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Bruno Latour – Special Issue

Bruno Latour and Actor-Network-Anthropocene

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Abstract:

Bruno Latour (1947-2022) was a prominent philosopher who critically interpreted the Anthropocene discourse. In this article, I highlight the impact of his legacy, particularly in political and philosophical Anthropocene debates. I attempt to position Latour's critical philosophical thinking legacy within the framework of Anthropocene debates. Bruno Latour has a strong position in explaining current Anthropocene issues, especially related to actor and network reposition, political *Gaia*, and criticism of the new climate change regime. However, despite the Anthropocene debate, I position Latour's notion as an entry point to open up explanations concerning the ontology of Anthropocene that can begin by understanding Latour's breakthroughs in the context of surpassing the metaphysical demarcation of subject/object by radicalizing pluralistic ontology. Instead of glorifying flat ontology, this article aims to emphasize the possibility of affirming the hybrid world of the Anthropocene by pluriversalizing the lifeworld.

Keywords: Latourian; Ontological Demarcation; Anthropocene Actors

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Introduction

The intellectual legacy of Bruno Latour (June 22, 1947 - October 9, 2022) remains relevant today. Many contemporary philosophers, like Graham Harman, Ian Hacking, and Levi Bryant, are influenced by Latour's critique of modernity in many aspects. Latour was widely recognized as a prominent philosopher and was the recipient of the Holberg Prize in 2013 and the Kyoto Prize in 2021. He has authored several monumental works focusing on the anthropology of science, the sociology of science, technological critique, and political ecology. His most recent essays, which are shorter, primarily deal with the climate crisis and the politics of the environment in the times of the Anthropocene. As an Anthropocene reader, I personally have attempted to summarize some of Latour's ideas that have contributed to the development and debate of the Anthropocene within the context of philosophy, anthropology, and the social sciences.

Bruno Latour's epistemological breakthrough began with his investigation of the anthropology and sociology of science concerning how science operates in the context of policy decisions, scientific work, and everyday practices among scientists within a scientific

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community. Around three classical works, namely *Laboratory Life* (1986), *Science in Action* (1987), and *The Pasteurization of France* (1988), resulted in his initiation of a more anthropologically-informed point of view that scientific work is not merely about seeking objectivity or discovering scientific “facts”. Instead, it uncovered the possibility of creative constructions among scientists and non-scientific actors. As a result, scientific investigation is not solely based on the anchor of scientific research in laboratories, but also involves a range of “agents” that allow science to be “developed” and explained more objectively. In essence, Latour’s work challenges the traditional notion that scientific facts and knowledge are the outcomes of an objective process that exists independent of social and cultural contexts. Science is a human endeavor, shaped by social, political, and economic factors. This perspective has profound implications for the way we understand science, its role in society, and the relationship between scientific knowledge and public policy.

Philosophically speaking, Latour appreciates non-human entities, which is one of the reasons why his work is compelling. However, Latour’s thought cannot be detached from the influence of early 21st century mainstream postmodernism. He became one of the contemporary French philosophers who constantly criticized the dualism of Western philosophy and modernity’s failure. Latour’s critique of this dualism led him to adopt a relational approach, which emphasizes the interdependence of humans and non-humans in producing knowledge.

That means, scientific knowledge is not solely produced by human subjectivity but is co-constructed through a network of human and non-human actors. This approach challenges the traditional view that scientific knowledge is solely the result of human reasoning and observation. In Latour’s view, non-human entities such as microbes, machines, and even climate change have agency and can shape human behavior and knowledge. This perspective trailblazes new avenues for understanding the complex relationship between humans and the environment and non-human entities’ role in shaping our world. It also represents a significant contribution to the postmodern critique of modernity and the development of a relational approach to science and knowledge production because it invites us to challenge and rethink our relationship with the environment and the non-human entities that shape our world.

In *We Have Never Been Modern* (1993), Latour challenges the assumption that modernity categorization has brought about a clear separation between nature and society. The boundaries between the two have always been blurry and the so-called “modern” world has always been a hybrid of both. According to Latour (1993), the idea of modernity relies on a dichotomy between nature and culture, with culture being seen as something that transcends nature. This dichotomy is problematic because it creates a false sense of objectivity and obscures the complex relationships that exist between humans and non-humans. Instead, the world’s workings are inherently networked and intertwined, resulting in hybrids that form a parliament of things. This means everything is interconnected, whether natural phenomena, social constructs, or even political discourse.

This idea of a parliament of things means that we cannot simply reduce things to their individual parts but must consider their relationships and connections. It suggests that we need to repudiate a hierarchical view of the world and move towards a more relational one, where everything is interconnected and equally important. It also highlights the need for interdisciplinary approaches that can consider the complex relationships between different fields of knowledge. Latour’s attempts to surpass modern thought traditions do not just challenge our assumptions about what is considered “subject” and “object.” In fact, he goes at great length to argue that entities need to be understood as symmetrical actors—hence acknowledging their equal value in causal agency.

In *Politics of Nature* (2004), Latour advocates for ecological politics, asserting that “modern constitution” never really existed. The reality is that the world is constructed through simultaneous representations in the networks between humans and non-human

entities. This perspective serves to highlight the absence of absolute dichotomies, thus affirming that everything collectively works together, inseparable and interdependent. Non-human entities like garbage, ecological objects, the atmosphere, trains, speed bumps, and everything in between—whether considered natural or artificial - all work together in this manner (Harman 2014).

It is necessary to emphasize that the differentiation between humans and non-humans is no longer about a dualistic separation. This distinction serves only to reconfigure the understanding that the principles of natural purity or subjective autonomy of the object world are impossible. Therefore, everything, even if it does not have intrinsic value to human needs, has a certain relationship that allows for an ecological constitution that brings together 'life' in its social, political, cultural, and scientific dimensions.

The rejection of the dualistic separation between humans and non-humans is an essential component of Latour's philosophy. This rejection is not just a simple matter of rethinking the distinction between subjects/objects, mind/world, nature/culture, but rather an attempt to overturn the notion that natural purity or subjective independence of the object world is impossible. Instead, all entities, irrespective of their intrinsic value for human needs, have a certain relationship that allows for an ecological constitution that brings together various aspects of life, including the social, political, cultural, and scientific realms (Conty 2018).

Latour's perspective on this matter is significant because it challenges the traditional modernist approach to understanding the world. Modernist thinking is often based on the separation between humans and the natural world, where humans are considered superior and objective, while nature is viewed as passive and subordinate. However, Latour's philosophy emphasizes the interconnectedness and co-constitution of human and non-human entities, leading to the idea that nature and society are mutually constitutive and cannot be understood in isolation. By recognizing the interdependence of humans and non-humans, we can move away from a human-centered approach to environmental issues and begin to understand the complex ecological relationships that sustain life. Similarly, by acknowledging the role of non-human actors in political and cultural processes, we can better understand how power and meaning of nature are constructed in society. With those being said, it seems that many of Latour's philosophical outlook on science and nature can certainly identify with the Anthropocene ideals, particularly the pluriverse. In the same breath, Latour's philosophy, among others, aims to conceptualize and reposition actor and network, political Gaia, and criticism of the new climate change regime.

By positioning Latour's notion as an entry point for understanding the ontology of the Anthropocene and surpassing the metaphysical demarcation of subject/object by radicalizing pluralistic ontology (Tummons 2021), this study seeks to emphasize the possibility of affirming the hybrid world of the Anthropocene by pluriversalizing the lifeworld. Through a critical analysis of Latour's ideas and their application to the Anthropocene discourse, this research aims to provide a new perspective on the ontology of the Anthropocene and its implications for understanding the relationship between humans and non-humans in the current era of global ecological crisis.

Actor-Network-Anthropocene

Actor-Network Theory (ANT) is a social approach offered by Latour in *Reassembling the Social: An Introduction to Actor-Network-Theory* (2007) to understand the interwoven materiality among various actors/actants. The theory proposes that actors or actants work within symmetrical relational networks, equalizing the relationship between humans and non-humans. Illustrated by the *Pasteur Network*, which tells us the story of Louis Pasteur's brilliant victory and formidable contributions in discovering the relationship between microbes and diseases behind his remarkable achievements in medical microbiology. His

discovery made 'Pasteurization' the spokesperson for *quasi-objects* - the life of microbes in the complexity of networks of other species. Pasteur even made the invisible germs visible, translating all changes in power networks and interests outside the Pasteur laboratory, such as public health policies, food hygiene, and the like.

This view can be seen as a departure from the dualistic conception of agency and the dichotomy of human and non-human actors. Another philosophical question that can be raised is: how does the ANT theory challenge the traditional view of causality? In old-fashioned philosophy, causality is often understood as a linear trajectory between cause and effect, with humans being the primary cause of actions. However, in the ANT theory, causality is understood as a network of relations and interactions among various actors, including non-human actors. This view challenges the traditional view of causality by highlighting the complex interdependence and co-creation of actors in a network (Harris 2005). In general, ANT theory provides a unique perspective on social relationships and the agency of actors in a network, by encouraging a more symmetrical understanding of human and non-human actors in shaping social phenomena.

Undoubtedly, Pasteur did not work alone in the isolated laboratory. As a scientist working in a laboratory with rigorous scientific methodologies, he collaborated with many "actors." One of them was the microbe as the object of his research. There are facts that have been considered unreasonable by many scientists, namely the "networking power of non-human actors." This network is like a piece of note paper, a report sheet, a research photo, a scientific instrument, and even bacterial or microbial cultural behavior that significantly impacts a scientific revolution. Science becomes "social" not only because science is carried out by human subjects alone, which undermines the reductionist view. Latour argues that it is reasonable for science to be social because it can unite various entities, both human and non-human, and utilize their collective power to act and change the world (Vries 2016).

From a different perspective, as illustrated by Pasteur's laborious scientific effort, science is not only a product of individual knowledge but is a collective and collaborative effort of various entities, both human and non-human. Science is not only about conducting experiments in a controlled laboratory setting but also about building networks of connections and collaborations between those different actors. Those actors can be in the form of equipment, tools, materials, data, and other non-human entities, as well as human researchers, scientists, and other stakeholders. By recognizing the social aspect of science, we can understand the importance of collaboration and cooperation in scientific research. We can also appreciate the role of non-human actors in shaping scientific discoveries and innovations. Such expression of appreciation posits that science is not only about discovering new knowledge and technology but also about building relationships and networks that facilitate the creation of new knowledge and technology.

What is interesting about Latour's work is that he expands the notion of networks in a small laboratory setting to the social world and even planetary scale. It did not only rely on speculative abstractions, but he embarked on experimental field trips during his lifetime, gathering data from places such as San Diego, the Amazon rainforest, the savannahs of Kenya, and the Vosges Mountains in France. Latour traveled across different regions just to align and verify the idea of modernity that we have taken for granted about the world we live in. Instead of accepting the social lifeworld as pre-given dualistic binaries that seem like modernity doctrine, Latour illustrated an excellent example of how climate change works at the complexity level, from small communities to global society in the entanglement proposition (Latour 2017a). For instance, Latour worked with climate scientists to explore the critical zone that is currently occurring. One of his observation sites is located in the Vosges Mountains, Alsace-Lorraine, France (Kofman 2018). He realized that the critical zone became a network of survival modes for humans. This term is similar to thresholds, planetary

boundaries, or the Great Acceleration, which is synonymous with the surplus of civilization progress and vulnerable to damage caused by that progress.

From a new interpretation perspective, Latour's work is not just about studying networks and collaborations in the laboratory setting. Instead, it is about recognizing that scientific research is inseparable from the social and environmental contexts in which it takes place. Latour's excursion to different places across the world shows that to fully understand scientific discoveries and innovations, we must also consider their impact on society and the environment. By studying the critical zone and other planetary boundaries, we can better understand the challenges facing humanity and the urgent need to develop sustainable solutions that protect both people and the planet. Thus, making Latour's work a call to action for scientists, policymakers, and society as a whole to work together to create a more just and sustainable future in terms of defining a new regime of climate.

Latour also participated in the Critical Zone project to understand how the impact of anthropogenic mass affects planetary degradation. The Critical Zone Observatory (CZO) is an interdisciplinary project that involves various scientific instrumentation and collaborations (Arènes, Latour, and Gaillardet 2018). Latour supported this project for the reason that allows for a rethinking of the system of localizing the impact of human activity during the Anthropocene epoch. Comparing the limited and small scale of human involvement over time with the vast expanse of Earth change represented through various geophysical phenomena presents new challenges in translating the networks of Anthropocene actions. The influence of humans is not as clearly visible on the geological layer and biological evolution compared to hundreds of millions of years of paleo-geological time before civilization. This is where it becomes interesting to discuss how the massive anthropogenic activities projected so far have accelerated the circulation of CO₂, which has not occurred for the past 150 years. The simple illustration shows how industrialization has become an accelerator of the acceleration of the exchange and transformation of interconnected bio- and geo-chemical cycles. The project also emphasizes the urgent need to address the acceleration of anthropogenic activities that have disrupted the balance of biogeochemical cycles and the environment (Arènes, Latour, and Gaillardet 2018). By studying and understanding the critical zone, scientists and researchers can develop more effective solutions to mitigate the negative impact of human activity and create a more sustainable future.

Latour's early thoughts on actor-networks of humans and non-humans were initially dismissed and deemed provocative when it came to discussing limits on climate policymakers (Latour 2016). This was due to Latour's objection towards climate denialists who arrogantly denied climate change, irrational political decisions, and scientists who manipulated scientific facts about the global crisis across networks (Hamilton, Bonneuil, and Gemenne 2015). However, in-depth conversation and dialogical interviews with many anthropological perspectives, including Donna Haraway, Noboru Ishikawa, Scott F. Gilbert, Kenneth Olwig, Anna L. Tsing, and Nils Bubandt, defended Latour as one of the thinkers who successfully brought the discourse of the Anthropocene to the level of social sciences, particularly anthropology (Haraway et al. 2016). Broadly speaking, this conversation highlights the fact that Latour's ideas were initially met with resistance and criticism, particularly from those who were unwilling to accept the reality of climate change and the role of human agency in the global crisis. However, his work was eventually embraced by scholars in various fields, including anthropology, who recognized the importance of considering the interconnectedness of human and non-human actors in shaping the Anthropocene.

Furthermore, in his work *Facing Gaia: Eight Lectures on the New Climate Regime* (Latour 2017b), Latour further critiques the Anthropocene and climate change. He argues that Gaia has become a surpassing concept of the Climate Leviathan. In this sense, Gaia is no longer just a social contract but a natural contract. Latour's Gaia is different from James Lovelock's Gaia hypothesis, which emphasizes the Earth as a single organism living with its own rules. Latour is very clear that Gaia refers to the Anthropocene climate regime today. The tendency

to understand the Gaia hypothesis only as a metabolic and holistic life form, and ignore the relations that it encompasses, is teleological (Lenton, Dutreuil, and Latour 2020). It seems as though the biological life form fails to understand the broader sense of life as [L]ife (with capital L). By expanding on the Gaia hypothesis, Latour encourages a shift in our understanding of Gaia as a way to understand the complex interplay between human societies and the environment, and emphasizes the importance of a natural contract, where humans are seen as part of a larger ecosystem, rather than separate from it.

It is reasonable that Gaia is no longer understood as a harmonious biological organism that interacts with each other and forms regulatory phenomena at the planetary level. This reference to regularity is often not fundamentally understood by different disciplines, for example, biologists only focus on biological life, chemists on geochemistry, or earth scientists only focus on the regularity of earth cycles. Therefore, rather than understanding Gaia as a single entity, Gaia should be seen as a [L]ife that accompanies the habitability of various actors in networks. Gaia and life are co-existent and relational. Anthropocene and Gaia are two different concepts, but they have a point of convergence that life on Earth is a challenging point to recognize, the *terra incognita*.

As with the crisis of the Anthropocene, the position of Latour is no longer limited to a single perspective of life, but rather should be viewed from multiple perspectives and levels of interaction, including social, political, economic, and cultural aspects. Gaia should be understood as a complex network of relationships between various actors, including humans, non-human beings, and the environment. By acknowledging this complexity and interconnectedness, we can begin to address the challenges of the Anthropocene and the urgent need to rethink our relationship with the planet. In this way, Latour's concept of Gaia offers a new perspective on how to approach environmental issues that are rooted in a deep understanding of the interdependence between human and non-human actors in the planetary system, and not falls or traps of romanticizing the past when Gaia is always establishment or in the *harmonia* of Earth-Human.

Another Latour's view of the Anthropocene is the time of destruction, rather than a techno-optimistic belief that future technology can solve the problems of the new climate regime. He vehemently opposes any talk of the greatness of technological engineering as a means of solving climate problems in the future, while Gaia in the era of the Anthropocene, will never wait for established and efficient technology to address the crisis (Yaneva 2017; Latour 2017b). Instead, humans must adapt and become "survivors." The limits of humanity today only work imaginarily in the geopolitical realm. There is no way to escape the Planetary crisis by changing to "Earth B" or finding a new planet in the solar system, because humans will always be earthbound creatures, and there is no longer any modernity or romanticization of Gaia. Politics-Gaia is a new way of reimagining the Anthropocene world and mapping the Planetary crisis intergenerationally (Latour and Lenton 2019).

It provides a mapping of the new ecological crisis as a threat to every nation, and political policy is no longer about development or domination over everything that is tread upon (land, earth, the world - space projects). Through his work *Down to Earth: Politics in the New Climate Regime* (2018), Latour radicalizes his thinking about concrete strategies for addressing climate change by reconsidering the possibility of the marginalized world of local life when facing crises. Against the modernist notion regarding global crises that can only be solved by global politics, this approach often overlooks the marginalized communities who are disproportionately affected by these crises. Latour believes that the utopian visions of techno-futurism, such as space exploration, interplanetary agriculture, or a new civilization on Mars, are mere daydreams if they ignore the pressing crises at hand. Politics should focus on addressing the specific needs of local communities and building more sustainable and resilient societies. This new approach to politics requires a radical rethinking of our values and priorities, as well as a recognition of the interconnectedness of all life on Earth. Rather than viewing ourselves as separate from the natural world, we must recognize that we are

part of a complex web of relationships that includes both human and non-human actors. Only by embracing this new vision of politics and reimagining our relationship with the planet can we hope to overcome the challenges of the new climate regime.

The assumption of the new climate crisis prompts a shift in agency status, which is no longer merely to valiantly take responsibility for a particular condition. However, the crisis itself never has a specific working boundary, so people must be able to respond to the “Our Monster” that has lived from the reflection of humanity, whether it is science or technology that creates crises that are invariably intertwined, which live and sustain civilization (Latour 2011). This “Monster” represents the non-human entities, such as carbon that have been created by human activity and have contributed to the crisis. The politics of the new climate regime, for example, shifting carbon explicitly has an important position in political decisions as a non-human thing that is experienced, engineered, and continuously politicized (Latour 2014a; 2014b). At this stage, the translation of the Anthropocene is not just a social translation of science. However, it transforms the boundaries of nature and culture into natureculture (Malone and Ovenden 2016) or multi-(in)stability politics of things, humans, and non-humans as actors-who-are-no-longer-stable—this whole act always interconnects, continuously.

In his observations on the issue of the Anthropocene, Latour (2016) notes that the debate on the status of the Anthropocene is largely driven by political epistemology among scientists, rather than a focus on the core issues of the Anthropocene itself. He argues that the concept of the Anthropocene does not inherently bring about good or peace for human civilization, but instead marks a transition from the romanticized notion of the “state of nature” to the “state of war.” (Luisetti 2016). This transition has led to the formation of a naturalistic biopolitical framework to combat the tendency towards collective irrationality based solely on existential anxiety (Latour 2014b).

During times of crisis, territorial boundaries become blurred or even nonexistent as every social group tends to defend their “ownership” and “right to survival.” This creates a new enlightenment amid catastrophism, where traditional boundaries and beliefs are challenged and new ways of thinking and acting emerge. This highlights the importance of reconsidering our relationship with the environment and the need for a more collaborative and holistic approach towards addressing environmental challenges. Ultimately, the Anthropocene requires a fundamental shift in our understanding of the role of humans in shaping the natural world, and a renewed focus on building sustainable systems and practices that prioritize the health of the planet and its inhabitants.

In the discourse surrounding the Anthropocene, Latour engaged in extensive discussions with Dipesh Chakrabarty to formulate the geo-story of the Anthropocene. Additionally, Noah Heringman (2015) actively criticizes how the humanistic perspective has influenced the debate on the transition to modernity within the Anthropocene. Since humans began leaving geological footprints on a temporal scale during the transition of Holocene epochs, the term “modern” has been in existence of human civilization timescale, considering a sociological perspective that encompasses geological deep-time. However, Heringman (2015) reinforces Chakrabarty and Latour’s conviction to reexamine the influence of humans as a species and their effects on geo-history. This highlights the requirement for interdisciplinary approaches, including archaeology, history, culture, and paleontology.

Chakrabarty’s engagement with Latour’s anti-colonial humor in discussing human colonization efforts towards non-human agents throughout history towards the Anthropocene highlights the Global South’s issues (Chakrabarty 2016). The Global South, comprises of developing nations, has been disproportionately affected by the environmental crises caused by the actions of developed nations in the Global North. The exploitation and extraction of natural resources by developed nations have caused irreversible environmental damage and affected the lives and livelihoods of communities in the Global South. Latour’s obscurity is reflected when he rejects the Kantian legacy of the idea of things-in-themselves and called “irreductionist” tendency. Humans have no privilege at all; they only can speak in

the same way of the relationship between what they experience and feeling. According to Harman (2009), Latour's irreductions refers to "Latour said that translations also occur between non-human things and did not add the proviso that humans must be there to observe it."

Chakrabarty's critique of human-animal mortality doctrine challenges the Eurocentric notion that human beings are the only actors who shape history and the world. This critique is particularly relevant in the Global South, where indigenous communities have lived in differentiation harmony with nature and shaped their environments for centuries. By recognizing the agency of non-human actors, Chakrabarty's critique advocates for the Global South's epistemologies and ways of knowing. Moreover, Chakrabarty's call for a cross-disciplinary approach that includes archeology, history, culture, and paleontology is crucial in understanding the Global South's issues. Many communities in the Global South have a deep understanding of their environment and ecosystems based on their cultural and historical knowledge. The incorporation of this source of knowledge into scientific research can lead to a more holistic understanding of environmental issues and better-informed policy decisions.

After Bruno Latour: Latourian and the Future Anthropocene

Bruno Latour's latest work, titled *After Lockdown: A Metamorphosis* (2021), is a profound reflection and closure on how the global pandemic has interrupted us all to momentarily rethink the drastic changes in the existence of global society. Lockdown forced everyone to 'submit' to rules in the name of large-scale social restrictions or in the name of public health together. For Latour (2021), the 'new climate regime' that reaches the peak of the crisis will move like a pandemic, in which we will all be forced to retreat, forced to limit our movements as much as possible because there is no more room for movement that can be lived in. This means that there is no more human "old" life; they are forced to continue living in crisis with other actors.

Latour argues that the pandemic has exposed the fragility of human existence and the interconnectedness of everything. The pandemic has also revealed the deepening crisis of the environment, and that the new climate regime we are facing is not just about reducing carbon emissions, but a profound transformation of how we live our lives. This transformation requires us to rethink our relationship with nature, technology, and other actors in the world.

Latour's influence in the political dimension of the Anthropocene highlights the importance of sensitivity towards the "noise" of "quasi-objects" that have been ignored, considered dead, closed, and final, like the teleological Gaia hypothesis. The Anthropocene demands the realization of a parliament of things, in which subjects and objects are not abolished but reconsidered, given our forgetfulness of the quasi-objects that are always reduced in the subject-active or object-passive dichotomy (Simons 2017).

After Latour, a new post-humanist thinker emerged and began to distance from the old modernist doctrine of the relationship between subjects, objects, matter, non-humans, and everything that is more-than-human. Graham Harman (2009) refers to Latour as a metaphysical philosopher, a contemporary thinker who inspired the emergence of Object-Oriented Philosophy. Latour radicalizes the traditional term "substance" into "actor." These actors are entirely real, competing and collaborating with each other without losing their qualities. What makes them actors is not just their materiality or their accessibility to subjects, but rather their existence that should transcend beyond imagined objects.

This perspective poses a challenge to traditional modernist thinking, which considers humans as the center of the universe, with the power to dominate and control everything around them. Instead, Latour's philosophy that emphasizes the interdependence and

interconnection of all entities, including non-human ones (animals, plants, and even objects) suggests that we should acknowledge the latter's agency as significant in shaping our world.

The metamorphosis of the Anthropocene based on actor-network theory cannot rely solely on the assumption of a flat ontology, where all actors work on symmetrical equality. One significant criticism of flat ontology within the context of the Anthropocene-Network Theory is its failure to provide an adequate explanation for causation. The assumption that "are all things all the same?" is often treated as a fundamental principle, but it is clearly problematic and lacks sufficient justification. There is also a need for speculation on how strong our intentions are towards symmetry, as this is where the possibilities of new non-symmetric hierarchies always exist. The impossibility of fully understanding the Anthropocene seems to create an incomplete network. The Anthropocene will inevitably be entangled in various forms, and eventually, it will depend on humans to choose whether to live life in geotrauma as a leap or obstacle on the brink of crisis. However, by acknowledging the agency and importance of non-human actors, such as quasi-objects, humans can develop a more comprehensive understanding of the Anthropocene event and its crisis.

In practical terms, Latour's Anthropocene prevails because he provides a series of basic argumentation that shows the epistemic violence of universalism dominance and Western modernity doctrine and its limitation in today's world. I would like to draw attention to link the term pluriverse that is presented as a philosophical concept to revitalize and advocate for multi- or transversal worlds and worlding practices during the post-climate regime. It means that the division between nature and culture is an artificial epistemological construct that can be dismantled through a reunion under the same constitution. While Latour acknowledges the agency of objects and the importance of relationality, his proposed solution involves a merger and unification, which differs from indigenous relational ontologies such as the Andean cosmology (Mercier 2019). According to this worldview, the pluriverse does not necessarily require a unification of what has been separated (Mahaswa and Kim 2023). Instead, interconnections between different worlds and realms are enough, and these worlds exist independently while constantly interacting with each other.

Querejazu (2016) presents an argument against the prevailing notion of reality as a single, unified world. Instead, the author suggests that rupturist narratives play a crucial role in dismantling the veil of universalism. Mario Blaser (2013) proposes that there are three main streams in the rupturist narrative that seek to challenge and distance from modernity. The first stream is the theory of network actors, which aims to destabilize the dualist system that separates nature/culture and subject/object (Latour, Harding, and Law belong to this mainstream). The second stream is feminist theory, which challenges hierarchical relations between mainstream thought and the "others" who are considered as non-human (e.g., Haraway, Harding, Tickner). The last stream comprises critical theories such as cultural, subaltern, and postcolonial studies that question epistemic asymmetries and the politics inherited from colonial differences between the modern and non-modern (e.g., Escobar, Lander, Mignolo).

Given that a Eurocentric view of humanity lacks recognition of other forms of life, Latour (Latour 2017b) proposes the term "terrans" instead to give affirmation of other forms of life and automatically elevate them to the same level with humans (who have been traditionally known as "earth dwellers"). He describes the ecological crisis as a "generalized state of war" (Latour 2017b, 73), emphasizing the urgency of the situation and calling for a collective response. To deal with the increasing tensions and polarized perspectives during the Anthropocene crisis, Latour proposes posthuman diplomacy for the "end times." This approach involves remixing politics and the Earth and confronting the specific historical challenges we face today. In this context, Latour's view of science as a way of understanding the world becomes crucial. The political implications of Latour's proposal for Anthropocene diplomacy are also significant. As Conty (2018) mentioned about Latour's proposal for "a new

materialist ecological politics” that acknowledges the urgency of the ecological crisis and embraces the interconnectedness of all actors in the ecosystem.

For further consideration, Bruno Latour and the future of Anthropocene discourse, the Anthropocene must bring science that does not de-animate the Earth. Gaia is not only limited as a figure of harmony between humans and nature. Povinelli (2021) also emphasizes four fundamental principles regarding Gaia and Ground relations, which include the entanglement of existence, the uneven distribution of power, the significance of events in political discourse, and the enduring impacts of racial and colonial histories. Meanwhile, Latour (2019) emphasizes the importance of treating the Earth as a being in disequilibrium, attending to its physical characteristics such as color, smell, texture, and so on. He relies on the Gaia theory introduced by James Lovelock and Lynn Margulis, which portrays the Earth as a complex organism, and not simple metabolic homeostasis. However, there are concerns about the limitations of the concept of organisms in understanding the Earth. Gaian bio-geopolitics has had a significant impact on systems theory and continues to echo in the work of contemporary scholars. Still, there is a need to more explore other scientific shifts and paradigms during the Anthropocene circumstance.

The Anthropocene requires an inquiry and engagement that is deeply immanent, considerate of the effects and consequences of human activity. This form of immanence fuses the finite with the infinite, but not in a theological sense of an emanation of God in matter. Instead, Latour argues that immanence must be self-causing, bringing causality down to earth and better reckoning with human activity in the flesh. Reclaiming causality of the Anthropocene to be of the world and in the world will bring new research orientation as a metatheory. It focuses on integrative metatheory and its application to more concretely and practically solving planetary flourishing in the Anthropocene.

Finally, I assume that how Latour’s legacy is to substantiate the position of environment, because the environment and the maintenance of our immediate natural surrounding is crucial to our survival and our ending. Rather, the earthbound must always recommence, aware of the historical flow of time. The end is an achievement, finite and only revealed through time. The Anthropocene is a complicated and contested idea, but it provides a way to conceive of the end times in the present.

To put it differently, according to Voegelin (1987), the Western concept of ‘the end times’, which was part of religious discourse, actually prevented the earth from experiencing those “end times.” The Moderns, whether they are misguided transcendentalists of the scientific or religious type, have disrupted the vital connection with the flow of historical time. The end is only possible because of the passage of time. Thus, the metamorphosis of the Anthropocene is a way of multiple-realization of the end of the world. Today is one small step for humanity to decide what they will do as children of extinction as well as accept the legacy of calamity.

Conclusion

In the end, I have put forth arguments that Bruno Latour’s ideas on the Anthropocene need further investigation, given that the findings on this topic are very limited. In the meantime, a Latourian Anthropocene work is a work in progress. In this increasingly fragile world, Latour’s thoughts on the politics of a new climate regime become highly relevant. He introduced and contributed many new perspectives on the climate regime to advance Anthropocene discourse further by questioning the failure of modernity and proposing an alternative ontological project called Actor-Network Theory, Ontological Pluralism, and Modes of Existence. As we know, Bruno Latour reveals scientific action as a collective endeavor that arises from ordinary entanglements in-between human and non-human worlds dimension. It means that in reality, all individuals will create the necessary changes

and play a crucial role in ontological conflicts. As agents capable of *worlding* the society within Earth, they have the ability to establish their relationship with others. In this Anthropocene rift, a world of many worlds would form an inseparable and becoming network, defining our new existence in the uncertainty world.

Furthermore, Latour's philosophy pushes us to reevaluate our assumptions about the nature of reality, especially regarding the relationship between humans and their environments. By rejecting the categorical and constitutive assumptions of modernity, Latour offers a new way of understanding the interconnectedness of the world and the role of non-human entities in shaping our understanding of it. This approach provides a valuable contribution to current debates on the Anthropocene, which seeks to understand the impact of human activities on the environment and the implications for our future.

Despite its flat ontological baggage, I also emphasized that Bruno Latour's metaphysics can be characterized by its pragmatic realism, anti-essentialism, and social constructivism. This suggests that Latour's philosophical approach is pragmatic in its orientation, which favors practical considerations and the importance of practical consequences, with a commitment to realism. As for his anti-essentialism, Latour emphasizes the rejection of fixed ontology, predetermined essences, or inherent characteristics, instead focusing on the dynamic and contingent nature of entities. His social constructivism refers to the emphasis on human actions and practices shaping reality with an understanding that reality is constructed through ongoing network processes. By integrating these perspectives, Latourian theoretical framework acknowledges the complexities and interplay between human and non-human actors, highlighting the contingent and constructed nature of our shared reality, specifically beneficial in the world of the Anthropocene.

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