Can Humanity Survive the Anthropocene? It Depends On Who We Think We Are
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The question in the title is prompted by our failure to deal with the climate and environmental crises. This in turn derives in part from a dubious but widespread idea of who we are as human beings: that we are basically free and independent individuals in economic competition with others for all the satisfactions that late capitalism offers. In recent times the libertarian Titans of Big Tech have added a strong dose of Cartesian mind-body dualism to the formula. More beneficial ideas of who we are can be found in numerous indigenous tradition, and especially in Chinese philosophy, which understands human beings as relatives in a dynamic network of interactions with our fellow humans, the biosphere, and the powers of Heaven and Earth. Together with corresponding views in our own philosophical tradition, these ideas provide good grounds for a dialogue with China about cooperating to resolve our environmental predicament.

Keywords: Anthropocene – China – Climate – Individualism – Internet – Libertarian – Relational Ontology – Xi Jinping

> Everything, o monks, is burning, burning with the fire of craving.
> Bhikkus, the All is aflame, enflamed with the fires of hatred.
> All things, o priests, are on fire, on fire with the flames of delusion.
> Monks, all the senses are burning, ensuing feelings are on fire.
> (*Ādittapariyāya Sutta*)

Those are excerpts from the Buddha's well-known "Fire Sermon," which he delivered to an assembly of a thousand monks who had come from a cult of fire worshipers – hence all the fire imagery in discussing the human experience. The year 2021 was a record year for wildfires world-wide, with unprecedented conflagrations in countries all over the world. The war-caused fires burning in Ukraine right now are not unrelated to those wildfires. Russia is the world's leading exporter of natural gas, the second largest exporter of oil, and the third largest of coal. And if we in Europe had weaned

ourselves from those Russian supplies decades ago – when it was already clear that burning fossil fuels was disrupting the climate – Putin could not have afforded his war against Ukraine. And so, the quicker we end our dependence on fossil fuels, the less able he'll be to start another war.

I'm beginning with fire because the consequences of our pyromania as a species are now severe enough to prompt the question of my title: Can we human beings survive the Anthropocene, the new epoch of the Earth System that we have brought about? The natural sciences – and common sense, if we think about it – make it clear that as a species we are totally dependent for our survival on the biosphere and other Earth Systems. If we burn up our resource base, we extinguish ourselves as a species. It could well turn out, in the most tragic of ironies, that after setting its stamp so firmly upon the Earth as to give its name to a new geological epoch, the human race will bring itself to a lethal finish by disrupting the natural systems on which its existence depends. The pyromaniac Anthropos might well put an end to the Anthropocene.

I. Where We Are Now

Let's begin by considering what's behind our pyromania – because, like the audience for the Buddha's fire sermon, we too are fire worshipers, even if covertly. When early humans learned the uses of fire, it made them more human: *homo pyrotechnicus*. Human-made fire was at first restricted by the amount of fuel available, and then expanded with the advent of agriculture and the ability to grow vegetation for burning. But with "industrial fire" to power steam engines and steam pumps, modern miners for fuel could delve deeper into the earth than ever before, reaching back in geological time to extract fossil biomass that was deposited during the Carboniferous Period. We're burning more than ever before, though the fires are now hidden from our sight in the furnaces of fossil fuel power stations.

It's no wonder that our relentless burning of coal, releasing energy that came in from the sun over 300 million years ago and emitting massive amounts of carbon, should now be throwing Earth's energy balance off by filling the atmosphere with heat-trapping gases. According to the latest reports from the Intergovernmental Panel for Climate Change, the sixth series since 1990, this human activity is having a potentially catastrophic effect on the Earth System (IPCC 2023). These reports highlight two crucial issues: the probable increase in global heating over the next few decades, and the risk of going over several climate "tipping points."

The problem is that we've already pumped so much greenhouse gas into the climate system that, even if we drastically reduce our emissions almost immediately, we're still likely to produce a temperature increase of at least 1.5°C over pre-industrial times by the middle of this century. And if the year 2022 was an indication of how things

are at an increase of around 1.1°C, just think of what a 50% increase will bring. In complex systems like the Earth System such increases have exponential effects, so the extreme weather is likely to be *several times* worse than now. Not a happy prospect.

Climate scientists have been complaining for decades that the IPCC reports consistently *underestimate* the risks of going beyond several climate tipping points, but the latest series finally warns of the dangers. There isn't room here to discuss the grim consequences of overshooting, but the growing literature on Earth Systems' tipping points is easily accessible.[1] And even if we were able to somehow resolve the climate crisis, continued *economic growth* will make the Earth uninhabitable in any case. To preserve the integrity of the biosphere that sustains human existence, we have to put an end to soil depletion, deforestation, overfishing, chemical pollution, and destruction of species and natural ecosystems. But that's another story, one too long to tell here.

The climate situation is made worse by the fact that the big banks are continuing to lend billions to the fossil fuel concerns, which are already enjoying obscenely huge profits, so that they can develop *new* sources from which to extract more carbon for burning. The biggest offenders are (in order of lending volume as of 2022): JPMorgan Chase, Citibank, Bank of America, ICBC (China), BNP Paribas (France), Bank of China, Wells Fargo, HSBC (UK), Barclays (UK), Industrial Bank (China).[2] A review by *The Guardian* has identified no fewer than 195 "carbon bombs" under development – defined as "gigantic oil and gas projects that would each result in at least a billion tonnes of CO_2 emissions over their lifetimes" (Carrington 2022). All the governments involved (Australia, Canada, the Middle East, Russia, the United States) pledged at the Paris Climate Accords in 2015 to reduce their carbon emissions drastically – and yet they're now approving the development of all these projects that are *guaranteed* to fry the planet.

To neutralise such ruthless forces, we need not only judicious action, but also political *activism*. Because if we in the overdeveloped world, immersed in the consumerist dream of endless abundance on a finite planet, fail to change our lives, the consequent scarcity of resources will *oblige* us to reduce our consumption. Is that really how we want to live? Lives of deprivation and violent strife, assailed and battered by the formidable powers of Nature? Alternatively, we could change our ways now, and live far more modestly, with less environmental destruction and jeopardy to ourselves.

[1] See, for example, Lenton (2019).
[2] See Niranjan (2023).

II. Two Ancient Views on How We Are

The idea of the Buddha's Fire Sermon is that our experience as human beings is ordinarily permeated by the "fires" of craving, hatred, and delusion, which keep us bound to cycles of desire and frustration. As long as we think of ourselves as independent agents striving to fulfil their desires, we are bound to be frustrated. But if we realise our actual interdependence, we can escape those cycles and find a Middle Way between clinging and detachment, indulgence and asceticism.

In a later Buddhist scripture, *The Lotus Sutra*, human beings are likened to the children of a rich man whose huge mansion is burning down, but they're so joyfully absorbed in the games they're playing that he can't persuade them to escape from the burning house (*Lotus Sutra*, ch. 3). But when the father then tells them there are far more attractive playthings outside the mansion, which he is happy to give to them, they all rush out of the house in high anticipation. They find a selection of animal-drawn carts (the equivalent of sports cars for modern children), each of which is emblematic of a particular school of Buddhist teaching. The burning house is the world of everyday experience, which generates desires and craving. We humans are like those children in the story, beings in whom the flame of desire burns so bright as to blind us to the risks of unrestrained satisfaction of desires. Humanity needs to grow up and wake up (the Buddha's name means "the awakened one"). Can't we follow one of those Buddhist schools by moderating our desires, becoming aware of the consequences of our actions, and taking responsibility for them?

Modern western civilisation is built on the basis of fire, on burning fossil fuels. Unwittingly, we belong to the cult of Prometheus, the Titan in ancient Greek myth who stole fire from the Gods to give it to humans. Let's understand myths in the spirit of the philosopher Sallustius, who wrote about them: "These things never happened, *but always are*" (Sallustius 1926, sec. IV) – meaning that myths are always playing out behind or beneath what humans do. In addition to fire, Prometheus also gave us the stolen arts of agriculture and animal husbandry, house- and ship-building, as well as techniques for *mining*. These arts are *technai* in Greek, which is the root of our word "technology," and their purpose is to make human life more comfortable.

Plato's discussion of the Prometheus myth (*Protagoras* 321c – d) suggests significant limitations to the gifts that the Titan bestowed upon us: while Prometheus was able to steal "technical wisdom" from the gods, "humanity did not get the political wisdom, for that was in the keeping of Zeus." Driven by the spirit of Prometheus, humanity has become supremely skilled in the technical arts of survival and comfort creation (while forgetting that these skills are gifts and stolen goods); but it lacks the *political* arts that would integrate technological expertise with the art of living well together in diverse communities.

And let us not forget that Prometheus, whose sacrilegious theft set in train so much technical ingenuity, suffered dreadful punishment for his crime. Zeus had the Titan nailed to a rock on a mountain-top for a thousand years, with an eagle coming every day to devour his liver – which would regenerate overnight, to be ready for another bout of torment in the morning. We humans do of course need to use fire, and build houses, and practice agriculture in order to survive, but we now need to employ these techniques *sustainably*. If instead, as protégés of Prometheus, we continue to let his spirit drive us to excess in burning fossil fuels, treating soil with fertilisers and crops with pesticides, and industrially producing meat from animals, it would be naïve not to expect some kind of painful backlash.

III. Libertarian Individualist Ideology

One reason for the severity of the climate crisis is that a small group of neoliberal economists allied with some very rich people launched a covert "War of Ideas" (their term) to persuade the inhabitants of the free world that we are basically consumers in a capitalist system that's guaranteed to satisfy our material desires. The story begins in London, shortly after the Second World War, but with an Austrian economist from Vienna, Friedrich August Hayek, who urged his fellow intellectuals to engage the "battle of ideas and policy" in order to promote the cause of freedom (cited in Cockett, 1995, 123 – 24). In a world suffering the consequences of totalitarianism, Hayek's book from 1944, *The Road to Serfdom*, was a best seller, and his message of untrammelled freedom for the individual as well as economic markets was received with great enthusiasm.

Another key assumption of neoliberal ideology, deriving from social Darwinism, is that we live in a world dominated by *competition*: as a species, homo sapiens gained the position of apex predator by competing with other species; and within the species, we compete as individuals in a struggle for success in which the cleverest prevail. This is how free-market capitalism works: leave it up to the Market, and everything will be better for everybody, including the consumer (but especially the capitalist or CEO). If the free individual is to thrive, the free market must be kept free, and taxation and regulation kept to a minimum.

Thanks to the influence of Hayek, and then Milton Friedman and Paul Volcker, neoliberal ideology came to dominate the policies of Ronald Reagan and Margaret Thatcher from 1980 onward – and also outward, to conquer much of the rest of the world's political leadership. The ideology thrives especially in the United States and United Kingdom to this day.

With her famous pronouncement, "There is no such thing as society. … There are individual men and women and there are families" (Thatcher 1987), Thatcher

perfectly embodied the spirit of neoliberalism – and its expansion from economics into politics and society as "libertarianism." Thatcher was an intelligent woman, but she got this one backwards: what's real are the populations that make up the society of any given country (as in "Austrian society"), whereas "the individual" is an abstraction from that concrete reality. Thatcher's credentials as a supreme warrior in the libertarian War of Ideas are summed up in her remarkable statement of purpose from 1981: "Economics are the method; the object is to *change the heart and soul*" (Thatcher 1981, emphasis added). It's remarkable that so few people found this objective sinister. In any case she and her followers have been unusually successful in changing the hearts and souls of countless people since then.

Some of that success is due to an effective campaign in the War of Ideas to convince people that *economics* provides the most important measure of human flourishing. But it's only a recent conceit that economics, and economists, can give us the right standards. Indeed, it would be "splendid" (as one of the greatest modern economists, J. M. Keynes, once suggested) "if economists could manage to get themselves thought of as humble, competent people, on a level with dentists" (Keynes 1963, 373).

As a result of Reagan's and Thatcher's policies, the rich libertarians have essentially *bought* the political system, especially in the United States. The Koch Brothers, for example, and their Freedom Partners Action Fund have been major supporters of the War of Ideas – buying their way into colleges and universities, setting up right-wing think tanks, and founding fake grassroots "citizen activist" groups to spread and weaponise the libertarian ideology. They and their allies donated millions to get Donald Trump elected, and then immediately issued a "Roadmap to Repeal," containing a list of things they wanted the new administration to do. At the end of 2017 they congratulated themselves, and the Trump administration, for getting almost all of those things done: a highly successful business transaction (see Parkes 2021, 78ff.).

If you buy a government – and this has also happened in the UK and many other countries – you have a great deal of power over how people live, especially if you control how free-market capitalism operates (see Reich 2021). This is a widespread problem, but with a fairly simple solution: *Get the money out of politics*! Simple but not easy: you have to make democracy work and persuade the 99.9 percent to *vote*.

IV. High Tech Spectacle

In order to promote the neoliberal agenda further, and influence how people want to live, you also need to make sure your libertarian allies (like Rupert Murdoch) control the mass media – and then you can probably count on social media to do the rest. In expanding the Free Market so as to encompass *all* human activity, the right-wing

billionaires have had to work closely with the libertarians behind the latest information and communications technology, the Tech Titans of Silicon Valley.

The Titans of Big Tech have given us the supreme version of what Guy Debord in *The Society of the Spectacle* presciently described as *le spectacle*. The key to the spectacle is that "everything that used to be lived directly has now shifted into a *representation*" (Debord 1994, § 1). That was in 1967, when television and cinema were the dominant visual media: Debord should see us now, gazing transfixed into the representation-filled virtual spaces in our smartphones.

The Spectacle is a profoundly un-Buddhist enterprise, designed not to wake us up but to keep us in a stupor. Its soporific quality comes from the transformation of things into images: "Simple images become real beings and effective motivators of hypnotic behaviour." And when consumerism shifts into high gear, the sleep is anything but restful: "The spectacle is the bad dream of modern society in chains, and ultimately expresses nothing more than its desire to sleep. The spectacle is the guardian of that sleep" (Debord 1994, § 18, 21). A society in chains, captivated and motivated by images – just as in Plato's Cave – a mass of sleepers and restless dreamers.

It's also a society in which the spectacle deliberately intensifies individualism. Debord writes: "*Isolation* is at the basis of the technologies, and the technical process isolates in return. From the automobile to television, the goods *selected* by the spectacular system are also its weapons for constantly reinforcing the conditions that produce 'lonely crowds'" (Debord 1994, § 28). Nowadays our favourite pastime seems to be *screening reality* in isolation. Most people think of screens as windows of some kind, through which we gain access to another world. But in its original meaning a screen is something that blocks or *conceals* some of what's around us: room partition screens, fire-screens, window-screens, and so forth. One root of the English word "screen" means *shield* – it's even better in German: *Bildschirm*, literally, "image-shield." So, what are these images on our screens shielding us from, or against? Our mortality, for one thing, surely.

Naomi Klein's excellent study of the power of corporate branding, *No Logo*, showed how forcefully the modern corporation imposes on us an ideology of the good consumer life. She described how the "corporate obsession with brand identity is waging a war" on many institutions, but crucially "on youthful identities," on young people's sense of who they are (Klein 2000, 5). That was in 1999, and many youthful identities are by now completely dissolved into profiles on social media and immersed in late capitalist fantasies about the good human life.

As good libertarians, the Tech Titans operate more or less free *from* taxes and regulations, and free *to* addict and manipulate their users, depriving them of time to attend to where they actually are, and blinding them to any risks – from climate change,

for example – that might be imminent. They are expert at addicting their "users" because they (or their researchers) have studied their Marshall McLuhan, who remarked some years earlier than Debord the narcotic effects of new media technologies. If "the medium *is* the message," as McLuhan suggests, then worrying about the "content" of new media is beside the point. "Our conventional response to all media, namely that it is how they are used that counts, is the numb stance of the technological idiot. For the 'content' of a medium is like the juicy piece of meat carried by the burglar to distract the watchdog of the mind." And amidst all this distraction, our minds are being changed unobtrusively by the manipulators of Silicon Valley, as they surreptitiously confine us in what McLuhan called "prisons without walls" (McLuhan 1964, 18, 20).

Few people have stated the problem more succinctly than the novelist J. M. Coetzee. The protagonist of his autobiographical novel *Youth* is a young computer programmer in London in the early 1960s. In the course of his evening readings in the history of logic he begins to wonder about the mainframe computer: "There are many alternative logics, he is convinced (but how many?), each just as good as the logic of *either/or*. The threat of the toy by which he earns his living [the computer], the threat that makes it more than just a toy, is that it will burn *either/or* paths in the brains of its users and thus lock them irreversibly into its binary logic" (Coetzee 2003, 160). We do well to burn the twenty words of that threat into our awareness in letters of fire — since our immersion in the digital world, with its stark binary logic of *either/or* (zero-one, this-that, black-white, on-off, yes-no, for-against), may well be responsible for much of the polarisation and discord that are unsettling our contemporary societies.

But why we should allow people like Jeff Bezos, Elon Musk, Sundar Pichai, Peter Thiel, Mark Zuckerberg et al. to determine how we want to live? Who do they think *they* are? The rich libertarians initially planned to escape taxation and regulation by going offshore, into "seasteading" communities. But now that their War of Ideas is causing the whole planet to burn, they're aiming higher – to get the hell out, and colonise the moon, or even Mars (see Rushkoff 2022). And since the human body sustains irreparable damage from spending too much time off-planet, we can reliably infer that these adventurers are good Cartesians who regard themselves primarily as *minds*, and only contingently as bodies.

The suspicion is confirmed by their Plan B: in case they're unable to liberate themselves from the Earth, they'll have the contents of their formidable brains uploaded to somewhere in "the Cloud," while their bodies are cryonically deep-frozen in anticipation of resurrection once techniques of reversing ageing have been perfected. The egomania is impressive: these people are determined to hang around for as many aeons as possible.

But just because that's how they think *they* are, there's no need for us to buy into this kind of self-understanding. To lessen the risk of mental contagion, we could simply tune out for a while, and disconnect from much of what the Internet offers. Just unplug and turn off what we don't need. But if we do that, won't we get bored? And who, then, are we, if we're not good consumers?

V. How Else We Might Be

Let us try thinking of ourselves as basically *inter-relatives*: after all, we all come into the world as issue of egg and sperm interacting. For the ancient Chinese thinkers, we're related to family and friends, and other members of the society we live in; to all the natural beings that surround and sustain us; and to the *things* we live with (so-called "inanimate" things). This means going beyond the human in our self-conception, to include all other beings in the world.

According with an archetypal understanding found in many philosophical (and especially indigenous) traditions, one that regards all things as condensing out of and dissolving back into an all-pervasive medium, the Chinese understand the world as a dynamic field of *qi* energies. These energies range along a continuum from rarefied and invisible (as with the breath) to condensed and substantial (as with rock), and also oscillate between the polarities of *yin* and *yang* (as with electric charges).

A major feature of this field is "sympathetic resonance" (*ganying*), whereby phenomena resonate especially with others of the same kind, often at a distance. Pluck a zither string tuned to a certain note and a similarly tuned string on a nearby instrument will vibrate in sympathy. In the *Book of Changes* (*Yijing*), in the commentary on the first hexagram we read: "Things that accord in tone vibrate together. Things that have affinity in their inmost natures seek one another" (Baynes 1967, 382). And for hexagram 31, "Influence," with a lake above and mountain below, it is written: "The forces of the weak above and the strong below stimulate and respond to each other, so that they unite. / Keeping still below and joyfulness above. The masculine subordinates itself to the feminine" (Baynes, 541). And through this union of the mutually influenced there emerge new life and the myriad things.

In a world of *qi* energies, all things are interrelated, some more closely than others, and so ecological thinking is a natural development. A person's project does well to integrate their energy expenditures with the propensities of the energy field, represented by the powers of Heaven and Earth. Relational understandings of ourselves in the world are all-important in our current situation, and we can appreciate their relevance by considering their role in speeches by China's President, Xi Jinping. In his early career he quoted frequently from the Chinese philosophical classics and has continued to promote China's transformation from an industrial to an "ecological

civilization." It is sad that the Xi regime has failed to follow through on its commitment to ancient Chinese ideas, but it's the ideas that are important – given that they can be enacted by anyone who isn't infected by Cartesian individualism.

Let's begin with a speech that Xi gave at Peking University on the 95th anniversary of the May Fourth Movement (Xi 2014, 185 – 99). His topic was "the Core Socialist Values," but he spent much of the speech praising the core values of the "ancestors in ancient China" and the glories of "traditional Chinese culture." "Socialism with Chinese characteristics" has to become socialism with ancient Chinese philosophical characteristics. After weaving several passages from classical Confucian texts into his address, he then says "Here are some quotations from ancient classics that I'd like to share with you today" – and goes on to hit the audience with no fewer than *twenty* of them in a row.

Xi launches his list of quotes with two fundamental ideas from the beginning of the Chinese tradition: "The people are the basis of the state," and "Nature and the human work as one." Beginning with the second: it refers to an original harmony between the human and the powers of Heaven and Earth: a harmony that has been lost and is well worth regaining. The practical implication is that human activities tend to fail when they conflict with the powers of Heaven and Earth and are more likely to succeed when integrated with them. Our insistence on burning fossil fuels, pursuing massive deforestation, and raising cattle on an industrial scale generates a volume of greenhouse gas emissions that is throwing off the Earth's energy balance, disrupting the dynamic harmony that prevailed during the Holocene Era. If we are to let the biosphere regain its integrity, we have to restore harmony among the Heavens, the human world, and the Earth as much as we can.

When Xi returned to the topic of "the harmonious coexistence of humanity and nature" a couple of years later, he invoked this time the ideas of Frederick Engels: "According to materialistic dialectics … the world is an interrelated whole and an interactive system." He then emphasised that "human development activities must respect, accommodate, and protect nature; otherwise, nature will retaliate against us" (Xi 2017, 225, 228). To illustrate the point, he paraphrased that wonderful passage in *Dialectics of Nature* (in 'The Part Played by Labour in the Transition from Ape to Man') where Engels gives an account of civilisations in Mesopotamia, Greece, Asia Minor, and Europe that ignored the principle of protecting nature – and suffered dire consequences as a result (Xi 2017, 228 – 229).

Xi went on to list some major twentieth-century environmental disasters in the West, followed by a series of environmental abuses in the history of China up to the Qing dynasty in the nineteenth century, coming to this eminently sensible conclusion: "We must take warning from these cases." These are salutary reminders indeed –

along with the devastating consequences of Mao Zedong's "war against nature," which began with the Great Leap Forward. In stark contrast, Xi quoted Engels again: "Let us not flatter ourselves overmuch on account of our human victories over nature. For each such victory, nature takes its revenge on us" (Xi 2017, 229 – 230).

In an interesting turn, Xi then showed how these ideas of Engels are anticipated in the ancient Chinese classics, citing relevant passages from the *Analects* of Confucius, the masterpiece by the third great Confucian thinker, *Xunzi*, and the *Spring and Autumn Annals of Lü Buwei* (Xi 2017, 230 – 231). The gist of the passages he cites is that human activities such as fishing, hunting, and tree-cutting need to be practised *sustainably* (to use a modern term), so as not to deplete the natural resources on which our existence depends. These are perfectly timely ideas, and all the more pertinent in the light of Xi's insistence on their compatibility with Marxist socialism on these topics – grounds, surely, for a productive conversation with western countries on environmental issues.

Xi's ambition for China is to make it into "a modestly prosperous society," rather than an opulent paradise of consumerism. His often-stated opposition to "hedonism and extravagance and waste" (Xi 2014, passim) is correspondingly absent from political rhetoric in most western countries. This attitude is perfectly in line with the Confucian encouragement of modesty and restraint (though not to the point of asceticism), as well as the Daoists' promotion of sufficiency and their warnings against excess. An emphasis on moderation, which also comes from the Chinese Buddhist tradition, is perfect for our present era, now that we've brought the age of planetary abundance to an end. It's a pity that the Chinese middle classes have fallen for consumerism in such a big way, and we should hope that the Chinese Communist Party can persuade them that the pursuit of greater wealth and ever more pleasure is a dead end – since natural limits will in any case put an end to excessive levels of consumption.

In a speech to the Third Plenary Session of the 18th CCP Central Committee in 2013, Xi addressed the question of how to "improve the country's resource management system." He reminded his colleagues that "the people together with mountains, waters, forests, farmlands and lakes form a living community," and emphasised that "to control the exploitation of natural resources and restore ecosystems, we must follow the laws of nature" (Xi 2014, 95 – 96). This allusion to Laozi's *Daodejing* (ch. 25) sums up the Daoist attitude perfectly. Human activities meet with success when they follow the ways of the greater powers of Heaven and Earth, which in turn exemplify the spontaneous patterning of *dao*.

When Xi inspected flood control measures in Anhui province in 2020, he again recommended "following the laws of nature" in dealing with flooding, and praised the legendary Emperor Yu's sensible "way of dealing with water." This echoes the

passage in the *Mencius* where Yu is praised for taming the floods by "following water's natural ways" (*Mencius* VI.B11). Xi's attitude is a welcome change from former president Jiang Zemin's, who during a ceremony at the Three Gorges Dam dismayed ecologically-minded academics in China by triumphantly repeating the Maoist slogan: "The human being must conquer nature."

It was an encouraging sign when China for the first time hosted a major United Nations conference on the environment (the 2021 UN Biodiversity Conference, in Kunming), and when Xi in his keynote speech confirmed China's transition to an "ecological civilization." All the preceding ideas concerning humans and the natural world constitute a salutary counterweight to the hyper-individualistic view of the human being promoted by the libertarians, whereby we flourish by extracting as much from the natural world as we can, regardless of the consequences. The problem is that Xi Jinping doesn't appear to be following through on his classical Chinese philosophy-inspired rhetoric. In a speech in 2022, for instance, he said: "China's low-carbon ambitions must not interfere with normal life" (Ni 2022). Recent studies have shown that China is suffering, and will continue to suffer, more than most countries from extremes of weather brought on by global heating. A consideration of the massive flooding that hit the country last year makes it clear that extremes of weather are *already* interfering with normal life for many millions of Chinese (see Parkes 2023).

VI. Well-Being of the People

The very first of Xi's twenty "quotations from ancient classics" at Peking University was this maxim attributed to Emperor Yu: "The people are the basis of the state" (2014, 190). He omitted the beginning of the dictum: "The emperor must cherish the people and never abuse them," but he often acknowledges that the ruler's obligation to "take good care of the people" is also just what Marxist socialism demands when applied to Chinese conditions. The Party must be, as Xi frequently reminds his colleagues, "dedicated to serving the people" (Xi 2014, passim). This is quite in keeping with the ancient Chinese idea that the emperor as the Son of Heaven must take care of the people – as the basis of the state – as if they were his own children. If he fails, it will be a sign that he has lost the Mandate of Heaven and it's time for a new regime.

Ever since Yu's success in taking care of the floodwaters, rulers in China have been granted legitimacy on their ability to manage the power of water so as to ensure the welfare of the people. And insofar as the legitimacy of the Chinese Communist Party depends on its taking good care of the people for the long term, it had better not ignore or downplay the danger of global heating, which is already inflicting considerable harm – by way of flooding and sea level rise – on millions of Chinese citizens.

Many of Xi Jinping's quotations from the Chinese classics concern political philosophy: how best to govern, and how to achieve harmonious co-existence with other states. A key idea here is that the ruler and the state should lead by example rather than govern by coercion – a remarkable Confucian anticipation of the idea of "soft power," which is something the Chinese government has long been keen to cultivate. But because Xi Jinping's policies, domestically and internationally, have recently taken a path that's diametrically *opposed* to the Confucian political philosophy that he has advocated, China's soft power is at an all-time low.

The absence of any serious climate leadership from the world's former hegemon, the United States, opens the way for China to lead global action to cope with the climate crisis. In a speech to the CCP National Congress in 2017, under the lengthy title "Secure a decisive victory in building a moderately prosperous society in all respects and strive for the great success of socialism with Chinese characteristics for a new era," Xi said the country was "taking the driving seat in international cooperation to respond to climate change" (cited in Phillips 2017). The world is waiting for the sound of the engine starting. If he were to follow ancient Chinese wisdom in taking the lead on slowing global heating for the long-term benefit of the Chinese people, he would in one stroke legitimise the Party's rule *and* gain the gratitude of the whole world and the greatest soft-power triumph in human history.

We in the West would do well to encourage this course of action – and in any case we would ourselves benefit from adopting a view of who we are that opposes libertarian individualism and encourages thinking of ourselves as relatives rather than individuals. That would help us deal with the climate and biodiversity crises and make it more likely that humanity can survive the era that now bears its name.

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FREEDOM IN THE ANTHROPOCENE: BRINGING POLITICAL PHILOSOPHY TO GLOBAL ENVIRONMENTAL PROBLEMS

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In order to address the current global challenges, including climate change, it is helpful to connect environmental and technology ethics, and bring in political philosophy. After briefly exploring some relations between AI and climate change, this essay draws on my recent work – in particular the book *Green Leviathan or the Poetics of Political Liberty* – to discuss the topic of political freedom in the light of climate change and AI in the Anthropocene. Starting from the need for changing human behaviour into more climate and environmentally friendly directions, it discusses nudging and climate change, warns for the danger of green authoritarianism, and, inspired by the capabilities approach and critical theory, explores notions of freedom that go beyond the libertarianism-authoritarianism dilemma. This leads to a consideration of more relational notions of freedom that link freedom to justice and human flourishing and to a brief reflection on anthropocentrism and the modern focus on control.

Keywords: Freedom – Liberty – Anthropocene – Climate Change – Nudging – Anthropocentrism – Political philosophy – Modernity – Nussbaum – Marx

Introduction

We find ourselves in times of crisis, or at least that is how we experience our time. There is an economic, technological, energy, environmental, and climate crisis. In order to deal with this crisis, we need as many intellectual resources as possible. Unfortunately, today thinking about the environment and thinking about technology are often divorced. For example, in academia there is little interaction between environmental ethics and technology ethics. This is surprising, given that technology has a significant impact on the natural environment, and that in a deeper sense technology is part of how we relate to nature. Perhaps it has to do with the split between nature and culture, nature and

technology, and other modern divisions (here Latour's work is of interest, in particular Latour 1993). In any case, we need to explore ways to better connect both fields.[1]

Moreover, normative work on technology is often framed as ethics of technology, for example "ethics of AI" or "AI ethics," without explicitly considering the political. This is not only misleading since many so-called "ethical" questions discussed have a political dimension, but also because it neglects or at least discourages using political philosophy for thinking about technology. Instead, I propose to start from the claim, well-known in philosophy of technology, that technology is political (see for example Winner 1980), and I have argued that we therefore need political philosophy next to ethics (Coeckelbergh 2022). This means, for instance, that we need to evaluate new technologies such as AI in the light of political principles such as freedom, justice, and democracy. Given that many technological and environmental problems have at least a global aspect (if they are not entirely a global problem), we also need a more global approach to these issues.

After exploring some relations between AI and climate change – some ways in which AI can help with climate change but can also make things worse – this essay discusses the topic of political freedom in the light of climate change and AI in the Anthropocene. While it is clear that we will need to accept some limits to individual freedom in order to deal with environmental issues (Sťahel 2016) and climate change, more work is needed on which limits are justified and what the political-philosophical tensions and trade-offs are. Here political philosophy can help. Starting from my recent books *The Political Philosophy of AI* (2022) and *Green Leviathan* (2021), I will briefly investigate the issue of freedom (or liberty) with regard to the need for changing human behavior into more climate and environmentally friendly directions. This includes a discussion of nudging and climate change, a warning for green authoritarianism, an argument for a notion of freedom that goes beyond negative freedom and beyond the libertarian-authoritarian dilemma, and a criticism of anthropocentric politics and of the modern focus on control.

I. Climate Change and AI in the Anthropocene

Climate change is one of the most threatening global challenges we face as humanity. It is also a very political issue. Think of climate protests such as Extinction Rebellion or the School Strike for Climate and Fridays for Future movements, often associated with Greta Thunberg. It is therefore vital to reflect on the role of technology vis-à-vis this crisis.

[1] At the Institute of Philosophy of the Czech Academy of Sciences I help to set up a Centre that does precisely that. For more information see https://cetep.eu/

Technology can help to solve climate change, but it is also part of the problem. Consider for example artificial intelligence (AI). One the one hand, AI is part of the solution: it can help us to mitigate climate change by gathering and processing data on temperature change and carbon emissions, predicting and showing the effects of extreme weather events and climate change, predicting energy needs and helping to manage energy consumption, processing data on endangered species, transforming transportation in a way that leads to less carbon emissions, tracking deforestation, monitoring oceans, and supporting precision agriculture. Some propose even methods such as carbon capture and (other forms of) geoengineering. Carbon capture stores carbon in underground geological formations. Here too AI can help.

However, the use of AI also raises ethical problems such as responsibility attribution, bias, and impact on the labor market (Coeckelbergh 2020), and AI can even *contribute to the problem* of climate change. Consider in particular the electricity used by data centers and large language models, and the carbon emissions that follow from this. AI is also sold to the oil and gas industry to help extract more fossil fuels. And the production of electronic gadgets is also not climate neutral but requires energy and leads to further carbon emissions. As Crawford (2021) has shown, the infrastructure of AI has significant social and environmental costs.

A deeper problem is that AI is one of the technologies that create and exacerbate what is sometimes referred to as the Anthropocene. Initially a term coined by a natural scientist (Crutzen 2006), the idea that humanity has become a geological force is now used more widely and is aptly illustrated by the phenomenon of climate change itself, to which humanity significantly contributes. The modern desire to control everything and everyone has resulted in a planetary condition under which human agency on earth has increased to such an extent that humanity has gained a kind of hyper agency, increasing its grip on nature and the earth. Every problem is framed as a control problem, and in response more technology is proposed to increase control. AI can be seen as part of this technologically powered hyper agency of humanity and part of this circle of control. In other words, AI is part of the problem. And so is the very hope and claim that AI and other technology will and should solve the problem – thereby neglecting the complex social and political dimension of climate change (and technology). In order to deal with the political challenges related to climate change and AI, political philosophy can help.

II. Freedom and Other Political Challenges

One of the most pressing political challenges when it comes to dealing with climate change is freedom or liberty. Many such problems follow from the need to change individual behavior as part of the mitigating climate change. In order to do this, there

are at least two options. One is to tell people what to do. Often regulation restricts what political philosophers call "negative freedom" (Berlin 1969): it interferes with my freedom to do what I want. For example, to restrict the use of carbon emitting cars is to restrict my negative liberty. I no longer have a choice: I am coerced not to use such a car (or to use it less). Partly this approach is useful. Environmental regulation in the EU, for example, has proven helpful.

But there is also another approach, which does not violate negative freedom: nudging (Sunstein and Thaler 2009). Nudging can be used for climate influences choices and behavior in more climate-friendly directions by altering the decision environment, the choice architecture. For example, it makes it easier to choose non-meat food options. We already know this from AI and digital technologies, for example when we want to buy something on Amazon and the AI-based software makes recommendations. Similar methods and tools can also be used for green purposes. AI is an excellent tool for influencing human behavior in this way. The idea is that negative freedom is preserved since there is no coercion, no direct interference with my choices and actions.

The problem with this option, however, is that it fails to respect human autonomy and rationality since it bypasses autonomous and rational decision-making. It is paternalistic: others decide what is good for you. One could argue that in a liberal democracy, the covert manipulation of citizens' choices and behavior has no place. It destroys what we – following Berlin – could call "positive freedom": freedom as autonomy. It prevents me from being a master of my inner freedom, the mastery I have over my self. But when it comes to addressing climate change and environmental issues, do we have an alternative? If people just do what they want, climate change will get worse. A combination of coercion and nudging seems needed.

Furthermore, since the problem happens at planetary level, preferably we need also a planetary solution. If we want to effectively deal with the problems, it seems that we need supranational solutions. Next to national measures, we need global governance of AI: partly through regulation (which is a form of coercion), partly through nudging. AI can help with this. Some might even propose that AI itself governs humanity in order to deal with the problem, since human intelligence seems not enough to deal with it. But this raises the objection that it would lead to authoritarianism at global level.

Thus, both on the national and the supranational level there is a clear tension between freedom and paternalism/authoritarianism. There seems to be a dilemma between libertarian laissez-faire and authoritarianism. The first retains (negative) freedom but does not solve the climate crisis. The second might solve it, but at the

price of destroying freedom by coercion (destruction of negative freedom) or nudging (bypassing autonomy, thus violating positive freedom).

Luckily, we don't have to choose between these extremes. We can try to find a middle way. Many political systems, for example in Europe, attempt such a middle way. And as I have argued in my book *Green Leviathan* (2021), we can also try to conceive of a different notion of freedom. I will say more about this below.

Yet freedom is not the only problem. Justice is also very relevant with regard to climate change and AI, in particular global and intergenerational justice. Not everyone on this planet is equally vulnerable to climate change. For example, a Pacific island population or people living in a region with long droughts are more vulnerable to the effects of climate change than, say, most people living in Western cities. Often those people – for example in the Global South – that are already struck by other problems also get to deal with climate change effects on top of their existing issues. And some of the effects of climate change may be felt more by the next generations. All these issues are political and need to be publicly discussed, for example using concepts of justice as fairness borrowed from political philosophy. We need to negotiate a fair local and global distribution of the environmental, social, and political effects of climate change.

This is difficult. Who should change their behavior and lifestyle to save whom? How much solidarity should there be between North and South, between younger generations and older generations? Who benefits from geoengineering? Political philosophy and the empirical social sciences can help us to discuss these issues.

In addition, it should be asked who should take the decisions about all these governance questions regarding climate change and AI. Not all countries in the world are democratic. And how to organize democracy at a global scale? Furthermore, some people(s) might not see climate change as a priority, for example when they are plagued by poverty, lack of clean water, malaria, etc. Let alone that they should care about AI. Is AI for climate a neo-colonial hobby or an attempt to exert authoritarian control? Much will depend on context and how it is done. It is also important to ask who should deal with the challenges and pay for the solutions. Some individuals and some nation states have more impact on the climate than others. It seems fair that they should take action first and contribute more to addressing the problem.

In any case, it is important to see and address all these problems as *political* problems. Too often both addressing climate change and dealing with AI are reduced to individual or technological problems. But they need to be addressed at the collective level and by using the conceptual tools we have to talk about politics – next to bringing in technological and scientific expertise. The project of using AI for climate can only be successful if it more directly addresses the ethical and political challenges, rather

than being mesmerized by the technology and being stuck in individualist versions of AI ethics. We need more public and democratic discussion about for instance freedom and justice. And this is not possible when the problems are presented as individual issues or as mere scientific and technological issues that can be solved by science and technology alone. Scientific expertise is absolutely needed to solve the problems, but in a democracy, citizens and their representatives should also have a say. This idea is not new. In political philosophy the role of expertise in a democracy is a long-standing issue. There are decades of discussions about rendering the development of technology more democratic and participative. This body of knowledge can be used in the area of AI and climate change.

Furthermore, education also has an important role: in order to prepare both citizens and experts to think about the politics of AI and climate change, education needs to be more interdisciplinary and bridge different worlds, for example between the tech industry and education. The citizens, politicians, and developers of technology we educate today need to be able to cross these bridges in order to deal with the global environmental and technological challenges of the present and the near future.

III. Revisiting the Discussion about Freedom: The Green Leviathan Scenario and Alternative Conceptions of Freedom

To deepen the discussion about freedom, let us now revisit the freedom versus authoritarianism issue by zooming in on what one can call the Green Leviathan scenario. Imagine a society in which AI governs the earth in order to deal with climate change. It might be a green techno-dictatorship for the good of humankind. The latter cannot deal with freedom and therefore delegates its decisions to AI. I compare this argument to that made by Dostoyevsky's Grand Inquisitor, who argues in the novel *The Brothers Karamazov* that people have been given free will, but that this is a burden, and that authoritarianism (in that case by the Church) should relieve people from that burden. Here we would have a green Grand Inquisitor. AI decides paternalistically that it is better for the planet that it rules over humans, who otherwise would destroy their own planet.

This scenario is science-fiction, of course, and in that form it is not of immediate concern to us. But it is instrumental in bringing out again the tension between freedom and paternalism/authoritarianism outlined earlier in this paper. Once we really and effectively want to deal with climate change, we remain confronted with that challenge, that dilemma between libertarianism (full negative freedom) which does little or nothing against climate change, and green techno-authoritarianism which deals with the problem but at the cost of loss of liberty: loss of negative freedom because people are no longer free to do what they want but also loss of positive

freedom because their autonomy is bypassed in a paternalistic way: they are nudged and manipulated towards green, climate-friendly behavior.

In response to this dilemma, we can try to find a middle ground, as I suggested. We can think of how European countries, for instance, try to find a balance between freedom and heavy regulation. But there is a possibility to offer a solution at the conceptional level, which transcends the dilemma: let's rethink freedom, and then apply this discussion to climate change and AI. In particular, inspired by Sen and Nussbaum I defend a notion of freedom in terms of human flourishing, inspired by Marxism I propose to "make invisible hands visible," in order to reveal some of the power aspects of the problem, inspired by environmentalism and posthumanism I argue that we need a more inclusive collective, and inspired by Arendt (but also going against her) I propose the poetic-political project of participating in the making of common worlds (Coeckelbergh 2021).

Within the space of this essay, I cannot unpack and further develop everything, but let me zoom in on the capabilities approach as a notion of freedom and on the new class struggle that may emerge in the light of climate change. Both directions of thinking about freedom are based on the idea that freedom is not just formal freedom but is about development and emancipation.

First, according to Sen and Nussbaum, freedom is not formal freedom (as for example written into constitutions) but is about capabilities: not about what you have (formal rights, resources) but about what you are actually able to do with your life and about achieving human development and human flourishing. It is about real opportunities such as being able to live a long life, being able to live with others, and being able to participate in politics (Nussbaum 2011). Here freedom is thus linked to the good life and – in my reading – to the common good. One could say that here human freedom is understood in a relational way. It is about real humans embedded in, and relating to, social and environmental contexts.

This conception of freedom is interesting for discussions about climate and AI, as it offers a normative political direction that goes beyond the libertarianism/authoritarianism discussion. The point is not just that someone may interfere with your choices or manipulate you; freedom here is about whether you actually are able to live a good life with others as an embodied and social being. The approach also enables us to link freedom to justice, among other things. It is not enough to be free of authoritarian rule; if we want to deal with climate change in a politically good way, we need to make sure that the capabilities of people are fostered – all people. This may require a re-organization of how the benefits of climate change and technologies such as AI are distributed. In the language of the capabilities approach: we need to reflect on, and politically and democratically negotiate, *how to distribute capabilities* in the light of

climate change and AI. This may also guide the development of AI. It gives us a political ideal that can be used in software development.

Second, this exercise may also take us to Marxian thinking. Marx also criticized formal definitions of freedom. He argued that the freedom you actually have depends on the socio-economic class you are part of, which in turns depends on whether or not you own the means of production. Some people have more power than others because they own the means of production; they are capitalists. They dominate those that do not own the means of production, the workers; their emancipation is prevented. For example, tech capitalists that own AI technology and the data needed for it have a much better social position than others. But many people don't see this. Formally they are free (e.g., to enter a labor contract with their employer); they have negative liberty. They can, however, become aware of their true unfreedom and struggle against the oppressing class.

Similarly, and with regard to climate, one could argue that some people contribute more to climate change and benefit more from it. Climate change may well seem the result of invisible hands, as it may seem when responsibility for climate change is pushed onto individuals (it is said that we are all responsible, there are many hands). But this is misleading; we can render the hands visible. We can show that some have "bigger hands" in what is going on with our planet and argue that they should carry more responsibility for doing something about it. In terms of classes: there is a class which benefits from climate change and a class that suffers from climate change, without having much power and agency to do something about it. In so far as this leads to the formation of a "climate proletariat," I argue, there may be rebellions and revolutions once people realize what is going on in terms of power and want to challenge the climate capitalists. Class struggle would then ensue, but now between climate classes. The conclusion is again that a re-distribution is needed. Or a different socio-economic system. (And similar arguments can be made with regard to AI.)

We also have to discuss what such a redistribution of capabilities and benefits/risks means at global level, and what these notions of freedom and liberation mean for non-humans. Although Nussbaum has paid some philosophical attention to animals, capabilities theory and Marxian theory are both still largely anthropocentric. What about the interests and needs of non-human animals? What about the natural environment? What are the boundaries of the political?

IV. Conclusion

To conclude, in this essay I have offered some discussion of what freedom means and could mean in the Anthropocene, in particular with regard to climate change and AI. For this purpose, I have mobilized political-philosophical work on freedom.

First, I explained that when we use AI and regulation in response to climate change, both negative and positive liberty may be compromised. I also discussed the libertarian-authoritarian dilemma. Then I showed paths that move beyond the dilemma by re-thinking what freedom means. I used the capabilities approach and Marxian thinking to suggest alternative conceptions of freedom. I explored what these conceptions mean in relation to dealing with climate change and suggested that they should guide use and regulation of AI.

The latter exercise suggests a more relational approach to freedom that refuses to choose between libertarianism and authoritarian paternalism, but instead aims to realize freedom as flourishing and emancipation by creating the right conditions for that flourishing and emancipation. Arguably in the Anthropocene and in the light of climate change and current AI developments, these conditions include at least the following: (1) a more just social order that aims at strengthening capabilities and opportunities for people while dealing with climate change and using AI, and (2) a collective relation to nature that escapes the vicious circle(s) of control and technosolutionism so entrenched in our modern form of life.

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CAPITALISM, COMMUNISM, ENVIRONMENTALISM, AND THE IDEOLOGY OF FREEDOM

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SANKOWSKI, E. – HARRIS, B. J.: Capitalism, Communism, Environmentalism, and the Ideology of Freedom
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It has been common in some cultural contexts to distinguish sharply between capitalism and communism, assuming conflicting concepts of freedom. The dichotomy has influenced some philosophy, real-world contests in politics, and popular discourse. In the West, often capitalism and markets have been associated, however questionably, with freedom and democracy. Different notions of freedom have circulated as part of another ideological complex opposed to that of the West. However, environmentalisms of various sorts have increasing importance in suggesting newer types of freedom, previously less salient due to the overpowering capitalism-communism dichotomy. Abstract concepts of freedom influenced by the older capitalism-communism dichotomy need critique. Different environmentalisms, less centered on the old dichotomy, increasingly can be progressively connected with different freedoms-in-environments frameworks. New perceptions about freedom can emerge.

Keywords: Capitalism – Communism – Environmentalism – Ideology – Freedom

Introduction

In much of the twentieth century one major dichotomy about societal organization and freedom was (and still is, in 2023, though to a lesser and more garbled extent) presented as a conflict between capitalism and communism. This was often depicted as a fundamental conflict between societies emphasizing free markets and those emphasizing planned economies, though that is a confused account. Variants of this account are still maintained at the present time. Typically, in the West or the so-called free world there was and is a widely circulated view that free markets were reliably conjoined with liberal democracy (Fukuyama 1992). It would typically be allowed by reasonable people that actual societies were much more complex than the earlier picture suggests. It would often be understood that some societies escaped classification altogether as falling under either category (capitalist/communist). But it was nonetheless notably often insisted (after Marx

but particularly between the Russian Revolution and 1989, and especially in Russia in the early 1990s) that this was the pre-eminent international conflict meriting political attention.

Take, for example Isaiah Berlin's influential "Two Concepts of Freedom" (1969), which was written and delivered originally in 1958 in the period of the Cold War. There is in the essay a wealth of historical material referring to a long stretch of Western history (with Russian references included). To judge by some later philosophical discussion, it might seem to the historically uninformed contemporary reader as if the essay's Cold War emergence is only marginally relevant, if at all, to its main philosophical message about freedom. But the Cold War context is relevant, and very significantly so, not only to Berlin's motivations, but to the function of later philosophical discussions of "positive and negative liberty" that have omitted reference to its Cold War origins.

Berlin was born in Russian territory, had sympathies with liberals in the history of Russian culture, and was a critic of what was called, in a later collection, The Soviet Mind (Berlin 2011). He expressed views about the Soviet Union that were applauded by US anti-communist diplomats. His account of positive and negative freedom has continued to incline some readers to an anti-governmental, pro-negative-freedom/anti-positive-freedom account of social freedom. This inclination has encouraged some readers in their continuing skepticism about government, sometimes even democratic government. Berlin-inspired fears of rational governmental planning are arguably among the factors that inhibit the sorts of political measures which are now necessary to cope with outstanding environmental threats.

Power within domestic society and globally, property, wealth generally, and money were (and are) up for potential basic changes in distribution. The language of freedom is routinely deployed in communications about rightful power arrangements. So not only anxieties, but strategic and tactical action (often aggressive, all too often murderous) to protect or pursue one's (and one's group's) interests were (and still are) widespread. That has contributed to the major wars pursued by capitalist-dominated countries against communist or potentially communist societies (e.g. Vietnam). But after changes in Central and Eastern Europe, especially in 1989, and then in Russia in the early 1990's, the triumph of capitalism and free markets (and with the changes, the supposed triumph of liberal democracy) was proclaimed by some commentators, such as Francis Fukuyama (Fukuyama 1992). Fukuyama has since modified his views. Recently, he has been polemicizing against identity politics, and more significantly, he has criticized neoliberalism (Fukuyama 2022). His shift of focus may suggest the obsolescence of, or loss of interest in the old dichotomy. Most pertinent is the way that he has modified his position, partly with a view now affirming a critique of neoliberalism (a type of free market capitalism) (Fukuyama 2022).

The dichotomy between capitalism and communism (while not repudiated as part of widely received rhetoric and doctrine) is now less enthusiastically insisted upon. But it is still very much a phenomenon in political-economic discourse, including propaganda and political mudslinging. Moreover, a sense of urgency about the conflict is still liable to re-emerge in periods of instability. We are in such a period now, in 2023, as US anxieties among some in the population about the development of China as a global power are increasing. China is a power with a nominally communist ideology and a powerful communist party, though now avowed internally to be a country governed under market ideology, and also as "socialism with Chinese characteristics." About contemporary China's officially pronounced political commitments to "socialism with Chinese characteristics," as well as Marxism and communism, markets, and sustainable development, see a volume of statements by Xi Jinping, *The Governance of China* (Xi Jinping 2014); also see many recent statements attributable to Xi Jinping's influence.[1]

Added to anxieties about communism in the West are concerns about the COVID-19 pandemic and racial divisions. But the old fears about the Russian and Chinese *others* do re-emerge repeatedly among some members of the ruling elite, e.g., in the US. Interestingly, political economists such as Branko Milanović proclaim China an exemplar of political capitalism. For Milanović, there is only "Capitalism, Alone" now in the world (Milanović 2019). But adopting such a conceptual scheme may have a high cost, namely, oversimplifying an account of Chinese society, and tending to evacuate the idea of capitalism of a definite meaning, as it loses any contrast with possible non-capitalist systems. Moreover, even if some generic type of capitalism dominated everywhere, or distinguishable variants reigned everywhere, there would be no re-assurance that a locally favored type of capitalism (say the US variety) would come out on top globally. The anxieties and maneuvering would and do persist, even when badly interpreted.

Milanović's viewpoint, while not anti-capitalist, recognizes some negative features of capitalism. Indeed, his view may imply that critical attention should now be focused on real-world capitalism, rather than marginalized or merely hypothetically threatening communism. On this sort of viewpoint, although a conceptual distinction may still apply to capitalism versus communism, the threat of communism as a rival to capitalism has subsided.

This paper maintains that a new language and conceptual scheme is needed. Less should be assumed to be useful in talk about a conflict about freedom in capitalism and/or communism. There should be greater interest expressed in forging discourse more useful in designating and analyzing a variety of major contemporary issues about

[1] See, for example, publicity about a new volume of "Xi Jinping Thought": http://www.china.org.cn/china/2023-10/23/content_116766438.htm (accessed October 29, 2023).

political economy and culture; also, new pragmatically framed stances for activism are needed. This is particularly important about many environmental issues, which are urgent in both capitalist and supposedly communist societies, e.g., the US and China respectively.

The preceding does not imply that a new dichotomy is needed to replace capitalism versus communism. Nor does it imply that the dyad of capitalism versus communism has lost all significance. One illustration of this is Slavoj Žižek's tendency to want to affirm a non-Stalinist communism (though he is sometimes attacked as a Stalinist, and he jokes about Stalin), to be distinguished from the twentieth-century varieties of communism. Žižek insists on a distinction, but increasingly asserts the centrality of environmental catastrophe in political philosophy and makes efforts to extend Hegelian-Marxist thought into environmentalist philosophizing. It will be enough if we displace old dogmas and formulae, and encourage constructive, thoughtful activism. Environmentalist movements may supply some of the needed intellectual and political energy to protect and advance freedoms of more intuitively pluralistic sorts.

We will next offer some reflections about older social and political thought that stresses environments. John Dewey was a philosopher dedicated to study and activism about using environments in education. Nonetheless, Dewey also recognized the importance of biological factors about humans in societal relations. And notably, even after the Russian Revolution and the formation of the USSR, Dewey did not allow himself to be distracted by focusing excessively on a supposed freedom-centered dichotomy between capitalism and communism; he did not opt for either one as vastly preferable to the other. He was capable of criticizing existing versions of both, and capable of seeing other, then-contemporary problematic practices apart from capitalist or communist aspects as in need of attention and correction, in the interests of freedom.

I. Elaborating on and Amplifying Dewey's Pragmatist Environmentalism

There are signs in John Dewey's writings of some embryonic features of the outlook of this paper. In *Democracy and Education*, for example, Dewey stresses the importance of distinguishable environments for communication and societal education (Dewey 1916). His remarks there are not focused on explicitly green concerns about damage to nature (Dewey 1916, chapter II, 12 – 27). But Dewey frames his views on environments in a way at least consistent with possible activism to protect and improve nature. His remarks about environments are suggestive, though limited and general. One especially interesting point is that he views references to the environment as consistent with interpreting humans as free and active in relation to their environment, not as mere passive products.

In *Freedom and Culture*, published in 1939, when some response to Marxism and communism seemed necessary, Dewey gave an account of freedom far from the abstract

over-simplifications of formulae currently proposed by some English-speaking philosophers, such as negative freedom, positive freedom, non-domination (and perhaps freedom as authenticity or self-fulfillment, in the style of one phase of Charles Taylor's thinking in the early 1990s), etc. (Dewey 1939). Dewey's discussion intentionally ranged over many issues of then-contemporary concern, including events in the USSR, and complex (mainly Western) historical background, incorporating US history (such as Thomas Jefferson's political outlook) among other topics. There was no attempt by Dewey to co-ordinate his topics with green environmentalisms, but there was also no obsession with highlighting any capitalism-communism conflict. He was rather careful to be critical but also respectful in his discussion of Marx, at times even complimenting Lenin, but critical about Stalinist trends. However, his overall position was not focused on any supposed capitalism-communism conflict about freedom. We conclude that while Dewey's approach to giving an account of freedom does not robustly and in detail anticipate this paper, its overall tenor is consistent with some central features of this essay and might be furthered in going on as this essay advocates. Preferably, we need to recall Dewey's overarching interest in learning environments, retain his stress on group activities, and emulate his willingness to be complex in his acknowledgment of various then-contemporary pragmatic demands in the name of freedom. Pragmatism in this sense is emphatically not a middle-of-the-road compromise, nor is it at work primarily in a commitment to "a pragmatic theory of truth" (passim). Pragmatism in this sense is among other things the analysis of meanings of language uses and similar meaningful social phenomena in terms of actions.

II. Environmentalisms, Continued

We propose that differences about environmentalisms are more helpful for understanding differences about freedom in society and its needs at the present time than the capitalism/communism dichotomy. In fact, after the supposed demise of communism in much of Europe, not only did that domain (Europe) fade as a place for communism to reign (or threaten) anywhere within its boundaries. What capitalism amounted to, also, has undergone major changes, and raised new questions, resulting in social formations with very different tendencies from those prior to 1989. Both then-existing communism and then-existing capitalism faded, though in the case of capitalism, the fading process has been taking longer, with more diffuse developments, not focally dramatized events such as the dismantling of the Berlin Wall. There are major continuities between the older capitalism and the newer capitalisms. But there are notable differences too between the older capitalist systems and the newer capitalist systems. One can say that capitalism in the older sense faded, though there are major continuities between the older capitalism-1 and the newer capitalisms-n. (Eventually, we would see, do see, and will

see, "capitalism-n" … and so on, using the "natural numbers").[2] Exploitation still reigns, though it should not be construed solely as the capitalist appropriation of surplus value in Marx's sense. This is a point noted by Žižek.[3] Another feature of contemporary exploitation in capitalism is its damage to the living conditions of the working class or economically excluded persons, damage which can in many cases be labelled without strain as environmental.

Notoriously, as neoliberalism intensified after 1980 in some influential parts of the world, such as the US (Reagan) and UK (Thatcher), capitalism and markets seemed less and less about its prior pre-dominant ideology, or co-existence with liberal democracy, or democracy in any genuine sense. This non-democratic democracy includes its supposed but too often, though not always, ersatz free multi-party elections with significant alternatives represented in political programs; where on earth is that now? Not in the US, where elections are more and more problematic, recently ferociously so. Disputes about rigged elections abound. Many involved in the disputes (including self-styled liberals) have overlooked or de-emphasized the serious defects about elections long before the 2020s.

Lately, fears have been more and more voiced about capitalism blending into authoritarianism or fascism. Jason Stanley's writings about propaganda and fascism are one example. Then too, real-life centralized authoritarian social organization came to dominate (in real social effects) over libertarian rhetoric which we are accustomed to hearing, propaganda publicly claiming to affirm a minimal state (notably in the US).

We do not fully agree with the self-avowed communist Slavoj Žižek (who confesses to his lack of an alternative vision to that of global capitalism) that taking the environment seriously somehow favorably represents the idea of what is common, the commons, etc., and hence potentially re-evokes a transformed interest in a new incarnation of Communism (minus Stalin, et al.).[4]

But in a charitable re-interpretation of Žižek, he may be seen as maintaining a position rather like that of the much more conventional and respectable Dewey. Both Dewey and Žižek are deeply indebted, as it happens, to Hegel. The Žižek position says that the capitalism/communism conflict is still a factor in interpreting societal phenomena, and seeking progress, but that environmental (or ecological) issues have come to have a legitimately regarded far greater prominence than they once had, in order to think about and act on major political problems about freedom, including those attributable primarily to contemporary capitalism. Žižek, paradoxically like many

[2] Cf., for example, Ther (2016).
[3] See, e.g., "Eco-proletarians and the Limits of Valorization," in Žižek (2022, 44 – 52).
[4] See Žižek (2017), especially "What Is to be Done?" (105 – 118), and more recently, Žižek (2022).

a capitalist fond of free markets, cannot yet pivot adequately to a new conceptual scheme beyond the capitalist-communist divide.

In contemporary Anglo-American analytic social and political philosophy, to shift academic cultural contexts, we have the odd language of Elizabeth Anderson, the US based distinguished academic who (perhaps jokingly?) claimed that capitalist firms are communist dictatorships (Anderson 2017, 37 – 41). In actuality, while capitalist firms are typically authoritarian, they are hardly communist in any meaningful sense. It may be that Anderson is banking on traditional anti-communism in her language.

III. Environmentalisms, Tentatively Listed

There is no finite number of environmentalisms. It might be constructive, however, to start with enumerating six. These overlap to some extent: There is, first, the environmentalism that we hear so much about today, and understandably so, about the atmosphere, and often particularly about global warming. It is to Amartya Sen's credit that he stresses the multiplicity of environmental challenges, beyond global warming: see his article, "Global Warming is Just One of Many Environmental Threats that Demand Our Attention" (Sen 2014).

We move beyond Sen, however, when we identify, second, land use environmentalism as a different stance, though often connected with concerns about global warming. Land use environmentalism rapidly becomes entangled with numerous strongly felt attitudes and acts about territoriality, often with ethno-nationalist or other political aspects. Examples abound: Israel-Palestine, Ukraine and the Crimean Peninsula, indeed, Central and Eastern Europe generally, with their worries about the potential for renewed Russian expansionism, South Africa, with its need for anti-racist land reform, China-Taiwan, China-Tibet.

But land use environmentalism need not be limited to discussions of, or activism about areas in which there are major international or inter-ethnic political disputes. It may concern more local issues about the built environment, or monuments (as we see in continuing US controversies about Spanish conquistador anti-indigenous or pro-slavery confederate monuments, and counterpart controversies internationally). Concerns about urbanization, the rural/urban relationship, etc. are in part within land use environmentalism.

A third type of environmentalism is about the public health aspects of life. This is dramatically brought to our attention in the case of the pandemic that began probably in 2019. The COVID-19 coronavirus pandemic has made the proximity and interrelationships of human bodies as biological factors a major environmental concern. Vectors for transmission of the virus, ordinary behaviors such as hugging, kissing, shaking hands, etc. have, as many know, become problematic in some situations. Indeed, the social and

even the physical environment (so hard to distinguish) have become deeply problematic in very disturbing ways. Urban population density (a phenomenon of urbanization, e.g., in New York City) has had much to do with the worst of the pandemic. The effects of the pandemic are apparently worsened by air pollution (an atmospheric environmental issue), also an indoor environmental issue. The potential for mobility and travel has at times been much decreased by the pandemic, so one's environment has at times been experienced in diminished ways. Travel is increasing as the official position is broadcast that the pandemic emergency is past.

The pandemic, however traumatic, is only one dramatic illustration of the importance of more general issues concerning public health environmentalism. To some extent, the pandemic and responses to it could serve as novel contemporary examples of a crisis within global capitalism, but it has obviously also generated severe problems in nominally communist China.

A fourth type of environmentalism includes but is of broader scope than public health environmentalism. This is social environmentalism, which includes many issues that go beyond physical relationships. This includes all sorts of interpersonal relationships, or the absence of them, and further distinctions are possible within this category. Public health environmentalism is one sub-category. Racist and caste systems are another. These are particularly evident in the surge of racism and anti-racism in the US. Other related concepts and activist themes are referred to in what follows below.

A fifth type of environmentalism focuses on the "learning environment(s)" of persons. The phrase is entrenched in educational commentary, but less well-worked-out in contemporary discourse is the place of this environmentalism in the total scheme of environmentalisms. Dewey, however, is exemplary here.

A sixth type of environmentalism will perhaps be regarded by some readers as fanciful. Nonetheless, the topic should be mentioned. We might call this digital environmentalism. Given the increasing prevalence of digital technology in the lives of many persons, there are digital elements that form part of our living environments. Not only are the physical bases of information and communication technology part of our environment, and the real-world physically characterizable effects of information and communication technology, the metaphorical worlds projected by and made accessible by digital technology are part of our expanded environments. Many normative questions (including questions about freedom) arise about the quality of our digital environment(s). This has been reinforced by the reaction to the pandemic, which has relied heavily on increased use of information and communication technology. The nature of our digital environments has major implications for freedom undreamt of by many philosophical formulaic concepts of freedom.

Is there any essence of environmentalisms as such? Following some readings of the philosopher Wittgenstein, we might say that there is no essence, but there are family resemblances among the different categories that incline us to call them environmentalisms (Wittgenstein 1953, Part I, sections 65 – 67).

IV. Environmentalisms as Subject-Object Relationships

One issue that might be suggested is what limits there might be on the scope of "the environment," as the categories abound. Possibly, there are no a priori limits, but there is a guiding question that recurs as new categories of environmentalism are proposed and modified. That is, what the contrast is or the contrasts are that are plausible between environments and human subjects confronting or intervening in or even partially constituting the environment. The contrast might be thought of as a distinction or as a relationship. Using the word "subject" to designate the varied individuals or groups that are thought to contrast with the relevant environment(s), we could refer to a variable subject-environment contrast. In this essay, we emphasize group subjects.

Both capitalism and communism (i.e., institutional elements in societies often placed in these categories) have been known to invoke notions of freedom that they supposedly address. Such elements claim some particular type of freedom achieved (or at least furthered) in their systems, and supposedly frustrated in the conflicting system, according to advocates of one or the other system.

We suggest that acknowledging and addressing challenges posed by multiple environmentalisms can be interpreted as supporting disavowal of the idea that there is one type of freedom that is an overarching value by which to evaluate social organization. Among other ideologies, capitalism and communism seem to project such monistic views, each in their own way. Amartya Sen, however, differs. He concludes one well-known book ("A Final Remark," in his *Development as Freedom*) by referring to the multifarious nature of freedom(s) (Sen 1999, 297-298). But his account, curiously, does not seem to address the matter we are addressing here. He seems to take seriously the very varying capabilities that are the freedoms that constitute and promote development or progress. But he accepts the idea of freedom as definable through capabilities, and by reference to what seems to be a relatively simplified combination of freedom-from and freedom to (Sen 1999, 18 – 19, 282 – 298).[5] Sen is a little attentive to environmental issues, but that is disappointingly limited in his overall outlook.

What we are proposing is that the existence of variable types of subject-environment relationships that are associated with different environmentalisms shows that frequent philosophical and political attempts to capture freedom in some unitary

[5] What is "simplified" is the freedom-from and freedom-to division; Sen's account of freedom is by contrast obviously complex.

account must fail. Both talk about subject and talk about environment can be parsed in multiple, possibly unlimited numbers of ways. This can generate a too-often neglected heuristic for investigating complex intuitions about freedoms or their corresponding un-freedoms. Many capitalisms and communisms have been unable to acknowledge the complexities and pragmatic context-dependence of freedom discourse and activism, particularly freedom as linked with environmentalisms.

To further clarify: rather than environmental studies or environmental activism having one content, we can distinguish different stances that can be called environmentalisms. The environmentalisms generate various subject-object relationships: individuals or more notably groups are subjects, while various types of environments or aspects of environments are the objects (objects of environmentalist interest).

We do not align ourselves in this essay with those who crave accounts of freedom such as freedom from, freedom to, or freedom as non-domination, nor freedom as self-realization/self-fulfillment/authenticity, or the like, as with Charles Taylor in some phases of his thought. These tend towards syntactic or idealized semantic accounts, whereas we want an account that investigates the (unpredictably exemplified) pragmatics of freedom discourse linked with environmentalisms, and related activism.

V. Some Ways to Examine and Act on Ideas of Freedom

The type of environmentalism, plus the relevant subject-object relationship, could heuristically encourage us to suggest examples of freedom or un-freedom. The examples will not neatly reflect some distinctions suggested by certain influential accounts of freedom, such as the positive freedom, negative freedom account, mentioned earlier, influentially expressed by Isaiah Berlin. Key successor accounts of freedom subsequent to Berlin's proposals have continued to be influenced by a supposed capitalism-communism dichotomy ideologically basic to Berlin's thoughts about freedom.

Post-Berlin accounts of freedom that combine positive and negative elements in a unitary negative plus positive account (freedom from … combined with freedom to…) perhaps somewhat soften or merely avoid the anti-communist fervor of Berlin himself. This may apply with accounts that focus on freedom as non-domination, as in work by Phillip Pettit. Vacillations about freedom in Charles Taylor's characteristic work have often been rooted in his ambivalence about capitalism and communism, even when capitalism is the overwhelming power system in Taylor's main territories of concern, such as Canada, the US, and Western Europe. All these accounts of freedom continue to convey in a veiled form the ideological commitments of their origins in Berlin's outlook.

The heuristic approach commended here is thus not limited to a third approach offered in some contemporary academic literature, notably by Philip Pettit. Pettit focuses on freedom as non-domination and defines his position in an account of a republican

politics as constructed in selected Western territories over history. Despite his interventions in Spanish socialism and his mild objections to the domineering effects of corporate capitalism, Pettit has not centrally challenged the political and cultural domination of capitalism, and his supposed departure from the positive/negative account of freedom is less definite than he implies (Pettit 2014).

Pettit is still a descendant of Isaiah Berlin in his account of freedom. This is evident, for example, in Pettit's comments in 2011 on the political defeat of the Spanish socialist movement that he endorsed in support of Jose Luis Rodriguez Zapatero's government. In those comments, Pettit concedes that global financial markets must be acknowledged even though they set severe limits on the advance of democracy. An interesting further point is that in his comments there Pettit does refer significantly to environmental topics (Berlin 2011).

To continue with the approach suggested in this paper, take, for example, land use environmentalisms. We mentioned that these often implicate territorial disputes. We can think of examples of individuals or groups who act, but in situations in which they must act within alienated territory and land, which was once the agent's, but now is not. A positive/negative account might somewhat fit the act in context, suggesting that the act is free. Still, the act will be in some ways unfree. The unfree aspect can be interpreted and explained in terms of the environmentalism/subject-object pairing in the account we have suggested. The republican idea of freedom as non-domination might seem promising in such cases. However, what is the dominating agent in some cases? Characterizing the "dominus" (the dominating agent, to use Pettit's word) is preferably done, we suggest, by describing the subject-object relationship and the relevant environmentalism. (Pettit 2014, xiii – xxiii; 52 – 54) The heuristic approach suggested here in looking for examples of freedom and un-freedom, drawing on intuitions, is arguably more helpful than the republican approach. The republican approach, it seems to us, is offered in an account by Pettit that still takes negative or positive freedom as the main rival accounts of freedom, from which freedom as non-domination must distinguish itself. But any of these three conceptions of freedom, when offered in idealized forms, are too abstract and context-less to offer much traction in defining a pragmatic politics serious about freedom. Pettit is said to have interacted productively with some Spanish socialists, but it is unclear that this was an application of his theory of freedom.

Furthermore, there are signs that any of the three or four excessively and often wrongly abstract conceptions of freedom (positive, negative, republican, plus Tayloresque-self-realization/self-fulfillment/authenticity-focused freedom) are at times conjoined with some anxieties expressed in the perspectives that focus on capitalism

versus communism. We already commented on this as obvious with Berlin's classical essay, so linked with Cold War anxieties.

Charles Taylor, also, seems to say at times that the idea of positive freedom too readily can be associated with some types of totalitarianism (perhaps conclusions drawn from worries about Rousseau's *Social Contract*, with its endorsement of being "forced to be free," or Marxist or maybe rather "Marx-like" tendencies). (Yet early in his career, Taylor was attracted by some features of Marxism). No, he says, we need the counterbalance of "markets" (a code word in Taylor, apparently signifying capitalism in the text referred to here) to be added in along with rational central nation-state planning as societal tendencies in modernity (Taylor 1992).[6]

Taylor's very recent work, however, seems to return to anxieties about capitalism, but now with some hints about the possible centrality of something like a Green Deal model of environmentalism. We would interpret this as some movement toward an environmentalist orientation that could overtake the older capitalist-communist dichotomy and yet promote a sober critical evaluation of capitalism. Taylor, once attracted to Marxism, later shifting to advocacy of democratic state planning plus markets, is now very recently vexed about capitalism. But rather than reviving corresponding fears about communism, Taylor shows some signs of an environmentalist sensibility (Craig – Gaonkar Parameshwar – Taylor, 2022).[7]

To return to the way we framed the topic of this essay, we can be open to recognizing the main conflicts about freedom occurring at the present time, without seeking out one central dichotomy. Capitalism versus Communism, or other proposals that make abstracted freedom central, is no longer, and probably never was, a central dichotomy on which social and political philosophy should focus. At the present time, multiple environmentalisms are more promising in formulating our outstanding perceptions of and intuitions about freedom and un-freedom. Environmentalism(s), interpreted in light of current developments, is/are more fruitfully suggestive than some of the most academically influential abstract ideas or word-concepts about social and political freedom.

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[6] See especially the chapter "Against Fragmentation" (Taylor 1992, 109 – 121). "What our situation seems to call for is a complex, many-levelled struggle…" (Taylor 1992, 120 – 121).

[7] See especially the section "What Is to Be Done?" by Calhoun and Taylor (Craig – Gaonkar Parameshwar – Taylor 2022, 251 – 257). Note the resonance of the Lenin-style question in the title of the section.

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ON GLOBAL ENVIRONMENTAL CITIZENSHIP IN THE CONTEXT OF THE ANTHROPOCENE AND THE DEEPENING ENVIRONMENTAL CRISIS

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MRAVCOVÁ, A.: On Global Environmental Citizenship in the Context of the Anthropocene and the Deepening Environmental Crisis
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The Anthropocene period has brought an unprecedented expansion of civilisation and enormous technological advances leading to a highly interconnected world. However, all this has come at the expense of the environment. The exploitation of nature along with the reckless and predatory life of humans have gradually led to the emergence of a global environmental crisis which, even with all the means and decades of efforts of the world community, has not been solved or even necessarily mitigated. The paper seeks to highlight and examine the significance of the emerging concept of environmental citizenship in the context of Anthropocene and the deepening environmental crisis, building on the fundamental features of classical citizenship, mainly its unifying potential, which led to the rise of its global dimensions. The emphasis is also partially focused on environmental political responsibility, which is in line with our core concept. Findings point to the growing potential of environmental citizenship to avoid the catastrophic predictions based on maintaining the current status. We argue that environmental citizenship should be seen as a possible basis for a necessary change in the organisation of society, which inevitably requires an active political approach.

Keywords: Global environmental citizenship – Anthropocene – Environmental crisis – Political environmental responsibility

Introduction

Humanity is currently facing many serious global problems and challenges. These are increasing in intensity despite all the efforts of the international community. Several of these processes occur naturally, but most of them are caused by humans and their "god complex," which seeks to demonstrate the superiority of humans over everything in the world, including nature. The contradiction between nature and culture (Pechočiaková Svitačová, Moravčíková 2021) is thus deepening, and human beings have gradually become the dominant category in all substantial changes in the world. Many experts classify this process as a new geological epoch called the Anthropocene. It is also the

one in which the most significant source of the persistent and deepening environmental crisis can be seen.

The term Anthropocene "denotes a new geological and climate epoch created by humans with all their activities. The concept of the Anthropocene has its origins in the idea that because of industrialism, urbanization, and exponential growth of the human race in the last two centuries the extent of our influence on the environment has reached such a level that people have become a geological and climate force" (Sťahel 2019, 340 – 341). This new geological epoch is appearing very unstable in comparison with the previous Holocene period and its relative climatic stability. At the same time, however, many warn that this is only a transitional period to a potentially much worse state (Sťahel 2019). In this context, it is assumed that global environmental citizenship can play an important role in combating the environmental crisis and its catastrophic consequences, as its important aspect is the ability to take environmental responsibility for individual and collective actions towards the common environment and thus move to real and necessary change.

The term "Anthropocene" itself was first introduced in 2000 when P. Crutzen and E. Stoermer highlighted that we are currently living in an epoch when the global environment is shaped at some level by humanity, rather than vice versa. They used the word "Anthropocene" as a call to action for environmental sustainability and responsibility (Crutzen, Stoermer 2000).

The Anthropocene is so significant in scientific circles as it is considered to be a geological phenomenon comparable to some of the great events of Earth history. However, the main difference is that the driving force behind these global changes is human behaviour and action, particularly in the social, political, and economic sphere (Zalasiewicz et al. 2011). Even "the Earth system hypothesis within the Anthropocene concept states that humanity has already modified the Earth system in ways that are not only complex, but these changes are irreversible to some extent (and most of the available data confirms this)" (Leinfelder 2020, 3 – 4).

Now, it depends on our future actions, how far the new Earth system will differ from that of the Holocene. This also strongly depends on our ability and willingness to change our attitude and understanding of our position and role in a world whose future – its preservation for life – is literally in our hands. Even though nature has a great regenerative capacity (we saw it also at the beginning of the global pandemic), some of the consequences of long-term human predatory approach are already permanent, but we can still change a lot.

The paper aims to examine the significance of the still evolving concept of global environmental citizenship in the context of the Anthropocene and the deepening environmental crisis, building on fundamental aspects of the classical citizenship

concept, in particular its unifying element, which has contributed to the emergence of its global dimensions. The focus is also partially on environmental responsibility, especially its collective and political aspect, which is in line with our core issue. Environmental citizenship is becoming a necessity, driven by responsibility for the whole to which we all belong. The findings point to the growing potential of this concept to avoid the catastrophic predictions based on maintaining the current state. Environmental citizenship should be seen as a possible basis for a necessary change in the organisation of society, which inevitably requires an active political approach. In this context, it will also be explored and justified why global environmental citizenship is a relevant response to the environmental crisis in the Anthropocene. This question will be answered through particular arguments on the very nature of the Anthropocene, the environmental crisis as one of its consequences at the same time, and the development of citizenship concepts as branches which have emerged from the need to respond actively to the worsening state of the environment, to the fact that humans are the main contributors to this degradation, and that humans must therefore be the primary agents of remediation.

Although discussions on global environmental citizenship have been ongoing for a long time and have become relatively established in scientific circles, they are now increasing in intensity and becoming highly topical again. Among other things, this is mainly due to the worsening state of the environment, alarming predictions for the future, and the shortening time for possible remedy and avoiding worst-case scenarios, where there is a growing need to appeal to people and their crucial involvement in the process. A significant milestone for the renewal of lively and intense discussions on the need for an emphasis on environmental citizenship has also been the struggles for global environmental justice, which have intensified greatly since 2019, and subsequently the global pandemic COVID-19, which has highlighted the strong global inter-connectedness of humanity.

I. The Deepening Environmental Crisis as the Consequence of the Anthropocene Epoch

Even though humans have always influenced their local environment, in the past the environmental consequences of their activities did not reach a global scale. As a milestone of the beginning of change the industrial revolution and the mentioned transition from the Holocene to the Anthropocene is often considered.[1] Humanity has become an independent global geological force. One of the main characteristics of the environmental crisis is therefore precisely the complexity of human impact on ecosystems (see also Martin et al. 2015). Thus, as M. Jafari and many others claim, the scientific understanding

[1] However, the industrial revolution is only one of many possible beginnings of the Anthropocene (Lewis, Maslin 2015).

of the environment is very important here and helps identify the whole spectrum of environmental problems. The solutions to these problems must be, however, constructed not only on the basis of facts, but also on the basis of the aspects of humankind experience – emotions, the sense of belonging and responsibility, etc. (Jafari 2013).

As Sťahel states, the human strategy of production, accumulation and consumption of surplus, the implementation of which is currently reaching the limits of natural resources and nature's ability to absorb the generated pollution, is the reason for the emergence of the global environmental crisis (Suša, Sťahel 2016). Similarly, S. Krno sees the cause of this crisis in humans, stating that the result of the contemporary era is that citizens have become homogenized, unilaterally oriented persons, addicted to excessive consumption with high, unified artificial consumption habits (Krno 2007, 433). According to the above, the current environmental crisis is the result of humankind's activity and the aforementioned need for the superiority of humans, who had already stopped perceiving nature as a necessity for their survival. This has overwhelmed them and turned their greatness into a defeat of nature.[2]

Despite the persistent denial of the existence of the environmental crisis or climate change by many people in many spheres (including politicians and even scientists), there is an overwhelming scientific consensus that the environmental crisis is real, which is confirmed by the data. Thus, not only are there reasons for being worried, but more importantly, the data show that the state of the environment is already alarming and catastrophic predictions are becoming very real and close.

The primacy of economics and development (which is also the basis of the sustainable development concept) and the idea of the unlimited expansion of production and consumption without regard for the real environmental costs and consequences (Oosthoek, Gills 2005) prevent taking truly effective actions against this crisis. As S. Clayton and A. Brook and many others have argued, in the 21st century it is important for everyone to understand the causes of climate change, as well as other human-induced environmental problems, because it is the collective impact of human behaviour and actions that is degrading the environment (Clayton, Brook 2005), and only a radical change in the functioning of human societies can make a change.

Humans are egotistic beings with great power ambitions, which they no longer translate only into their relationship with other humans, but also with nature. However, they are now facing the consequences of their behaviour which are leading

[2] There is also a scientific consensus about human beings as the cause of the environmental crisis in the Anthropocene, which is supported, for example, by the report, IPCC: *Climate Change 2022 – Impacts, Adaptation and Vulnerability, Sixth Assessment Report on Climate Change: Impacts, Adaptation and Vulnerability* (Pörtner et al. 2022, 7).

to the destruction of their world. It is a high time to also understand the greatness and power of humans in the direction to save the world from the catastrophe.

II. Moving to Global Dimensions of Citizenship

In the context of the ongoing environmental crisis, it is crucial to look for effective solutions that deliver real improvement. Humanity needs to open its consciousness to the realities the world is facing and change its thinking and behaviour to a pro-environmental one. First and foremost, it is necessary to understand the common belonging to the world – everyone is part of it, and today everyone can really act globally.

In this context, the institution of citizenship is also gaining in importance. Citizenship as such disposes of an important unifying element – the potential to bring people together within a particular society. According to J. Carens (2000, 166), it is the so-called psychological dimension of citizenship that influences the strength of the collective identity of a given community. The potential of the institution of citizenship thus lies in the fact that when many citizens express a strong sense of belonging to the same community, social cohesion is strengthened, and a shared identity can motivate others to actively participate in the life of a given society. Citizenship today necessarily goes also beyond the legal recognition (González-Valencia, Ballbé, Ortega-Sánchez 2020) and has an ability to mobilise people to strive for a better life of the community. As a result of ongoing global processes which allow people to act with global impact, the term "global citizenship" has been intensively emerging mainly in recent decades (although the global citizenship concept is not new and can be found as far back as antiquity, and in the context of globalisation and global problems it takes on a different, primarily ethical and moral dimension, more than political and legal one), taking on the positive elements of the institution of citizenship, but moving towards a kind of universal inclusiveness and transnationality. In this context, global citizenship is understood as citizenship "beyond the nation-state" (O'Byrne 2003) which focuses on people's responsibility towards the world. Citizenship in the sense of being part of the whole world affects people's personal identity. Although the term global citizenship is not understood mainly as formal citizenship, but as a moral category[3], it must be emphasized that moral values always operate within political power relations (Veugelers 2011).

Global citizenship is mostly associated with global responsibility in the sense that all people are citizens of the world, and everyone should therefore understand the extent of their own responsibility. Thus, global citizenship is perceived primarily as a way of

[3] Also, according to Kant, all rational beings are members of one moral community. They are equivalent to citizens in the political sense in that they have the common characteristics of freedom, equality, and independence and that they live according to their own laws. Their common laws, however, are the laws of morality, which have their basis in reason (Kant 1996).

thinking and behaving. It implies a specific perspective on life and a belief that each individual can make a change (Young, Commins 2002). We assume that global citizenship has the potential to become an important unifying element in individual societies. By its very nature, it can contribute to greater justice, sustainability and equality, while respecting diversity. Global citizenship, then, can be defined as a global justice project[4] that seeks to resist the pressures of the current era of prosperity and encourages individuals and whole societies to participate in the new knowledge economy by focusing on critical engagement with structures and relationships that tend to exclude and marginalise. It further seeks to transform the foundations of societies into more just and equitable ones by focusing on a socially and politically empowered public sphere (Mravcová, Šeben Zaťková, Pechočiaková Svitačová 2017).

The global understanding of citizenship is a progressive idea (which is why it does not always meet with understanding or recognition. It is still a rather controversial concept associated with a high degree of abstraction). As W. Al Saadi states, it refers to the tendency of the contemporary international community to deal with broader horizons in the sense of involving citizens of countries in global processes of organizing, developing, and creating international cooperation of a specific kind, whose actors are individuals themselves as citizens transcending national borders (Al Saadi 2022). The goal of global citizenship is then, according to M. Golmohamad (2008), to conceptualize human relations beyond monetary values and restore a positive framing of global relations. In addition, it "entails being aware of responsibilities beyond one's immediate communities and making decisions to change habits and behaviour patterns" (Schattle 2009, 12).

Being a global citizen is not just about pure belonging to the world as a whole. It is the result of active and sustained thought, energy, and effort. Being a national citizen often requires no action other than being born to someone or somewhere. As global citizens, we are not only born, but we must consciously become such citizens. When we accept our identity as global citizens, we also understand our responsibility for our actions. Hence, global citizenship cannot be tied to *jus de sanguis* or *jus de soli*, nor can it be a status granted to an individual by the state. It must be understood as a right and a moral imperative, as belonging to global politics and the world community along with belonging to the national level (Golmohamad 2008).

[4] Environmental citizenship is thus an essential global justice project that has a significant place and mission today to overcome stereotypes and exclusions of different groups from citizenship itself, as it highlights the need for universal inclusiveness, focusing on the global responsibility of all individuals to protect the common planet (UNESCO 2014). It makes people equal as subjects, obliged to take responsibility for their actions towards the environment as well as subjects who should be entitled to benefit from the environment equally – regardless of differentiating factors and allowing all others to do the same – including future generations.

Within this context, R. Israel states, that the global citizen is a person who identifies as part of an evolving global society and whose actions contribute to the constitution of its values and practices (2012, 161). It can be stated that the global citizen is one who takes responsibility for the common good. The most obvious and transparent example of what we all share and depend on is the environment (Michelfelder 2007, 20).

The term "global" is becoming widely accepted in the environmental context, although citizenship is still mostly associated with the national level. In this context, the slogan "think globally and act locally" is also gaining in importance. The local and the global are strongly interlinked and interdependent and can no longer be universally separated.

III. Environmental Dimension of Global Citizenship and Environmental Responsibility

Already in 1993, there was a belief that "Promoting global citizenship is a practical strategy to support sustainable development" (Baha'i International Community 1993). This belief is particularly relevant in the environmental context, with an emphasis on the fundamental understanding that environmental sustainability requires a profound change in attitudes (see also Dobson, Sáiz 2005, 157).

Environmental citizenship as a citizenship with a global reach is, like global citizenship, associated with a high degree of abstraction and can be perceived in different ways. Therefore, a person adopting environmental citizenship understands his or her belonging to a global whole and sees not only themselves and their surroundings but seeks a more global view of their existence. It requires a positive identification with a common humanity and provides a space for critical engagement with others and the world (Golmohamad 2008, 524).

As part of the change in attitudes A. Dobson and D. Bell call for behavioural change (2006, 4) as part of or as a consequence of political responsibility for achieving sustainable development. We are therefore of the opinion that the concept of environmental (or ecological or green) citizenship is at the core of the sustainability model. In this context, the argument that will always be relevant is emphasized – we are all inhabitants of the same planet, and its sustainability is of great importance to everyone.

Environmental citizenship as such can be understood in terms of claiming a new category of human rights – environmental rights – and respecting that everyone should be able to benefit from these rights equally. This perception is thus based on rights as well as obligations in the sense of active and responsible relationships between citizens, societies and the environment. As J. Barnett et al. (2015) claims, this concept highlights the necessity to look beyond the satisfaction of one's immediate interests and to consider the well-being of the wider society as well as the needs of future generations.

There are different perspectives on environmental citizenship, and some views may be even contradictory or incompatible. But looking at the very essence of the concept, we consequently perceive the environmental citizen as a citizen of the ecosystem, and thus a kind of prerequisite for building the non-harming ecosystem principle (Latta, Garside 2005, 5) as well as for developing a personal and collective critical environmental consciousness.

Environmental citizenship can be categorised variously according to its implementation. On this basis, the following types of environmental citizens can be identified here (tab. 1).

Table 1 Types of Environmental Citizens

Types of Citizen	Personally Responsible	Participative	Socially Responsible ("green" citizen)
Characteristic	Behaves responsibly without questioning why	Behaves responsibly and takes action	Critically reflects on social justice and takes action accordingly
Example	Recycles waste	Distributes flyers on recycling	Discusses with others in local forums whether the recycling scheme saves energy and negotiates how best to improve recycling scheme for benefit of the community

Source: Levinson et al. (2020)

From the above mentioned classification, it can be seen that it is the socially responsible citizens who actively and determinedly seek to live a way of life that is compatible with a more sustainable society: they recognise a responsibility to live sustainably so that others have a similar possibility to live well – they understand their duty to act fairly, and their responsibility to do so transcends both national and species boundaries (Levinson et al. 2020). Cosmopolitan environmental citizenship thus creates a greater sense of interconnectedness and interdependence on a global scale (Beck 2010), while in its essence stressing the necessity of transforming individual societies and states into so-called green or sustainable societies that should be governed in a way that respects the ecological and environmental limits of the Earth (Humphreys 2009, 180). Such a state or society would reflect intergenerational, interspecies, and transnational needs – this presupposes that citizens would be aware of the limits of the environmental space as well as of responsibilities that transcend borders and generations (we can see that not only in the context of the analysis of the

concept of environmental citizenship, but also overall, today, the rights and duties of states and their citizens clearly transcend national borders).

Citizenship, therefore, can no longer be limited on the basis of belonging to sovereign states. Citizens need to be understood as members of a community, united by characteristics other than their relationship to a sovereign political entity, in particular the common world, which is becoming increasingly fragile and requires people to understand this reality and to transform it into their thinking and actions.[5]

The concept of environmental citizenship essentially redefines the relationship between humans and nature and emphasizes that environmental protection is everyone's responsibility, including governments, the private sector, as well as individuals, and is based on making life decisions to minimize negative impacts on the environment (Meerah, Halim, Nadeson 2010). The goal is not only to change people's attitudes and behaviour, but also to encourage personal participation. The environmental citizen is therefore expected to behave in a way that mitigates the consequences of the environmental crisis by acting with consideration of other people and all living organisms. We also agree with Dobson, who identifies environmental citizenship as pro-environmental behaviour in both the public and private sectors, based on a belief in equal distribution of environmental benefits, as well as participation and joint development of sustainability policies (Dobson 2010, 6). Dobson also claims that local initiatives have a special potential. Every human act has an impact on the environment, including the local ones. The goal of the environmental citizen is then to minimize the negative ecological footprint and live sustainably so that others can live well (Dobson 2007, 280 – 282). R. Wonicki also supports the emphasis on the importance of local initiatives and opposes the fears of some people that environmental citizenship, as a type of global citizenship, implies a threat of loss of national identity. He argues that it certainly does not require a rejection of the values and duties of local communities or of the importance of national identity. In the case of the environment, the duty and responsibility towards the local community and towards the global community can be seen as equal (Wonicki 2019, 59). Considering the emergency of the environmental issues, this kind of citizenship is very much needed as, in our opinion, it can contribute to mitigating current environmental problems and can help prevent the creation of new ones.

Of course, in this context, there are also many critical perspectives on the very definition of global environmental citizenship, but also on its effectiveness or possibilities. For example, criticisms have been raised about the fact that most scientific work on environmental citizenship preserves the traditional model of citizenship,

[5] The concept of citizenship has undergone significant developments and enormous changes since its establishment. It now bears little resemblance to its origins. For a closer historical overview of the various fundamental changes in the citizenship concept, see Mravcová (2023).

masking the specificities of gender inequality while depending on a gendered division of labour that exempts citizens from participation in the public sphere. Criticism in this direction also comes from feminists, who point out that the very notion of "citizen" has, from its inception until recently, in fact been attributed only to men – single, adult, and property-owning. Therefore, as many criticize, citizenship was infused with the values and experiences of white wealthy men (Lister 1997). Women were deprived of citizenship status because they were not considered to be autonomous persons (i.e., they were just property) and also, for example, because political involvement might interfere with their duty in their households. Environmental citizenship is often criticized for adopting this traditional model (MacGregor 2007). Also, for example, M. Mellor (1992) writes that throughout most of their development, the "greens" have lacked a vision that adequately integrates ecological sustainability and social justice. Similarly, the critique applies to other groups who have been or are actually excluded from the traditional model of citizenship, such as children, migrants, poor people, etc. Because many proponents of environmental citizenship overlook other spheres and, for example, diminish the issue of social citizenship rights, they do not focus on certain categories of human rights, claiming mainly environmental rights and, above all, environmental obligations and issues, so that these rights can be extended to future generations or the non-human world (Lister 1997). Also, rights that protect workers from exploitation and unsafe environmental conditions are increasingly important in a global market that relies on cheap labour (Ehrenreich, Hochschild 2003; Murphy 2006). Despite many criticisms, the importance of global environmental citizenship is enormous. It is essential to overcome the traditional model full of discrimination against many groups in societies. There is no more space for this. Every single individual in the world needs to understand their role in this world and in the process of saving the environment – for themselves, their children, their families, for all, and preserving a place to live for those who come after us. We must all individually and collectively, personally, and politically take on this responsibility without strict and blind adherence to literal formulations in definitions and theories, but with an understanding of the very essence and intention of the concept of environmental citizenship.

In the context of the above, we believe that environmental responsibility in its various dimensions (such as individual, collective, political, and global) is one of the most apparent concerns of global environmental citizenship. Members of the community thus have obligations towards the Earth and its global environment in terms of interdependence, even when being a member of the community does not itself imply any conditions or obligations (see Attfield 2002).

Although environmental responsibility has an important individual dimension, in the context of addressing global environmental challenges and future threats, such as

environmental security as well as other important areas, it is important to perceive environmental responsibility primarily as a political and legal category (see also, Sťahel 2015). Already in Antiquity, Aristotle was aware that because of human nature, achieving real and effective changes in any area is possible mainly through political regulations and laws, arguing that we need laws, "[f]or the many obey the governance of necessity more than of speech [logos], and of punishments more than of what is noble" (Aristotle, *EN* 1180a5). Also H. Jonas (1997), who initially defined responsibility, as well as its environmental dimension, mainly as a moral and ethical category and emphasized its individual aspect and value, gradually became sceptical about the ability of humans to voluntarily limit their freedom and accept the necessary environmental responsibility for some abstract common good. Later, therefore, he also inclined to emphasize the role of the state and political power as instruments for taking effective action and achieving results through laws, regulations or coercive measures. I. Dubnička expressed it even more clearly when he stated that "moral imperatives do not move the crowd" (Dubnička 2007, 399), especially when they are in conflict with economic and political imperatives. He also considered state interventions such as agreements, regulations, laws, and other systemic measures to be more effective (Dubnička 2007). A similar view is presented by Sťahel, who also stresses, in the context of dealing with environmental crisis, that political and legal means can be most effective in overcoming it or mitigating the environmental threats arising from it (Sťahel 2015).

The importance of the role of the state in environmental responsibility and action is therefore undeniable. Its interventions can be highly effective and successful in bringing about positive change through a variety of coercive measures and, in particular, through the political power it possesses.[6]

However, with the current level of interconnectedness of the world, there is a need to go further and recognise the importance of political environmental responsibility not only within individual states, but also within the international community as a whole. Therefore, global environmental responsibility as a fundamental norm in international relations is becoming widespread (see also Falkner 2020). This is also reflected in the intensification of the network of international rules, agreements and organizations and the universalization of the principle of environmental citizenship, which expects states to engage in global efforts to address global environmental degradation (Falkner 2020, 24). It means not only that every state has a responsibility and an obligation to behave environmentally friendly and sustainably, but also that remediation and effective

[6] As an example, there are also numerous studies showing that government rules and regulations – i.e., forms of coercion – reduce emissions, waste or other environmental problems at a significantly higher level than the actions of individuals, because these regulations are enforced under the threat of sanctions, and thus, they are implemented by more individuals.

regulatory control in the form of political and legal rules are important issues that need to be effectively adapted to collective threats and to addressing unacceptable environmental behaviour (see also Mason 2005).

Conclusion

As Jonas (1979) stated, the present situation is without precedent in human history. The Anthropocene system has brought the world to an imminent threat with possible catastrophic consequences. Returning to the Holocene is no longer naturally feasible, but to avoid a much worse scenario than the Anthropocene, we need to change our societies from the foundations and on a more radical scale than the concept of sustainable development offers. There is still too little attention being paid to alternative futures that are truly compatible with the limits of our planet.

We still do not have enough knowledge either of the Earth's global environmental systems or of all the real consequences that the Anthropocene and the environmental crisis may have. However, national interest should not be involved in efforts to reveal them, nor should development be the dominant category.

Humanity has the power not only to affect and create, but also to destroy the life on Earth. With such power comes great responsibility. Therefore, in order to avoid an environmental or complex catastrophe, we must adapt our economic and social systems to environmental imperatives and reverse our deep-rooted assumption that progress through the unlimited use of resources is desirable. This requires conscious political leadership and a willingness to accept a reality that does not yet immediately affect our generation, but we must also take responsibility for those who come after us and enable them to live at least a relatively good life.

The presented text suggests that global environmental citizenship can indeed be seen as a relevant response to the environmental crisis in the Anthropocene, based on the demonstrated knowledge. Firstly, this type of citizenship has the possibility to eliminate stereotypes and various forms of exclusion in societies and in a way to give all people in the world a common identity and a consciousness of a common goal, common and equal rights, and common threats that they need to face individually and collectively. However, at the same time, as shown above, active environmental citizenship is essential to prevent environmental collapse, to prevent catastrophic predictions for humanity and the planet, it is essential to reduce the unsustainable predatory attitude of humans in the Anthropocene.

In this context, we believe that global environmental citizenship, together with political environmental responsibility, can be considered as a fundamental impulse for the above, as well as for rethinking our role as part of the Earth system, which should not be seen as a resource to be exploited, but as a necessary basis for our survival.

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NUCLEAR POWER IN TIMES OF INTERNATIONAL INSECURITY AND ENVIRONMENTAL CRISIS

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This study substantiates the claim that nurturing state sovereignty, pursuing national interests and relying less on other states is the coveted compass that could guide humanity out of the ecological quagmire. My starting point is Hegel's notion of state sovereignty, which implies that relations between states are irradicably strained. This starting point causes me to see state sovereignty as part of the solution, rather than as an obstacle, to dealing with the environmental crisis. I build my argument on a parallel between the instability of the natural and international environment. Awareness of the unnecessary risks associated with over-dependence on other countries and on the natural environment is, in my view, leading to a renaissance of nuclear energy, which could enable us to ensure adequate energy self-sufficiency without serious damage to the environment.

Keywords: Hegel – Environmental crisis – International relations – Nuclear power – Struggle for recognition

"Anyone who has visions should see a doctor."
Helmut Schmidt

Introduction: The Realist's Assumption

Amidst the environmental crisis that endangers humanity's survival, it is unlikely that the long-standing political, international, economic, and social norms of human existence on Earth will change proactively. Although the crisis extends beyond national borders, it would be unwise or naive to assume that states will relinquish their differences to resolve a shared issue. The contrary result is anticipated. This common challenge is probable to intensify tensions among nations. This realistic conviction and skepticism regarding the feasibility of significant modifications in human behavior persuade me to

contend that the principle of state sovereignty should be honored, rather than altered or dismissed,[1] to steer humanity out of our predicament.

By realism, I refer to an attitude that does not pit human reason against unreasonable reality. Instead, realism trusts the world, even when it appears irrational, and seeks to see rationality in it. Correspondingly, it does not set humanity against the tide of history and "brush history against the grain."[2] Instead, it seeks to march with the times. It recognizes the past events that failed to resolve the "tragedy of international politics" (Mearsheimer 2001) and caused the collapse of the anti-capitalist economy, resulting in the end of ideological competition (Fukuyama 1992).

In response to Russia's war in Ukraine, German Chancellor Olaf Scholz proclaimed a "turn of the times" (*Zeitenwende*). The unipolar moment has passed and multipolarity is on the rise. The era of imitating the West seems to be coming to an end (Holmes, Krastev 2019). "The world is changing dramatically and it's not waiting for us to change it" (Zupančič 2021). The forgotten downside of international relations is becoming visible. Globalization, previously considered a contributor to world peace, is now exhibiting contradictory trends. Growing animosity between nations has the potential to lead to outright warfare. Following a three-decade lull, the wheels of world history are beginning to turn again. Countries are grappling with a sense of insecurity regarding their future prospects. They do not encourage greater cooperation and instead tend to be more isolationist.

What becomes evident is the *simultaneity* of the ecological and international crises. This juncture constitutes a unique opportunity to rethink our strategies towards tackling environmental challenges. In the past, when American global dominance was not in doubt, efforts to address ecological crises were focused on promoting international collaboration. However, an era reminiscent of the Cold War (Kotkin 2022) is emerging, emphasizing the conflicting interests of nations. Protecting our country's sovereignty seems to be more important than cooperating to preserve the planet.

Amid these challenging circumstances, it is critical to investigate novel approaches to address the environmental predicament. Can this global issue be resolved *sans* cooperation from all major nations? Can we protect the planet while confronting nations like China and Russia? With minimal coordination between governments, can we address this universal challenge? Is it possible to foster the common good while each state pursues its own national interests vigorously? Could the intuitive imperative for all major countries worldwide to collaborate be a flawed and deceptive belief that

[1] For a rejection of the notion of sovereignty, see for example, Smith (2011). For an overview of the debate on the concept of sovereignty, see Bilder 1994.

[2] Cf. The historical materialist "regards it as his task to brush history against the grain" (Benjamin 1986, 257).

undermines the existing tools in place to tackle the environmental crisis? Conversely, could the increasing friction between nations be the guiding light to pave the way forward?

Interstate confrontation prompts states to prioritize their self-reliance. As a result, states will be cautious about choosing their partners, especially if they cannot afford not to cooperate. The idea that good trade relationships lead to amicable ties is now obsolete. Due to the unpredictable and unstable climate, countries will no longer *teleologically* assume that sharing the capitalist "base" will have a positive impact on the political "superstructure" in the future. It is worth considering whether exclusively instrumental rationality in economic relations can promote a superior level of international relations, such as lasting peace or friendship. By way of precaution, countries tend to approach others with reserve and scrutiny, often adopting conservative risk management strategies and seeking to spread their risks.

My argument for how mutual distrust contributes to solving the ecological crisis is as follows. States driven by their basic instinct for sovereignty inadvertently become more detached from the natural environment. Their inclination for independence from other countries unintentionally results in their increased independence from the physical world as well. Fostering self-reliance in relation to other countries also positively impacts self-reliance concerning the environment. The need to exhibit resilience in international relations includes withstanding the unpredictability of nature. The hazards of war and natural disasters are analogous. Neither world peace nor the preservation of life on Earth can be assured anymore.

When the three main sources of energy – renewables, fossil fuels and nuclear power – are assessed according to the resilience criterion, nuclear power emerges as the clear winner: it is environmentally friendly and also friendly to state sovereignty. This is why the unstable geopolitical situation could help countries to mitigate the effects of the climate crisis.

I. Hegel on Sovereignty and International Relations

Before delving into the details of nuclear power and its characteristics, it is necessary to establish the essential concept of state sovereignty in the context of international relations.[3] The controversial issues surrounding the concept of sovereignty will also be briefly examined.

The formation of international relations cannot be taken for granted. It necessitates the existence of numerous political entities. The interconnectedness between nations is achieved when these political actors differentiate themselves from one another, whilst retaining their own distinct identities. Each entity seeks to preserve its position as a node

[3] For a detailed historical discussion of the relationship between national sovereignty and international law, see Hinsley (1986, 158 – 235).

within the network and shows no inclination to merge or dissolve with its fellow units, unlike Prussia in the past.

> Those who speak of the wishes of a totality [*Gesamtheit*] – which constitutes a more or less independent state with its own centre – to abandon this focal point and its own independence in order to form a whole with another state know little of the nature of a totality and of the self-awareness which an autonomous nation possesses. (Hegel 1991, 360, § 322).

To maintain their sovereignty and prevent disintegration, states focus on preserving their borders, which separate them from the outside world. If a country did not feel its independence, it would not be threatened by another country violating its territorial integrity. Sovereignty is the core of every state. It is the soul of its body. A made-up state that is not independent could let itself be taken over and assimilated by another country without any resistance or a war of independence, but it could also try to expand because it would not be aware of the difference between itself and the outside world. This latter situation aligns with the description of empires given by Henry Kissinger: "For the greatest part of humanity and the longest period of history, empire has been a typical mode of government**.** Empires have no interest in operating within an international system; they aspire to *be* the international system" (Kissinger 1994, 21).

Empires cannot be considered sovereign states due to their constant desire for more land. They lack self-control and their size fluctuates based on their current level of power. Thus, the concepts of power and sovereignty are not identical. Being a sovereign state requires more than just strength (Hegel 1991, 316, § 278). Modern nation-states represent the ideal counterpart to empires. These political entities can genuinely claim sovereignty because they are capable of self-limitation. They are not solely shaped by external forces, but also by their citizens. These citizen-states define themselves through their individual moments, while conversely citizens define themselves through the nation-state.

This is how the philosopher Georg Wilhelm Friedrich Hegel views the modern nation-state, namely as a personality or individuality, irreducible to its constituent parts. Individuality is an "infinitely negative reference to itself" (Hegel 1991, 359, § 321), which equates to self-determination. Individuality demonstrates its completeness, coherence, and unity to the outside world by referring to itself.[4] It presents itself as a self-contained and determined unit. "Individuality, as exclusive being for itself, appears as the relation [of the state] to other states, each of which is independent [*selbständig*]

[4] One focal point is what Europe lacks. Recall one of the commonly held sayings attributed to Henry Kissinger: "Who do I call if I want to call Europe?"

in relation to the others" (Hegel 1991, 359, § 322). Hegel thus describes modern or constitutional states as "organisms," a commendable designation (Hegel 1991, 304, § 271). By contrast, he demotes empires, despotisms, or former feudal monarchies (Hegel 1991, 327, § 286) as "aggregates" due to their lack of proper self-relation (Hegel 1991, 315, § 278). Their unity is not genuine but rather a mere collection of parts. The aggregate only imitates unity, and this type of conglomeration of parts does not constitute a living whole. Several federations nowadays bear a striking resemblance to such an aggregate. By definition, these political associations stifle the ability of nations to exercise self-determination. "What is lacking [in these regimes] is the principle of subjective freedom" (Hegel 1991, 338, § 299). Their level of self-determination does not meet the standards of democratic nations. As a result, these countries are often classified as non-Western or authoritarian. The West's relationship with what it perceives as flawed countries is characterized by an incomplete or limited form of recognition, with both parties experiencing mutual misrecognition and mistrust. This asymmetry fundamentally hinders the pursuit of common solutions to global issues.

This section has demonstrated that the assertion of state sovereignty is not an archaic concept, to be relinquished, but rather a contemporary principle that organizes the relationships between states (Hegel 1991, 368, § 333). The pursuit of independence is primarily a state's pursuit of recognition for its independence by other states (Hegel 1991, 367, § 331). Thus, independence does not signify an unattainable or regulatory aim of total absence of dependence on others.

II. Independence? It Depends on What Country and to What Extent

When the international and natural environment turn unfavorable and turbulent, it would be irresponsible and manifestly irrational for states to rely on what is unreliable and unstable. However, it would be equally irrational for states to sever all outside connections.[5] The prudent response would be to pursue self-sufficiency to a satisfactory degree.

Different nations hold different views on what constitutes an acceptable level of autonomy. Generally, it is deemed sufficient for countries to exercise control over what is known as critical or systemically relevant infrastructure. However, pinpointing exactly what falls within this category is a matter of subjective assessment and cannot be accurately determined from the outside. Ultimately, a state is considered to be "a wholly

[5] For the sake of illustration, perhaps the most significant attempt to disengage from international relations was once made by the Soviet Union, which wanted to escape the capitalist environment and the "imperialist policies" of the bourgeois states.

spiritual entity" (Hegel 1991, 369, § 335), with varying levels of anxiety across different states (cf. Biess 2019).

A country's self-reliance potential is dependent on numerous factors. While I will not delve into these factors in detail, I will provide a brief list of some: scientific and technological expertise, geopolitical location, size of territory, size of population, level of patriotism, and access to natural resources. Furthermore, strong relationships with other nations, particularly neighboring ones, also significantly contribute to this potential. Friendly nations typically compensate for their lack of self-sufficiency through military, technological, trade and energy cooperation.

But among nations, too, a friend in need is a friend indeed. It is specifically the emergency situation that we are concerned with. When states feel that they are in need, they will generally and instinctively react as individuals, taking care of themselves first and then, if necessary, helping others. In times of crisis, it is more important for the state to prioritize its relationship with its citizens over maintaining friendly relations with other nations. The precarious and volatile external circumstances complicate the task of mutual assistance. Cooperation is complicated by the lack of confidence that what is valid today will be valid tomorrow. As the environment becomes increasingly unpredictable, nations will aim to rely more on their own resources and less on others. Reducing their reliance on external sources fosters greater self-sufficiency.

We have highlighted that independence should not be viewed as a binary concept, but rather as a matter of the degree or extent to which a state is self-sufficient. This is because a state can maintain sovereignty while still depending on other nations and the natural environment. The struggle for recognition amongst states illustrates this point. A state cannot attain sovereignty by isolating itself from its surroundings and becoming self-sufficient. Sovereignty is attained through recognition and respect from other states. A state is only truly sovereign when it is sovereign not only for itself but also for other states (Hegel 1991, 367, § 331). The recognition of its sovereignty by others is necessary for a state to secure its identity and international status. Therefore, interdependencies between states do not negate state sovereignty[6] and only become problematic when they are no longer accompanied by mutual trust and recognition. Relying on a disrespected and untrustworthy state can turn dependence into a perilous source of insecurity and danger (cf. Hoffmann 1963, 321). Being reliant, particularly in critical sectors, on an entity that is not substantially recognized as an equal political partner is contradictory and hazardous.

[6] Some scholars claim otherwise. Interconnectedness and globalisation violate the notion of sovereignty, e.g., Bragdon (1992, 384).

We can see the primacy of a political category of misrecognition over the economic viewpoint of utility and profitability. When alienation and disrespect intervene in the relationship between states, the need arises to make oneself independent of the country that is disrespected.

There is another reason why it is important to understand independence as a matter of degree and scale. It makes sovereignty less of an unattainable ideal and more of a practice that is lived. If a country is disappointed by another and finds itself dependent on its potential enemy, it does not cease to be sovereign for this reason. Sovereignty is not just a desired goal, but the actual pursuit of being more sovereign. Only an already existing sovereign can seek a more perfect fulfilment of sovereignty. A state must already be an individuality that exists for itself in order to want to be more materially independent of the states that it does not recognize. Analogously, it must already be an individuality to want to be recognized as such by other states. Only a sovereign can have the desire to be truly sovereign. Sovereignty is not only the end, but also the way to this end.

So I propose to understand state sovereignty as a movement between what is and what is desirable. It is neither what it is, nor what it is going to be, but what it is becoming. It is what is happening right now. It is a movement between what is and what ought to be. This movement is the "soul" of reality. Reality is not spiritless. It is not that which opposes an ideal, but that which already fulfils the ideal. Only when states are under the illusion that a lasting peace is at hand can this dynamic stagnate. Once the illusion of permanent friendship between all the great nations of the world has been dispelled, states that have awakened to the new realities will have to relearn the pursuit of their sovereignty.

III. Featuring Nuclear Power

Having introduced the concept of state sovereignty, the struggle of states for recognition of their sovereignty and the concept of misrecognition, it is clear that the harmonization of interstate relations and the stagnation of their dynamic development is an interlude rather than the result of historical evolution. Against this background, the robustness of nuclear power stands out in comparison with other energy sources. To assess the reliability of nuclear power, Martin Heidegger's notion of "enframing" (*Gestell*) proves useful, even though he did not intend to endorse the technology, but rather to criticize it. I generally believe it is quite legitimate to use a term against the intentions of the author who originally used it. In this case, I am also being honest because Martin Heidegger worries about exactly what I find to be the benefit of nuclear energy.

In his essay "The Question Concerning Technology," Heidegger explains enframing "as the name for the essence of modern technology" (Heidegger 1977, 20), with the contrasting example of "the old windmill" (Heidegger 1977, 14). This "ancient" source of energy defies the modern paradigm of enframing because its sails "are left entirely to the wind's blowing" (Heidegger 1977, 14), so it produces energy only occasionally. When it is windy, the mill grinds flour; when it is not windy, it produces nothing. The mill does not draw wind power from a "standing-reserve" (*Bestand*) (Heidegger 1977, 17). Wind cannot be stored and made available to turn the mill when it is needed. Wind cannot be commanded. It is maladaptive. It cannot be stockpiled for the bad times to come when the wind stops blowing. "The windmill does not unlock energy from the air currents in order to store it" (Heidegger 1977, 14). However, if we were to store the energy from the wind in batteries, we would incorporate windmills into the enframing at that moment. Hydroelectric power stations, for example, work in this framework because instead of using the energy of the water flow directly, as watermills do, the turbines are driven by water stored in a dam, so that if the water flow suddenly dried up, we could rely on the hydroelectric power station being able to produce electricity for some time thanks to the enormous amount of water in reserve.

In terms of *Gestell*, temporality plays a crucial role as we can see. The more accumulated energy humanity has available for immediate use, the more time it has to realize its goals, the less time is in the hands of "the future," the less power fate has over humanity, and the more firmly humanity holds its destiny and its future in its own hands (cf. Groys 2018, 8).

Before our time runs out, we are free to plan our future without any limitations. If I thought there might be a power cut in the next 24 hours, I would not be able to make plans for tomorrow. That is why coal was such an important breakthrough for humanity. People discovered that coal (and later other fossil fuels) provided not only a vast amount of energy, but also energy that could be used immediately. Coal "is stockpiled; that is, it is on call, ready to deliver the sun's warmth that is stored in it" (Heidegger 1977, 15). Overnight, people no longer had to save energy and live in energy and time poverty from day to day, year to year. Instead, they could pursue their full potential without constraint.

It was not until the industrial revolution, powered by fossil fuels, that the era of the natural or circular perception of time came to an end. Although Christianity had already rejected this pagan perception of time (Löwith 1949, 3, 30f.), the reality of life in a constant energy shortage did not correspond to this new awareness. People kept relying on bioenergy (wood, water, sun) which, although infinitely replenished, could only be regenerated slowly and unreliably. This handicap of renewables is fundamental and persists to this day. While wind and solar power are basically

limitless, they are not constantly available for long periods of time. By contrast, coal and other fossil fuels are still there, as an emergency line. Until all the fossil fuels are used up, they will remain obedient to our orders, akin to an athlete ready for the starting signal. The constant presence of this resource allows us to truly live in accordance with a linear perception of time.

Inevitably, growth becomes an end in itself for a humanity governed by a linear understanding of time. While growth for the sake of growth is not always looked upon favorably,[7] a society without energy scarcity can project itself spontaneously into the future over unprecedented distances. Consequently, it can contemplate future possibilities far beyond what previous generations, who suffered from energy deprivation, could conceive.

The contemporary proliferation of unreliable energy sources that are not available around the clock, such as wind and solar power, is a surprising development in light of Heidegger's notion of enframing. Rather, the expansion of nuclear technology might have been predicted. This is because nuclear technology takes the logic of enframing to its imaginary peak, given that the reserves of uranium and thorium (i.e. two elements that can be converted into fissile material and used as fuel for nuclear power stations) will last for tens of thousands of years at current rates of energy consumption (e.g. Herring 2021, 661 – 669).[8]

In addition to their vast availability in the Earth's crust and oceans, uranium and thorium have a deeper advantage compared to fossil fuels. They do not rely on the existence of a specific biosphere that produces fossil fuels over millions of years. These substances come into being due to the collision of neutron stars (Herring 2021, 661ff.), so their occurrence is not limited to planet Earth, and they will be found on other planets throughout the universe.

When discussing nuclear energy viewed from the enframing perspective, remember that the location of energy reserves is important. If they are in a limited space, such as the Earth's crust, it is different than if they are in an unlimited space, like the universe. As a result, the common argument that unlimited growth is impossible with limited resources becomes irrelevant if energy exploitation is not restricted to our planet.

In terms of international politics and the struggles of states to secure their independence, nuclear energy offers the following advantages over fossil and renewable sources. Firstly, those powerful nations in search of reliable access to natural resources will be happy to learn that reserves of uranium and thorium are more or less evenly spread throughout the entire planet's surface. It is also comforting to know that proven technologies can extract uranium from seawater. "Thus no country or international cartel

[7] E.g., "Growth for the sake of growth is the ideology of the cancer cell" (Abbey 1977).
[8] See also https://www.kernenergie.ch/de/rohstoff-uran-_content---1--1085.html.

can monopolize the uranium market, as has been the case with petroleum (Herring 2021, 668). Given this situation, nuclear energy can help strengthen a country's sense of self-sufficiency and independence from other states.

National self-sufficiency greatly depends on a country's energy reserves. Fissile materials have several orders of magnitude higher energy density than fossil fuels, making them vital to this goal. A consistent supply of fuel is needed to maintain the uninterrupted operation of coal- and gas-fired power plants, regardless of whether it is transported via long coal trains or gas pipelines. The high energy density of uranium allows nuclear power plants to order fuel years ahead, although current plants only use about 1 per cent of the energy in the fuel rods. As a result, there remains unused energy in nuclear waste that could potentially serve as a considerable source (cf. Smil 2015).

The enormous energy density results in a high EROI coefficient (Weißbach 2013). This indicator measures how efficient an energy source is overall. It shows how many times more energy this or that energy source produces over its lifetime relative to the energy consumed in its manufacture (construction), operation, decommissioning, fuel purchase, and any other costs we count. Heidegger speaks of expediting (*Fördern*), which "is always itself directed from the beginning toward furthering something else, i.e., toward driving on to the maximum yield at the minimum expense" (Heidegger 1977, 15).

Under ideal circumstances, renewable sources generate a tenfold return on the energy invested, and coal-fired power plants have an EROI of around 30. Nuclear power plants nowadays produce about 75 times the energy required to build, operate and decommission them. Nonetheless, the possibilities of innovative fourth-generation reactors are impressive. One calculation suggests they could effectively generate up to 2000 times the energy invested in them (Huke, et. al 2015, 234).

Regarding environmental protection, splitting atoms is a much more efficient way of exploiting nature's resources than any other type of energy source. Figuratively speaking, nuclear exploitation of nature is so effective that it causes comparatively little damage to nature. This also makes it a substitute for less efficient, i.e. more violent, ways of extracting energy from nature. Put simply, if we use nature in a more intensive, concentrated and efficient way, we would not need to use it in a way that is wasteful, primitive and uncivilized. Rather than exploit nature in ways less productive than technically possible, the logic of capitalist ideology suggests that it is better to let nature take its natural course.

IV. Conclusion: After the Comeback of History

Although nuclear power has the ability to minimize insecurity by decreasing reliance on potentially unfriendly states and unforeseeable environmental circumstances due to its

robustness, its use for civilian purposes poses environmental and economic risks (Müller-Jung 2023). Considering the objective decline and waning of the "first nuclear era" (Weinberg, 1994), these limitations have outweighed the advantages of nuclear power. Consequently, it is necessary to mention at least two factors to provide context to the nuclear phase-out. Firstly, this policy is mainly implemented in Western democratic nations where public opinion carries great weight. Secondly, it is taking place in geopolitical conditions that are considered favorable.[9]

International politics no longer elicits insecurities for a country that has fulfilled the universal history of humankind and sees its triumph as an inspiration for others. By adopting such a grand, teleological narrative, a nation does not fear economic dependency on states with less advanced forms of government. This dependence does not cause a sense of insecurity because, as the argument goes, the telos of historical development is to transform all countries into liberal democracies (see Fukuyama 1992). This view of history may be the sole means of challenging a fundamental claim of realist theory, which is the lack of certainty regarding the intentions of other nations in the present or future (Copeland 2000, 210).

When the idea that international relations are subject to progress and that all countries want to westernize collapses, Western countries will experience the insecurity they have forgotten. They will realize that they do not know what other people's intentions are. What exactly do these other nations desire if not liberal democratic governance? Amidst the current state of uncertainty and in a real competition with no clear winner, the time has come for a comparison, namely between the risks of using nuclear energy and the risks of not using it (Kalmbach, et al. 2020). This reassessment will highlight the previously disregarded advantages of nuclear energy. In uncertain times, refraining from nuclear energy and depicting it as an uncontrollable and high-risk technology may no longer be easy, given that its alternatives also present substantial risks, particularly at an international level. If avoiding nuclear energy is considered equally perilous, the fear of nuclear power may thus be put into perspective, paving the way for a more level-headed, less emotive, and more rational discussion on energy policy.[10]

However, the uncertainty resulting from a lack of knowledge of other states' intentions has another crucial dimension. It prompts us to reflect upon what other states know and the knowledge that underpins their plans and intentions. While Western

[9] One good illustration of this thesis is Iran, which is developing its nuclear programme partly because it does not feel that it is in a geopolitically benign situation.

[10] This invitation to compare the risks associated with the use and non-use of nuclear energy allows me to avoid a separate approach to the issue of nuclear security, which I believe is unfair because it implicitly suggests that the other options on the table do not pose serious geopolitical risks.

countries, as evident by their energy policies, may harbor serious doubts about the viability of nuclear energy, certain other countries could be unshakably convinced that there exists no (sustainable) alternative to this energy source. While certain countries may hesitate, others will focus on developing technologies that can provide them with an almost insurmountable edge. It is exceedingly risky to allow a potentially hostile state to establish a major technological lead. The inference drawn from this argument is that some countries may harbor doubts regarding the future potential of nuclear power, yet they should still pursue technological development as a precautionary measure to safeguard against potentially unfriendly nations obtaining an undue advantage in the event of successful nuclear power exploitation. This argument would be pointless if we were to assume that peace between states is guaranteed.

The insecurity among states ought to prompt countries to maintain an open-minded outlook and steer clear of self-centered tendencies (cf. Kissinger 2010, 10). Taking security concerns into consideration will help prevent nations from succumbing to populist temptations and determining, for instance, a country's energy policy according to their whims. Nations need to harness their views on energy production with regard to the international landscape, putting aside subjective evaluations. It is therefore important that countries learn to keep their willfulness in check and act accordingly. The increasingly perceived tragedy of international politics will compel nations to curb their self-absorption and consider the actions of others. External risks will be a challenge for nations to move away from insularity and instead engage with other people's perceptions of them. Understanding international relations as social relations cultivates respect for the views of others.[11] Sociability involves relativizing one's own opinions by considering those of others.[12] By openly acknowledging the unfavorable nature of interstate relations, countries could be encouraged to adopt an energy strategy that enhances their self-reliance and consequently their resilience in the face of international and environmental challenges.

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[11] On understanding international relations as social relations, e.g., Wendt (1999).
[12] Cf. "Thus, since the size of the body politic is purely relative, it is forced constantly to compare itself in order to know itself; it depends on everything that surrounds it, and must take an interest in everything that happens there, for, wish as it might to remain inside itself without gaining or losing anything, it becomes small or large, weak or strong, according to whether its neighbour extends or contracts and becomes stronger or weaker" (Rousseau 2005, 67).

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CLIMATE ACTIVISM, SOVEREIGNTY, AND THE ROLE OF STATES: ENVISIONING POST-NEOLIBERAL CLIMATE GOVERNANCE

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This paper examines the relationship between climate movements and states in climate governance, suggesting that movements may improve their political output by adopting a sovereignty-based, democratic framing of their agenda. The ambivalent attitude of climate movements and Green Deal supporters concerning the desired role of states is reconstructed. Moreover, a multidisciplinary review of the literature supporting a "return of the state" in climate politics is offered. Drawing on the critical literature on neoliberal environmentalism and the role of states within globalization, as well as considering issues such as equality, accountability, and scale of the transition process, this paper advocates for a non-nationalistic, democratic understanding of sovereignty as crucial for an efficient and fair green transition. It particularly emphasizes the need to revive the distinction between public interest and private gain and provide a bridge between subaltern agendas and climate movements' goals in order to successfully envision a post-neoliberal climate governance model.

Keywords: Climate Change – State Sovereignty – Climate Movements – Neoliberal Environmentalism

Introduction

As the IPCC reports that the global response to climate change still falls short of the goal of limiting global warming to +1.5°C, with global warming of 3.2°C projected by 2100 (IPCC 2023), there appears to be some novelty – and a great deal of ambiguity – in the way climate movements and global economic institutions (GEIs) are approaching the climate crisis in their agendas, press releases and reports. On the one hand, scholars have reported traces of a "statist" turn in the agendas of some of the most relevant climate movements, such as FFF and ER (Doherty et al. 2018; de Moor et al. 2021), hence partially breaking with a longstanding tradition of ambivalence concerning the desired role of states among environmental activism and green parties

(Eckersley 2004, 11) and a past commitment to lobbying the international arena rather than national governments (Doherty et al. 2018). On the other hand, evidence suggests that GEIs are increasingly starting to question their three-decade-long support of the "neoliberal" governance model (Dent 2022; Brad et al. 2022) and look more favorably at the role of states and governments in managing the transition. For example, the IEA has recently declared in a report that "it is for governments to take the lead and show the way" in the transition process (IEA 2022, 26). However, as this paper attempts to illustrate, it might be too soon to speak of a return of the state or a "post-governance era" (Brad et al. 2022) as a paradigm shift in global climate governance (GCG), since among the agendas of the social movements, and the GEIs' reports as well, the desired role of the state remains ambiguously framed. Nevertheless, this paper argues for the burning need for such a paradigm shift and positively looks at the controversial conceptual heritage of sovereignty as a partially original way to frame the climate crisis – for both climate movements and governments.

This paper consists of an exercise in non-ideal theory with a twofold goal: (*i*) to conduct a literature review identifying the ongoing and past trends in GCG concerning the relationship between states and the agendas of climate movements,[1] as well as the multidisciplinary literature supporting a "return of the state" in climate politics, and (*ii*) to contribute in terms of a conceptual clarification of the recent "statist" trend among climate movements and GEIs meant to ameliorate their policy output, through the aid of a novel framing centered around non-nationalistic democratic sovereignty and the re-affirmation of the public-private conceptual divide. In the post-Paris era, where international negotiations seem to have stalled, and as geopolitical tension rises, climate movements might be tempted to "go solo" and bypass institutional politics. However, this paper supports the view that they might not be able to generate enough political momentum for change without targeting public authorities and pushing them not only to act but also to *redefine their role* vis-à-vis the market. Furthermore, bridging climate and social justice struggles across developed and developing countries, as the proposed framing does, appears just as crucial and potentially beneficial to the overall cause.

The argument unfolds in three main steps, articulated into four sections and a conclusion. The next section, section I, offers a diachronic overview of environmental and climate movements concerning their oscillating attitude to top-down and state solutions. The point here is (step 1) to argue that despite some changes happening in the agendas of the movements over the last few years, there is still ongoing confusion

[1] Although a comparative study of the relationship between authoritarian states, their different conception of sovereignty (Paris 2020), forms of climate activism, and environmental policies (Li – Shapir 2020) would be highly crucial, due to the limited space, this paper's scope is limited to democratic countries.

concerning what movements *want* from states – if they want anything at all. Furthermore, sections II and III (step 2) offer a multidisciplinary review of scholars supporting the need for a "return of the State" in climate governance vis-à-vis decades of (inefficient) "neoliberal" environmentalism. In detail, section II offers anecdotal evidence of "eco-social conflicts" that could be better addressed by stronger state intervention and proposes two climate policy-relevant public choice trade-offs (equity vs. sustainability, efficacy vs. decentralization) to help frame the complexity of the transition. Moreover, section III offers a review of the debate on state sovereignty in environmental political theory, an overview of the critical stances against "neoliberal environmentalism" and a brief literary review of economics, public policy, and political ecology scholars advocating for stronger state intervention concerning climate change. Finally, building on steps 1 and 2 (which are logically mutually independent), the last step (step 3), which is the normative side of the argument, consists in showing that movements ought to put an end to their confusion on the desired role of sovereign powers to maximize their political output and that they can do this by adopting a novel framing for their agendas and goals – one centered around state sovereignty, democracy, and the re-affirmation of the public-private conceptual divide. To accomplish step 3, section IV recalls some elements in the history of sovereignty to support its present utility, grounding the value of democratic sovereignty in the defense of the public good and as endowed with a normative concept of public utility (Bobbio 1989, 3). It then discusses some elements in the agendas of the XR and the FFF pointing at an already happening (but still vague) pro-state shift from the confusion in section I. Furthermore, it advances some consideration on the parallels between the pandemic and the climate crisis concerning the role of the state and answers to an objection concerning planetary sovereignty.

Finally, it appears crucial to point out that, while this article is receptive to the position that minimizing the negative consequence of the climate catastrophe needs us to envision a post-neoliberal GCG paradigm and a "return to the state," no specific importance is attributed here to the *national* or *ethnonational* dimension as such. In what follows, when the word "state" is deployed, it merely indicates *any polity able to function as a state* – in other words, endowed with a significant set of sovereign prerogatives in respect of the transition (such as control on currency, trade, social spending, industrial planning, environmental regulation). Movements should address sovereign, public authorities wherever they are sited (at the national, regional, or supranational level) and, additionally, push them to embrace a self-understanding as "stewards of the public interest." Moreover, radical change will not take place within democratic polities without the fundamental role of climate movements in creating political momentum. This paper argues that the conceptual repertoire of sovereignty

might help us unify these burning causes within a single frame and help us address them more properly.

I. How Climate Movements See the State: An Oscillating Attitude

Environmental social movements have a longstanding tradition of ambivalence on the desired role of states in their agenda and their preference for bottom-up or top-down solutions. They have often oscillated between an "anti-state" approach – which is rooted in the history of twentieth-century social movements (Della Porta 2002) – prescribing decentralization, autonomy, grassroots decision-making, and rejection of disciplinary violence – and a pro-state call for stronger state regulation and stronger public institutions vis-à-vis the economy – historically rooted in a socialist and eco-socialist standpoint (de-Shalit 2000) and asking for "large doses of state resources (both fiscal and repressive) to be made available to the causes of desired social change" (Eckersley 2004, 11; Sicotte – Brulle 2017). Moreover, in the wake of the securitization of climate change as a global challenge in the late 1980s, climate movements initially focused on lobbying the international arena (for example, through the UNFCCC framework) rather than national governments with a parallel focus on individual responsibility (Doherty et al. 2018).

Meanwhile, in their ambivalence on the desired role of state and top-down measures, as well as with their initial transnational scope, climate movements might have inadvertently reinforced so-called "neoliberal environmentalism" (Dent 2022), a three-decades-long trend in GCG which systematically favored de-politicizing market-based solutions, privatization of resource control, commodification of resources, withdrawal of direct government intervention, decentralization of resource governance to local authorities and NGOs (Dent 2022), and an emphasis on an eco-consumeristic ethic (Stoner 2020). Despite some relatively successful parenthesis of national level-based climate campaigns in the 2010s – such as the UK's "golden age" of climate activism and policymaking (Nulman 2015, 24 – 56) – not much changed in the agendas of the movements until COP21, when scholars "increasingly saw climate activists reject any possibility of the UNFCCC solving the climate crisis" (Doherty et al. 2018). Consequently, recently established climate movements such as XR and FFF have been documented to increasingly recognize the need to "bring the (nation) state back in" (Doherty et al. 2018), thus breaking "from prior climate mobilizations targeting transnational institutions or fossil fuel industry and emphasizing '*do-it-yourself*' forms of actions" (de Moor et al. 2021, 622). In this respect, it must be noted that the literature on climate movements supports the view that, to optimize political outcomes, movements should primarily lobby *national* governments rather than engage the international arena (Nulman 2015) or overly localized protests (Brulle – Sicotte 2017).

In more than one way, XR and FFF are thus breaking with the tenets of neoliberal environmentalism concerning the role of states. Nevertheless, many activists participating in XR and FFF continue to engage in lifestyle politics and individual responsibility as the key solutions to climate change (de Moor et al. 2021). Furthermore, one of XR's ten core values is that "we are based on *autonomy* and *decentralization*."[2] We ought to conclude that, despite signs of change, the ambiguity of the climate movements concerning the desired role of the state is yet not gone. On the other hand, despite some recent signs of a post-neoliberal, pro-(nation)-state turn (Dent 2022; Brad et al. 2022), among GEIs' reports and current national and regional climate policymaking the ambivalence persists as well.[3]

Over the last few years, different varieties of the "Green New Deal" have gained momentum among scholars, civil society, and policymakers (Brad et al. 2022), inevitably contributing to the revitalization of the discussion about the desired role of states in GCG and the pros and cons of top-down and bottom-up measures. Nevertheless, even among well-known Green Deal proponents who are also climate movement supporters, the pro-state/anti-state ambiguity seems to resurface once again in the shape of a widespread suspicion against top-down initiatives and a preference for bottom-up initiatives, localism, and decentralization. For example, Naomi Klein theorized "Blockadia" as a global social movement meant to overthrow deregulated fossil capitalism through *localized* popular resistance, in direct opposition to "the failures of top-down environmentalism" (Klein 2014, 253 – 254). Moreover, in a more recent contribution, she is not entirely clear on the role of state-level measures she asks for, as she opposes the centralization of the US New Deal with the spirit of *decentralization* of the Green Deal (Klein 2019). In a similar vein, in Max Ajl's recent book on the Green Deal, top-down Green Deal projects are considered plans seeking "to maintain exclusion and exploitation in the world system" at the expense of the Global South (Ajl 2021, 21). Even some Marxist-inspired scholars seem to prefer horizontality to top-down strategies, for example, Mann and Wainwright are skeptical of global top-down governance and market-based instruments, as well as of state-led green Keynesianism, and highlight instead the key role of a future, bottom-up radical climate movement ("Climate X") (Mann –Wainwright 2018).

[2] See online: https://rebellion.global/about-us/ (Retrieved on September 23, 2023; emphasis added.)
[3] Overall, institutional climate initiatives continue to heavily rely on transnational, market-based environmental policies, e.g., the EU is still heavily counting on its ETS mechanism to meet its 2030 targets (ICAP 2023).

II. Challenging Ambivalence: Problematic Trade-offs and Eco-social Conflicts

The widespread suspicion against top-down Green Deals among scholars and activists is certainly partly justified, given the influence that corporations and global markets exercise on policymakers on all levels to push back or "capture" regulation and protect short-term profit (Davies 2014), and the exclusionary and unjust policies of past instances of state planning (Klein 2019). Nevertheless, the traditional and ongoing ambivalence concerning the desired role of states and top-down policies (section I) remains problematic given the political and social complexity of transition plans. For the movements to maximize their political output, it appears helpful to lay down the most salient traits of the "fair transition" conundrum in terms of public policy.

We can conceptualize the most relevant challenges to transition plans through two trade-offs, which call on climate movements and scholars to clarify their *desiderata* concerning the role of the state and the scale of the plan: (*i*) the equity vs. sustainability trade-off – concerning the difficulty of protecting the environment while respecting social justice – and (*ii*) the efficacy vs. decentralization trade-off – describing the need to find the right balance between the *scale* of the plan and the respect for regional diversity, and the special needs of indigenous peoples, different classes and social groups, inclusivity and democratic participation.

Some scholars have been stressing the possible incurrence of tensions between *inclusivity* and *mitigation*, as well as between *mitigation* and *participation* in the management of environmental problems (Rathzel – Uzzell 2011; Ciplet – Harrison 2019; Temper et al. 2020). In recent years, the global North witnessed numerous "eco-social conflicts" that complicated the traditional link between the political left, grassroots movements, and environmentalism, posing new challenges for supporters of Green Deal projects. For the scope of this paper, the term "eco-social conflict" indicates any social conflict in which a trade-off between environmental protection and social welfare or equity is particularly evident (Barca – Leonardi 2018; Scheidel 2020). For example, the *Yellow Vests Movement*, originated in France in 2018 from, among other reasons, the imposition of a fuel tax by the French government which was largely perceived as disproportionally weighing on working and rural classes (Satre et al. 2021).[4] In the French case, as well as in the case of the Dutch right-wing, agrarian political party *Farmer-Citizen Movement* (Novelli 2023), we saw grassroots movements rise to directly confront top-down environmental protection which was perceived to favor the rich and disproportionally affect the low-income and working classes, putting

[4] Eco-social conflicts have been described as having affected the global South as well, and for a much longer period, with scholars denouncing the unsettling alliance of mitigation strategies and imperialist capitalist accumulation in the form of new ecological enclosures and land grabbing ("carbon complex") (Angus 2016; Salema 2018) or gentrification effects (Anguelovski et al., 2018).

the social justice-climate justice alliance in jeopardy. In light of this, the next sections bring in additional evidence to conclude that sovereign entities can minimize eco-social conflicts by optimizing the relevant trade-offs and that for this reason, the movement should be resolute in demanding sovereign states to act.

III. Sovereignty and Its Enemies: The Case of "Neoliberal Environmentalism"

Political Sovereignty is a complex and evolving political concept that has been used to achieve various goals throughout modern history. At the theoretical level, it has been employed to legitimize absolute monarchy, as well as to assert popular will as the basis of state power, and secure independence for postcolonial nations in the twentieth century (Grimm 2015; Philpott 2020). For many progressive, cosmopolitan, and liberal scholars, as well as activists, "sovereignty" directly recalls anti-environmentalism, nationalism, and authoritarian statism – a perception that makes any environmental re-investment in state sovereignty considerably harder. In environmental political theory, the relationship between sovereignty and environmental protection is a subject of debate. The mainstream argues that state sovereignty hinders effective global climate action (Latour 2018; Stilz 2019; Mancilla 2021) and is detrimental to climate justice (Vanderheiden 2008) and to the environment (Conca 2000). Most scholars have at best sometimes focused on partial aspects of the sovereignty-climate change nexus, but no significant comprehensive study on the issue has been released. Moreover, the noncompliance of several countries to international agreements on emission reduction over the last three decades has often been formulated through the appeal to sovereignty and national interest (Badrinarayana 2010), both for developing countries and for developed countries such as the US, and so-called "sovereigntist" populist movements across the globe are increasingly associated to climate skepticism and exclusionary nationalism (Kallis 2018).

However, the reduction of sovereignty to authoritarian rule and nationalism highly undervalues the complexity and potential of the conceptual history of sovereignty (Paris 2020). In this vein, some scholars have suggested that the concept of sovereignty can be actively re-invested to critique and reform a globalization model that impedes an adequate climate change response (Eckersley 2004; Christoff – Eckersley 2013; Mitchell – Fazi 2018). Furthermore, a liberal conception of the sovereign *demos* has been pointed out as a crucial element in supporting trans-generational fairness (Ferrara 2023, 8), which in turn appears to be widely perceived as a crucial endeavor to back up climate action (Caney 2014). As Piketty perfectly summarized, in this case from a social-democratic perspective, a Green Deal project ought to "be *internationalist* in its ultimate objectives but *sovereignist* in its practical modalities," adding that "the difficulty is that this universalist sovereignty will not always be easy to distinguish from the nationalist type of sovereignty that is currently gaining momentum" (Piketty 2020b).

In particular, the critical literature on neoliberal globalization and "neoliberal environmentalism" highlighted for decades that the weakening of state sovereignty and the "privatization" of norm-making and regulation (Zumbansen 2013) in neoliberal globalization has represented in many instances an *obstacle* to climate action and global justice. Concerning developed countries, scholars considering state sovereignty as a positive resource vis-à-vis the failures of neoliberal climate governance piggyback on three decades of critical globalization studies that denounced an alarming crisis of state sovereignty and accountability and the rise of private powers, such as transnational corporations and NGOs, as well as an increasing power of unaccountable GEIs and trade agreements (Rodrick 2011; Davies 2014). Moreover, a problematic lack of distinction between "public" and "private" domains across multiple domains was highlighted (Sassen 1996), comprising global environmental governance (Pattberg – Stripple 2008; Vatn 2018). Transnational free-trade agreements and GEIs have been widely highlighted as the locus of most crucial tension between free-trade economic growth and environmental protection, undermining the attempts of nation-states to promote radical environmental protection measures (Klein 2014; Ajl 2021; Dent 2022) as well as conflicting with UNFCCC and UNEP (Bierman 2014). Concerning developing countries, scholars have stressed the importance of claiming effective state sovereignty and rejecting unfair climate agreements as a rejection of Western neo-imperialist "green" projects which do not satisfy the basic requirements of climate justice – considering, for example, the disproportion of historic GHG emissions and the uneven distribution of financial and administrative capabilities across developing and developed states (Eckersley 2004, 232), as explicitly stated at the Cochabamba *World People's Conference on Climate Change* in 2010. In this respect, the discourse over the "green" potential of sovereignty intercepts the content of numerous de-globalization or alter-globalization movements over the last four decades, especially comprising claims for "food sovereignty" (Tramel 2018; Guerrero 2018; Ajl 2021; Liddell – Kington – McKinley 2022) and "clean energy sovereignty" (Menotti 2007) in movements such as *La Via Campesina*. This hints at the possible existence of a Global North-Global South convergence on the environmental and anti-neoliberal potential of states and sovereignty. Therefore, formulating the desiderata of the climate movements in terms of sovereignty claims might help bridge environmental and social justice struggles across developed and developing worlds, amplifying their policy outcomes, and facilitating climate policy dissemination across different nation-states (Nulman 2015, 37 – 9).

Going back to the "efficacy vs. decentralization" trade-off, economists have been increasingly pointing out the need to start betting once again on the sovereign prerogatives of national states and to break with the neoliberal soft regulation and governance system. Under overly free markets and strong free trade and investment

agreements worldwide, Mariana Mazzucato argues, the world economy follows a path-dependent direction that, in the case of climate change, locks us in catastrophic fossil-based inertia (Mazzucato 2015, 6). The view that states are best suited to guide climate action and people's lifestyles (IEA 2022) is increasingly popular in the GEIs' reports (Dent 2022). In this view, states "can lead the way by providing the strategic vision, the spur to innovation, the incentives for consumers, the policy signals and the public finance that catalyzes private investment" (IEA 2022, 26), while simultaneously supporting most affected communities and – crucially – bearing "*the responsibility to avoid unintended consequences* for the security and affordability of supply" (IEA 2022, 26, emphasis added). Consequently, they result in our best chance to green up our "techno-economic paradigm" in a reasonable timeframe and in a *just* way (Mazzucato 2015; IEA 2022). Some degrowth supporters share this view about the government's role as well (Hickel 2020), along with numerous scholars calling for wartime economies during World War II as a model for ideal climate action (Delina 2016; Malm 2020). More radical anti-capitalist positions claim that the restructuring of our productive system must now be so deep-seated that capitalism itself must be deeply transformed in an eco-socialist fashion (Angus 2016; Malm 2020; Ajl 2021). In this vein, Karl Polanyi's seminal idea of a "double movement" between market forces and non-market forces has been widely used to support the necessity of the state in confronting market forces and implementing a fair Green Deal (Dale 2021).

These results seem to point out the fact that nation-states – or, significantly, any supranational organization able to retain a significant set of "sovereign prerogatives" concerning innovation and industrial policy, funding, and regulation, although currently not existing – are the actors most capable of adequately addressing climate change (vs. private firms and individuals or translational institutions), and therefore the most adequate target of climate activism. Regrettably, the *structural* capacity of states to accomplish a task does not imply that they would automatically play the leading role in the transition to a new techno-social paradigm without further pressure from below by the movements and without redefining their role vis-à-vis society (see section IV). If climate movements are determined to maximize their policy outcome, the ambivalence concerning crucial trade-offs should arguably be minimized.

IV. Democratic Sovereignty as a Framework for Climate Activism

We are then prompted to ask if a "greening of sovereignty" (Eckersley 2004, 203) is possible in the current circumstances, and if framing the agenda of the movements in terms of sovereignty claims will be helpful to reach their goals. A crucial point here is that when the movements set apart their ambivalence and explicitly advocate for a stronger state, as Eckersley pointed out, they do not seem to conceive of the state

merely as *instrumental* to their goals: a *normative* ideal of "the good state" as "some kind of embodiment of the public virtue or democratically determined public values" emerges as well (Eckersley 2004, 29). Elaborating on this insight concerning a stronger sovereignty-movements partnership, it must be noted that the normative ideal of "the good state" is embedded in a vision of democratic sovereignty and of the state (or its government) as the steward of the "public interest." The genealogy of this view can be traced back to the modern emergence of territorial national states in Europe between the twelfth and the sixteenth centuries, during which territorial sovereigns managed to centralize control over the kingdom "neutralizing" all the "indirect powers" (church, guilds, towns, feudal lordship), causing state power and public power to ultimately coincide and reuniting under a single power a bundle of sovereign prerogatives or capabilities which were previously dispersed in the feudal society (Sassen 1996; Grimm 2015). Through a fragmented and complex process, the concept of sovereignty developed into the concept of an abstract, de-personalized public power (Grimm 2015, 37 – 76) which ultimately took on board instances of popular and democratic control over the political ruler, landing on the "comprehensive regulation of public authority" in modern constitutional states (Grimm 2015, 68). Through this process, the concept of sovereignty came to comprise an ideal of "public good" and "public interest," which gradually detaches from the ruler's self-interest and becomes increasingly inclusive of multiple interests within society. In this respect, modern sovereignty establishes the distinction between "public" and "private interest," both responding to a different notion of "*utility*" (Bobbio 1989, 3). It must be noted that adopting this framework implies that the concept of utility that pertains to firms and individuals as economic agents is ontologically different from the one that normatively governs public power – suggesting a structural inability of private agencies to take care of the collective interest.

In the recent agenda change by movements like XR and FFF, some signs are pointing in the direction of a stronger sovereignty-public interest link. Although they blame politicians for their inaction on climate change, many XR activists do *not*, for that reason, steer away from the state and concentrate instead on individuals and private companies (de Moor et al. 2021). Instead, they assign states and governments a crucial epistemic and political role and ethics. Currently, XR's three central claims demand that governments "tell the truth," "act now," and "create and be led by the decisions of a Citizens' Assembly on climate and ecological justice,"[5] while the "FFF explicitly demands that politicians 'listen to the science,' and 'follow the Paris agreement'" (de Moor et al. 2021, 622). The overall message seems to be that "the government must act

[5] See more online: https://rebellion.global/ (retrieved September 23, 2023).

on what climate scientists say, even if the majority of people are opposed" (Moor et al. 2021, 623). This does not appear to be blind faith in politicians. Rather, activists are possibly skimming the surface of the potential lying in the link between sovereignty and "the public interest." Neither does it imply the discharge of democratic values. According to the different notions of utility schematized above, democratic governments acting on climate change according to science *even if the majority of people are opposed* would just be "doing their job" – protecting the public interest against an existential menace to the well-being of the political community.

To get an idea of the potential of sovereignty as a "steward of the public interest" in addressing collective action problems like climate change, we might have to look at the way countries, and especially Western democracies (from whom we might have expected a softer response), dealt with the COVID-19 pandemic by implementing unprecedented measures – including mass mobilization, property and personal rights infringements, nationalization, and emergence measures – exceeding by far the demands of climate activists concerning the climate crisis (Malm 2020). In a game theory setting, both climate change and the pandemic can be framed as collective action problems, where free-riding behavior is incentivized, although coordination would benefit all. The pandemic management demonstrated that public authorities, even in democratic countries, can mitigate collective action problems through extensive regulation and (relatively moderate) imposition of their sovereign rule on businesses and property rights in case of emergency. Similarly, states can address the trade-offs in section II by *mediating* conflicting interests and compensating the "losers" of the green transition. Examples like the Yellow Vests Movement in France and the Dutch case of BBB illustrate how governments *could* have accompanied controversial policies with incentives or subsidies to mitigate discontent among working-class and rural communities.

One of the reasons why these measures are still so unpopular is that they clash not only with a three-decade-long neoliberal trend in environmental policymaking (Dent 2022) but also with decades of neoliberal macroeconomics influencing European and global politics, prescribing national competitiveness, austerity measures, privatization, tax cuts, public-private partnership, and a managerial approach to public administration (Davies 2014; Klein 2014, 2019). In the end, to envision a post-neoliberal climate regime, a re-politicization of the climate issue (Swyngedouw 2013) through the conceptual resources of the history of sovereignty seems timely.

One objection against re-affirming the value of sovereignty in the context of climate change must be addressed, namely, why, if we are to reframe the demands of activists in terms of sovereignty, restricting ourselves to the existing nation-states (or, at best, hybrid regional polities such as the EU), and not envisioning a *global sovereign*

instead? Admittedly, if we limit ourselves to the goal of climate mitigation and adaptation in an ideal setting, such a solution could meet benign patterns of optimization of the trade-offs in section II – for example, maximizing the scale and the overall efficacy in envisioning a radical transformation of our techno-economic paradigm. The main counterargument to this objection, however, is simply the state of the art of climate science and the reality of the past thirty years of overall unsatisfactory climate negotiations. Contrary, for example, to Latour's diagnosis concerning the emergence of a new planetary sovereignty in the current climate regime (Latour 2018), or at least three of the geopolitical scenarios envisioned by Mann and Wainright (Mann, Wainwright 2018), the restricted timeframe for significant climate action (IPCC 2022) and the past failure of climate negotiations leave hardly any hope for such global sovereign scenarios – given that a *Climate Leviathan* (Mann, Wainwright 2018) can be considered a desirable outcome. Therefore, out of a cautionary principle, given the very limited time left to minimize the effect of the climate catastrophe, we should rather focus on plausible scenarios that do not presuppose the birth of entirely new political actors. However, this is not to exclude the possibility that, as is partially the case of the EU's Green Deal, macroregional political entities (at least if endowed with a proper set of sovereign prerogatives and a proper self-understanding of their role as mediators of trade-offs and stewards of the public interest) could serve the goal of rapid climate action better than nation-states.

V. Conclusion

This paper examined the relationship between the goals of the climate movements and state sovereignty in the context of the current GCG paradigm and advanced a novel framing of the targets of the climate movements in terms of a democratic conception of sovereignty. Through a multidisciplinary literary review concerning the movements-state relationship, the paper analyzed the shifting attitude of climate movements towards sovereign entities vis-à-vis their heritage of ambivalence towards state-led measures, paralleled by a similar pro-state turn in GEIs reports and economic theories – nonetheless concluding that ambivalence persists on this issue. The following sections drew on political theory and the history of Western political thought to advance a normative proposal concerning the need to re-frame the agendas of the climate movements in terms of a call for political, democratic sovereignty, which is meant to clarify the existing targets and political goals of the movements and to avoid confusion and inefficacy – as well as better linking the climate cause with subaltern struggles in the Global South. This article advocated for a non-nationalistic, democratic understanding of state sovereignty as crucial for an efficient and fair green transition and for a full comprehension of what is at stake in the agendas of the current

climate movement, while particularly emphasizing the need to revive the distinction between public interest and private gain.

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DECONSTRUCTING THE ANTHROPOCENE WITH SPECULATIVE COSMOLOGY

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LAMY-RESTED, E.: Deconstructing the Anthropocene with Speculative Cosmology
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This article proposes to deconstruct the philosophical foundations of the Anthropocene based on Whitehead's philosophy or cosmology. After questioning the scientific or geological validity of this notion and having shown how this notion was inseparable from the question of technology, it brings to light its philosophical foundations by isolating three moments in the history of philosophy. Philosophically, the Anthropocene is founded on the idea that human beings are essentially different from the other living beings, among other things, in their technical capacities. These three moments correspond to three different representations of technology: (1) the Promethean moment of ancient Greece. In this time, technology is understood as a "know-how" ("*savoir-faire*"). It saves humans from the certain death that their nakedness promises to them. (2) The modern moment of Descartes who defines technology as a power. (3) The contemporary moment of Heidegger for whom modern technology is a huge peril. From this point of view, the "general organology" that Canguilhem introduced corresponds to a first questioning of this cosmology. After defining "general organology," this paper shows how and why it fails to deconstruct the Anthropocene. This paper finally presents Whitehead's cosmology that ultimately offers a better weapon to deconstruct the Anthropocene.

Keywords: Anthropocene – Science – Ontology – General Organology – Speculative cosmology

Introduction: Is the Anthropocene a Geological Concept Only?

The Anthropocene is commonly defined as a geological epoch resulting from human action on the Earth, itself conceived of as a global system possessing its own balance, comparable to that of an organism. The concept of the "Anthropocene" thus claims to describe a scientific reality in which the functioning of the Earth System, which Lovelock also called "Gaia" (Lovelock 1998), is nowadays significantly determined by human activity and more specifically by technical activity. Indeed, the Anthropocene

corresponds to the period in which the impact of human activity, externalized in technologies of machines or methods of production, extraction, etc., is now so great that it has become a geo-physical force. Indeed, in a scientific or geological sense, the Anthropocene is inseparable from questions of technology, which has massively increased human power since the First Industrial Revolution. This theoretical framework is a part of a broader view of the Earth, and more precisely matter, that reacts to our actions and obeys physical and/or biochemical laws (the "laws of nature"), knowable to us through reason and experience. In other words, the concept of the Anthropocene is a Western construct founded on Western principles according to which human beings have a very specific place among living beings from which the former is radically different by virtue of their capacity for knowledge.

At the same time, as a concept, the Anthropocene carries with it certain psychological connotations, provoking fear, or even dread: our geological epoch is one of collapse of biodiversity, of global warming, of the irreversible pollution of soils and oceans. Overall, it is a period of ecological crises that directly threaten all forms of life. This psychological reaction is a consequence of the scientific foundations underlying the Anthropocene: because the truth, based on facts and scientific reasoning, cannot be questioned, the idea of the Anthropocene causes an ecological anxiety that haunts contemporary society. According to this logic, it should not be a concept whose relevance one is able to evaluate; it would express an indisputable reality that evades any form of interpretation. This apprehension of the Anthropocene is based on a certain conception of science: it alone has the power to tell the truth, the capacity to describe reality and, above all, to predict it. The credence given to the Anthropocene thus depends on its scientific nature, which itself lacks ontological foundations. It exists as a fact, and is objectively valid, independent of any discourse. It could undoubtedly be shown that this definition of science is itself based on an entirely Western perception of the world and of reality, which elevates the so-called "hard sciences" to the rank of truth. The urge to turn the Anthropocene into a science comes directly from this perception.

I will not attempt to show here that all science itself possesses its own ontological foundations; I will instead focus on the Anthropocene. I will do this firstly by turning to a paper written by Sébastien Dutreuil, "Is the Anthropocene a Concept of the History of the Earth? A Concept of Uncertain Epistemology" (Dutreuil 2018). Along with the deconstruction of the scientific aspects of the Anthropocene, I will also attempt to reveal its ontological underpinnings, which themselves depend on a technical and scientific context that renders another understanding of the Earth's functioning possible. There is indeed a distinctly performative aspect to the Anthropocene, because of the philosophical, political and psychological principles behind it and the effects it produces.

According to Dutreuil, the concept of the Anthropocene emerged in the 1980s from the "Earth System Sciences." These sciences were supposed to respond to a certain sense of urgency in the face of global changes the planet was undergoing, as well as to the discovery of the interconnection between its different processes. This new way of representing the systemic functioning of the Earth came from cybernetics, which understands an organism or a machine as a set of self-regulating processes that both keep the organism alive and the machine in working order. If something or someone acts on the machine, its balance can be destabilized. With the advent of technological progress, humans have become an external force whose impact on the Earth can, more or less, be predicted. Dutreuil's argument, while in general not questioning the validity of science, consists in showing that the Anthropocene is not the result of a geological study of the Earth's history, but of an ontological understanding of the Earth as a system, as it was understood from the 1970s onwards. While not denying the impact of human activity on the Earth, he suggests rethinking the function and the role that the Anthropocene plays in our contemporary societies. If the term is to be retained, he argues, it would be mainly for its political, philosophical and psychological impact.

Because it is not my area of expertise, I will not discuss the scientific relevance of this paper. For my part, I would like to use it as a lever to snatch the concept of the Anthropocene from its strictly scientific anchorage and to bring to light its Western ontological foundations which determine the relationship between humans and their world. Indeed, the Anthropocene, as I understand it, first refers to a specific cosmology that I would first like to reveal.

I. The Ontological Foundations of the Anthropocene: A "*Human, all too Human*" Technological Question

As its name suggests, the ontological foundations of the Anthropocene are rooted in a philosophical approach that places humans (and more specifically, white men) both at the center of the world and at the summit of all living things. In other words, the Anthropocene is the product of a certain conception of humanity and of the world, whose traces can be found in Ancient Greek philosophy. Seen from this perspective, the Anthropocene can be understood as a geological result of a philosophical approach according to which man alone is able to configure a world – in its most pragmatic sense. In other words, the Anthropocene that we are facing nowadays comes from a radical Anthropocentrism which has finally had a significant impact on the Earth. It would make little sense here to retrace the entire history of philosophy by showing how man has been repeatedly – both by idealism and by a specifically Marxist branch of materialism – distinguished from other living beings by virtue of his intelligence, and his logical, linguistic, scientific and technical capacities. Keeping in line with the

Anthropocene perspective, I will focus on technology's ontological foundations and the ways in which they remain connected to humanity. I will go on to identify three philosophical moments that seem to me particularly representative of the Anthropocene epoch, from its Greek origins to our contemporary era, in which, although technologies have started to be criticized, their anthropomorphic foundations remain unquestioned.

These three philosophical moments consist, firstly, of the Greek myth of Prometheus reported by Plato in the *Protagoras*, which has played a significant and philosophical role in our representations right up to the present day when it is used to herald the end of mankind because of technologies; secondly, a modern or Cartesian one, in which man was called to become "like master and possessor of nature" using science and technology; and thirdly, the contemporary moment, influenced by phenomenology, and which – thanks to the words of Heidegger – has started to grasp the "perils of technology."

The Promethean moment, as recounted by Plato in the *Protagoras*, connects humanity's unique nature to our nakedness, as well as to the proximity to the gods achieved by their mastery of arts and fire. Prometheus, when confronted with our nakedness and defenseless, decides to steal fire from Hephaestus, and the knowledge of arts and science from Athena, in order to provide humanity with the means necessary to protect itself. This myth not only asserts the essential difference between humanity and all other living beings, but it also goes further, in suggesting an essential distinction between technology (which is a human invention) and nature. Whereas animals are able to attack or defend themselves organically, men must invent ways to do this, using fire and knowledge stolen from the Gods, who also bestow upon them the "know-how," or *techné* in the Greek sense of the word, necessary for the manufacture of technical objects. In this sense, *techné* is "a doing" (a *poësis*) and a power (*dunamis*) because it is a capacity to produce objects or to invent arts (like medicine or rhetoric) that did not exist in the original nature. This reading of the Prometheus myth has clearly influenced a large swathe of Western philosophy which Descartes also inherited.

When, at the very end of the *Discourse on Method*, he enjoins man to become "like masters and possessors of nature" (Descartes 2006, 51),[1] by using the scientific knowledge capable of transforming the world through technical means, he updates the conception of both humanity and of technology, as found in the Prometheus myth. In a very different context – that of the Scientific Revolution which claims that nature is

[1] Here is the exact and complete quotation: "For these notions have made me see that it is possible to attain knowledge which is very useful in life, and that unlike the speculative philosophy that is taught in the schools, it can be turned into a practice by which, knowing the power and action of fire, water, air, stars, the heavens, and all the other bodies that are around us as distinctly as we know the different trades of our craftsmen, we could put them to all the uses for which they are suited and thus make ourselves as it were the masters and possessors of nature" (Descartes 2006, 51).

written in geometrical language – he reaffirms the essential distinction between reasonable man and the other living beings trapped in a nature that has become mechanical, by subjecting it to an inflection fraught with consequences for our understanding of the Anthropocene. Indeed, technology is no longer just a power in that it has the capacity to "do" or "to make," but in that it has potentially unlimited powers of domination. Without discussing here the word "like" (as it appears in the original French, or the "as it were" of the English translation) that tempers Descartes' words, I would like to emphasize the aforementioned shift that structurally modifies the way one apprehends the ontological foundations of both technology and science, the latter of which is no longer destined simply to know, but to transform in order to dominate.

It was not until the first decades of the 20th century that we began to clearly suspect the detrimental effects of technology, after the unprecedented massacres of the First World War, in which new technological methods played a significant role. Then, in the thirties, after this human and animal catastrophe, Freud's *Civilization and Its Discontents* (Freud 2010) and Bergson's *The Two Sources of Morality and Religion* (Bergson 2020), foresaw the potential destruction of a second world war. But it was without doubt Heidegger who had the most impact on the landscape of Continental philosophy, when he criticized the way in which modern technology had drifted into treating nature as "standing reserve," exploiting it relentlessly through rational and scientific means. Resisting this peril, Heidegger, in *The Question Concerning Technology* (1977), reasserts the essence of technology as something that is able to reveal, to bring into being (bringing-forth). In order to save the world from destruction, we must go back to technology's Greek meaning, that is, above all, as a "doing" – a *poësis* and not a power. According to Heidegger, the one who is able to "hear," to "attend to" the Being or to form worlds thanks to his capacity to hear the Being – that is to say: man, according to *The Fundamental Concepts of Metaphysic* where we can read that "the stone is wordless, the animal is poor in world, (and) man is world-forming" (Heidegger 1995, 12) – must render it audible. Inventing a new language, the poet (who is the privileged figure) is able to lead it into a presence that evades being enclosed within science's calculations and categories. The poet or artist is ultimately best placed to perform this task.

These three philosophical moments have shaped the contours of the Anthropocene, which can also be described as a cosmology, whose foundations, while changing over time, repeat themselves structurally. The Anthropocene is in this way built on the idea that humanity is both at the center of the world, and at the top of the scale of living beings. It alone possesses the technology that confers upon it the power to transform, or even master, nature – something which is seen as passive and entirely determined by

physical laws as they are understood by science and reason. Lastly, technology is seen as being essentially distinct from nature.

II. General Organology: Just a Fault in the Anthropocene

There is, however, one branch of philosophy which partially displaces this transcendent image of the origins of technology. Unequivocal successor of the materialist philosophies, this branch in its specificity consists in making life the origin of technology. Canguilhem, in his paper "Machine and Organism" (Canguilhem 1992), calls it "General Organology." This approach indeed provides us with the conceptual tools necessary to deconstruct the Anthropocene: by making links between life and technology, General Organology explicitly proposes the relativization of humanity's capacity for technical invention (it is no longer the only one capable of invention) and implicitly criticizes the *hubris* (or excessiveness) of technical progress, where it might exceed the limits of life in human fantasies, though not in reality. In some ways though, this approach repeats similar principles to those at the core of traditional philosophies of technologies, displacing the essential difference between humans and nature with the essential difference between organic bodies and inorganic matter. Nevertheless, General Organology may have points in common with the kind of speculative cosmology we seek to identify. Both open a way that has remained entirely unexplored by Western philosophy even though General Organology remains in certain aspects linked to the Anthropocene. It is in a footnote to "Machine and Organism" that Canguilhem speaks for the first time of "General Organology" as a way of defining Bergson's philosophy of technology. Bergson was, according to him:

> One of the rare French philosophers, if not the only one, who has considered mechanical invention as a biological function, an aspect of the organization of matter by life: *Creative Evolution* is, in some sense, a treatise of General Organology (Canguilhem 1992, 69).

This quotation comes from a passage in which Canguilhem mentions the first thinkers or philosophers to have conceived of tools as outside projections and extensions of the body's organs with which to adapt to or modify its environment. He cites "the movement of the amoeba, which extends substances out beyond its mass so that it might seize and capture an object it wishes to digest," a metaphor used by Leroi-Gourhan in *Milieu et technique* (2000) to "explain the phenomenon of the construction of the tool" (Canguilhem 1992, 62). In other words, tools or machines are not made up of representations of human intelligence, but from an impetus that drives all living beings to come out of themselves and incorporate their environment. In this same vein, Canguilhem summons Bergson's *Creative Evolution* (Bergson 2007), in which, for the first time,

the philosopher suggests that the technical object should be thought of as the result of what Stiegler would later call the "organization of the inorganic" (Stiegler 1998). General Organology is thus based on the distinction between the organic and the inorganic in that it conceives of the technical object as an inorganic object that is nevertheless organized, like the living being that invented it. Though Canguilhem attributes, somewhat hastily,[2] General Organology to the philosophy of Bergson, he also includes it in the same school of thought as Kapp (Kapp 2018) and Leroi-Gourhan,[3] who, while applying the model of projection and externalization of organs to the technical object, maintain that technical invention is the preserve of human beings. Bergson's "*élan vital*" allows Canguilhem to escape this restriction: the organization of matter by life concerns all living beings. The production of the technical object is not essentially a matter of human intelligence or of consciousness' specific ability to represent things, but of an instinctive impulse. To sum up this short definition of General Organology, by connecting life and technology in an unprecedented way, General Organology proposes understanding the living as an organism in the making which, in order to survive, must adapt to or transform its external environment by inventing machine-organs like a crab claw or removable tools like a hammer for example. In other words, and to use the terms of Leroi-Gourhan, exteriorization must be more broadly thought of as a "technical tendency" that causes all living beings to come out of themselves and explore or survive in their environments.

Canguilhem's student, Simondon reinvests the General Organology as a dynamic in *On the Mode of Existence of Technical Objects* (Simondon 2017). Even if the expression appears only once in a sense which is not exactly the same as that of Canguilhem (Simondon 2017, 66), Simondon's reflection on the invention of Technical Objects is clearly inspired by Canguilhem's General Organology. For Simondon, the technical object is the product of the dynamic of life that he presents in *Individuation in Light of Notions of Form and Information* (Simondon 2020). The human specificity that he considers in *On the Mode of Existence of Technical Objects*, does not isolate man from the rest of the living beings who can possess technology and produce technical objects as he claims in *L'invention dans les techniques* (Simondon 2005, 191 – 192).[4]

[2] For a development of this idea, I refer to my article "La vie technique est-elle une organologie générale?" (Lamy-Rested 2023).
[3] For these three thinkers, technology is essentially the result of a life force.
[4] For a development of this idea, I refer to my upcoming article which brings to light the ambiguous thought of Simondon. Indeed, he develops a discreet but significant cosmology beyond his master concept of (trans)individualization which is, in my view, a reformulation of General Organology. "Une aventure de l'extériorisation. De l'organologie générale à la cosmologie de la vie technique. Une lecture de Simondon," to be published in *Lo Sguardo* (http://www.losguardo.net/it/homepage/).

In this sense, General Organology constitutes one possible way in which the ontological foundations of the concept of the Anthropocene can be deconstructed.

It is not the case with Stiegler's recapture of General Organology which is re-connected to humans, who – according to him in the introduction of *Disorientation* (Stiegler 2008) – are the only ones to possess technical capacities. Thanks to his third memory that Stiegler calls "epiphylogenetic," man is essentially different from the other living beings. This third memory even constitutes a "rupture in the law of life" in his own words.[5] On this point, Stiegler joins Leroi-Gourhan, who, in the end, attributes technical invention to humans only. By differentiating a "technical man" and other living beings trapped in a biological life, Stiegler reintroduces General Organology in the philosophical foundations of the Anthropocene, i.e., anthropocentrism.

But regardless of the use that Stiegler made of it, the reason why General Organology is nothing than a "fault in the Anthropocene" can be deduced from the geological definition of the latter, which, though less visible than the role of humanity on the Earth System, is critically important to think through in relation to the Anthropocene. As I have already pointed out, the geological – or scientific – definition of the Anthropocene is that the Earth System, and more precisely matter, react to human actions, obeying what we call the "laws of nature." But this also relies on ontological principles. It is predicated on the idea that matter is inert or passive, and that these laws entirely determine its movements that can be predicted with the use of scientific knowledge. Even if the Earth is considered as a giant organism as in Gaia hypothesis, it remains determined by biochemical law reducing life to matter. Reinterpreting the "life of the Earth" in the eyes of General Organology displaces the problem without solving it. Founded by Canguilhem, who was also a doctor, General Organology makes an essential distinction between life (or organism), which is inventive, and inorganic matter, which is passive and mechanical. In other words, General Organology, wanting to save life from its reduction to matter, reestablishes the traditional distinction between man and other living beings at another level. General Organology thus remains imprisoned by the ontological or cosmological principles of the Anthropocene. In order to deconstruct these foundations, we therefore need an

[5] I quote here the French section of the book: "… le processus d'extériorisation est une rupture dans l'histoire de la vie dont résulte une *troisième mémoire* que j'ai appelée *épiphylogénétique*. La mémoire épiphylogénétique, essentielle au vivant humain, est technique: inscrite dans le mort. C'est une rupture avec la 'loi de la vie' en ceci que, compte tenu de l'étanchéité entre somatique et germinal, l'expérience épigénétique d'un animal est perdue pour l'espèce lorsqu'il meurt, tandis que dans la vie qui se poursuit par d'autres moyens que la vie, l'expérience du vivant, *inscrite dans l'outillage (dans l'objet)*, devient transmissible et cumulable: c'est ainsi que se constitue la possibilité d'un *héritage*" Stiegler (2018, 318). For an update of this text, one can check the Stieglerian Website *Ars Industrialis*, page "epiphylogénèse": https://arsindustrialis.org/epiphylog%C3%A9n%C3%A8se- (visited: 09.04.2023).

ontological or cosmological reversal. Bergson's cosmology is undoubtedly the first to reverse the foundations of the Anthropocene, not only by thinking of technology as an invention of life, as Canguilhem noted, but more profoundly by thinking about matter as a flow that is neither organic nor inorganic. But the first explicit and structured Western attempt to think about "living matter" was made by Whitehead in *Process and Reality* (1978), which, it seems to me, is a decisive text in terms of "getting out" of the Anthropocene because it follows a particular and innovating path that subverts the principle of Modern Western Science.

III. Speculative Cosmology: Deconstructing the Anthropocene

As a mathematician and a logician first, Whitehead was aware of the deep changes that electromagnetic and relativity theories bring to our world. Wishing to give metaphysical foundations to these new theories, as Descartes did for the mathematization of nature in his day, Whitehead finally invented a new cosmology that surprisingly deconstructs the principles of science (the universally true). What electromagnetism and relativity have taught us is that matter is an atomic energy always in progress that we could influence, and that experiences are not universal even if they constitute a common experience. In *Process and Reality* (1978), Whitehead tries to explain what he calls "our experience" which is everyone's from these scientific principles which have shattered all our traditional points of reference. In his own words:

> Speculative Philosophy is the endeavor to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. By this notion of "interpretation" I mean that everything of which we are conscious, as enjoyed, perceived, willed, or thought, shall have the character of a particular instance of the general scheme (Whitehead 1978, 3).

Whitehead's work is above all about giving an account of "our experience"[6] which put the subject in contact with an objective reality instead of explaining its conditions of possibility as Kant did:

> The philosophy of organism is the inversion of Kant's philosophy.…The philosophy of organism seeks to describe how objective data pass into subjective satisfaction, and how order in the objective data provides intensity in the subjective satisfaction (Whitehead 1978, 88).

[6] Based on her reading of Whitehead and her interpretation of "our experience," Isabelle Stengers connects it to the "common sense" with which Whitehead maintains an ambiguous bond: "La philosophie a pour tâche, selon Whitehead, de souder le sens commun et l'imagination" (Stengers 2020, 15). Here, my translation.

In other words, a system of ideas does not aim to reconstruct our experience or to explain it from the point of view of its ontological foundations. It is about attending to this simply as a fact and proposing an explanatory system whose value lies in possibility and not in necessity. This system is thus intended to be modified according to how matter and experience change. There is no such thing as a universal and substantial reality as science claims traditionally. In Whitehead's opinion, Western Science has thus produced a bifurcation of nature, according to which experiencing nature through "our experience" is an illusion and science alone is the key to the truth about nature. Science, to which total credence has been given, has therefore come to organize our relationship to the world, relegating "our experience" to the realm of obscurantism while simultaneously devaluing the feelings of non-human beings. But, according to Whitehead, the pink of the sunset really is there in the sky; in the same way, an animal's feelings, with which we can empathize, cannot be questioned without doing violence to our experience. Whitehead's philosophy or speculative cosmology is not, therefore, a dogmatic system that locks reality into categorical categories by suggesting that any feeling that escapes this system ought to be banished or, at the very least, criticized in the name of truth.

But in what sense can Whitehead's cosmology provide an exit from anthropocentrism and then the Anthropocene? Having prepared some of the groundwork, I will now attempt to summarize the cosmology of *Process and Reality* in order to show how it profoundly and structurally reverses the whole way in which we relate to the world.

As we have seen, the starting point for Whitehead's philosophy is a confrontation with "our experience," which must be explained by inventing a speculative philosophy whose value is one of possibility, in exactly the same way as the world that we experience is only one possibility among an infinite multiplicity of others. This experience is essentially the experience of change that, incidentally, was philosophy's starting point, Plato being the first to conceive of this kind of process philosophy: "Both for Plato and for Aristotle the process of the actual world has been conceived as a real incoming of forms into real potentiality, issuing into that real togetherness which is an actual thing" (Whitehead 1978, 96). In this way, "our experience" and philosophy come together in a prehension of becoming. For Whitehead, this becoming concerns so-called inorganic matter just as much as organisms, the philosopher not making any essential distinction between them: "there is no absolute gap between 'living' and 'non-living' societies" (Whitehead 1978, 102). Though the difference between living and non-living societies is maintained in *Process and Reality* and in *Science and the Modern World* (Whitehead 1933), Whitehead shows how Maxwell's electromagnetic laws, which transform matter into atomic energy, and Pasteur's work on the microcell, constitute a rupture in our traditional way of thinking about matter. An electron or

a proton is a quantum of energy and is therefore an organism. For this reason, Whitehead also calls his philosophy a "philosophy of organism" (1978, 7). According to him, becoming is actually finalized, not in the sense that it has reached an ideal or final form, but because each actual entity, or existing thing, seeks complete satisfaction that concludes the "process of concrescence." This satisfaction which ends the concrescence of an actual entity "is one complex, fully determinate feeling:

> The final phase in the process of concrescence, constituting an actual entity, is one complex, fully determinate feeling. This final phase is termed the satisfaction. It is fully determinate as to its genesis, as to its objective character for the transcendent creativity, and as to its prehension – positive or negative – of every item in its universe (Whitehead 1978, 25 – 26).

In other words, if there exists one purpose, it is nothing other than a "lure for feeling": "The 'lure for feeling' is the final cause guiding the concrescence of feelings. By this concrescence the multifold datum of the primary phase is gathered into the unity of the final satisfaction of feeling" (Whitehead 1978, 185).

Becoming is thus motivated by this quest for satisfaction, which is characterized by its indeterminacy, even though it is also ordered; otherwise there would only be disjunctions, and no concrescence of one actual entity could be possible. It is indeed this order that makes it possible for feeling to be deepened or enriched, something that is not dependent on any finality external to itself. Indeterminacy also constitutes the foundation of the becoming that Whitehead calls "creativity." The primary categories through which speculative philosophy gives an account of our experience of change and contingency are thus those of "many" and "disjunction," which, under the effects of the "lure for feeling," coordinate themselves into a "novelty" (Whitehead 1978, 21). Each actual entity is a "novelty." It is internally determined by its quest to satisfaction, and externally free to change in accordance with its interrelations with the other actual entities. A current entity is thus a "superject," i.e., a projection beyond its present state. This projection depends on its virtual ability to feel. These perpetual interrelations are communicative: each part of reality can change in relation to others, without obeying "natural laws" in the traditional sense of "necessary and universal laws." In *Process and Reality*, Whitehead proposes to think of the law as the result of an abstraction from observations. Thus electromagnetic laws that are the structure of "our cosmic epoch" seek to systematize the crush of electrons and protons observed by scientists.[7] But this systematization has a real impact on the behavior of protons and electrons, which

[7] In Whitehead's words: "Our present cosmic epoch is formed by an 'electromagnetic' society" (Whitehead 1978, 98).

stabilize and reproduce themselves thanks to these laws organizing the permanence of reality. In other words, the mentalization of perception has a real influence on reality, not because the subject imposes its laws on it from a Kantian perspective, but because there is an interaction between reality and the subject, which are mutually transformed by contact with each other. We need to understand that law is not truth or reality, but potentiality. Given the ordered nature of the real which seeks satisfaction, and the specific cosmic epoch, it becomes possible to formulate a law that can account for and reinforce this order. But the real partly escapes the law, which, on the one hand, is only a possible systematization of the real and, on the other hand, limits the creativity erected by Whitehead as the ultimate principle of the real. It follows that a society gradually weakens before disappearing and being replaced by another society, organized by another interaction between current occasions and therefore governed by different laws. The cosmos or the world structurally and constantly changes beyond the repetition and the permanence (the order) required for the satisfaction.

To conclude, overall, Whitehead's cosmology can be thought of as a process whose foundations are ones of plurality and disjunction; this process is embodied by actual entities seeking satisfaction. Whitehead's cosmology is thus fundamentally non-anthropocentric. Then it opens a fault to escape to the Anthropocene which is a scientific concept based on metaphysical principles that are fundamentally anthropocentric. It is plural and accompanies the becoming of each actual entity, ultimately accounting for "our experience." It is able to think through the interrelation between these entities by taking into consideration the fact that they are always in society, whether they are living or not. Lastly, it thinks within the limits of experience and feelings, which constitute the ultimate framework for this perpetual creativity. If we follow Whitehead's philosophy, the concept of the Anthropocene becomes obsolete not because it cancels the history of our technical humanity and its impact on the Earth, but because it forces us to think totally differently about our relationship to existing others and to our future.

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THE THREAT OF LONGTERMISM: IS ECOLOGICAL CATASTROPHE AN EXISTENTIAL RISK? DISILLUSIONED IDEALS FOR A BOLD, NEW FUTURE

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HICKS, S. F. – JANUS, D.: The Threat of Longtermism: Is Ecological Catastrophe an Existential Risk? Disillusioned Ideals for a Bold, New Future
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In a world of rapidly advancing technological innovation, a case has been made to prioritize potential long-term benefits to future generations over the interests of those currently alive. Proponents of this approach, called longtermists, support investments in technology to avoid existential risks. They claim technology will eventually "solve" climate change, while ignoring technopower reduction as a potential solution to global environmental catastrophe. Democratic control over technology mitigates some of these harms, yet falls short of the authors' proposed level of oversight. In this paper, we consider the ethical hazards of longtermists' stance. An ethical dilemma emerges from the devastating effect some technological advancements have on the environment. While we recognize the merits of long-term thinking, we argue longtermists' prioritization consolidates power among few technocrats. This prioritization exacerbates existing inequalities instead of redistributing economic and political power to communities most affected by climate change. We posit this trade-off to be unethical.

Keywords: Longtermism – Ethics – Effective altruism – William MacAskill – Martha Nussbaum – Existential risk

Introduction

We currently live in a time of rapid social and technological advancements. In the age of the Anthropocene humanity has had an increasing effect on our environment, often to the detriment of the climate. Through this time of societal advancement, we have prioritized man-made achievements in the pursuit of a better life over the long-term preservation of ecosystems. The longtermist philosopher, Toby Ord, in his book *The Precipice*, discussed the impact humanity has had on the environment, which increased dramatically in the twentieth and twenty-first centuries. Ord points out that in the past 50 years humans have developed the power and means to wipe out humanity through events like engineered pandemics and nuclear war (Ord 2000).

Ord, similarly to other prominent longtermist thought leaders, argues that the decisions society makes in the upcoming decades could determine the survival of our species (Ord 2000). Longtermists argue for tipping the odds in the favor of human preservation, at the same time claiming that climate change does not pose an existential risk, as the likelihood of it causing a mass extinction of humanity is assessed to be quite low. In this paper, we argue that climate change poses a greater existential risk than longtermist philosophers want to admit. We will consider the potential effect climate change will have on future generations and the threat it may pose to humanity, concluding that longtermism makes a fatal error by neglecting environmental conservation, as priority ought to be placed on preventing ecological disasters that threaten the lives of the world's most vulnerable populations.

In this paper, we will consider the tension between technological advancement and preservation of the environment. We will critically engage with the emerging ethic of longtermism, which justifies the benefits of risky developments such as AI and space exploration (by colonizing other planets) for the sake of future generations. In order to weigh the risks to future generations, we argue that Martha Nussbaum's Capabilities Approach is a more sustainable theory. We will turn now to look at the arguments presented by longtermism.

I. What is Longtermism?

The direct implication of longtermism's key arguments is that the interests of future generations ought to be prioritized over the interests of people in the present. The framework is based on the calculus that, while every person has equal moral worth and their lives count equally, the Earth's population in the future will far exceed the current population, and, therefore, future generations ought to be prioritized. The philosopher William MacAskill defines longtermism as follows: if we want to do the most good, we should focus on bringing about those changes to society that do the most to improve the very long-term future (MacAskill, 2020). He supports this thesis with four premises:

> Future people matter, morally; 2. There are (in expectation) vast numbers of future people; 3. Future people are utterly disenfranchised; they have no say in what happens today; 4. There are ways (in expectation) to positively impact the very long run (MacAskill, 2020).

Longtermists build on Derek Parfit's estimation of the quality of life of future generations in his book *Reasons and Persons.* In considering acts that benefit future generations, we can look to Parfit's argument that an act benefits a person when the consequence is that a person is benefited most (Parfit 1986, 69). By this metric, an action

is morally justifiable if the consequence of the action is what would benefit a person the most. The burden of proof rests on the longtermists to prove that the measures they propose in prioritizing future generations will benefit them more than it will harm current people. This is an impossible claim to prove.

Further, the longtermists derive their moral theory from the ethical framework of Effective Altruism, a phrase coined by a group of people around the organizations Giving What We Can and 80000 Hours, including Toby Ord and William MacAskill, who build on Peter Singer's moral argument in *The Expanding Circle* that an ethical standard is progressive if it expands our circle of moral consideration (Singer 1993, 12 – 14; Singer 2011, 96 – 124). Longtermists base their arguments on the view that we ought to maximize our ability to do good using a utilitarian calculus. But, importantly, they also claim that our circle of moral concern ought to be expanded to include future people extending hundreds if not thousands of years in the future (Beckstead 2019; Greaves – MacAskill 2021). Since there could be significantly more people in the future, we have an ethical obligation to make sacrifices in the present that will benefit people in the far distant future. However, longtermists use this ethical argument to justify risky technological advancements. We will look more into this trade-off later on in this paper.

Effective Altruists, through statistical analysis, try to quantify how much good a charitable action will cause and encourage people to maximize the good they do. Longtermism expands this idea of doing the most good to their ideas about the future, claiming each person has equal moral worth, and the time in which they live is irrelevant in considering our ethical obligations towards them. Therefore, we have a moral obligation to do the most good for people in the far-off future.

Effective Altruism, as defined by Ord and MacAskill, is the use of evidence and reason to help others as much as possible with our time and money – with a particular concentration on how to act given moral uncertainty (Centre for Effective Altruism). But as longtermism goes, it consolidates the decision-making processes among a few technocrats and ends up disenfranchising present people. In *What We Owe the Future,* MacAskill says that:

> Longtermism, the idea that positively influences the long-term future is a key moral priority of our time. Longtermism is about taking seriously just how big the future could be and how high the stakes are in shaping it. If humanity survives to even a fraction of its potential life span, then, strange as it may seem…[w]hat we do now will affect untold numbers of future people (MacAskill 2022, 4 – 5).

If human beings live the lifespan of a typical mammalian species, billions and billions of future people remain to be born, and their interests swamp our own (MacAskill 2022, 3). To the objection "Why should I care about that? I care about my family and friends, not possible people in the far future," MacAskill responds with disarming moderation:

> Special relationships and reciprocity are important. But they do not change the upshot of my argument. I'm not claiming that the interests of present and future people should always and everywhere be given equal weight. I'm just claiming that future people matter significantly" (MacAskill 2022, 11).

However, MacAskill contradicts this statement in his 2021 paper "The Case for Strong Longtermism" in which he argues for "the view that impact on the far future is the *most* important feature of our actions today" (MacAskill 2021). Further, MacAskill does little in the way of explaining what exactly it would look like to prioritize future generations. An analogy MacAskill gives in *Doing Good Better* is the comparison that it costs roughly $50,000 to train a seeing eye dog, whereas that same amount could be used to buy 4,000 schoolbooks for kids in another country. MacAskill argues the Effective Altruist should buy the schoolbooks because they would be doing better for more people (MacAskill 2015, 71 – 72).

A. Counter Arguments to Longtermism

To the calculus that there will be more people in the future, therefore, we ought to prioritize future generations more highly. We have three main objections: 1. It is impossible to know what the needs of future generations will be, thus making it impossible to accurately arrive at an effective strategy to meet their needs. 2. Governments make decisions based on an understanding of reciprocal agreements, making governments' consideration for future generations complex. 3. We would argue that longtermists' agendas of permitting disastrous technological advancements are not the most helpful action for future generations, but are, in fact, potentially very hazardous for present people.

First, it's impossible to accurately assess the needs of future generations, which makes it difficult to take effective actions to adequately meet the needs of future generations. Technological advancements quickly become outdated, infrastructure breaks down, and engineers develop methods of accomplishing the same goals in more effective ways. During the industrial revolution concern arose over whether the world would run out of coal in the near future. However, technological advancements shifted energy dependence on to fossil fuels and the concerns they had in the 1890s for the future people became irrelevant. We could invest billions of dollars into Elon Musk's

Boring Company to build freight tunnels to transport goods, but in a hundred years freight transportation may be obsolete. In this scenario, arguments justifying the damage to the environment caused by burrowing underground for hundreds of kilometers for the sake of future generations falls flat. Likewise, over the past century per capita GDPs in developed countries have risen substantially and tens of millions of people have been raised out of extreme poverty. Standards of living have changed so drastically in the past century it would have been impossible for people at the time to know what it would take for people today to live at a median level of subsistence. Given the limitations of the government to accurately anticipate the needs of people in the future, it is unconvincing to say, with absolute certainty, that X action or behavior will be in future generations' best interest.

Second, a government's obligations to the present people who voted them into office makes it difficult to justify prioritizing future generations or acting in a way that is against the interest of present people. Longtermism contradicts previously held understandings of democracy and the understanding of John Locke's social contract theory (Locke 1980, 52 – 65). Locke argues that the government has authority to rule because people consent to being ruled in exchange for certain benefits from the government. Further, governments have a monopoly on violence because citizens cede their power to their government in exchange for protection. Therefore, governments have an obligation to protect the interests of those who are submitting to its power. What's more, politicians' salaries are funded from taxpayers' dollars and so citizens are entitled to a return on their investments: it follows that politicians would discourage behaviors that benefit future generations at the expense of present people.

Third, technological advancements that are destructive to the environment will not be in the best interest of future generations because humans exist in an ecosystem dependent on the longevity of the environment around them. Longtermists' claims that environmental disaster will not harm future generations can't be guaranteed. On the other hand, we can estimate with a marginal degree of variance the extreme effects that certain behaviors will cause the environment. For example, if the world continues with the current output of CO_2-emissions, scientists have projected that it will cause the global temperature, on average, to increase between 1.5 – 4.5 degrees Celsius this century (Burke – Diffenburg 2019). The effects of climate change are already apparent with irregular rainfall patterns causing increased flooding in some areas and drought and forest fires in other areas. This change alone will cause hazardous climate events claiming people's lives, increasing food scarcity, and famine. Further, we will point to what Parfit refers to as the *Social Discount Rate* (Parfit 1984, 357). In response to the claim that we ought to be concerned about effects on future people. Parfit says: "we are morally justified in being less concerned about effects in the further

future…[a] cost-benefit analysis. On this view, we can "discount" the more remote effects of our acts and policies, at some rate of n per cent per year" (Parfit 1984, 357).

It is undeniable that future generations matter, morally speaking, but we can justifiably place limits on the extent to which we prioritize people in the future. Because longtermists' arguments for prioritizing future generations are vague and difficult to justify, it is understandable that some governments don't take these claims seriously. Yet, some politicians, like the UK, are incorporating the language of longtermism into their policies, as demonstrated by Rishi Sunak's "Long-Term Decisions for a Brighter Future" slogan. We will turn instead to focusing on ecological preservation. We argue that, at least for the foreseeable future, humans are an Earth-bound species, and thus dependent on the well-being of our planet.

II. Existential Risks

Due to its claims about the importance of artificial general intelligence (AGI) in determining whether the immensity of the future will be realized or erased, longtermism is seen as a set of efforts aimed at ensuring that the power of AI is harnessed toward long-term ends generally understood as "good." Longtermists argue that humanity should be investing far more resources into mitigating the risk of future catastrophes in general and extinction events in particular. Longtermism assumes that events categorized as existential risks could wipe out humans altogether or cause the irreversible collapse of industrial civilization.[1] However, when it comes to climate change, longtermists believe it is unlikely to directly cause an existential catastrophe, although they see it as a factor that may increase the probability of other existential risks. In this section we will explore the concepts of existential risks, and look into how the prioritization of *what futures are worth taking which risks* relies on a notion of value.

For longtermists, existential catastrophes and existential risks are concepts of special concern. One popular definition of "existential risk" is an event that threatens the premature extinction of Earth-originating intelligent life or the permanent and drastic destruction of its potential for desirable future development (Bostrom 2002ab). Similarly, existential catastrophes are events which irrevocably destroy what is perceived by them as humanity's long-term potential. Fin Moorhouse, defending longtermitsts' position says that, in the case of climate change, it is not clear that it is among the most plausible causes of an existential catastrophe (Moorhouse 2021).

[1] Longtermists refer to "existential risk" also as probability; e.g., "an existential risk is a chance of a terrible event occurring," as particular scenarios; e.g., "the existential risk of AGI destroying humanity," or "humanity faces numerous existential risks this century."

Toby Ord, in *The Precipice: Existential Risk and the Future of Humanity*, is concerned about large-scale threats we have created for ourselves, especially about two possibilities: empowered artificial intelligence unaligned with human values and engineered pandemics. Ord claims the chance of an existential catastrophe caused by climate change directly over the next century at around 1 in 1000; risk from engineered pandemics is 1 in 30, and the risk from rogue artificial intelligence (AI) is roughly 1 in 10 (estimates which are not supported by any kind of methodology) (Ord 2020, 295). This does not mean that longtermists are climate change denialists. In fact, they often highlight that climate change is an ongoing global emergency, however, given our present state of knowledge, it seems unlikely for them to cause human extinction, and as such is not a primary concern. Longtermists are, therefore, not oblivious to the fact that there are many challenges and problems that the world faces. However, if we are taking a long-term view, we should establish a method that can help us choose which are the most important from the perspective of thwarting extinction of the human race. The issue of prioritization of existential risks is also explained by MacAskill. He claims that our focus should not necessarily be on the risks we are currently paying most attention to: predominantly because of how many other people are focusing on them at the same time. He breaks that down into categories of significance, persistence, and contingency (MacAskill 2022, 57 – 58). The significance of an event is how big a difference it makes at any time to how "good" or "bad" the world is; persistence is how long the event lasts; and contingency is whether that event would've happened otherwise.

Definitions of existential risk are quite abstract, failing to incorporate insights from risk assessment in relevant fields, ultimately preventing us from clarifying whether climate change and ecological catastrophes can be classified as existential risks. In our opinion, the particularly faulty ones are representing the techno-utopian approach (TUA), that not only chooses arbitrary categorizations of risk, but also advocates for dangerous mitigation strategies. TUA relies heavily on total utilitarianism and strong longtermism: its moral as well as empirical assumptions might be particularly vulnerable to misuse as subject of securitization. TUA definitions conflate the study of global catastrophe and subsequent human extinction with that of the longtermist ethics of existential risk. This perception of existential risk has serious consequences for our argument. In the case of extinction-level existential threat event (that longtermists want to avoid) the people who survive are the people who can afford to take care of themselves; this means there are better and worse equipped groups (by privilege of wealth or being born in a state that is taking care of all the citizens). Supporting longtermists' logic in this case means implicitly agreeing with worse-off people dying.

At the same time they are the most vulnerable people who are not able to escape the effects of climate change.

The longtermists' prioritization of two particular kinds of events as existential risk is ultimately deciding which life is worth living. Techno-optimists claim new technologies can create better life, but the implication is that disadvantaged people are going to die *en masse*, rather than creating an environment in which lives can flourish. By not taking care of the planet now and in the shorter time horizon, as well as by not considering the climate emergency as existential risk, we make future generations suffer and live with our decisions. Deciding what qualifies as an existential risk means deciding what kind of sacrifice future generations can or would consent to: it is therefore more than "giving voice to the voiceless," as proposed by MacAskill.

III. Martha Nussbaum and Capabilities Approach

We argue a better approach than longtermism to consider the interests of future generations is Martha Nussbaum's Capabilities Approach, which primarily concerns the conditions for human flourishing and what it means for individuals to lead a good life. The Capabilities Approach is motivated by the concept of human dignity. Unlike longtermism – with its potential to consolidate decision-making among a few technocrats, – Nussbaum's approach inherently advocates for a redistribution of power; emphasizing the importance of political freedoms, control over one's environment, and non-discrimination. Nussbaum defines the Capabilities Approach as "an approach to comparative quality-of-life assessment and to theorizing about basic social justice…when comparing societies and assessing them for their basic decency or justice, is, "What is each person able to do and be?" In other words, Nussbaum takes each person as an end, asking not just about the total or average well-being, but about the opportunities available to each person" (Nussbaum 2011, 47). This approach entails two normative claims: (1) the freedom to achieve well-being is of utmost moral importance and, (2) that well-being ought to be considered in terms of people's capabilities and functions. Nussbaum provides a list of such core capabilities (Nussbaum 1992) and justifies this choice with the fact that selected capabilities promote human dignity (Nussbaum 2011). Nussbaum goes on to use these criteria as a framework in determining the freedoms a person is entitled to and how society and government can best promote each person's interests. In this way we can consider the well-being of future generations to the extent that we understand the effects that actions have on the future. However, this model would stop short at requiring current people to sacrifice their well-being for the sake of future generations. Nussbaum acknowledges the complexity of discussing the well-being of non-sentient entities (like plants). However, the primary thrust of her extension of the Capabilities

Approach to non-human entities is geared towards sentient animals, as sentience provides a more evident grounding for considerations of well-being and flourishing.

Nussbaum does not explicitly address the topic of risks to future generations, ecological catastrophes, or environmental sustainability. That said, there are aspects of her capabilities list that are relevant to these topics, such as life, bodily health and integrity, senses and thought, affiliation, and finally relevance of other species. Nussbaum understands the capability of life as being able to live to the end of a human life of normal length. In this sense environmental catastrophes could pose a direct threat to being able to live to the end of a human life of normal length by creating conditions that reduce life expectancy. Ecological catastrophes further jeopardize sources of clean water and nutritious food, that are included in the good health capability; the capability of bodily integrity includes having safe places to move, which could be interpreted as safe from environmental hazards. Part of the affiliation capability emphasizes living with and toward others, which may be at risk if communities become fragmented due to environmental displacement. Similarly, the other species capability directly talks about being able to live with concern for and in relation to animals, plants, and the world of nature. While less direct than previous capabilities, if resources are redirected away from education due to ecological crises, the capability of senses, imagination, and thought (emphasizing the importance of education and freedom of expression) could be at risk. Finally, the *Control Over One's Environment* can be understood as political (i.e. the right of political participation), but also material: in essence, ecological disasters threaten the very fabric of what it means to have "control over one's environment" in Nussbaum's framework. Disrupting both the material and political spheres of this capability, ecological disasters are leaving individuals and communities struggling to reclaim a sense of agency, security, and dignity in their interactions with their environment.

Looking at the potential implications of these capabilities in the context of environmental sustainability, one could argue that the Capabilities Approach is deeply concerned with the well-being of current and future generations in the face of ecological challenges. Martha Nussbaum has further extended the Capabilities Approach to consider non-human animals, emphasizing that it is not only humans who possess intrinsic dignity and are deserving of a life worth living. In essence, Nussbaum's extension of the Capabilities Approach to animals is grounded in the belief that all sentient beings have inherent worth, and this worth demands recognition in ethical, legal, and societal considerations. This capability, identified by Nussbaum as "Other Species" implies a recognition of the intrinsic worth of non-human entities. In this case, the criteria for flourishing are not based on a human standard but rather on what is suitable for the particular species in question. Nussbaum's approach moves beyond

the basic welfare considerations of minimizing suffering. While preventing suffering is vital, the Capabilities Approach asks a more comprehensive question: what does this animal need to flourish and live a life in accordance with its species-specific capabilities? Nussbaum also criticizes utilitarian approaches to animal ethics (such as Peter Singer's perspective), which are primarily focusing on maximizing utility or pleasure and minimizing suffering. Nussbaum however believes this is too limiting and does not capture the full range of what is essential for a dignified life.

While arising from distinct philosophical contexts, both Capabilities Approach and longtermism deal with ethical considerations concerning well-being and flourishing: we argue that Nussbaum's framework is more appropriate to apply while considering the interests of future generations, however there are areas where their concerns intersect.

First, in theory both the Capabilities Approach and longtermism prioritize the well-being of individuals. Crucial difference is that while Nussbaum focuses on conditions for human flourishing in the present and near future, longtermism extends the sphere of moral concern to encompass the well-being of countless future generations. Second, both perspectives understand that certain conditions and capacities are interconnected. Just as Nussbaum sees health, education, and political freedoms as mutually reinforcing, longtermists see the well-being of present and future generations as interconnected, especially when it comes to addressing what they see as global catastrophic risks. Third**,** both approaches offer normative frameworks for guiding policy decisions. In Nussbaum's framework the list of central human capabilities is what policies should promote; longtermism, on the other hand, is less precise, but it does guide policy toward considering the long-term impact and ensuring that the interests of future generations are represented.

In order to contrast Nussbaum's approach with longtermism, we examine how the Capabilities Approach relates to some of the philosophical perspectives fundamentally incompatible with longtermism. The starkest contrast is represented by the temporal aspect: the Capabilities Approach, in its essence, concentrates on the well-being of people alive today by focusing on what people are currently capable of doing or being, while still considering their future interests. In this way, it shares presentism's concern for the immediate and tangible needs of living individuals. Secondly, while Nussbaum's approach emphasizes human capabilities, it also contains a capability related to "Other Species" suggesting the importance of living with concern for and in relation to animals, plants, and the world of nature, which overlaps with priorities of deep ecology. Saying that, deep ecology's emphasis on the intrinsic worth of all living entities goes beyond the anthropocentric focus of the Capabilities Approach. Thirdly, both the Capabilities Approach and ecofeminism

challenge structures of oppression. Nussbaum's framework, especially her emphasis on bodily integrity, health, and control over one's environment, aligns with eco-feminism's critique of patriarchal structures and their ties to environmental degradation, that are particularly visible in longtermism's potential to consolidate decision-making among a few technocrats. Furthermore, the Capabilities Approach values the idea of individuals having control over their environment, both politically and materially. This can align with the precautionary principle's emphasis on avoiding harm, especially if actions might compromise an individual's capability to have such control. Similarly, Nussbaum's approach values social affiliation, including having the social bases of self-respect and non-humiliation, and being able to live with others. This overlaps with communitarian values. However, while communitarianism places strong emphasis on the community, Nussbaum's approach remains primarily centered on individual capabilities.

In direct opposition to longtermism's origin, the Capabilities Approach can be seen as a critique or alternative to utilitarianism. Instead of focusing on utility maximization, Nussbaum emphasizes a list of specific capabilities as essential for human dignity. Her framework resonates more with a rights-based or deontological perspective than with utilitarian calculations. Unlike longtermists, Nussbaum recognizes the importance of cultural and contextual specificities in realizing her capabilities. Thus, while her framework provides a general guideline, it also leaves room for particularities in its application. Finally, while this perspective isn't directly addressed in Nussbaum's framework, her emphasis on present capabilities implicitly recognizes the challenges and uncertainties of predicting future outcomes.

In summary, while the Capabilities Approach and longtermism differ in their primary focuses and methodologies, they both harbour ethical concerns for ensuring that individuals – whether in the present or future – can lead lives of dignity, value, and well-being. We posit the Capabilities Approach is preferable to longtermism because it is comprehensive and considers not only the interests of humans, but of animal and non-sentient beings as well. The central emphasis of the Capabilities Approach on promoting conditions for human flourishing provides a rich ground for dialogue and integration with other ethical and philosophical ideas. We don't agree that there needs to be a trade-off between human interests and environmental conservation. We argue instead that environmental conservation is in humans' interest in the long term.

IV. Arguments Countering Longtermism

There are a number of potential shortcomings when longtermism is applied to considerations of ecological disasters. In this part of the article, we will attempt to

broadly characterize them, in order to show how Nussbaum's Capabilities Approach addresses longtermism's limitations.

As demonstrated in the previous sections, the most serious weaknesses of longtermism include its disproportionate prioritization of a few randomly chosen *existential threats* (like potential risks from superintelligent AI) over more immediate and tangible ecological risks, such as climate change or biodiversity loss, under the premise that existential threats have a more significant potential to impact the vast future. This leads to overemphasis on future generations. While it is praiseworthy to consider the well-being of future generations, we argue that longtermism leads to an overemphasis on the distant future at the expense of pressing issues in the present, including current ecological challenges. Some philosophers have used "Pascal's Mugging" to illustrate the problems with longtermist's focus on the future (Bostrom 2009). "Pascal's Mugging," as described by Nick Bostrom, is a thought experiment of a man who is stopped by a mugger who demands he give him his wallet. The man refuses to give the mugger his wallet because the mugger doesn't have a gun. The mugger tells the man if he gives him his wallet today he will bring the wallet tomorrow with twice as much money. The man still refuses and the mugger increases the amount he promises to bring the man. The man refuses and again the mugger increases the amount. Bostrom argues if this exchange continues with increased promises of return and added threats, eventually the man will give the mugger his wallet even though the chance of the mugger returning is nearly non-existent. The man does so in hopes of the minuscule chance for a huge return. It would seem foolish for the man to give the mugger his wallet no matter the promised return. In the same way, making massive sacrifices for the promise benefit in a future that does not exist would be imprudent.

Longtermist perspective underweights the significance of localized and immediate ecological harms in favor of broad, future-focused strategies, ideally solved with the use of technological innovations. Focus on new and emerging technologies is further raising a concern that longtermism might place undue faith in exotechnology solutions to issues of sustainability and ecological problems. For instance, believing that future technologies will "solve" climate change might downplay the urgency of present-day actions or overlook the potential benefits of non-technological solutions, such as changes in consumption patterns or cultural shifts. This ties directly with disproportionate harm to developing and less well-off countries. While longtermists intend to build their case for focusing on the well-being of future generations, ignoring the effects of climate change on present people. We posit this to be irresponsible at best and unethical at worst. Investing in technological innovations that contribute to carbon emissions and rising temperatures only serves to widen the divide between Higher and Lower Income Countries. According to research done by Stanford University, "The increase in

inequality between countries has resulted primarily from warming-induced penalties in poor countries, along with warming-induced benefits in some rich countries" (Burke – Diffenburg). This is where the Longtermist calculus breaks down. The effect on a nonexistent future generation may seem greater than the effects on present people, but longtermist obscure the moral obligations we have to present people.

In some interpretations of longtermism, there is a focus on maximizing economic growth now to ensure greater resources for future generations, with the belief that a richer future society would be better equipped to handle challenges. This could lead to undervaluing ecological preservation in the present if it is seen as a hindrance to economic growth.

Longtermism presents an ethical argument to justify de-prioritization of using up finite resources to mitigate effects of climate change by building a case for future generations. However, in the past decade the impact the environment has on human's lives has become more apparent and poses an increasing threat on our way of life. The World Health Organization released a statement estimating that a total of 7 million people die each year as a result of climate related crises (Kluge 2023). As the planet continues to warm, it is safe to assume this number will only rise in forthcoming years. But beyond causing increases in death, climate change poses other risks such as food and water shortage, poor air quality, and frequent extreme weather events, to list a few. All of these effects threaten the quality of human lives and their livelihoods. Furthermore, if the primary focus is on ensuring the distant future is as abundant as possible, it could lead to decision paralysis, especially in the face of complex ecological challenges. The argument might be that taking action now could have unforeseen negative consequences for the far future.

It's essential to note that longtermism is a broad and varied philosophical viewpoint, with different proponents emphasizing different aspects and strategies. Not all longtermists would agree with or fall into the potential pitfalls mentioned. Making decisions that heavily weigh the interests of future generations introduces moral complexities. There's a challenge in determining how to balance the known needs of the present against the uncertain needs of the future, especially in ecological contexts where actions (or inactions) today have lasting consequences. With its emphasis on the conditions necessary for human flourishing, Nussbaum's Capabilities Approach offers tools that might address some of the concerns raised about longtermism, especially in the context of disproportionate harm to developing countries and ecological risks.

Central to Nussbaum's approach is the idea that every individual, regardless of where they are from, has the same intrinsic dignity and deserves the same opportunities to flourish. This contrasts with any form of utilitarian thinking that might sacrifice

the well-being of some (e.g., those in developing countries) for the greater good of future generations or the majority. Unlike longtermism, the Capabilities Approach does not just look at one dimension of well-being (e.g., economic growth or technological solutionism). Instead, it assesses a wide range of areas. This comprehensive view ensures that the interests of less well-off countries are not reduced to mere economic metrics but encompass the broader spectrum of human flourishing. The Capabilities Approach is sensitive to local contexts. While it provides a list of central capabilities, how these are realized might differ across cultures and regions. Thus, it would resist any one-size-fits-all solution that longtermism might inadvertently promote, especially if these solutions overlook local needs or impose undue burdens on specific regions (like developing countries). Finally, one of the core capabilities Nussbaum emphasizes is "Control over one's environment," which includes both political and material control. This implies that individuals and communities should have a say in the decisions that impact their lives. If longtermism leads to decision-making concentrated among a few technocrats, the Capabilities Approach would challenge such a concentration of power and call for broader democratic engagement.

Nussbaum's capability of "Other Species" directly addresses the relationship humans have with the environment. This capability asserts the importance of environmental sustainability. Thus, any technological or economic advancement that compromises ecological balance would be viewed critically within this framework. The Capabilities Approach, as extended by Nussbaum, pushes back against any version of longtermism that might prioritize human interests in the distant future over the immediate well-being of sentient beings.

In conclusion, while the Capabilities Approach and longtermism both exhibit concern for well-being and flourishing, albeit with completely different understanding of what flourishing is or who shall experience it, Nussbaum's framework provides specific tools to ensure that the quest for a better future doesn't compromise the dignity and well-being of individuals and communities today, especially in vulnerable regions. It also explicitly integrates environmental concerns into its vision of a just and flourishing society.

V. Conclusion

We claim that Nussbaum's Capabilities Approach, which directly includes the capability to live with concern for and in relation to nature, can guide policy toward considering the long-term impact much better than longtermism, as it is inherently concerned with environmental issues. Given that environmental sustainability has long-term implications, addressing ecological threats becomes crucial in ensuring a good life for future generations. We argue that prioritizing ecological preservation is in fact in

their best interest. Likewise, compromising climate impact by focusing on technological advancements could have disastrous effects that will be borne disproportionately by lower income countries. Developed countries can largely avoid these effects because they are better positioned to benefit from the technology advancements.

A thought experiment that MacAskill uses to illustrate longtermist calculus is: imagine you're in a museum and a fire breaks out. You are the only person in a room with a child who is about to burn to death. You are the only person who can save this child. But then you see a Van Gogh that would also burn. You know you could sell this painting for $15 million and use the money to save the lives of tens of thousands of children. You can only save either the child or the painting (Intelligence Squared 2015). MacAskill claims you should save the painting because it would be wrong to deny thousands of children the help you could provide them. It is easy to get swept up in this example such that you ignore the reality that you would be doing something morally reprehensible by turning your back on a child when you are the only person who can save them. Could you live with the knowledge that you let this child burn? Let's not fall into MacAskill's trap of trying to calculate the "most good" that we forget what it means to be a decent person.

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A *RASA* SENSIBILITY FOR ECOLOGICAL AESTHETICS AS A CHALLENGE TO THE ANTHROPOCENE

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MISHRA, A.: A *Rasa* Sensibility for Ecological Aesthetics as a Challenge to the Anthropocene
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Based on the premise that an aesthetic experience is inevitably a human one, this paper considers a non-anthropocentric ecological aesthetic experience through the lens of Indian aesthetics. It does so by problematizing the beautiful in the aesthetic. *Rasa* in Indian aesthetics refers to the essence of emotion felt in an aesthetic experience. The *adbhuta rasa* refers to the experience of wonder through astonishment. I argue that what we might find amazing in nature is not only the picturesque, but rather the ecological interconnectedness of nature. Through Indian aesthetics, we recognize in this paper, the criterion for a sensitive, receptive and responsive subject presenting themselves to an engulfment, as important for a non-othered ecological aesthetic experience. It is recognized that there might be an aesthetic allowance in ecological design, realized by placing importance on a sensory immersion in the natural world that allows an engulfment in it. While not neglecting a cognitive reflexive analysis of such a relishing of the *adbhuta*, we conceive of an experience that finds aesthetic value and appreciation beyond the instrumental and commodified value placed on natural environments. The paper concludes with key questions that a *rasa anubhuti* raises for emerging eco-aesthetic theories and a summary of the unique hermeneutical and epistemological contributions this approach could make to the field.

Keywords: *Rasa* – *Rasika* – *Adbhuta* – Indian aesthetics – Ecological aesthetics – Anthropocene

Introduction

The field of ecological aesthetics can be credited for revitalizing the importance of an aesthetic experience that goes beyond that which might be referred to as art experience, and rejecting dualisms entrenched in the examining of an aesthetic experience. Xiangzhan Cheng's key overview of this field recognizes four keystones crucial to

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ecological aesthetics (Cheng 2013). We juxtapose an Indian ecological aesthetic with two keystones of his overview: The first on the question of ecological knowledge as a pre-requisite for an ecological conscience and aesthetic appreciation; the second, the experience being predicated on an ecological ethics. There is then a possibility of an ecologically attuned aesthetic appreciation without attaching a primacy to ecological knowledge, while recognizing the moral implication of such an experience seen as key to the field. We argue for this through the *rasa* theory from Indian aesthetics, the details of which this paper shall go into after making clear the position this approach shall occupy in contemporary debates of this field.

I. Navigating the Cognitive and Non-Cognitive in Ecological Aesthetics?

What is worth clarifying first is where our approach might fit in the divide in the broader field of environmental aesthetics between what are cognitive and non-cognitive approaches. The former prioritizes the importance of scientific knowledge for aesthetic appreciation, while the latter finds sense perception key to the aesthetic experience. Arnold Berleant, a key figure in environmental aesthetics, has thus proposed models of "sensory immersion" and an "aesthetics of engagement." As he wrote, the aesthetic environment "is sensed through my feet, in the kinesthetic sensations of my moving body, in the feel of the sun and wind on my skin, in the tug of branches on my clothing, in the sounds from every direction that attract my attention" (Berleant 1992, 27). It is such prioritization of sense experience that I find myself agreeing with. Ecological aesthetics though, quite possibly finds itself on another side of this divide. As it prioritizes at least basic ecological knowledge as crucial to an eco-aesthetic experience, it attaches a certain primacy to knowledge (Cheng 2013).

What I shall argue is that *rasa* theory will show us a conception of aesthetics that will allow one to attach primacy to sense perception, but not at the cost of abandoning reflexive thinking or cognitive knowledge. Berleant writes of ecological aesthetics: "Such efforts are misguided when they turn away from the primacy of the phenomena of aesthetic experience by subsuming them under a scientific model" (Berleant 2016, 126). I agree with his highlighting of the idea that such models of thinking and cognition we might rely on are aesthetically relevant only if they affect our perception. However, maintaining such a distinction might be easier said than done. Our reliance in this paper on ecological thinking is to highlight a lack of perceptual awareness of the interconnected underpinnings of the natural world and thus an alienation from what we might be able to perceive in the first place.

Becoming aware of the ecological functioning of nature is not perceptive at first glance to the untrained eye. Everything that a forest ecologist might observe with

a single look, a city-dwelling rookie hiker (like me) might need multiple glances and some training. Yet when considering a non-anthropocentric ecological aesthetic theory, we must attempt to be as inclusive as possible, and argue for an experience that is accessible to anyone who can present themselves in such a context. For there is a process of becoming aware of what you are experiencing that is manifested in nature. One might not know they need to just look around for a moment longer to realize the wonderfully complex web of relations that are playing out above them. Ecological aesthetics accommodates for this interconnected web that makes available to our senses much more to perceive. It also ties back to a natural progression that might stem from Berleant's "Aesthetics of Engagement," a movement from a disinterested approach to aesthetic experiences to a more immersive one (Berleant 1992). His focus on sensory perception can be understood, if we were to wonder how one might be able to accurately explain what a forest is without walking through a forest of some kind. Such experiences stimulate all the senses one has access to – if one cannot see, then they might hear a forest, if they cannot hear, they might smell it. They could feel the forest by tripping on the carpet of vines that the trees lay out for them. It does not have to be a forest, for it certainly is not the most accessible of spaces. The key idea here is that a form of tangible experience is essential to formulating our conception of an ecological aesthetic, and it is this that we shall elaborate upon through Indian aesthetics.

II. Introducing an Indian Aesthetics Approach

This paper draws inspiration primarily from the works of two historical thinkers, Bhatta Nayaka and Abhinavagupta and two more contemporary thinkers, Prof. M. Hiriyanna and Ananda Kentish Coomaraswamy, both of whom wrote in the 20th Century. The *rasa* theory stems from the *Natya-śastra*, a *Treatise on Drama* authored by the legendary Bharatamuni. *Rasa*, as understood from one of the most often quoted passages in the *Natya-śastra*, is stated to be realized "from the combination of excitant determinants (*vibhāva*), expressive consequents (*anubhāva*) and transient feelings (*vyabhicāri*), the relishable juice (*rasa*) is realized (*rasa*-nisīpattihī)" (Ghosh 1934, 105). The factors or determinants, *vibhāva*, are "the aesthetic problem, plot, or theme"; the reactions or consequents, *anubhāva*, are the "deliberate manifestations of feeling, as gestures, etc." (Coomaraswamy 1918, 31). The initial, and most literal translation of *rasa* was "taste" and *rasa* theory thus became taste theory (Chaudhury 1965). Yet the implied simplicity and subjectivity of such a translation could be highly misleading (Pollock 2016, 5). We adopt K. C. Bhattacharya's account of the two direct meanings *rasa* could have, namely, "essence" and "what it means to be tasted" to argue that "The aesthetic conception of rasa combines the two senses and signifies the essence of a feeling" (Bhattacharyya 1930, 195).

What does this imply about the meaning of what might consist as an aesthetic experience? R. Gnoli in his introduction to Abhinavagupta, writes "Aesthetic experience marks a definite break with samsara, which is dominated and conditioned by the law of cause and effect" (Gnoli 1956, xxi). Abhinavagupta and Bhatta Nayaka thus identify an aesthetic consciousness, where "Rasa is not a thing in itself…but the consciousness itself…which, freed from external interference and all practical desire, becomes Rasa or aesthetic consciousness" (Gnoli 1956, xxii).[1] We shall here refer to the experience of *rasa* as *rasa anubhuti*, *anubhuti* implying experience. There are eight *rasas* as recognized in the *Natya-śastra*, with Abhinavagupta adding a ninth *rasa*. This paper shall focus more on the hermeneutical insights that *rasa* theory can offer for ecological aesthetics, and starts with the *adbhuta rasa*.

III. *Adbhuta*, the *Rasa* of Wonder

The *adbhuta rasa* in most accounts is translated as "wonder" or "the fantastic." However, it is also mostly defined in the realm of literature, art and theatre. The *Natya-śastra* does not acknowledge *rasa anubhuti* outside the domain of theatre. Abhinavagupta is perhaps even more stringent, drawing a clear distinction between the experience through poetry and drama in theatre, and the experience of the "real," or the world outside that space (Masson – Patwardhan 1970, 54). In this context, the *adbhuta rasa* has been said to be of two kinds: That which is divine, and that which is born from joy. The divine (*adbhutarasa*) arises from seeing heavenly sights, and the adbhutarasa which is born from joy comes from delight (i.e., the fulfilment of one's desires) (Masson – Patwardhan 1970, 57).

Then there is the *sthāyibhāva* of the *adbhuta rasa,* which is *vismaya*, amazement, from which arises the *rasa* of wonder (*adbhuta*) (Chandran – Sreenath, 2021). K. C. Pandey defines the *sthāyibhāva* as "a basic state of mind which binds together in an organic whole" (Pandey 1959). Abhinava writes, that "the Determinants (*vibhava*) are the cause of the birth of the mental movement (*cittavritti*) which constitutes the permanent Mental State (*sthāyibhāva*)" (Gnoli 1956, 30).

It is necessary to understand the factors that are employed, to examine the creation of *rasa.* The initial development of *rasa* theory focused on the creation of *rasa* in a performer, specifically in the context of dramatic performances. While it would be reductive to propose the progression of *rasa* theory as strictly linear, one can see a gradual shift in the focus of *rasa* in two key ways: firstly, in being located

[1] There might be recognized a tension between how *rasa* has been defined and perhaps depicted, and the connotations we derive from it but also attach to it. *Rasa* might be viewed as consciousness itself, yet it may also emerge within an actively engaged subject in the world. This tension I believe is in keeping with how Indian aesthetics has developed and the myriad approaches it entails.

in forms of art other than drama or theatre, namely, poetry, prose and literature, and secondly, in the turning of enquiry by Bhatta Nayaka from *rasa* in the character to *rasa* in the "reader" (or in our case *rasa* as experienced by the subject), prompting "him to rethink both the ontology and the epistemology of rasa, the question of how and where rasa exists to how and where rasa is made known" (Pollock 2016, 16). This ontological shift becomes crucial as a justificatory principle in this paper's endeavors of locating *rasa* in an aesthetic experience of the natural environment. It shows us that the very nature of *rasa*'s movement has been expansive, though not a reckless expansion. It is thus in keeping with the tradition of Indian aesthetics that this paper's undertaking is embarked upon.

Can one argue for a universal experience of wonder in nature? It is difficult, to make a statement such as "Everyone finds something wonderous in nature." Yet let us turn to Elizabeth Kolbert's Pulitzer Prize winning book, *The Sixth Extinction: An Unnatural History*. In a chapter, entitled "The Forest and the Trees," she writes of how, as they went deeper into the forests, they crossed through tunnels formed by trees, so dark that they needed headlamps, making her feel like she had "entered a very grim fairy tale" (Kolbert 2014, 154). Such an aesthetic contrasts with how she described "crawling" out of her tent that morning to see the sunrise, "Overnight, clouds had rolled in from the Amazon basin, and we watched them from above as they turned first pink and then flaming orange" (Kolbert 2014, 154). Our closest star never seemed to go unappreciated by her, as in the very beginning she describes her vantage point:

> We were standing in eastern Peru, at the edge of the Andes, on top of a twelve-thousand-foot-high mountain, where, in fact, there were no trees, just scrub and, somewhat incongruously, a dozen or so cows, eyeing us suspiciously. The sun was sinking, and with it the temperature, but the view, in the orange glow of evening, was extraordinary (Kolbert 2014, 148).

What Kolbert depicts is what I would interpret to be an *adbhuta* experience in nature, or at the very least an experience capable of being wonderous, with its *sthāyibhāva* of amazement certainly noticeable in her descriptions. It is similar to what I felt in my favorite hike in Hong Kong, which has an expansive view of the ocean on my right, with not a single skyscraper in sight, a view though not uncommon, but much harder to come by in the concrete jungle that Hong Kong can feel like. It is the *adbhuta* that I almost taste, when I walk by the water on an island two hours away from the city center, before I am pulled back by the need to return to a clockwork-like schedule. In this relishing of the *adbhuta*, there is a *vibhāva*, the wind, the ocean, the seashore; the *vyabhicāribhāva*, a fleeting moment of joyful yet pensive happiness; the *anubhāva*, me visibly catching my breath as I stare into the horizon, or at a neighboring island.

These parallels should not be interpreted as me transposing categories from the domain of art and drama into a "real" world experience. It is rather to make clearer what the hermeneutical implications of locating a *rasa* sensibility in an ecologically aesthetic experience might look like, and it is certainly useful for locating a *rasa anubhuti*. When I confront such beauty in nature, my mind wanders through all that it stands for, sparking in me reflections about my role within nature. What I recount might not scale up to Kolbert standing at the edge of the Andes, yet the reflexive process it triggers is not dissimilar. Furthermore, in my recollection as well as Kolbert's depictions, what is obvious at a glance is that this experience can signify a break from regularity, the same break characteristic of an aesthetic experience in Indian aesthetics. The break is not necessarily from the mundane, and labelling it as such would be limiting the potential that I argue aesthetic experiences carry in challenging the Anthropocene. It is a break in our "being," that is, giving us a moment to realize what being is, catapulted into an engulfment by nature. It can arise and float away multiple times, and it can be worth more than a moment. What it certainly is though is a break along the lines of how Prof. Hiriyanna would describe an experience of beauty, which is "anything that brings about a break in the routine life and serves as a point of departure towards the realization of delight" (Hiriyanna 1954, 9). It might be easier to admit then that one is certainly capable of having such *adbhuta* experiences in nature, with this break being a mark of such an experience.[2] The question worth answering now becomes what having such an experience entails; we do this in the section that follows.

IV. The Sensitive, Receptive, and Responsive Subject

An aspect of Indian aesthetics that cannot be ignored, is how it talks of the subject in the case of *rasa anubhuti,* and what the thinkers have depicted as a *rasika*. Pollock in his recent exposition describes them as "he who, or that which, has or tastes or experiences rasa" (Pollock 2016, xvii). Coomaraswamy writes of it as "one who enjoys rasa, a connoisseur or lover" (Coomaraswamy 1918, 31); and he further claims, "the capacity and genius necessary for appreciation are partly native ('ancient') and partly cultivated ('contemporary'): but cultivation alone is useless, and if the poet is born, so too is the *rasika*, and criticism is akin to genius" (Coomaraswamy 1918, 33).

[2] The phenomenological nature of the break which is a mark of aesthetic experience for Hiryanna might certainly be different from the nature of a break in the reality that we speak of in the context of environmental aesthetics. However, hermeneutically, in viewing environmental aesthetic experience through the anatomy of how Hiriyanna views an aesthetic experience, I believe there might be merit for a break, in our mundane and mediated experience of the world, to be the connecting principle between a "real world" experience and the aesthetic experience delineated through *rasa anubhuti*, leading to ontological consequences for our approach.

In the context of an ecological aesthetic, I shall not make the argument that a *rasika* can only be born and focus rather on how they might be cultivated. I shun the former, especially in the context of the "modern, colonial, capitalist, and patriarchal world" (Grosfoguel – Mielants, 2006) that the subject is born into, one which is mediated and dualistic. Today, the experience of engagement with nature must more often than not be actively sought than become generally available to one. I focus then on how the thinkers write about a *rasika* and consider what that might entail for an ecological aesthetic experience.

These are recurring qualifications, which emerge from reading Indian aestheticians, are of the following kind-"the receptive reader/viewer" (*sahṛdaya*) (Masson – Patwardhan 1969, 65), "the sensitive reader/viewer," and "the responsive reader/viewer" (*sacetāḥ*) (Pollock 2016, 331). Who is this *rasika* then, and what conditions go into the existence of one? We could imagine there being a requirement of knowing *rasa* in some form and way, though without being a full-fledged scholar of poetics to fall under these criteria. What is more relevant though, is to consider locating a similarly placed subject in their experience with nature, which is a sensitive, receptive, and responsive subject. While these qualifications might be used at times interchangeably in Indian aesthetics, we introduce subtle variations, an entering of the subject as sensitive, a being of the subject as receptive, and an emerging of the subject as responsive. It is a sensitive subject that must enter nature, sensitive to that which is unfurling around them, the ecological balance of things, the *being* of everything that is not them. Through this acknowledging of what is around them, they continue as receptive subjects, welcoming and accepting the experience they are going through, processing through the previously acknowledged ecological framework the significance of a butterfly crossing their path as well as the poisonous spider hovering above their heads on a hike; the corals they see on a dive as well as the jellyfish that might sting them in a moment of absent-mindedness. In this process they thus become responsive subjects, imploring them to engage with what they encounter, moving towards a temporary experiencing of unity with nature, in the space they find themselves in. If the subject is mundane and nonchalant, the pervasion of *rasa* shall become substantially difficult, for they are neither open to nor accepting of what they are capable of encountering.

Considering then the aesthetic experience of the *rasika*, Abhinava wrote, "The audience members too are captivated first by the apprehension of rasa, and only afterward, by an act of analytical understanding, come to apprehend the various aesthetic elements" (Pollock 2016, 212).

He thus assigned priority to sense perception before any form of reflexive understanding might begin to be formulated. It is the same for the sensitive subject as

they enter nature, where they are first captivated by nature before processing what they are going through. Abhinava's argument about analytical understanding emerging only after an initial "immersion," substantiates our position which navigates between cognitivists placing primacy on scientific knowledge, of which analytical understanding is formative. We thus acknowledge the importance of analytical understanding on the part of the *rasika,* but not by neglecting sensory experience. He, however, also recognized a strong element of moral instruction in aesthetic experience, as one of its purposes (Pollock 2016, 192). This would be in contrast to theories of aesthetics where beauty is experienced only for the sake for beauty. It closely aligns though with the initially discussed keystone of ecological aesthetics being predicated on ecological ethics. Taking the question of moral instruction from Abhinava, we examine further how such instruction is retained in an Indian aesthetic approach for this field.

V. The Ecological *Rasa Anubhuti* as Instructional

There are two important challenges to acknowledge in our Indian aesthetic approach, in terms of the thinkers we choose to examine in its crafting, emerging from what they saw to be the goal of an aesthetic experience. Bhatta Nayaka argued that pleasure was an indispensable aspect of *rasa anubhuti*. Abhinava, by contrast, stated that a morally instructive element was an end of *rasa anubhuti* (Pollock 2016, 33; Masson – Patwardhan 1970, 53). I find it problematic to appropriate both into an existing framework of ecological aesthetics for two reasons. First, it would be reductive to do so, if not directly contradictory to some of the cornerstones the field has set for itself. The second is that it would limit our enquiry into the true meaning of the goals that both thinkers set for aesthetics. Rather, a deeper look into them shows more resonance with the goals of ecological aesthetics rather than a strict dissonance. Ecological aesthetics recognizes an ethical premise to its experiences, in how one understands nature as well as what the ecological motivates one towards (Cheng 2013). The path of the sensitive subject in a *rasa anubhuti* thus also leads to a non-intentionally instructional realizing of ecological interconnectedness, one within nature rather than of nature, showing an expected moral relation emerging.

Here though, we delve further into the instructive potential that an ecological *rasa anubhuti* might hold. In art, while an instructive element is purposive and intentional, in nature such potential must be realized by the subject in what I term an "aesthetic allowance" available to them. It cannot be simply conveyed, nor intentionally crafted or manufactured to be experienced the same way a movie (with varying degrees of explicitness) conveys. It is a necessary level of engagement from the subject which might thus be called upon for an Indian ecological aesthetic sensibility. In drama, we

know that such an experience is generated through the coming together of the three elements: *vibhāva*, *anubhāva*, and *vyabhacaribhāvas*. While not directly equating this to the real world, we locate parallels of similar consequence. A source could be the typhoon that has hit your city. As you sit in the safety of your balcony taking it in, a strong gust of wind makes you worried, just as a streak of lightning shows you the trees on the nearby hill dancing to the wind, it dawns on you the fearsome yet wondrous nature of nature.

Abhinava argued that it was acting that made aesthetic experience in drama possible, separating it from reality (Pollock 2016, 211). There is, though, no acting in nature. But we can find, in every experience in nature, the scope for a tripartite breakdown into the factors of *rasa anubhuti* listed before, and at the very least the *sthāyibhāva* of *rasa*. Is this enough to term it a *rasa anubhuti*? Our argument becomes as follows: In the absence of acting, and an absence thus of emotions distinct from that in the "real" world, an aesthetic experience of nature can still be understood as a *rasa anubhuti* as primarily an Indian aesthetic hermeneutical approach to ecological aesthetics. We see empirically as well as anecdotally that many of the emotions generated through *rasa* can be experienced in nature too. The two ends identified for such experience, pleasure and moral instructiveness, can be found being reached in the aesthetic experience of nature too.

Can we then completely ignore the importance of acting in Indian aesthetics? We cannot, and we need not. While *rasa* was recognized in the domain of the "as if" in classical aesthetic literature, Bhatta Nayaka attributed real-world consequences to them, arguing that "And though in this way they remain mere appearance, they can become a means of understanding the true ends of man" (Pollock, 2016 148). While not leaving the domain of theatre, the following is attributed to him:

> I pay my homage to Siva the poet (also the omniscient one, *kavi*) who has created all the three worlds and thanks to whom (*yatah*) (sensitive) people are able to attain aesthetic bliss by watching the spectacle (*prayoga*) of the play that is our life in this world (Masson – Patwardhan 1969, 23).

Bhatta Nayaka thus allows a scope of enquiry into aesthetic experience beyond the strict boundaries of what theatre might consist of, opening the possibility for a mediated way of being in the world.[3]

[3] There are others too who are expansive in their enquiry, notable among them Rupa Goswami along with his nephew Jiva Goswami who think of *rasa* as manifesting as devotion for God. Their thought paved the way for the recognition of religious and devotional *rasa* in the real world (Wilke 2018).

We then consider this question ontologically, in the theory of reality juxtaposed against acting, what role does nature actually occupy? There is an aspect of an othered being that has crept into our experience of nature. In reifying our understanding of nature into the categories of the Anthropocene, economic, social, political, etc., we have created a certain barrier. With the existence of this barrier comes a dualistic and alienated perception. Hence, in our experience of nature in modernity, there is not always a direct perception of reality overcoming these categories; and while there is no acting, our experience with nature is enacted through the mentioned categories. Hence, the experience of nature is not always *a priori* and is a non-real and mediated experience of nature, with the generative potential of experiencing reality. It is a culturally and scientifically shaped consciousness that experiences nature. If we are to acknowledge the categorized and reified conceptual understanding of nature that rests within us as we look to indulge in sensory immersion, we understand that it is not an *a priori* reality that we simply enter into to experience. It is rather a space layered time and again through various epistemologies. What we may witness though, is a gradual dismantling of reified categories, should one be an approximation of the crafted subject that we have laid out before.

The nature of instruction is thus through what we recognize as ecological design, i.e., the realization of an interconnectedness that is not othered by the human subject, and with no aesthetic intentionality to it in the traditional sense of the term "aesthetic" with its connotations of "beauty." Design ought not to imply that such a system is crafted, but rather that multiple factors have a purpose. Our argument is for an aesthetic allowance in nature, where *rasa anubhuti* is treated not only as an experience of beauty or ugliness, but rather as an experience opening us to the engulfment of nature, to immerse ourselves in all that it has to offer. It is an offering not *for* us but an experience *of* its existence and functioning where we co-exist and have a role to play. Once we treat aesthetic experience as such a pathway, we might then encounter the categories of beauty and ugliness, pleasure and annoyance, as rooted in the Anthropocene but encountered as openings rather than reified fixities.

V. Is *Rasa* Rooted in the Anthropocene?

Another challenge to being able to recognize an idea of immersion within nature is its prevalent instrumental use in the Anthropocene. The idea of instrumental value has been dealt with by Emily Brady, an important figure in this field. In her work on environmental aesthetics and climate change, she takes the position of a moderate autonomist, arguing that aesthetic value can be derived and enjoyed independent of moral concerns, but moral concerns will exist too, although they are not capable of eliminating or overtaking aesthetic appreciation (Brady 2018). Arguments which

critique such commodification of nature by depriving it of capitalist value, pit such valuing against the recognition of an intrinsic, non-anthropocentric value of nature. I agree with the need to employ similarly positioned value theories that can look beyond anthropocentric concerns. Such an agreement though, begs the question of our position, where there is an emphasis on the importance of a human experience of wonderment in nature (amongst other experiences). It could be argued that our position is certainly one steeped in the Anthropocene.[4] The critic could interpret us as arguing for nature conservation and climate action only because we want to continue to enjoy an *adbhuta anubhuti* in nature. Such a critique of a *rasa* sensibility might be further strengthened by the problem of eco-tourism, where, by simply commodifying the value humans place on enjoying scenic nature, entire ecosystems have been irreversibly affected (Duffy 2002).

Such a critique would stand, if not for us delinking the idea of aesthetic valuing being intrinsically connected to the idea of anthropocentric beauty in nature. By arguing instead for an aesthetic allowance emerging from an experience and recognition of ecological design, we rely on an aesthetic valuing different from the instrumental valuing that could be attributed to our position. We do still refer to the scenic and the beautiful, but not as absolute concepts. By reverting to how we understand aesthetic experience through an aesthetic allowance in nature, and admitting to ideas of beauty as harmony in ecological design, we try to establish a non-anthropocentric basis for the human aesthetic experience. This makes it possible to conceive of a non-anthropocentric value theory where the human subject remains a focus of our argument, but the experience does not center around them. We address this also by problematizing the dualism that would embolden the Anthropocene critique of our position, such a dualism of the subject and nature is indeed reified in our ordinary conceptions of reality. It is an overcoming of that reification that is a possibility through the *rasa anubhuti* of nature, through the sensitive subject giving in to the engulfing of nature. This giving in would be non-existent should the sensibility that is argued for be rooted in the categories of the Anthropocene.

In discussing *rasa* and the Anthropocene, we might consolidate here a problematic touched upon throughout this entry, namely, that of the relation of beauty and pleasure, or rather contextually examine if all that is beautiful has to be pleasurable. For instance, it is difficult to argue that childbirth is pleasurable. Would any parent say that oh yes,

[4] The Kantian sublime of nature has also been examined as an anthropocentric argument, and in so far as it prioritizes human experience, it could be said to have such a concern. However, Kant prioritizes the admiration of nature as non-instrumental, and its aesthetic experience as non-reductive to moral concerns (Brady 2018). In that appreciation of nature for itself, his view has aided contemporary thinking in being non-anthropocentric.

the tearing apart of my body for my child to come wailing and kicking into this world was the most pleasurable moment of their life? Yet, the times that follow of the parents holding the baby for the first time and realizing that they have created life, is something that might be claimed to be beautiful. Happiness and beauty are thus not grounded *only* in pleasure. Famed novelist Manik Bandhopadhyay's short story of love between a gangrene criminal and a beggar with leprosy might not be anthropocentrically beautiful (Chakrabarti 2016). Yet it is beautiful, and pleasurable too. In short, the linkage of beauty and pleasure is anything but straightforward, especially with the reifications they are accompanied by. The sensibility we propose looks beyond the Anthropocene reifications in understanding beauty, while not essentializing it into a *rasa anubhuti*. Where Prof. Hiriyanna argued that the truth of art experience is trumped by the truth of an aesthetic experience of "nature" (Hiriyanna 1954, 10), we argue that the truth of a non-anthropocentric, transcendental pleasure might be ascribed a similar position over the conventional ideas of pleasure used in a modern, colonial, capitalist and patriarchal world. We can thus begin to conclude by considering what such a sensibility is going to imply for ecological aesthetics.

VI. The Implications of *Rasa* for Ecological Aesthetics

Returning to Elizabeth Kolbert's journey to the Peruvian rainforest, it is interesting to pay attention to how Miles Silman, her forest ecologist friend, introduces trees to her- as if they have individual personalities "the way other people speak about movie stars" is how she describes his thinking (Kolbert 2014, 163). He would describe one as "charismatic," another as "crazy," another as "amazing" and so on (Kolbert 2014, 163). Silman's gaze sounds akin to how I, with next to no knowledge of trees, try to perceive them when I go hiking. There is aesthetic value in this gaze, for it is not an instrumental one. I am not concerned about the furniture it might be good for, or if it will burn well as fuel, without too much smoke. Further, a forest ecologist adopting such descriptions sheds light on how a non-cognitive aesthetic experience and description must go hand-in-hand with cognitive sources if an ecological understanding of forest communities is to be achieved, and in our case if the *adbhuta* is to lead to an ecological *rasa* experience.

It is here that we might problematize the essential role ecological knowledge plays in ecological aesthetics. While agreeing that ecological knowledge can enhance aesthetic appreciation, finding that deep aesthetic appreciation is possible in its absence as well. This is argued for through the primacy of sense perception and the importance of a willingness for such experience. For importantly, Indian aesthetics generally does not argue for an experience of beauty for which the basis is superficial pleasure. While there certainly is an aspect of pleasure, it is recognized through multiple "positive" as well as "negative" feelings. Manik Bandhopadya's story best

summed this up, with Arindam Chakrabarti using it in his chapter "Toward Indian Aesthetics of the Ugly and the Disgusting" (Chakrabarti 2016, 149 – 164).

The problem though would lie in the aesthetic appreciation of a magnificently expansive desert, yet formed because of anthropogenic desertification with socio-economic consequences (Burrell – Evans – De Kauwe 2020). Without acknowledging a need for knowing this, one's appreciation might be morally tainted. While the moral nature of aesthetic appreciation has been debated, we align ourselves in this regard more closely with the ethical approach of ecological aesthetics and agree that such knowledge shall become important, but its presence is not key to appreciation and an *adbhuta anubhuti.* The problem for me with knowledge is its predominantly inflexible nature, with hegemonic determinations of what actually counts as knowledge. Knowledge must mean more than only Western scientific knowledge. As seen in the Niyamgiri tribal led movement against the Vedanta, cultural and traditional beliefs, for instance, are intertwined with aesthetic living and appreciation, with tangible consequences of climate activism as seen in the movement (Padel 2014). Vandana Shiva writes of the devastating discounting of agrarian epistemologies that have happened in India by Western enterprises (Shiva 2016). Making scientific knowledge of environments defined only by epsitemologies embodying values of the capitalist world, into a pre-requisite for aesthetic appreciation, would feed into the same narrative. It is this criterion of knowledge and what it means that I see effectively challenged through a *rasa* sensibility, a reorienting focus where one is sensitive, receptive and responsive within nature. Shiva was also responsible for a series of ecological movements now termed "*bija satyagraha*" inspired by Gandhian philosophy (Shiva 2014). Yuriko Saito, a significant figure in this field, has also recognized the importance of cultural narratives amidst others (Saito 1998). Such alternatives are also consolidated in *Pluriverse: A Post-Development Dictionary*, where the authors document various "relational ways of being." They recognize a politics of care converging with "*buen vivir*, *ubuntu*, and *swaraj*" culminating as an alternative relational epistemology (Kothari et al. 2019). Ashish Kothari, one of the authors and a key figure in the Indian Environmental Movement, documents through Vikalp Sangam such alternative praxis, for instance, how a revival of millets in Odisha (a province on the East coast of India) is improving the lives of tribespeople (Singh 2022).

This account has thus begun an addition of a different epistemic approach to the ever-expanding field of ecological aesthetics. There remain multiple further questions and linkages, unanswered and unmade, which this paper lays the ground for. Indian aesthetics is a vast field, where the consequences of an aesthetic experience are far-reaching, and drawing hermeneutic inspiration from such ontological thinking shall continue to expand the scope of ecological aesthetics, as this paper has attempted to show.

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