

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 CO₂ 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.

Bibliography

- BRAND, U., et al. (2021): From Planetary to Societal Boundaries: An Argument for Collectively Defined Self-Limitation. *Sustainability: Science, Practice and Policy*, 17 (1), 264 – 291, DOI: <https://doi.org/10.1080/15487733.2021.1940754>
- COECKELBERGH, M. (2021): *Green Leviathan or the Poetics of Political Liberty. Navigating Freedom in the Age of Climate Change and Artificial Intelligence*. New York and London: Routledge.
- CRUTZEN, P. J., STOERMER, E. F. (2000): The "Anthropocene." *Global Change Newsletter*, (41), 17 – 18. Available at: <http://www.igbp.net/download/18.316f18321323470177580001401/1376383088452/NL41.pdf>
- HANSEN, J. E., et al. (2023): Global warming in the pipeline. *Oxford Open Climate Change*, 3 (1), kgad008. DOI: <https://doi.org/10.1093/oxfclm/kgad008>
- IPCC (2023): *Climate Change 2023: Synthesis Report of the IPCC Sixth Assessment Report (AR6)*. Switzerland: IPCC. DOI: <https://doi.org/10.59327/IPCC/AR6-9789291691647>
- JØRGENSEN, P. S., et al. (2023): Evolution of the Polycrisis: Anthropocene Traps that Challenge Global Sustainability. *Philosophical Transaction of the Royal Society B*, 379 (1893), 20220261. DOI: <https://doi.org/10.1098/rstb.2022.0261>
- NOGRADY, B. (2023): Record-Breaking Heat Set to Hit Southern Hemisphere as Summer Begins. *Nature News*. [Online.] November 19, 2023. DOI: <https://doi.org/10.1038/d41586-023-03547-9>
- RICHARDSON, K., et al. (2023): Earth Beyond Six of Nine Planetary Boundaries. *Science Advances*, 9 (37), eadh2458. DOI: <https://www.science.org/doi/10.1126/sciadv.adh2458>
- RIPPLE, W. J., et al. (2023): The 2023 State of the Climate Report: Entering Uncharted Territory. *BioScience*, biad080. DOI: <https://doi.org/10.1093/biosci/biad080>

- ROCKSTRÖM, J. et al. (2009): Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, 14 (2), Article 32. Available at:
<https://www.ecologyandsociety.org/vol14/iss2/art32/>
- ROCKSTRÖM, J., et al. (2023): Safe and Just Earth System Boundaries. *Nature*, 619, 102 – 111. DOI: <https://doi.org/10.1038/s41586-023-06083-8>.
- VECCELIO, D. J., et al. (2023): Greatly Enhanced Risk to Humans as a Consequence of Empirically Determined Lower Moist Heat Stress Tolerance. *PNAS*, 120 (42) e2305427120. DOI: <https://doi.org/10.1073/pnas.2305427120>
- ZALASIEWICZ, J., et al. (2011): The Anthropocene: A New Epoch of Geological Time? *Philosophical Transactions of The Royal Society A: Mathematical Physical and Engineering Sciences*, 369 (1938), 835 – 841. DOI: <https://doi.org/10.1098/rsta.2010.0339>
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