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The Shaping of Our Historical Moment

Contribution to GTI Forum [Interrogating the Anthropocene: Truth and Fallacy](#)

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A key point of Paul Raskin's beautifully written [essay](#) concerns the relationship between the crisis of the Earth system and "the crisis of civilization: the macro-transition from the Modern Era to the Planetary Phase of Civilization." I would like to make a couple of remarks on this, on the basis of critical realist ontology, epistemology, and methodology. We humans and our minds are not separate from the world but an integral and emergent part of it. Emergence means that when lower-level entities are combined, integrated, and organized in a particular way, new higher-level qualities and causal powers come into being, opening possibilities for still new forms and levels of emergence. With new levels of learning and social complexity, and related population growth, the human impact on the Earth system was certain to grow over time (in the course of human history, this has already led to many local disasters). Higher ontological levels remain dependent on the lower levels. Different ontological levels of reality coexist and can have causal effects also across levels. The mind and social world form an interconnected emergent layer of reality with unique structural properties and powers and capacity to impact upon lower levels of reality, as is indicated by the concept of Anthropocene.

From this ontological perspective, it is relatively easy to connect the crisis of the earth system and the macro-transition to the planetary phase of civilization. For instance, the Industrial Revolution led to rapid acceleration of the human impact and thereby to the Anthropocene. It was also the origin of the planetary era. As Karl Polanyi explained in *The Great Transformation*, "the old world was swept away in one indomitable surge toward a planetary economy" and to "the new and hazardous planetary interdependence."

Could this have been otherwise? By exploring counterfactual possibilities of economic and political history, we can shed light on the impact of agency, structures, and complex social systems on the earth system. Many counterfactual possibilities about the Industrial Revolution are plausible. It could have happened at another time and place, either earlier (perhaps already in the Song Dynasty China before it was conquered by the Mongols) or later (perhaps in North America in the late nineteenth century). Nonetheless, it seems that the Industrial Revolution was bound to happen. We know that for processes at different layers of reality, there are often diverse ways of arriving at roughly the same endpoint. The unevenly shared collective learning of humankind and the self-reinforcing effects of numerous small changes were preparing the ground for the widespread use of fossil fuels and for the Industrial Revolution. Yet the specific path of history matters. For example, an earlier transition to the use of fossil fuels could have sped up the demographic transition, among other things.

The exploration of counterfactuals can also shed light on the debate about Anthropocene vs. Capitalocene. Is capitalist market society a mere historical coincidence? Would everything—including our relationship to nature—be drastically different had history taken, as it could have, a different path at some point(s)? This is a multi-layered, multifaceted, and complicated problematic, but to the best of my knowledge, in all plausible counterfactual scenarios that have been proposed, the Industrial Revolution is associated with some form of capitalist market economy. And as far I understand, it was also Marx's position that the emergence of capitalist practices drove both European expansion and rapid changes in Europe. This suggests not only that what is called Capitalocene is a manifestation of the Anthropocene, but also that in the history of humanity, the Industrial Revolution was probably bound to have been linked with an evolution of practices and institutions that we now associate with markets and "capital."

Various counterfactual possibilities have existed within the capitalist market society and world economy. For example, in the United States by the turn of the twentieth century, 40 percent of automobiles were powered by steam, 38 percent by electricity, and 22 percent by gasoline. The use of energy could have taken a different path without Henry Ford's assembly line and some other developments that favored combustion engine. Many technological, social, and other alternatives

could have affected the growth of population and patterns of production, consumption, and waste, with significant effects on the earth system—but all this is contingent on many circumstances.

What is also interesting is that a non-capitalist modernization is not only a counterfactual but also an actual possibility. After the Russian Revolution and especially from the early 1950s to the late 1970s when almost half of the planet was ruled by socialist or communist one-party states, there seemed to be an alternative to capitalism. Did these countries exist just as a part of the capitalist world economy, or did they constitute an independent state-socialist or, in some loose sense, communist reality? One can argue that the Soviet economy was in fact modeled on World War I war economies, that the Marxist-Leninist and Maoist states were tied to the developments in the capitalist world economy, and that similar techniques of planning were developed by market corporations. Nonetheless, world markets played only an indirect role in state-planning, and private property rights for the means of production did not exist. Yet economic developments in these countries had an equally vast—and often especially devastating—impact on the earth system. The Soviet Union contributed significantly to the plutonium fallout of the 1950s and to the rise of CO₂ emissions. The state-socialist camp might have been a latecomer in the production of fridges, freezers, and air conditioners, but nonetheless played a role in the depletion of the ozone layer.

The Anthropocene is here to stay unless humanity somehow succeeds to destroy itself, whereas the profit motive and capital accumulation may well cease to play a dominant role in world-historical developments. The term “Capitalocene” does not refer to a geological era, but to a more specific and transient world-historical era. What the Anthropocene means is that we humans recognize our deep interconnectedness with—and dependence on—the complex living systems of the planet. Whether “capital” will be driving developments or not, from now on we must contribute to shaping the developments of the planet. Planet Earth has been alive for a long while. Its life-systems have been disturbed several times by massive events and changes. Now it is us humans who are causing disturbances on a catastrophic scale. Under these circumstances, there is no positive alternative to reflexive self-regulation aiming at maintaining life-friendly climatic and biogeochemical conditions. Reflexive self-regulation may simultaneously also contribute to improving the social conditions of ethico-political learning and reflexive self-determination. Learning to co-determine, in a democratic

fashion, the direction of world history means that the sphere of human freedom can be gradually widening. This is the essence of human emancipation conceived as a historical process.

As far as the future is concerned, we do not talk about counterfactuals but about scenarios of possible futures. Not everything is possible. Possibilities and impossibilities are context-bound. X may be possible in general, but impossible in the context C or impossible together with Y. When multiple causal mechanisms, tendencies, and processes interact, involving human agency, they define both compossibilities and impossibilities. Within these limits, we can talk about rational tendential directionality of history. Tendencies are transfactual and may push history towards a particular direction across a set of possible and different paths.

We, and our consciousness, constitute a causally efficacious layer of the world and cosmos, and this layer can co-determine future history within the confines of real compossibilities and impossibilities. The feasibility of alternatives depends also on the degree of human freedom. Each alternative possible future can then be assessed in terms of its impact on the earth system in decades, centuries, and millennia to come.

About the Author



Heikki Patomäki is a social scientist, activist, and Professor of World Politics at the University of Helsinki. He has published over 20 books, 200 research papers, and hundreds of popular articles and blogs on such topics as the philosophy and methodology of social sciences, peace and futures studies, and global political economy, justice, and democracy. His books include *Disintegrative Tendencies in Global Political Economy* and *A Possible World: Democratic Transformation of Global Institutions* (with Teivo Teivainen). Patomäki is a full member of the Finnish Academy of Sciences and Letters and Life Member of Clare Hall at the University of Cambridge. He is a longtime activist of the international Attac movement and a member of the Steering Committee of EuroMemo and DiEM25. He holds a PhD from the University of Turku.

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