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► **To cite this version:**

Nathanaël Wallenhorst, Jean-Yves Robin, Jean-Pierre Boutinet. The Emergence of the Anthropocene, an Astonishing Revelation of the Human Condition?. Political Education in the Anthropocene, Springer International Publishing, pp.23-36, 2023, Anthropocene – Humanities and Social Sciences, 10.1007/978-3-031-40021-6_2 . halshs-04543593

HAL Id: halshs-04543593

<https://shs.hal.science/halshs-04543593v1>

Submitted on 12 Apr 2024

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Wallenhorst, N., Robin, J.-P., Boutinet, J.-P. (2023). The emergence of the Anthropocene, an astonishing revelation of the human condition? In N. Wallenhorst, R. Hétier, J.-P. Pierron, C. Wulf (Eds) *Political education in the Anthropocene*. Springer, 23-36, https://doi.org/10.1007/978-3-031-40021-6_2.

Chapter 1. The emergence of the Anthropocene, an astonishing revelation of the human condition?

Nathanaël Wallenhorst¹, Jean-Yves Robin², Jean-Pierre Boutinet³

Abstract The concept of the *Anthropocene* appeared at the beginning of the 21st Century and has quickly become a hot topic. It has even enjoyed growing media success throughout the last two decades, both in scientific circles and in popular works. It has provoked polemical reactions as well as much semantic debate. The use of the term *Anthropocene* remains ambiguous and we are faced with a concept that is still under construction, and which is worthy of further examination so that we might grasp its originality and also its usefulness for thinking about both education and politics in a new way.

Keywords: Anthropocene, human condition, political education, political anthropology

I. A NEW CONCEPT WITH ATYPICAL ORIGINS IN SEARCH OF LEGITIMACY

Although *Anthropocene* is a term from geological science, how it originated is quite unusual. Three observations demonstrate this. Firstly, although the *Anthropocene* is a concept from Earth System Sciences, the term was not coined by a geologist but an atmospheric chemist.

Secondly, the term *Anthropocene* was not coined after several decades of soil studies, differentiated analysis of sedimentary strata and debates between geologists and stratigraphers. These debates sometimes lasted more than a century, as was the case with the dating of the beginning of the Triassic period (about 252 million years ago), the mass extinction at the end of the Permian period being proposed as the starting time in 1840 by the British geologist John Phillips and endorsed in 2001. The term *Anthropocene* was improvised, composed on the spot by someone taking part in a symposium, following the intuition that we were no longer living in the Holocene⁴.

Finally, usually, when a neologism is proposed by a researcher, it takes several long years or decades for the new term to be used and accepted by the scientific community. Here, the

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⁴ The Holocene is the current official geological epoch that began 11,700 years ago.

instigator of the Anthropocene is not just anyone, but Paul Crutzen, who, as early as the 1980s, was able to get the media on side and alert public opinion about the possibility and consequences of a nuclear winter⁵. The same Paul Crutzen won the Nobel Prize in Chemistry in 1995 for his well-publicized work on the hole in the ozone layer. The conceptualization of this neologism *Anthropocene* has not got quietly lost in scientific publications read by a few experts unaware of political debates in the media. On the contrary, it has come under the media spotlight, in a back-and-forth between publications in the world's most prestigious scientific journals (*Science*, *Nature*, *Philosophical Transactions*, *Proceedings of the National Academy of Sciences*, etc.) with a community of readers that goes far beyond scientific experts. Thus, the concept of the Anthropocene, in the interest it is currently generating, is becoming, in a short time, one of the dominant paradigms of the present time.

II. THE SEMANTIC SCOPE OF THE ANTHROPOCENE

The Anthropocene has therefore rapidly become a very broad, even sprawling, field of reference that can be identified by two very specific characteristics: it is an equivocal field, and it is also paradoxical.

1. An equivocal field

So what does this Anthropocene mean for us? Basically, in a few words, it demonstrates that the sustainability of the human adventure is compromised. Nothing more, nothing less. This is why the term Anthropocene is polysemous. Indeed, we are not dealing here with a scientific tool like any other: the human being cannot talk about the Anthropocene without being affected by it. The French biologist Pablo Servigne, who works on the biospheric and politico-social collapses of the Anthropocene, has no hesitation in saying at his conferences that a significant number of environmentalists experience depression caused by the anxiety-provoking component of the subject they are working on⁶. This is highlighted by the environmentalist Alexander Federau (2017) who shows the connotations of this neologism for the scientific community who want to share their anxiety with the more global public. The Anthropocene is not simply a scientific concept, it is also a militant concept: we are dealing, among other things, with a term taken up by a whole variety of environmental activists driven by the desire to preserve, protect and regenerate the Earth. It is a question of seeking a harmonious relationship with living things, which implies radical changes in our lifestyles: we must break with consumerism as well as with this endless and exhausting search for growth, these convinced militants of the Anthropocene tell us.

The Anthropocene is thus a strong argument of 'post-growth', post-capitalist, or post-neoliberal activists. In fact, the stratigraphic debate is more institutionalized than the debates within other scientific communities because its purpose is to produce the geological time scale that is disseminated worldwide by *the International Union of Geological Sciences*. The scientific debates are organized by the institutional policy of this Union. Moreover, over the last ten years, the Anthropocene has gradually become a concept cultivated by the social sciences, taken up by political scientists, historians and sociologists, highlighting both the socio-historical divides

⁵ A nuclear winter refers to a cooling of several degrees of the Earth's surface temperature, which would jeopardize global food security in the event of a full-scale nuclear war

⁶ This is an element worked on with his two co-writers Raphaël Stevens and Gauthier Chapelle in *Une autre fin du monde est possible* (2018).

concerning the responsibilities of humans in the entry into the Anthropocene and the societal reorganization necessary to guarantee the sustainability of the human adventure.

2. A paradoxical field

In addition to the equivocal character of the Anthropocene highlighted above, which is seen as a new geological epoch fraught with foreseeable planetary catastrophes (global warming being one of its variants), researchers in the Earth System Sciences and in the social sciences are developing a paradoxical approach. This approach curiously seeks to marry the Anthropocene with the modern idea of progress, often expressed in the expression ‘*augmented reality*’. These researchers believe that it is necessary to accompany our entry into the Anthropocene by continuing to liberalize our economy. The liberalism that brought us firmly into this new geological epoch is what will allow us to live in it, the eco-modernists seem to be saying (*Manifeste écomoderniste*, 2015). The neo-capitalist and neo-liberal British magazine *The Economist*, had the headline, as early as 2011 *Welcome to the Anthropocene*. The generation of paradoxes is complete when the Anthropocene even becomes the main argument of the opponents of the militants of an alternative system to the hegemony of economic growth, such as we mentioned above. Thus, the proponents of a neoliberal capitalist transhumanism do not fear our entry into this new geological era – here we could mention first and foremost Mark Zuckerberg (co-founder and CEO of Facebook), Larry Page and Sergey Brin (founders of Google), Jeff Bezos (founder and CEO of Amazon), or Elon Musk (founder of a group of companies such as SpaceX, Tesla or Neuralink and whose objective is to put a human colony on the planet Mars). We can even say that our entry is held up as an example: we have in fact taken power (admittedly rather without our knowledge for the moment) over the Earth system; we must push this domination to the point of mastery over the functioning of this system in order to reorganize it as we wish. Let us take control of the “planetary machine” (Steffen *et al.*, 2004, p. 9) or the “engine room of the Earth system” (Schellnhuber 1999, p. 21). If nature, as something outside us, does not resist the techno-scientific genius of humans, how much more then will we be able to reorganize and reorient human nature to our liking: “If nature is unfair, let's change nature!” (Cuboniks, 2016, p. 273).

III. THE ANTHROPOCENE: MYTH OR REALITY?

So what should we think about the Anthropocene? How can we not be lost when faced with the blurring of the boundaries of such a highly permeable concept, which is both scientific and militant, but also contentious and at the same time attests to the current order? Thus, as we have just seen, the structural complexity of this neologism generates much confusion. After the past fictions that we have known, which have their place in history, such as those of progress, humanism or modernity, is the Anthropocene not, ultimately, one more fiction that is currently being suggested to us – i.e. a way of thinking that will help us to understand present society in a time when there is great uncertainty about the present and the future? A way of thinking which attempts to justify ways of acting that aim to make this future possible, through manipulating reality in various ways? In what way is this fabrication of reality a mirror of the human condition? Such a fiction is at work, through what follows, which relates the meanders of the current stratigraphic debate with different ways of dating the entry into the Anthropocene. These different hypothetical dates provide a good example of the vagaries that can run through any work, in this case conceptions of the Anthropocene, highlighting the way in which a variety of ways of thinking are currently struggling.

1. The search for a GSSP or Global Stratotypic Point

Currently the Anthropocene does not yet appear in the geological time scale produced by the *International Union of Geological Sciences*. The Anthropocene, in order to acquire formal geological acceptance, requires the choice of a place and a date that attests to its beginning (its end needing to correspond to the beginning of a new geological epoch). The official process of studying the Anthropocene as a new geological epoch has been launched - this formal study is conducted by the *Anthropocene Working Group (AWG)* within the framework of a Subcommission of Quaternary Stratigraphy (*SQS*) of the International Commission of Stratigraphy (*ICS*), a member of the *International Union of Geological Sciences (IUGS)*!⁷

In the near future, the official Anthropocene Working Group will be able to complete the process of defining an entry date for this new geological epoch (Zalasiewicz *et al.*, 2017a). What will happen next? The outcome of this institutional work based on the current scientific debate will be the revision of the official geological time scale learned by all schoolchildren around the world who will also be taught the political, historical, cultural and social reasons for this change in geological epoch. When future generations learn in school what the Anthropocene is, this neologism will quickly gain a prominent place in the public arena. But what is still very uncertain is the narrative that will accompany the learning about this new geological epoch. Will the story told by teachers point to the responsibility of humanity as a whole or of a small handful of humans as being largely responsible for the contemporary environmental situation?

How do geologists go about organizing the history of the Earth? They use different temporal categories based on changes in the Earth's global state, traces of which can be seen in the sediments. They identify segments that are particularly recognizable in terms of climate, sea level and living species. Generally, geological boundaries are defined by the connection of a specific point on the Earth with a stratotype and a date. This is called GSSP: *Global Boundary Stratotype Section and Points*. It refers to rocks, sediments and glaciers that have developed during a given period. Geologists then plant a 'golden spike' at the location of the GSSP.

A GSSP must be positioned in one place on the globe while having a demonstrable correlation to a new global context. It must also have continuous and clearly discernible sedimentation (Lewis and Maslin, 2015, p. 172). It is a simple question that structures stratigraphic research: "Have humans changed the Earth system to such an extent that recent geological deposits in formation that will remain in the geological record include a signature distinct from that of the Holocene and earlier times? If so, when will this stratigraphic signal (and not necessarily the first detectable anthropogenic change) become recognizable worldwide?" (Steffen *et al.*, 2016, p. 11).

2. Different hypotheses for dating the entry into the Anthropocene

There are currently seven hypotheses being worked on by stratigraphers to date the entry into a new geological epoch following the impact of human activities.⁸

I. The Stone Age. The stratigraphic debate of recent years has worked on various possible dates for the entry into the Anthropocene. The earliest proposals for dates of entry into the Anthropocene go back to the Stone Age⁹ (Doughty, 2013). The frequent use of fire during the

⁷ The ICS is the largest scientific body of the IUGS, consisting of representatives from 50 countries, and composed of an Executive Board and 16 sub-committees, each with about 20 voting members.

⁸ These different assumptions are developed in *The Anthropocene Decoded for Humans* (Wallenhorst, 2019).

⁹ The Stone Age begins with the creation of stone tools by the first hominids (2.4 to 3.2 million years ago).

late Pleistocene geological epoch, about 400,000 years ago in Africa, is certainly the first landmark event of humans on their environment (Roebroeks and Villa, 2011). Furthermore another very significant event that the biosphere experienced was the extinction of the megafauna with the disappearance of half of the large mammals through *homo sapiens* (which took place between 50,000 years and 12,000 years before present) (Lewis and Maslin, 2015, p. 174). Among these extinctions of large mammals, we can note the extinction of other species of the genus *homo* with which *homo sapiens* could not cohabit and which he exterminated or which in fact disappeared.

II. Agriculture. Some authors mark the entry into the Anthropocene as being the development of agriculture, perceptible through the modification of the chemical composition of the atmosphere (Balter, 2013; Kaplan *et al.*, 2011; Ruddiman, 2003, 2013; Ruddiman *et al.*, 2014). The stabilization of the climate at the beginning of the Holocene allowed for a development of agriculture in different parts of the globe. Agriculture began on three continents 10,000 years ago: in Southeast Asia, South America, and northern China (Lewis and Maslin, 2015, p. 174). Gradually agriculture consisted in the replacement of natural vegetation by another type of vegetation, i.e. cultivated, as well as in the disappearance of some species in favour of the development of others domesticated by humans. It is possible that the development of agriculture in different parts of the world is responsible for maintaining stable Holocene temperatures and not returning to an ice age because of the increase in CO₂ 8,000 years ago and the increase in methane 5,000 years ago (MacFarling Meure *et al.*, 2006).

III. The meeting of the old and the new world. Two British researchers, Simon Lewis and Mark Maslin (2015), propose an original dating of the entry into the Anthropocene - the collision between the old and the new world. This event is the beginning of a global organization of humanity on Earth with common food products. This generated a reorganization of animal and plant life. But the major fact noted by the two researchers is that of the arrival of Europeans in America in 1492, which was accompanied by a significant decline in the population of the continent from more than 50 million in 1492 (between 54 and 61 million) to 6 million 158 years later, in 1650. This decline in the population in America is due to wars, slavery, diseases brought by Europeans as well as famines. This population decline was followed by a decrease in agricultural land but an increase in forest area estimated at 50 million hectares. This increase resulted in a decrease of CO₂ in the atmosphere by 7 to 10 ppm¹⁰, which can be seen in the sediments of the Antarctic ice between 1570 and 1620.

IV. The Industrial Revolution. From the earliest publications on the Anthropocene, it is the industrial revolution that is identified as the point of entry into this new geological era. In his early articles, Crutzen sees the entry into the Anthropocene as at the start of the industrial revolution and, if he had to date it precisely, he would choose the date of 1769 with the filing of the patent for the steam engine by the Scotsman James Watt. Indeed, for a number of authors, including Crutzen, industrial technology is the origin of the advent of the Anthropocene (Steffen *et al.* 2011a; Zalasiewicz *et al.*, 2011b), with the industrial revolution supplanting agriculture in its global effects on the environment.

V. The Great Acceleration. Among the social changes that have occurred since the middle of the 20th Century, we can note a very significant increase in the world's population and in particular in the urban population, with an increase from 730 million to 3.7 billion people living in cities between 1945 and 2014 (Zalasiewicz *et al.*, 2014, p. 3). The curves of this great acceleration were proposed by Steffen *et al.* in 2004 without them yet being named *Great Acceleration* and then, with this name, in 2007 to illustrate how human activity on Earth

¹⁰ Carbon dioxide in the atmosphere is measured in parts per million (ppm). One part per million is the fraction corresponding to one millionth.

evolved. Great Acceleration refers to an acceleration of human-induced sediment production. It turns out that, for a range of authors, it can also serve as a relevant stratigraphic marker (Holtgrieve *et al.* 2011; Wolfe *et al.* 2013; Zalasiewicz *et al.* 2014; Waters *et al.*, 2014).

VI. *Thermo-nuclear bomb explosions.* Another hypothesis explored as a possible date of entry into the Anthropocene is the first explosion of a nuclear bomb on July 16, 1945 in Alamogordo, New Mexico, which generated a peak of radioactivity that occurred some twenty years later. Following this initial explosion, additional bombs were detonated at an average of one every 9.6 days, which subsequently changed the chemical makeup of the atmosphere (Zalasiewicz *et al.*, 2014, p. 1). The peak of radioactivity is noticeable in 1964, just after the Partial Test Ban Treaty signed on 5 August 1963 in Moscow was put into practice.

VII. *Somewhere in the future.* For British climatologist Eric Wolff (2014), there is no doubt that human activity has altered elements of the Earth system, which he sees unambiguously in the ice cores of the ice caps, these polar glaciers being considered particularly important in climate stability.¹¹ On the other hand, since the future of the Anthropocene in a few hundred or thousands of years' time was not yet clear, it seemed to him to be geologically more prudent for future generations to decide on the date of entry, when it would be possible to have more hindsight.

IV. THE ANTHROPOCENE AS A MIRROR OF THE HUMAN CONDITION

What is important to us in the contemporary stratigraphic debate is not so much the formally accepted political choice of date and place, even if this choice is important because it will play a role in the structuring of the Anthropocene narrative. On the contrary, what seems essential to us is the recognition of the impact of human activities on their environment. The various hypotheses for dating the beginning of the Anthropocene are a mirror of the human condition that questions the status of modernity and the post-modernity that followed and its ways of thinking. The collected sediments put into question the whole concept of entering a new geological era, generated by man himself, and give us an insight into glimpse of the multifaceted complexity of the issues linked to these human activities.

Whereas the research of stratigraphers identifies only one main factor that is responsible for the entry into this possible new geological epoch¹², as researchers in the human and social sciences, we are interested in the meanings that may be attributed to the sedimentary markers identified, since they function as mirrors of how human beings exist and live.

Here we will focus on the social and cultural meanings to be attributed to the markers that are associated with the different hypotheses put forward by stratigraphers for the entry into the Anthropocene epoch.

a) In the *Stone Age*, the extinction of the Quaternary megafauna, such as the extinction of other species of the genus *homo* supplanted by *homo sapiens*, points to the difficulties of human cohabitation with certain other species.

b) At the time of the *development of agriculture*, the ability of humans to control ecosystems and to generate agricultural surpluses was apparent. Following this it was the

¹¹ Ice caps are large glaciers located at the poles. They are sometimes several kilometres high and extend over tens of square kilometres. These ice caps are an important part of the Earth system and can be seen from space. They have a high albedo (albedo is the reflective power of a surface) and thus contribute to global cooling.

¹² It is possible that one or the other stratigraphic factor mentioned appears among the secondary factors correlated to the main factor responsible for the differentiation of the two sedimentary layers (but history will remember the predominance of one factor over the others).

management of these surpluses that led to the development of civilizations marked by the arts, sciences and technology. The mastery of ecosystems, which will gradually be accompanied by an externalising of nature, is the foundation of our civilizations.

c) With the *meeting of the old and the new world*, the collected sediments highlight the colonial history of humanity by pointing historically to the imperialist dynamics at the origin of world trade but also to the domination that arises in the relationship to the Other and the difficulties we encounter in living in a cosmopolitan way. These few elements show the fragility of humans who can quickly feel threatened by the Other, in a position of strength.

d) The geological traces left by the *Industrial Revolution* are considerable and show the formidable power of this newcomer, *homo oeconomicus*: everything seems to be able to be manufactured, bought and sold. This dating shows that the major characteristic of a part of humanity lies in the optimization and maximization of individual short-term interests¹³.

e) The *Great Acceleration* that began after the Second World War celebrates the reign of globalized consumerist productivism characterized by its excessiveness and the cult of freedom. The preparation and the explosions of the thermo-nuclear bombs highlight the speed and power of the techno-scientific development of a part of the planet from the 1940s onwards, which becomes capable of destroying the planet in a few explosions. We perceive here the fragility of the political component of the human adventure when it is associated with techno-scientific power in an enterprise of mass destruction, as we experienced with the bombing of Hiroshima and Nagasaki in August 1945. At the same time we are also aware of the impact of politics when it provides itself with the means to avoid this destruction, as was the case in August 1963 with the signing in Moscow of the treaty for the partial prohibition of nuclear tests.

From the above, it is essential to clarify the following:

- How do the identified sedimentary markers, which record the traces of human action in a permanent way, question the ways in which humanity lives in the world by examining democratic life together, progress, humanism and the idea of what happiness could be?
- How do these markers question the imminence of possible major collapses? Is the democratic way of life still strong enough to resolve the challenges we face? What can we say about the totalitarian models that threaten us and what avoidance measures can we take against them?
- How can we rethink the tragic dimension of the human condition for today and tomorrow so that it is able to respond to such challenges?

V. THOUGHT PATTERNS STRUGGLING TO UNDERSTAND THE NEW WORLD BEFORE US

The image of the human condition that we find reflected in the mirror of the Anthropocene shows us that the thought patterns that emerged during modernity are now struggling. Modernity at its best was characterized by an attempt to connect technical and social progress: what we call *Les Trente Glorieuses* in France, a term coined by Jean Fourastié can be seen as an example of this, where strong economic growth was allied with improved living conditions. It is this alliance that has broken down in recent decades, which have been marked by a turning away from the *Trente Glorieuses* to characterize what is called the entry into postmodernity. We are now engaged in a period marked by a dissociation between the two forms of progress, with technical progress now accepting social regression.

¹³ This component is further developed by Nathanaël Wallenhorst (2019).

Our entry into what we are beginning to hypothetically call the *Anthropocene* is complex: faced with this technical progress/social progress divide, we paradoxically find a number of views that were clashing throughout modernity now coming together. The Anthropocene forms the background for us to analyse these ways of thinking that modernity had deliberately placed in opposition, or even in conflict: this is true of the nature/culture, innate/acquired, time/space, masculine/feminine and also life/death pairings.

At the very least, these five pairings, which the modernity of the Enlightenment and then of industry had all too often treated as divides or even as mutually exclusive, now seem to us to have become complementary, interchangeable or even fused. In postmodernity, culture has ceased to take its revenge on the nature from which it sprang, a nature that we are now ecologically required to respect as existing in its own right. The skills assessments that workers carry out are as much a matter of acquired skills as of innate ones. As for the masculine/feminine, against a backdrop of complete differentiation, there are now numerous instances where there is no differentiation, as transgenderism can testify. Life and death, opposites in modernity, as shown by the existentialist revolts, making death a taboo to be removed from life, are now learning to intertwine, under the gaze of Transhumanism to bring out *augmented man* who, going beyond questions of life and death, attempts to merge in the same bodily entity the living man and the deadly machine.

Thus, these five oppositional pairings, which in modern times placed value on one to the detriment of the other, have become partly fused in postmodern times. Through the way they have metamorphosed we can consider them as characteristic, of the current cultural changes that frame the advent of the Anthropocene. We have thus entered a new historical regime, characterised by digital culture, marked by an avoidance of caesuras or breaks and by a denial of castration. It is also illustrated by the paradigm of globalization, which is one of the components of this culture.

If it is now accepted that this era that appears to be coming, the Anthropocene, threatens to radically transform the spaces as well as the ways of life of humanity in every corner of the world, then should we not ask ourselves if the perils that threaten us announce the end of a history, that of the human adventure? The transition we are witnessing reveals challenges that humans will have to face if they simply want to preserve themselves or survive, but will they be able to? In other words, the mirror of the Anthropocene reflects a set of questions that allow us to better identify some of the components of the human condition.

First of all, we must remember what makes this condition tragic. Death remains objectively the horizon of our lives. There is therefore a time to live and a time to die. Consequently life and death are inseparably linked, like positive or negative emotions. We cannot escape the paradox of our existence. Thus, the scientific adventure has made us powerful, in its association with technology that brought about industrialization, itself made possible by capitalism but with obsolescence programmed in. This scientific and technical adventure has been able to generate so many feats that risk contributing to our downfall, or at least indicate the ineluctable fragility of our human condition. Is it possible to escape the risk of collapse of the world around us, as well as our own fragility? Some avenues can be explored to ward off the inescapable and turn this risk and fragility into possible salvation (Servigne, Stevens and Chapelle, 2018).

What affects our scientific-technical adventure is indeed this obsession with *more and more*, in other words growth in its current form: a predatory growth that has difficulty cohabiting with what tomorrow's transitions could bring, whether they are ecological, economic, industrial or simply existential. It is not a matter of decelerating but of entering into better resonance with this nature, this environment in which we are immersed (Rosa, 2018). Finally, through our excesses of predation and domination and the disruptions they generate, nature, by contrast,

paradoxically comes to control us, whereas we had the demiurgic claim to dominate it and shape the world to our likin. Now the fabric of history as we had imagined it is slipping away from under our feet. This is how humanity discovers that we are first and foremost beings immersed in nature, and new research in genetics in particular has shown how much the social environment, and also the air we breathe, shapes epigenesis, this experiential component which, in addition to our genetic material, constitutes us.

This experience of the world that we live in at the beginning of the 21st Century is, at least for a minority of us, currently marked by the worrying image of the Anthropocene, but such an experience says nothing about our relationship to this world. Some of us are well aware of what is at stake, others are aware of the facts without taking them on board, and others again are indifferent, or even dubious about the changes that surround them. Some of these even deny this process of degradation and acceleration, going so far as to spread fake news about the heuristic happiness that transhumanists promise to 'augmented man', no doubt with the aim of sowing doubt and uncertainty. This denial of reality says a lot about our relationship to truth: after all Hannah Arendt wrote that one of the characteristics of totalitarianism lies in the impossibility of agreeing on the facts. Everything has become falsifiable, modifiable, nothing holds and nothing resists: reality dissolves, and relativism comes to serve a mode of operation that could be called perverse.

VI. BUT, THROUGH THE ANTHROPOCENE, WHAT MEANING CAN WE GIVE TO WHAT WE ARE EXPERIENCING?

Faced with such challenges, faced with great societal fragility, politics and democracy are put in the front line. Politics has lost its grip on the meaning of history. It has taken refuge on the island of governance, abandoning the government of societies and people. Indeed, what institutions still exist today: the UN, whose decisions are constantly challenged and scorned? The Security Council, whose members are constantly waging trench warfare by using and abusing their right of veto? It is the deregulation of flows, exchanges, debates and economies that seems to prevail over any other consideration. Thus the invisible hand of the market becomes the key to all regulation, as libertarians claim. So, we French can condemn the Saudi offensive in Yemen and at the same time point out that our Western and particularly French military equipment performs very well in a hostile desert environment: business takes precedence over all other considerations. We see that idealism and cynicism coexist without difficulty. And the same is true of the financial and banking economy. According to the 'dismayed economists, nothing has finally changed since the previous crisis of 2008. (*Les économistes atterrés*, 2015). The impunity enjoyed by UBS and Goldman Sachs can attest to this.

We therefore have the impression that we are witnessing the decline of institutions, in all their forms (Dubet, 2002). This raises the question of the meaning of history. Is its destiny a game of chance, controlled by the opportunities and financial economic interests held by a minority of individuals? Since January 2019, supported by the annual report of the NGO Oxfam, we know that the 26 richest people on the planet have as much money as 50% of humanity (*Public Good or Private Wealth?* Oxfam, 2019). With such inequality in the distribution of goods, what sense does it make for it to be imaginable and long lasting? Also, in view of these data, it has become imperative to collectively question the meaning that could be given to political action. Unfortunately, if everyone today sees a meaning in what is happening to us, no one really knows what meaning is right. Any interpretation remains precarious, provisional, all the more so because it is often partial and consequently biased. What resonates today at the heart of our anxious and frightened postmodernity is the multifaceted nature and equivocality of our present

human condition, questioning the problematic future it has prepared for itself. Will the emergence of this new geological epoch and its recognition as the Anthropocene be able to set guiding benchmarks for this future and if so, what educational consequences should we draw from it?

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