Anthropocene: A Dispute of Words, A Dispute of Worlds

The Anthropocene: a catchword, a trapword, a word of debate. Invented at the turn of the 21st century by Nobel laureate Paul Crutzen to designate a new geological era marked by humanity's irreversible impact on the planet. But which *anthropos* are we talking about? Which starting point should we choose for the Anthropocene? And why should this era be considered new?

From the very beginning, the concept has been divisive. Geologists, concerned with the rigor of their discipline, have sought to demonstrate its scientific validity. In 2024, they formally rejected its recognition as a geological epoch.
Others, by contrast, find it too vague, too all-encompassing. Jason Moore, among others, offers a Marxist reading: to speak of the Anthropocene is to obscure the historical causes of the disaster. It is not "humanity" in general that is disrupting the climate, but a historically situated and politically structured mode of production. He therefore proposes another narrative: that of the Capitalocene, which highlights the central cause as the historical dynamics of global capitalism, which emerged during the long 16th century of modernity and colonialism.
In this critical wake, other terms have been proposed, either before or after the term "Capitalocene". Among them is the "Plantationocene", coined by ecofeminist scholars Donna Haraway and Anna Tsing, which designates a model of exploitation of nature, reduced to a reserve of productivity, based on the brutal prototype of the slave plantations of colonization. Other names have emerged: Androcene, Pyrocene, Anglocene... Sometimes stylistic flourishes, sometimes assertive theoretical gestures, they shift the responsibility from an abstract "human" to more historically situated agents: the Western man, fossil combustion (or even the invention of fire), or Anglo-Saxon hegemony.

Within this dispute, there is also a disagreement over the origin of the Anthropocene. Geologists have placed it at the moment of the Great Acceleration, around 1950, before abandoning any geological claim to the concept. Paul Crutzen and his followers, on the other hand, place it between the invention of the steam engine by James Watt (1784) and the beginning of the second industrial revolution, around 1850. These two dates, 1850 and 1950, correspond to inflection points on the curve of rising atmospheric CO_2.
Other, more historical or epistemic proposals have emerged. Some epistemologists focus on the year 1610, marked by a global drop in CO_2. This drop is attributed to the reforestation of the Amazon following the demographic collapse caused by colonization. Jason Moore, as we saw, proposes an even earlier start: the beginning of capitalist modernity, around 1450. Still others trace the origin to the Neolithic sedentary revolution, when human societies began to permanently transform their environment. Finally, more radical approaches place the origin with the domestication of fire, marking the foundational moment of a dissociation between humanity and nature, around 400,000 years ago.

Behind these quarrels of words and chronological disputes lies a quarrel of interpretation: depending on the chosen point of origin, different agents, narratives, and responsibilities emerge. The dispute is fundamentally political. It pits a geological view against a historical reading; a perspective from Nature against one from Society. And, implicitly, it raises a

crucial question: does saying “Anthropocene” mean saying “everyone is guilty”, or is it a way of avoiding naming who and what is truly responsible?

Rather than settling the matter, it might be better to shift the focus. And to first state that the Anthropocene truly begins today, in the 21st century. Not as an era set in stone, but as a lived epoch—both historical and ontological. The Anthropocene is the time of a new materiality. The time of serial catastrophes, of generalized instability, of the emergence of what Bruno Latour called in 2018 Gaia 2.0—a system that is neither benevolent nor indifferent, but a living, fragile, unpredictable, and uncontrollable system that reacts to our actions.

What inaugurates the Anthropocene is not an event carved into geological strata, but a planetary shift—sensitive and irreversible: global warming with the continuous rise of CO_2 in the atmosphere, rising sea levels, the collapse of biodiversity with a seventh extinction (if we count the first mass extinction caused by the Great Oxygenation produced by cyanobacteria), among other elements of this new materiality. It is the moment when the world begins to respond — and no longer merely obey our “enframing”. The moment when we cease to be masters and possessors of nature.

We are here. The Anthropocene is no longer a hypothesis: it is our era, our condition.

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The diagnosis has been made, the threshold crossed. Two sets of questions now demand our attention. Why and how did we enter the Anthropocene? And more importantly: why and how should we act differently from now on?

These are some of the most contentious questions we face—because they are political, economic, social, and historical. Because they involve responsibility, institutions, and choices. Too vast to be resolved here, they can nonetheless be approached from a perspective that is often overlooked: that of the forms of knowledge that made the Anthropocene possible in the first place.

It’s not just a matter of technique—or even of politics. It’s a matter of perspective, of language, of truth. Ultimately, it’s a matter of thought. In other words: a matter of epistemology. What’s at stake is a scientific revolution, in the sense described by Thomas Kuhn.
What kind of epistemology of the “before-times” led us into the Anthropocene? And what kind of epistemology for the “after-times” might we invent—or perhaps recover—to inhabit this new world differently?
Because inhabiting the Anthropocene isn’t just about surviving it. It’s about learning how to think differently within it.

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The Anthropocene, as we have produced and conceived it, is the result of a particular form of knowledge: that of Western modernity. A knowledge built on the scientific and philosophical framework of Descartes, Newton, and Kant—but also on a vision of life reduced to a competitive Darwin, a Freud frozen in his topographies, and a biology centered on Mendel, Watson, and Crick. A knowledge that has explored the extremes of space and time—through

relativity and quantum physics—without ever breaking away from the logic of modeling, objectification, and universality.

A knowledge that, despite the great decenterings—Copernican, Darwinian, Freudian, relativistic, quantum—has never left the ground of separation: the separation between subject and object, the separation between things themselves. A knowledge grounded in *res cogitans* and *res extensa*, where objects are divided, ranked, and isolated. A knowledge that makes it conceivable both to imagine a world without us, and a "we" outside the world—a "we" as master and possessor of nature, of the world itself.

But this epistemology is faltering. It is reaching its limits, as the Earth system—now globally disrupted—begins to respond. The world can no longer be modeled like a machine: it veers, it reacts, it spirals. It is no longer a clockwork mechanism, but an organism. Living, unstable, unpredictable.

What we need today is not merely to change our practices, but to transform our gaze. To rethink our framework. To reinvent our understanding of the world.

And yet, another way of thinking emerged in the 20th century. Though not always formally theorized, it has nonetheless spread—particularly through our everyday use of the internet in the 21st century. It is a way of thinking grounded in generalized relation, in systemic interdependence. One shaped by *Mitdasein*—a being-there-in-relation—rather than by *res extensa*, a thing extended and separated from others. The world is no longer a fixed backdrop, but a tangle of living beings—a web of life, of thresholds, of feedback loops. No longer a binary, causal, hierarchical determinism, but a complex, adaptive, non-linear one. As Donna Haraway says, we become with, or we do not become. The time of dead understanding and inert being is over.

"I" is another, as the French poet Arthur Rimbaud famously declared at the end of the 19th century. Modernity—and capitalism, which reduce everything to their logic—have turned this intuition into an advertising slogan and a personal development mantra: "Become what you are." The Anthropocene—and all our science—reminds us of a deeper truth: "I" is another, meaning "I" is a holobiont. The self exists only in interaction—with other selves, with other living beings. Before giving her breast, a mother gives her microbiome to her child. A new genealogy begins there.

It is not about rejecting the modern legacy—the binary determinism and Cartesian reductionism—nor about starting from scratch. It is about recognizing that this legacy is no longer enough to make sense of the real world. And recognizing that if science is meant to describe, model, and understand reality, then modernism, with its reductionism, has ceased to be scientific.

This critique—already underway within the internal revolutions of modern science itself—finds a clear illustration in the shift to quantum physics.

For Thomas Kuhn, the transition to quantum physics is a paradigmatic case of scientific revolution. It did not invalidate the Newtonian paradigm, nor did it simply correct classical physics: it transformed its fundamental concepts—causality, continuity, observation. The old and new paradigms are incommensurable. Scientists—and humans—before and after such a revolution no longer see the world in the same way. Today, both paradigms continue to

coexist: Newtonian mechanics still governs many practical applications, while quantum physics reshapes our understanding at the subatomic level.

The same applies to the paradigm of the Anthropocene. It describes an ancient and fundamentally contingent nature—the one shaped by the original colonization of Earth by the first unicellular organisms: the earliest bacteria. This paradigm, far from a return to myth or animism, is more scientific than ever. Never have we understood so clearly the essence and dynamics of the Earth system and of life. And in that sense, it is also, paradoxically, more modern than ever.

"Blackbody radiation", a major paradox of classical physics known as the "ultraviolet catastrophe", was resolved by Max Planck at the cost of a revolution: the birth of quantum physics. Similarly, the paradox of a "living Earth" may call for another revolution — that of a physics of generalized interaction, a physics specific to the Anthropocene.

We are talking here about the epistemological Anthropocene: the new scientific age that alone will allow all of us to comfortably inhabit the ontological Anthropocene. We then distinguish between two Anthropocenes: ontological and epistemological.

The ontological Anthropocene is the material reality of our time: a warmed world, produced not by humanity in general, but by the actions of certain human societies. A world that is difficult to inhabit because it has become less habitable due to humans, who are increasingly numerous and increasingly destructive of their vital environment. This is what Donna Haraway calls the Chthulucene: a strange, living world, saturated with interactions, interdependencies, regularities as well as unpredictabilities.

It is our vision of the world — our epistemology — from yesterday (modern) that gave rise to this new material world. And it is also this epistemology from yesterday that now allows us to scientifically grasp the mechanisms of today's degraded world — where other human societies, foreign to our rationality, had already intuitively understood its principles and foundations.

This is the world we now inhabit.

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Here we are. The Anthropocene is not merely an era; it is a world shift. With it, our cosmos tilts.

We are leaving the Universe-cosmos of Modernity and entering the Earth-cosmos of the Anthropocene—a contingent cosmos, largely unpredictable, in which the mind of the sapiens is but a fragile little king, carried along by the current of the living.

This shift, when paired with a vision of non-binary determinism—systemic, or rhizomatic, if we follow Deleuze and Guattari—could allow us to imagine a way of dwelling on Earth that is comfortable, just, and sustainable for all.

It is the role of critical thought, wherever it arises (from the hard sciences, the humanities, the arts, religion, law, or philosophy), to bring about this shift.

So yes, perhaps, with the Anthropocene, it is not something that will end—but something that will begin.

Bertrand Liaudet