

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 Metaphysics* 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 *épihylogénétique*. La mémoire épihylogénétique, 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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