

# Review of: "The Anthropocene Borderline Problems"

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## The Anthropocene Borderline Problems, by Martin Bohle: a comment

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As a psychoanalyst, I do not belong to the community of Earth System scientists. I am therefore not competent to discuss most of the topics addressed by Martin Bohle. I can only express my gratitude for his work in clarifying the notions of geological event, geological episode and geological epoch, and for his concern to integrate these notions that work on the concept of the Anthropocene rather than to oppose them. I can only express myself on this subject from the knowledge of the *Anthropos* that my practice as a psychoanalyst gives me. This teaches me that the notions of geological event, geological episode and geological epoch correspond to three aspects of the psychic functioning of the human being and, in a fractal manner (although shaped by history and geography), of humanity.

Bohle participates in a collective work of naming. « Anthropocene » is intended to be the name of an awareness that humanity has become a major geological force, on a par with other natural geological factors. Rather than referring to an « environmental crisis », the Anthropocene describes the engagement of the biosphere and lithosphere in a long-term, human-induced geological and biotic revolution. One of the interests of naming is to create a link with what is unknown and to make this unknown an object of observation. Naming calms anxiety and arouses curiosity.

Naming is also a process that designates those responsible for the changes under study and therefore generates conflicts. In this respect, the term « Anthropocene » establishes the environmental crisis as a product of a humanity that is undifferentiated in terms of its cultures, history, genders, social classes and geographical locations. Yet historians (Fressoz, Bonneuil, 2013) tell us that the anthropogenic environmental crisis is rather a « Westernocene » (the result of the industrial and technological revolution engendered by the Western naturalism described by Descola [2005], a naturalism that separates human subjects, actors in history, from non-human beings, objects to be known, dominated and exploited as dehumanised sources of resources for humans); a « capitalocene » or « consumerocene » (through the generalised takeover since the Great Acceleration of a neoliberal economic ideology); a « militarocene » (through the economic recycling of military industrial machinery after the Second World War); or even an « androcene » (according to the eco-feminist account of the domination of nature and women by men, see Bon and Rousseau, 2021).

This work of naming therefore involves political stakes, a search for scapegoats, and the public space is today worked by different ideological narratives: a narrative, now dominant, that is naturalistic and scientific (in which Martin Bohle's article is embedded); a post-nature and techno-optimistic constructivist narrative; an eco-catastrophist narrative envisaging an ecological and economic collapse forcing societies to live in a shrinking ecumene; an eco-marxist narrative linking the

social and geological effects of capitalism; and an eco-feminist narrative. This contextualisation of Martin Bohle's work seems important to me, if we think, for example, of a position taken by Paul Crutzen, who argues for the political project of a global planetary governance, guided by experts and driven by neo-liberal economic mechanisms: « The old barriers that separated nature from culture are breaking down. It is no longer us against 'Nature', but we decide what nature is and what it will become [...] In this new era, Nature is us » (reported by Schwägerl, 2011). In this perspective, the notion of the Anthropocene is potentially the bearer of a geoengineering programme that would claim to intervene on the environment on a large scale to intentionally modify the planetary system itself, or even humans through genetic forcing towards transhumanism, or to commit humanity - at least a tiny fraction of it - to a hypothetical flight to the stars such as the one dreamed of by Jeff Bezos and Elon Musk.

If man is governed by his unconscious rather than by his reason, as psychoanalysis teaches us, this means that, on a planet and in a biosphere increasingly artificialized by oil chemistry, by genetics, and even by the geoengineering of which Crutzen is the apostle, *it would henceforth be our biosphere and lithosphere that would be governed by our unconscious*. Either by our arrogance, at best, or by our madness, at worst.

Read in the light of such remarks, Bohle's article is beneficial in that it is part of a discourse that renews the human and social sciences by attempting to nuance the standard discourse on the Anthropocene, and what is involved in a new geopower in the making. Nevertheless, it fails to decolonise ecological thinking from its Western and naturalistic blinkers.

One more step. The notion of geological event seems to me to question the genesis of human thought. The notion of geological episode questions the particularities of human drives. And that of geological epoch seems to denounce the action of the human unconscious.

The notion of a « geological event » reminds me of Charles Darwin's last book, *The Formation of Topsoil by the Action of Earthworms* (1881), whose main idea is that an immeasurable amount of minute forces (in this case, earthworms), acting over a very long period of time, created the humus that shaped the Holocene landscape (today, we know how much micro-organisms contributed to this work, and that Darwin's earthworm is only a model for thinking about the action of micro-organisms more globally). The action of earthworms is also a « geological event ». However, it is the result of a symbiosis between earthworms and the biosphere that is mutually beneficial to both parties. Whereas the notion of the Anthropocene as a geological event refers to the ability of the Anthropos to modify its environment to suit its needs in a way that tends to be parasitic and mutually destructive to both parties. Each migration of *homo sapiens* to a new continent has resulted in an extinction of the megafauna of that continent.

According to this perspective, the Anthropocene event is immeasurably extended into the deep time of prehistory. If we were to turn to the recent findings of palaeontology, would we discover hypotheses about the genesis of this « event » ? I think so.

A century and a half of palaeontological research confirms Darwin's intuition (1871) that contemporary man originated in the evolution of a bush of primate species over a period of about ten million years (Cohen, Maureille, Braga, Teyssandier, 2016). These evolved (yet extinct) primates all underwent a joint process of hominisation and humanisation. It seems that

the decisive creation of natural selection, the one that has made man what he is for the last two million years, apart from his brain, is his prolonged neoteny (his immaturity at birth) beyond that of other evolved primates. The prolonged neoteny of the human child seems to be the feature that distinguishes our phylum from the hominising bush of the evolved primates that preceded us.

Neoteny has a major consequence for our species: the father and mother jointly raise their offspring, unlike other present-day primates. It is from this phylogenetic « primitive scene » that the ontogenetic oedipal situation can be constituted, experienced emotionally and represented psychically by the development of symbolic thought. It is in this field delimited by the brain of the primate and the neoteny of the *homo sapiens*, at the intersection of the biological, drives, emotional and cultural prohibitions, in the space of the links established between an infant, its mother and its father, that thought and culture are born, grow and decline. In other words, cerebral organisation is not in the cranium, it is born between the organism and the environment, in the space that phylogenesis has selected to make our thought a function of the links we form with others, originally with our parents. The neoteny of an infant requires the presence of a couple of adults for thought to develop, a capacity for symbolisation, from which stems our ability to create tools to make objects and, unbeknownst to us, in two million years, an Anthropocene.

In relation to the extractivist, productivist and consumerist « Great Acceleration », the notion of a geological episode questions the particularities of human drives, as I noted above.

As Jacques André (2019) points out, the human species is really not a species like the others. It is the only species to destroy other species, and the only one to destroy itself. When a wolf devours a deer, it follows the carnivorous programme that instinct sets for it: it kills, it feeds, it stops killing. And there is nothing here that threatens deer with extinction. On the contrary, it would be a factor of demographic regulation. The instinct, which continues to govern the animal world, is always adapted to the self-preservation of the species. On the other hand, man can kill wolves and deer endlessly, because sexuality and its pleasure principle interfere in hunting as in all human activities. Man kills for pleasure as much as to satisfy a need. Human sexuality and destructiveness are neither natural nor unnatural, they are *denatured*, notes André, quoting Beaumarchais: « Drinking without thirst and making love at all times, Madame, are the only things that distinguish us from other beasts ». To sexuality and thirst could be added all the other human drives. They are unrestrictedly under the sway of a phylogenetically acquired permanence of the drive. Consequently, the human disqualification of animal instinct weakens the very notion of self-preservation, there is a « malaise in nature » (André, 2019), as evidenced by the existence of unmanaged commons (the soils, the oceans, the atmosphere) and which are in the process of intense transformation since the Great Acceleration, this new face of the greed of our denatured instincts.

Man is governed by his Unconscious. This discovery of psychoanalysis is worrying as we enter the « present », says Martin Bohle, of a new geological epoch.

« We have not only invaded the space of the world, but, if I may say so, [its] ontology, [its essence] ... Vulnerability has just changed sides » (Serres, 1990, my brackets). This is our new paradigm. Today, it is no longer man who is vulnerable to the forces of what Modernity called Nature, but the ecosystems to which we owe life that are vulnerable to the

Promethean forces of man. These ecosystems, we modify, we artificialise, or we destroy them. As a result, we are engaged in what is known as the Anthropocene. In the 3.5 billion years of life on earth, our planet has experienced only five mass extinctions of species. This means that the time to restore biodiversity after it has been destroyed is measured in millions of years. Consequently, if the biosphere is not to say biogeophysically « no » to humanity, for example through uncontrolled climate change, which would become irretrievably uncontrollable, it would have to be humanity that becomes aware of the unprecedented and destructive relationship it has today with the environment on which it depends.

Yes, humans have invaded the space of the world : humanity accounts for 30% of the planetary animal mass, animals domesticated by humanity for 67% of that mass, and wild animals account for a balance of only 3% of that mass (Hamilton, 2017). However, when Serres remarks that humans have not only invaded the space of the world, but also the essence of the world, what does he mean ? This, I think, is that the relationship proper to Modernity that distinguished man from nature is no longer relevant because humanity is endlessly artificializing nature, because it is transforming the « nature » of nature, its essence (Magenat, 2019).

By definition, nature is sexual. It includes all living creatures that are born and develop by themselves, as well as the soil, water and air whose cycles these creatures ensure. However, as Hanna Arendt points out in her collection of essays *The Crisis of Culture* (1954-1968), we are now discovering that humanity is capable of triggering new natural processes that « make nature » by artificialising it. Humans are substituting themselves for the matrix sexuality of the biosphere, and we could see the environmental crisis as the culmination of an immeasurable unconscious attack on the ecosystemic sexuality of the biosphere.

Until our time, Arendt notes, human action, with its man-made processes, was limited to the human world. Man's main concern with nature was to use the materials it offered to make human artifices from them and to defend himself against the enormous force of the natural elements.

From the moment we began to unleash natural processes that would never have occurred without human intervention, such as nuclear fission, genetic engineering, so-called phytosanitary chemistry, the biospheric release of greenhouse gases and plastics, we have not only increased our power over nature, we have not only become more aggressive in our relationship with the existing forces of the earth, but for the first time we have captured nature in the human world as such, we have embraced it in our cultures. In this way, Arendt adds, we have erased the boundaries between natural elements and human artifice that limited civilisations before ours.

Modernity recognised the environment as essential, but as separate from us. However, natural processes are nowadays mixed with the human, because contemporary nature is above all a « second nature » secreted by the great networks of capitalism, by technological systems, by military apparatuses, etc. And our societies are mixed in nature, since they are traversed by gigantic flows of materials, energy, and virus epidemics. By artificially triggering natural processes, man begins to act in nature, on the essence of nature, he « invades its ontology », as Michel Serres says.

Arendt's key point is this: by artificialising nature and introducing new processes into it, man exports his own unpredictability into the very domain that we thought was governed by the inexorable laws discovered by the natural

sciences. This is a second paradigm shift : when the processes of the earth are created by man, man, wherever he goes, encounters only himself. Put from a psychoanalytical perspective, this means, I think, that the endless artificialisation of nature, indeed of our own nature, alienates the laws of nature from those of the human unconscious, in particular from those of the craziest zone of our personality and our societies.

*We might think that it is no longer only man who is governed by his unconscious, but also nature made by man, a nature that is no longer only sexual but also partially artificial.*

If another word had to be found to describe the Anthropocene, I think it would be useful to take a leap into greater abstraction in order to emphasise the radical novelty of the era we are entering, on the one hand, and to try to escape the politicisation of the term, on the other.

The environmental sciences teach us that *homo sapiens* is not only a great maker of tools, objects and waste. He is also, unwittingly, a maker of hyperobjects, notes Timothy Morton (2013). A hyperobject is an object immeasurably extended in time and space. Galaxies, black holes, the biosphere, are hyperobjects, just as a mother's womb is for the fetus it contains. The sum of the chemical and nuclear waste spread on our planet, the machinery of the industrial and technological revolution, are hyperobjects. Freud (1930) may have seen man as a « prosthetic god », but today the forever neotenic being that we are seems crushed by his prosthesis. Our waste is a « zombie » whose life span considerably exceeds not only the duration of its use, but also the duration of a human life. We could say that our waste spends « most » of its long life becoming a hyperobject of waste, becoming an Anthropocene, becoming those climatic « tipping points » that we now perceive to be packaging climate disruption through positive feedback mechanisms, beyond any measures that humanity could take.

For this hyperobject, the Anthropocene, is such a truly omnipresent planetary entity that the peoples of the earth are situated on another scale that makes them appear as shadows melted, lost, in the hyperobject. Only some of the manifestations of the hyperobject, such as a pandemic or climate disruption, are accessible to simple human perception. A hyperobject does not « play », although it appears to « play » us in an interobjective relationship that seems to crush any possibility of potential space. In this asymmetry between the human being and the hyperobject, it is a non-game that seems to be played : Can Jonah play with the whale that swallowed him and will not spit him out ? This is, I think, our contemporary cultural narcissistic wound.

I thank Martin Bohle for his beautiful and thought-provoking article.

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