



University of
Zurich^{UZH}

IKMZ – Department of Communication and Media Research

Working Paper – Media Change & Innovation Division

The Transhumanist Anthropocene

Emerging Regimes of (Non-)Human
Nature in a Digital Era

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Zurich, October 2025

Abstract

This paper identifies a significant shift in the current dynamics of the Anthropocene driven by transhumanist thought that shapes the digitalization of societies. While the Anthropocene has traditionally emphasized humanity's impact on the natural environment, transhumanist visions now direct this transformative force inward, targeting human nature itself. This marks an expansion of human action toward the technical control of human evolution, generating unprecedented living conditions that redefine what it means to be human. To capture this development, we introduce the notion of the "Transhumanist Anthropocene". With it, we point to a novel trajectory within the overall Anthropocene dynamics. This is characterized by a reinforced anthropocentrism, the rise of techno-religion, a reduction of the perceived urgency of the climate crisis, and an increasing reliance on techno-solutionist models of environmental governances. We argue that the growing dominance of transhumanist logics within the Anthropocene along with the digital transformation and recent AI developments narrows possible future pathways. This significantly complicates efforts toward effective and sustainable regulation and oversight in the face of the climate crisis.

Keywords: Anthropocene, Transhumanism, Digitalization, Techno Religion, Climate Crisis, Artificial Intelligence

PLEASE CITE AS

Schütze, P., & Latzer, M. (2025). The Transhumanist Anthropocene – Emerging Regimes of (Non-)Human Nature in a Digital Era. Working Paper – Media Change & Innovation Division. University of Zurich, Zurich.

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Authors' original manuscript – this version has not undergone peer review.

1. Intro

In the 21st century, a defining feature of the Anthropocene is the *socio-technical transformation of digitalization* (e.g., Brevini & Murdock, 2017; Crawford, 2021; Creutzig et al., 2022; Falk et al., 2024; Grumbach & Hamant, 2018; Hornborg, 2015; Travis, 2018). Researchers have explored digitalization's effects on the Anthropocene pointing toward its challenges regarding, for example, Earth system stability, social equity, or human agency (Creutzig et al., 2022). Others have especially highlighted the material footprint of the digital transformation (e.g. Brevini, 2021; Hao, 2019); and yet others have focused on digital technologies' potentials for climate adaptation and solutions (e.g. Jörisen, 2023). Digital technologies are seen as both the problem and the solution.

In this paper, we acknowledge these discussions and argue that there is a fundamental, qualitative shift in the dynamics of the Anthropocene that has received far less attention. By analyzing recent scholarship on the socio-technical transformation of digitalization and its transhumanist influences, we show how this implies a novel understanding of the Anthropocene. Our core argument is this: the qualitative shift in Anthropocene dynamics is fueled by the transhumanist strand within the digital transformation. Previously, the Anthropocene was mainly characterized by humanity's effects on the natural environment and the planet (e.g., Dalby, 2016; Hamilton et al., 2015; Zalasiewicz et al., 2015). Now, the transformative force of humankind has also turned inward, *toward the human itself*.

Our starting point is the recognition of the significant influence of transhumanist thought on the digitalization of societies (Latzer, 2022; Thomas, 2024). Transhumanism is marked by the strong belief that human biological evolution can and should be technically controlled and improved beyond current human limitations. These visions are accompanied by advances in digital technologies, including Artificial Intelligence (AI), as well as human enhancement technologies in biotechnology, medicine, robotics, and genomics. The contentious transhumanist conviction in the Anthropocene is now “that the evolutionary development of humankind is not at its end point” (Latzer, 2022, p. 338), but it must be surpassed through technological means in order to improve individual and societal well-being. This technologically driven goal is to be achieved not only through digitalization alone but through a new era of converging technologies (NBIC), defined as “the synergetic combination of nanotechnology, biotechnology and biomedicine (including genetic engineering), information and communication technology as well as new technologies based on cognitive science” (Latzer, 2022, pp. 337–338).

As a consequence, there is now a transhumanist quality within the Anthropocene dynamics. The planetary-scale force of human intervention – the impact on Earth’s system – is now expanding from non-human nature to human nature with significant repercussions for the understanding of both the Anthropocene and the governance of our planet. To develop this argument, the paper proceeds as follows. First, we outline the Anthropocene concept and the reasons for its inception. Second, we present critiques of this concept that have produced refined and related notions. Following this, we propose the term *Transhumanist Anthropocene* to explicitly denote the new qualities the transhumanist strand of digitalization brings with it. We highlight that the Transhumanist Anthropocene marks one increasingly dominant trajectory of a multidimensional epoch which incorporates diverse and simultaneous developments. Lastly, we describe the effects of these new transhumanist qualities, with a specific focus on current responses to the climate crisis.¹

2. The Anthropocene Concept

The term *Anthropocene* refers to a new geological epoch, beginning sometime between the late 18th century and the mid-20th century (Crutzen, 2002).² Introduced in the early 2000s, the term formally recognizes the destabilizing impact of human activities on Earth’s systems (e.g., biosphere, cryosphere, or hydrosphere), most critically evidenced by the climate crisis caused by anthropogenic CO₂ emissions (Crutzen & Stoermer, 2000; Zalasiewicz et al., 2015, 2024). The Anthropocene was introduced as a useful concept that has enabled interdisciplinary discussions, ranging from Earth system sciences to philosophy (Hamilton, 2016; Zalasiewicz et al., 2017). Policymakers have turned to the concept to guide environmental governance focused on mitigation and adaptation (Zalasiewicz et al., 2024, p. 981), while scholars use it to analyze a range of social and ecological challenges (Hamilton et al., 2015). “It has become a contentious term and a lightning rod for political and philosophical arguments about what needs to be done, the future of humanity, the potential of technology and the prospects for civilization” (Dalby, 2016, p. 34). As such, the Anthropocene signals two things: the anthropocentric view that humans have significantly disrupted Earth’s systems, and that they must now find ways to respond (Zalasiewicz et al., 2024; see also Davis & Todd, 2017).

¹ The climate crisis is a multi-dimensional problem of different systemic issues, such as colonialism, patriarchy, or class struggles (e.g., Fraser, 2022). Hence, talking about the climate crisis implies talking about the central crises of the Anthropocene.

² The exact starting point is contested. The “Anthropocene Working Group” has recommended a mid-20th century boundary (Zalasiewicz et al., 2017). Others argue for different boundaries or for conceptual approaches without a boundary altogether (e.g., Chakraborty, 2024; Davis & Todd, 2017).

This can be traced back to its historical origins, which can roughly be summarized within three trajectories, as Anthropocene scholar Clive Hamilton and his colleagues describe it (Hamilton et al., 2015). First, the concept is used to denote a new *geological* epoch, aiming to provide a precise starting point based on evidence from sedimentary rock strata and other geological data (e.g., Crutzen, 2002). Second, it is adopted within *Earth system science*, where it is used to emphasize the significant shifts in Earth's systems caused by human activity, such as climate change and species extinction (e.g., Zalasiewicz et al., 2024). Third, the notion is found in the *humanities and social sciences*, which expand the concept to encompass the broad, cumulative effects of human activities, highlighting socio-cultural transformations and marking a fundamental shift in human-environment relationships (Hamilton et al., 2015, pp. 2–3).

In these diverse ways, the Anthropocene discourse has always been about understanding the crises-ridden and destabilizing living conditions of the current epoch. Right from the beginning the term was connected to the currently unfolding climate crisis. As Paul J. Crutzen writes in one of the articles introducing the Anthropocene: due to “anthropogenic emissions of carbon dioxide, global climate may depart significantly from natural behaviour for many millennia to come” (Crutzen, 2002, p. 23). Hence, with its inception the concept was used to name and describe “the effects of humans on the global environment” (Crutzen, 2002, p. 23). But not only this, the term was also employed to identify and call for human action to counteract these destructive effects, and “to guide society toward environmentally sustainable management during the era of the Anthropocene.” (Crutzen, 2002, p. 23)

As such, the concept has originally been accompanied by “humanistic narratives”, where the human is put at the center and displayed as the “transcendental actor of the Anthropocene” (Biswas Mellamphy & Vangeest, 2024, p. 601). The human has caused the crises of the Anthropocene, now the human is the one who must solve them. In other words, the Anthropocene is employed both to understand the unprecedented living conditions and to call for climate action. From this follow two important conclusions for the meaning of the term Anthropocene, particularly in discussions within the social sciences (Hamilton et al., 2015, pp. 2–6).

(1) The concept uniquely highlights the epoch-defining *direction of human actions*: Humans have become a force (implicitly) directed at destabilizing the Earth systems (e.g., biosphere, cryosphere, or hydrosphere). Their impact is on par with natural phenomena like volcanism or tectonic activity (e.g., Crutzen & Stoermer, 2000; Zalasiewicz et al., 2017). This

effect comes mainly as the result of the exploitation of non-human nature and is accompanied by anthropocentric and capitalist logics (e.g., Biswas Mellamphy & Vangeest, 2024).³

(2) The Anthropocene outlines the *effects of human actions for human inhabitants* and their living conditions: The result is an epoch of unprecedented human living conditions. In other words, human actions have „altered the planet’s habitability“ (Wallenhorst & Wulf, 2023, p. 8). Humanity is facing unprecedented environmental changes, with rapid ecological shifts that may not be reversed, even with global sustainability efforts. This marks a new epoch not only characterized by a mere global ecological crisis. But this marks a new “regime of existence for the Earth” and entirely new living conditions for humanity (Hamilton et al., 2015, p. 4, emphasis added). Living in the Anthropocene means to living “in a hotter world increasingly characterised by catastrophic events and new risks, including the possibility of an ice-free planet.” (Hamilton et al., 2015, p. 4)

In the following, we build on these two key insights of the Anthropocene discourse. We argue that in light of the digital and transhumanist socio-technical transformation, these insights need to be revised (see Section 5 & Table 1). Before analyzing this in more detail, the next section discusses the common and important criticisms of the Anthropocene concept.

3. Critiques of the Anthropocene Concept

The Anthropocene concept has long received important criticisms, due to its disregard of colonial and capitalist histories (Åsberg, 2017; Chakrabarty, 2009; Davis & Todd, 2017; Haraway, 2015; Malm & Hornborg, 2014; Moore, 2016a). From these works it can clearly be derived that the very term *Anthropo*-cene is misleading or at least imprecise. Not the entirety of a homogenous humanity has impacted the Earth with a geological force. It is only a small number of people within the minority world that are truly responsible for the crises of the Anthropocene (e.g. Malm, 2016). The effects of human action are distributed unequally and are mainly felt by the majority world (e.g., Haraway, 2015; Moore, 2016a) – that is, in island nations such as Fiji, the Dominican Republic or African countries such as Kenya or Uganda (UN Climate Change, 2021; World Meteorological Organization, 2024). These critiques have brought with it a variety of different concepts and versions to rethink the Anthropocene.

³ Anthropocentrism describes a worldview which sees the human species as more valuable than other non-human entities (Washington et al., 2017). This prioritizes improving human lives and well-being over that of non-human nature and other species (Biswas Mellamphy & Vangeest, 2024, p. 602). Key to anthropocentrism are human dominance and control over nature as well as valuing non-human entities primarily based on their usefulness for human purposes (Washington et al., 2017).

A key critique comes from critical feminist scholar Donna Haraway, who argues that while the Anthropocene concept highlights humanity's planetary impact, it overlooks the specific historical and political forces – like capitalism and colonialism – that drive ecological crises (Haraway, 2015, 2016). As such, she proposes alternative terms like Capitalocene and Plantationocene to better capture the systems of exploitation underpinning these changes (Haraway, 2015, p. 162).

A similar critique can be found in Jason W. Moore's as well as Andreas Malm and Alf Hornborg's work (Malm & Hornborg, 2014; Moore, 2016a). These authors also argue that the Anthropocene concept fails to adequately explain the underlying causes of the fundamental transformation of the changes of Earth's systems (Moore, 2016b, p. 6). Moore analyzes that the Anthropocene concept often resorts to a simplistic dualism between "humans/society" and "nature" (Moore, 2016b, p. 4). Malm and Hornborg argue more strongly that the Anthropocene concept is analytically flawed altogether, as it portrays humanity as a unified species responsible for the current ecological crisis (Malm & Hornborg, 2014).

In that sense, all of these authors emphasize that the Anthropocene framing neglects crucial questions of capitalism, power, class, and anthropocentrism (Malm & Hornborg, 2014, p. 63). The human interventions leading to the Anthropocene are not the responsibility of a unified humankind but of a tiny minority, namely the owners of the means of production, within a highly unequal global context shaped by capitalism and colonialism.⁴ According to this criticism, the Anthropocene concept hinders a proper understanding of the origins of climate change, and makes it difficult to challenge the status quo and envision alternative futures (Malm & Hornborg, 2014, pp. 64–68). Hence, these authors suggest and prefer the term Capitalocene.

In line with these views lies what is called the "ecocentric critique" of the dominant Anthropocene concept (Åsberg, 2017; Biswas Mellamphy & Vangeest, 2024; Washington et al., 2017). This critique challenges the dominant, human-centered Anthropocene narrative by rejecting the idea of human superiority over nature and calling for a more relational, interconnected view of humans and the Earth (Biswas Mellamphy & Vangeest, 2024, p. 603). It seeks to de-center the human, promote care and repair over control and exploitation, and often includes a decolonial perspective that critiques the Anthropocene's ties to colonial and technocratic ideologies (Washington et al., 2017, pp. 35–37). This approach also frames the Anthropocene concept as imprecise and calls for an integration of environmentalism with anti-

⁴ In the context of digitalization this has been discussed under the heading of "algorithmic colonialism" or "digital colonialism" (Birhane, 2020; Couldry & Mejias, 2019).

colonial principles (Biswas Mellamphy & Vangeest, 2024, p. 604; Washington et al., 2017, p. 39).

Others have proposed to specify the Anthropocene with notions such as the “technosphere” (Haff, 2014, 2017), or to call it the “Technocene” altogether (Hornborg, 2015). The geoscientist Peter Haff introduced the term technosphere to refer to the vast, self-sustaining global technological system – from infrastructure to governance – that now shapes the planet (Haff, 2014, p. 127; see also Donges et al., 2017). Slightly different is the term “Technocene” introduced by Alf Hornborg (Hornborg, 2015), which emphasizes technology, especially fossil fuel systems, as central to ecological change and global inequality, aligning with the Capitalocene critique (Hornborg, 2015, p. 61). Yet others have also called this the “digital Anthropocene” with a similar focus specifically on the impact of digital technologies (Maguire et al., 2023; Travis, 2018).

4. Transhumanist Digitalization

Following these theoretical endeavors, we suggest to rethink the Anthropocene concept in light of the transhumanist digitalization (see also Latzer, 2022, p. 351). While researchers have noted digitalization’s material impacts like energy use or resource consumption (e.g., Brevini, 2021), we argue that the influence extends deeper. We contend that the Anthropocene has acquired a new transhumanist quality, driven by a religion-like belief in converging technologies – a techno-religion rooted in a transhumanist vision of progress (Latzer, 2022, 2025).

The socio-technical transformation of digitalization can be understood in terms of what media scholar Michael Latzer describes as the “Digital Trinity” of datafication, algorithmization, and platformization (Latzer, 2022). With this, Latzer illustrates how digitalization in the 21st century works mainly through three interconnected processes. The *Datafication of Life Domains* that doubles the world in the form of digital data, thus creating a new asset class of small and big data. The *Algorithmization of Decision-Making* that turns this new asset class of data into economic, political, and social capital, typically through automated manipulation of users. Finally, the *Platformization of Markets* that creates the optimal organizational forms (two- or multisided markets) for further datafication and algorithmization in all areas of life. These three processes reinforce each other in a co-evolutionary manner and are at the core of the digital transformation.

Currently, this transhumanist, digital transformation is spearheaded by AI developments. Critical AI theorist Paul Schütze describes this latest iteration with the notion of

“AI Futurism” (Schütze, 2024, 2025). As such, AI technologies are a central and integral part of the Digital Trinity, increasingly included in visions and ideas to transform all parts of societal life (e.g., D’Ignazio & Klein, 2020; Jarrett, 2022; Lindemann, 2024; Mühlhoff & Henningsen, 2025). As Schütze describes, the ideology of AI Futurism presents these technologies as an unavoidable step toward the future (Schütze, 2024, p. 3, 2025). These narratives are rooted in historical ideas of techno-futurists which already in the 19th and 20th century aimed at overcoming human limits by technological means (Thomas, 2024, p. 57). Futurism can therefore also be seen as a forerunner of current transhumanism (Thomas, 2024, pp. 17–19). Today, these visions co-evolve with the self-amplifying dynamics of the Digital Trinity, AI technologies and transhumanism.

The co-evolution of the Digital Trinity and AI Futurism are backgrounded by a broader religion-like faith in the potential of technology per se, coupled with a strongly future-oriented perspective. Moreover, the expansion of the Digital Trinity in the 21st century comes with the explicit pursuit to enhance “humankind”, and it is explicitly advanced by the transhumanist movement (Latzer, 2022, p. 337). In other words, the socio-technical transformation of digitalization has historically co-evolved with transhumanist ideas. Simply put, the transhumanist strand of digitalization can be described as a specific and extreme part of digitalization.⁵

Transhumanism is a multifaceted, hard-to-define ideology. At the same time it is a movement centered around the questionable belief that the human species can and should use technology to overcome its fundamental limitations, including those related to physiology and cognition (e.g., Mularoni, 2024, pp. 18–58; Puzio, 2022, p. 25; Tirosh-Samuelson, 2018, p. 200). Concretely, transhumanists envision a future where converging technologies such as genomics, robotics, informatics, and nanotechnology will enable radical human enhancement (Puzio, 2022, p. 57). This is often described as the “nano-bio-info-cogno convergence” (NBIC convergence) (Latzer, 2022, pp. 337–338). The belief is that the NBIC convergence will pave the way for a new phase of human evolution and lead to the emergence of superhuman entities, including autonomous and superintelligent machines (Latzer, 2022; Schnetker, 2019; Thomas, 2024).

For transhumanists, this is an active task and a pursuit which must be driven by human technological engineering. Their aim is to use technological progress to make humans healthier,

⁵ The connections of transhumanism and digitalization are complex and often implicit. However, research on transhumanism clearly shows this interconnection and points toward the historical co-evolution of digital technologies and transhumanist thought. For detailed work see for example: (Loh, 2023; Puzio, 2022; Thomas, 2024).

happier, and ultimately perhaps even immortal (Tirosh-Samuelson, 2018, p. 205). This ranges from the goal to overcome the limits of the human body and mind, over the merging of humans and machines, to leaving earthly boundaries altogether and colonizing space (Gebru & Torres, 2024; Mularoni, 2024, pp. 18–58; Thomas, 2024). According to transhumanism, “humans can acquire attributes previously reserved for the gods: omniscience (seamless data monitoring), omnipotence (creation of life, of non-biological intelligence and beings), omnipresence (ubiquitous digital technology) and eternal life (mind uploading, cryonics)” (Latzer, 2022, p. 340).

The historical roots of transhumanism are complex and have been traced back to the Enlightenment and even earlier schools of thought (Mularoni, 2024, pp. 21–39; Puzio, 2022; Thomas, 2024). Current key concepts of transhumanism include: morphological freedom, the right to modify one’s body and mind according to one’s desires; overcoming biological limitations; creating superintelligence, including Artificial General Intelligence (AGI), to save and better humankind; and ultimately the goal of transcending humanity itself to become enhanced super-humans (Gebru & Torres, 2024). Thus, while diverse, these currents generally share a noxious belief in the transformative potential of technology to transcend human limitations and achieve a transcendental and all-around better future (Thomas, 2024, p. 1).

In that sense, transhumanism drives forward the Digital Trinity of datafication, algorithmization, and platformization in a specific direction, thereby reinforcing the rise of a techno-religion that challenges longstanding ideals of the ongoing Enlightenment project such as critical reason and human autonomy (Latzer, 2025). Doing this, it builds a toxic coalition with AI Futurism and existential ideologies such as longtermism (Gebru & Torres, 2024; Latzer, 2022; Schütze, 2024). Specifically, longtermism is important in the Anthropocene discourse as it shifts the societal and individual focus toward a very long-term future, spanning potentially millions or even billions of years from now. This leaves less attention to the current societal and environmental crises of the Anthropocene (Thomas, 2024, p. 173). This perspective is based on the idea that the future holds underestimated amounts of potential and value. Key objectives for longtermists include ensuring the flourishing of humanity in a distant future by mitigating ominous and imagined future existential risks (Thomas, 2024, pp. 174–177). This is allegedly achieved through the pursuit of nebulous goals, such as space travel or asteroid mining, that will be enabled by advanced technologies (Crary, 2023).

The transhumanist visions have been criticized as racist, colonial, and patriarchal tropes, where the drive toward immortality and technological progress has to be situated within a discourse of population control and questionable genetic optimization (Mularoni, 2024;

Schnetker, 2022).⁶ Further, it is clear that transhumanism's obligation toward enhancement through technology is often driven by venture capital speculation, which exacerbates social inequalities, potentially leading to a future where the tech elite achieves superhuman life while others remain confined to an earthly existence (Schnetker, 2019; Thomas, 2024). With the transhumanist agenda comes an excessive focus on technological fixes which neglects necessary social and political transformations, all while the visions of a technologically controlled human evolution raise more ethical concerns about the definition of the "human" (Katz, 2020; Latzer, 2022; Schütze, 2024).

5. A New Quality of the Anthropocene

The analysis of digitalization within the Anthropocene, however, is not new. For instance, Wickberg & Gärdebon (2023) have employed a historical lens and analyzed the digital transformation as a key driver of Anthropocene history. Similarly, Jörissen (2023, p. 947) emphasizes "the importance of digital means and infrastructures for new forms of cultural resilience" in addressing the Anthropocene's crises. Most notably, Creutzig et al. (2022) outline digitalization's influence on Earth system stability, equity, and human agency, detailing effects on resource use, inequality, and political control. We agree with the findings of Creutzig et al. But, our argument further extends their analysis. We contend that the transhumanist strand of digitalization has now led to *a qualitative shift in the dynamics of the Anthropocenes*.

A key conclusion by Creutzig et al. is that "worldwide regulations and policies" could still alter "the trajectory of digitalization" toward a positive future (Creutzig et al., 2022, p. 494). However, with the transhumanist strand of digitalization gaining increasing influence, we observe an intensification of its current trajectory. This suggests that the new transhumanist characteristic of the Anthropocene narrows future possibilities, making effective and sustainable climate as well as technology regulation and oversight increasingly difficult. In our view, this results in a bleak outlook, particularly in relation to the climate crisis. In order to better understand this observation, we propose the term Transhumanist Anthropocene. With this, we explicitly highlight the new transhumanist qualities within the broader dynamics of the Anthropocene. At the same time, we recognize that this represents only one trajectory within a

⁶ A critique of transhumanism also comes from the perspective of a "critical posthumanism" (Loh, 2019; Puzio, 2022). Critical posthumanism is a position separate from transhumanism and as a stance that challenges traditional, humanistic dichotomies like woman/man, nature/culture, and subject/object (Loh, 2019, p. 8) Its aim is to overcome anthropocentrism and a restricted understanding of the "human" (Åsberg, 2017; Puzio, 2022, pp. 329–345).

multi-dimensional epoch, which, as described above, can also be looked at in terms of a Capitalocene or a Technoscene.

5.1 What is Qualitatively New?

In light of the transhumanist dynamic within digitalization, we must revisit the *two core elements of the Anthropocene discourse* identified at the beginning: (1) the Anthropocene concept uniquely highlights the epoch-defining *direction* of human actions, and (2) this results in specific *effects* of these actions on human inhabitants and their living conditions. In light of transhumanist digitalization, these two core elements of the Anthropocene concept must now be extended (see Table 1).

(1) The *direction* of human action is expanding. From altering Earth's systems, human actions are now also turning toward altering *human nature*. As a result of transhumanist developments – such as the pursuit of AGI through the use of NBIC technologies – the formerly outward-oriented actions of humans are now also directed inward. This means that human influence on Earth's systems has expanded to include influence on the human itself. “The end of nature” as we know it, brought about by the Anthropocene's polycrises (Hamilton et al., 2015, p. 4), is giving way to *the end of human nature as we know it*. With this, the “epoch of humankind” takes on a new meaning: humans are now striving to redefine themselves. Previously, human intervention primarily altered “the Earth's trajectory” (Hamilton et al., 2015, p. 3). In the Transhumanist Anthropocene, this is accompanied by the hijacking of biological human evolution toward the creation of “super-humans”. According to transhumanist visions, the main driver of this shift is technological progress, which places human enhancement and the supposed technical control of human evolution at the center of this new epoch. In the Transhumanist Anthropocene, human actions are increasingly transforming both non-human and human nature simultaneously.

These novel developments in turn, also transform the traditional dynamics of the Anthropocene. Transhumanists hope that enhancing the human will bring with it the capability to better solve the multiple crises of the Anthropocene. They suggest that the technological control over (non)-human nature can help solve the climate crisis. This means that the belief in the technological enhancement of human nature, in turn, influences the ways humans interact with non-human nature. Through the endeavor to technologically enhance humans, new methods of controlling, dominating and exploiting nature are emerging. For instance, as Mads Ejlsing critically highlights, ecomodernists (a strand of transhumanists) aim to avert the dangers of climate change by “not only decoupling the human from nature”, but also by increasing

“technological control over nature” (Ejsing, 2023, p. 246). The near-divine human powers envisioned by transhumanists are then presented as solutions to the climate crisis.

However, in reality, the transhumanist visions are not currently producing the positive effects they promise. On the contrary, transhumanist endeavors are among the key drivers of a further exploitation of the Earth. As critical media scholar Benedetta Brevini shows, particularly the AI boom and the quest for AGI have massive impacts on non-human nature (Brevini, 2021). From energy consumption and rare earth mining to toxic e-waste, the transhumanist digitalization exploits and destabilizes entire landscapes and ecosystems (see also Halpern, 2021). Thus, the new quality of the Anthropocene – transforming human nature – negatively impacts the older dynamics of the Anthropocene – transforming non-human nature.

(2) The *effects* of human actions on human inhabitants are expanding. From unprecedented living conditions for humans, we can now also observe *unprecedented living conditions of “being human”*. This results from point one above: directing human actions toward altering human nature produces new living conditions. Originally, the Anthropocene marked a fundamental transformation of Earth’s systems. It signified unprecedented living conditions regarding the planet’s habitability. For humans, this meant to grapple with and finding themselves in a world of destabilized and increasingly uninhabitable Earth systems. Transhumanist endeavors are now aiming to change “the system of being human”. From this perspective, it becomes an obligation to technologically create “new and better humans” (e.g., Mularoni, 2024). This means that the transhumanist imperative, along with the religion-like belief in the inherent potential of digital technologies, fundamentally alters the room of possibility and thought of what it means to be human. As Mahaswa et al. write, this restricts humans in their ability to freely move into the future. This happens “not by limiting autonomous decisions”, but because the transhumanist ideology “has imprinted, and continues to deepen, its structures within” the very essence of being human (Mahaswa et al., 2025, p. 4). In other words, with the rise of the transhumanist digitalization, the space of being human is becoming increasingly constrained.

Critical media scholar Alexander Thomas observes that within the transhumanist digitalization the human becomes instrumentalized (Thomas, 2024, p. 126). Digital technologies become a means to achieve a transcendental and divine future of a super-human species. These transhumanist visions are accompanied by “closing possibilities and narrowing creative and ethical spaces to rethink *Anthropos*.” (Thomas, 2024, p. 126) What some transhumanists might claim to be an “opening time to a multiplicity of individual paths”

(Taillandier, 2021, p. 232), is in fact a restriction of paths. The “new human” must be seen as a function of the socio-technical dynamics of the Digital Trinity shaped by transhumanist visions and driven by the latest developments such as AI Futurism. If the only path forward is technological progress, the “new human” becomes a pre-defined part of this path. The “Transhuman” becomes the means to uphold the functioning of the Digital Trinity (Thomas, 2024, p. 216). With this, the human takes center stage in a double sense. On the one hand, in the classical sense as the central actor behind the massive changes to Earth’s systems (Hamilton et al., 2015, p. 6). On the other hand, in the novel sense, as both the subject and object of controlling the future of human nature and becoming a superhuman.

It is important to highlight that these visions are not discussed within a homogenous humanity. Nor are they about finding or enhancing what is “truly human”. In fact, there is no such thing as “the human” (Katz, 2020). But the focus on and the very idea of “the human which has to be enhanced” is itself a transhumanist narrative. Crucially, this narrative is brought to life by the top-down and socio-economic power of big tech (Gebru & Torres, 2024). Especially in the Anglo-American and European context, tech corporations and the billionaires at their top (e.g., Elon Musk, Peter Thiel, Sam Altman) dominate the visions of humanity’s futures. These visions are built on a specific social order and produce “racialized, classed, and gendered models of the self [the human]” supposedly passing as ““universal” what in fact constitutes a white, elite, and masculinized perspective.” (Katz, 2020, p. 122) This reproduces socio-economic and racialized power dynamics. In that sense, the transhumanist vision to alter the living conditions of being human must be understood as deeply entangled with capitalist and techno-solutionist logics.

In sum, the notion of the Transhumanist Anthropocene highlights how the two core elements of the Anthropocene discourse are now being extended (see Table 1). Human actions are now also targeted at altering human nature. This leads to unprecedented living conditions characterized not only by a transformation of the Earth but by a profound reconfiguration of the human itself.

Characteristics	Anthropocene		Transhumanist Anthropocene
Direction of human actions	- Non-human nature - Transforming Earth’s systems	Now extends to →	- Human nature - Transforming human biological evolution

Effect of human actions for human inhabitants	- New regime of non-human nature - Restricting future habitability of Earth - Instrumentalized non-human nature		- New regime of human nature - Restricting future paths of what it means to be human - Instrumentalized human nature
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Table 1: Extension of the (simplified) key characteristics of the original Anthropocene within the Transhumanist Anthropocene.

5.2 The Effects of the Transhumanist Anthropocene

In their paper “Digitalization and the Anthropocene”, Creutzig et al. (2022) identify three main areas in which the digital transformation is currently effecting the dynamics of the Anthropocene. First, they highlight its effects on equity. Digitalization leads to global and local power asymmetries and contributes to increased economic and social inequalities (Creutzig et al., 2022, pp. 485–487). Second, they highlight the effects on democracy and governance. Data accumulation often leads to monopoly power of big tech corporations or states and thus enables control over users or citizens (Creutzig et al., 2022, p. 488). Third, they highlight the environmental effects, pointing to emissions, water consumption, and pollution resulting from the production of digital technologies, the operation of data centers and the growing stream of e-waste (Creutzig et al., 2022, pp. 489–490).

- In addition to the effects Creutzig et al. cover, we contend that an explicit understanding of the Transhumanist Anthropocene, as outlined above, points to the following new implications: The Transhumanist Anthropocene reinforces *a strong anthropocentrism*. Within it, the human becomes both the destabilizer of the planet and its potential savior through technological enhancement (Thomas, 2024). Just as nature was once the object of control, now human nature becomes the target as well. While visions of human control and technological solutions have been part of the Anthropocene debate from the very beginning (e.g., Crutzen, 2002), transhumanist digitalization now intensifies these dynamics. We are witnessing an amplification of what has been called a “strong anthropocentrism” (Biswas Mellamphy & Vangeest, 2024; Kopnina, 2019). Transhumanist visions are built on ideas of human supremacy, positioning the human as the central and only worthy actor of the Anthropocene (Biswas Mellamphy & Vangeest, 2024, p. 602). The alleged goal is „a new dawn for humankind. Science will make us faster, healthier, smarter, stronger, and morally if not perfect then perfectible.“ (Koch, 2020, p. 180) This is exemplified in the very

concrete aim of human enhancement and technological control over evolution. For instance, there are dubious debates around biotechnologically enhancing genes to tackle the climate crisis. The highly problematic idea here is that modifying genes could be used to improve the morality of the masses to improve their will for climate action (see Schnetker, 2022). Hence, transhumanist digitalization reinforces a strong anthropocentrism, focusing on the human as a central and quasi-divine actor, which leads us directly to the following further effect.

- The Transhumanist Anthropocene gives rise to a *techno-religion that sacralizes technology and the self in mutually reinforcing ways* (Latzer, 2025). Latzer (2025) argues that the reinterpretation of Enlightenment ideals by the transhumanist strand of digitalization threatens core democratic values of the prevailing understanding of Enlightenment such as critical reasoning, freedom, and autonomy. In Western societies, the prevailing Enlightenment sought “to replace religion as the primary source of knowledge and world explanation with rationalism and modern science” (Latzer, 2025, p. 2). Today, however, the transhumanist trajectory of digital transformation is generating “a new social form of techno-religion” (Latzer, 2025, p. 2). This techno-religion re-enchants society, endows technology with divine solutionist power, and generates transhumanist myths (Latzer, 2025, p. 2). In doing so, it endangers key values of human rights, such as freedom from external interference and the capacity for autonomous action (Latzer, 2025, p. 11; see also Coeckelbergh, 2022; Park, 2024; Scherer et al., 2023). In the Transhumanist Anthropocene, therefore, “a new (digital) mythology is emerging: this time one centered around a blind faith in the technical controllability of human evolution” (Latzer, 2025, p. 10). This development undermines prevailing Enlightenment ideals of autonomy and critical thought. Yet, this does not imply that we should blindly restore the Western-centric, anthropocentric model of the 18th century. Its recognized shortcomings, highlighted by ecocentric, posthuman, and post-colonial critiques, remain relevant. Nevertheless, some of the Enlightenment's key ideals are fundamental parts of the current democratic order, particularly in Anglophone and European contexts. Transhumanist digitalization erodes these values and, with this, the transhumanist Anthropocene is displacing traditions of critically interrogating technological development, including those offered by ecocentric, posthuman, and post-colonial thought. This directly connects to the next point.
- The Transhumanist Anthropocene *neglects other possible paths toward the future*. From this perspective on environmental governance and climate action is locked in on technological solutions and human control. The result is that alternative approaches

become secondary. Concretely, this means that ideas such as degrowth, sufficiency or critical post-human futures are largely neglected (e.g. Åsberg, 2024; Kopnina, 2019; Kwet, 2024; Loh, 2023). For instance, eco-centrism – understood as the idea that humans are an equal part of nature (Washington et al., 2017) – is not a relevant debate in the dominant narratives on how to tackle the climate crisis. On the contrary, as we have seen above, the Transhumanist Anthropocene reinforces the human/nature dichotomy.

- The Transhumanist Anthropocene *reduces the urgency of climate action*. As a result of the strong faith in human agency and techno-solutionism, transhumanist digitalization fosters a sense of serenity toward the climate crisis. As Clive Hamilton fittingly puts it: “We are witnessing ... a recovery ... of the Anthropocene as an event to be celebrated. ... A new breed of ‘eco-modernists’ welcomes the new epoch as ... a sign of our ability to transform and control, ... as an opportunity for humans to realize their full potential” (Hamilton, 2015, p. 41). The hope that technology will eventually save humanity – whether through human enhancement, the transcendental singularity, or simply by leaving the planet – obscures the urgency of the climate crisis in the present. Transhumanist promises shift societal and individual attention toward the future, masking the continued exploitation of non-human nature in the present. An example of this can be found in Orit Halpern’s text “Planetary Intelligence” (Halpern, 2021). She describes how companies in the Atacama desert now optimize their mining of rare earths (crucial resources needed to build digital technologies) with the help of AI. Through this optimization, the extraction of finite resources can supposedly be stretched into an infinite future. Where previously resource depletion and water scarcity imposed limits, technological advancements now create an illusion of boundless opportunities. These technological advancements make it increasingly “difficult to imagine running out of materials or suffering catastrophic events” (Halpern, 2021, p. 245). This shows how the strong belief in technological progress reduces the perceived urgency of addressing the climate crisis in the present. While, in reality, the current state of Earth’s systems calls for a radical departure from our current trajectory to avoid imminent disaster (IPCC, 2023).
- The Transhumanist Anthropocene *restricts the perspective on environmental governance*. It seems no longer possible to envision a world without technology, without human control over nature, and ultimately without human enhancement. As described above, this marks a shift in how the climate crisis is perceived. The Transhumanist Anthropocene introduces a specific standpoint from which environmental problems are addressed. From this position, the only imaginable paths forward involve employing technological solutions, creating a

super-human species, or, in its extreme form, eventually leaving the planet. The Transhumanist Anthropocene comes with an imperative to increase technological control over nature, such as with geoengineering, increased resource efficiency, or simply by “playing God at a planetary level” (Lynas, 2011 as cited in Ejsing, 2023, p. 248). For instance, transhumanist visions might accept higher resource and energy consumption of technologies today in order to achieve human enhancement and a supposedly better world in the long run. We can observe this locked-in perspective on techno-solutionism both in academic and policy debates. For instance, much research, especially in connection with the recent AI boom, focuses on technological solutions to environmental challenges (e.g., Cows et al., 2023; Floridi & Nobre, 2020; Rolnick et al., 2019). Similar perspectives can also be found in the latest IPCC (2023) report, where technological solutions are presented as a necessary and even essential part of climate mitigation paths. Seemingly, environmental governance without techno-solutionism is no longer imaginable. All of this cumulates in the last effect.

- The Transhumanist Anthropocene implies a *capitalist trajectory for the future*. It will likely intensify, or at least maintain, existing inequalities as well as the asymmetric distribution of climate effects. The digital transformation intensified by transhumanism is currently shaped by the interests of venture capital and big tech (Creutzig et al., 2022). Visions of human enhancement are primarily driven by powerful political and economic actors and the tech elite, the “prophets” of a transhumanist techno-religion within the Digital Trinity (Latzer, 2022; Thomas, 2024). As Koch (2020, p. 187) notes, “the promise of species advance quickly devolves to the advantage of those with access to enhancing technologies rather than a societal (or better, global) advance toward a better shared future.” This means that there will inevitably be tensions between those who control technological advances and those who may not even have access to them. The question of who can afford such technological enhancements becomes central. As Gebru and Torres (2024) argue, this is closely linked to questions of racism, ableism, and even eugenics. Despite claims that everyone could benefit equally, Gebru and Torres suggest that problematic eugenic ideas, such as a focus on “intelligence” and concerns about “dysgenics”, persist (2024, p. 9). This exclusive and discriminatory character is exemplified in the development of AGI. Leading transhumanists, for example, “have suggested that AGI should be developed by ‘some small vanguard of elite super-programmers and uber-scientists’” (Gebru & Torres, 2024, p. 17). This implies that a small elite defines what it means to be “human” for everyone else – while, as we have seen above, the notion of “the human” is problematic in itself (see

also Haraway, 2015). As Thomas observes, the result of these dynamics will be a new “technohuman condition” (Thomas, 2024, p. 126). In classic capitalist fashion, this will be a condition of closedness, reserved for those with socio-economic privilege.

6. The Future of the Transhumanist Anthropocene

What do these effects imply for the future of the Anthropocene? In the literature, this question is often framed under the headings of the “good”, “bad” or “ugly” Anthropocene (Dalby, 2016; Ejlsing, 2023). The *good Anthropocene* expresses the hope that humanity can overcome current environmental crises. The idea is often linked to ecomodernist thinking, suggesting that technological advances offer opportunities for a thriving human future (Dalby, 2016, p. 35; see also Ellis et al., 2024; Hamilton, 2016). The *bad Anthropocene* suggests that the future will be negative for most of humanity, as the sixth – now human-induced – extinction event on the planet is only about to accelerate (Dalby, 2016, p. 33). Climate science now points to a disastrous future with significant global temperature increases. Hence, many see the good Anthropocene as a delusion ignoring the likely suffering of the majority of humanity (Hamilton, 2014). The *ugly Anthropocene* focuses on the messiness of this new era, emphasizing the complex and conflictual struggles for economic and political hegemony (Dalby, 2016, pp. 34–36). Simon Dalby, for instance, argues that neither the “good” nor the “bad” narratives fully capture reality, and the “ugly” will likely be decisive in shaping the future (2016, p. 35).

In a similar taxonomy, Creutzig et al. outline three possible scenarios for the future of the Anthropocene (2022). The first describes a path toward *planetary destabilization*, aligning with the bad Anthropocene, which reflects our current trajectory. The second highlights a *green but inhumane* path, broadly corresponding to the ugly Anthropocene, focusing on the potential loss of agency and democratic values. The third is a path of *deliberate action for the good*, aligning with the good Anthropocene and describing the best possible outcome with global efforts toward immediate and stark environmental governance (Creutzig et al., 2022, p. 492). Creutzig et al. contend that while planetary destabilization currently appears to be the most likely scenario, there remains room to influence this outcome through collective global efforts.

We argue that with the rise of the Transhumanist Anthropocene, these possibilities to positively influence the future might increasingly be closing. Acknowledging the processes and effects of the Transhumanist Anthropocene makes clear the dire future that lies ahead. As we saw above, once the transhumanist influence gains momentum, we witness a reinforcement of strong anthropocentrism, the strengthening of capitalist structures, the emergence of new inequalities, and the threatening of human freedom and autonomy. At the same time, the

urgency of climate action will be neglected, and environmental governance will increasingly become a techno-solutionist endeavor.

While this development is not (yet) fully realized, and there is no explicit public commitment to transhumanism, we can however already observe indicators of a growing transhumanist influence. This is exemplified, for instance within governments such as with the involvement of Elon Musk in the Trump administration in 2025 (Mühlhoff, 2025a, 2025b). One notable example is the administration's plan to prohibit the federal states from passing their own AI regulation for the next ten year, arguing that such regulations would inhibit innovation (Bhuiyan, 2025). This clearly reflects a move toward the transhumanist vision of an AGI, a super-human intelligence, or at least of AI as the ultimate solution to major societal challenges.

As the transhumanist movement becomes increasingly influential, the trajectory of the Anthropocene will change significantly. This is particularly visible in societal responses to the climate crisis. Versions of transhumanist ideas are already present in influential policy papers. For instance, the latest IPCC report includes major commitments to strong techno-solutionism. The modelled mitigation pathways, which aim to limit global warming to below 2°C, now necessarily rely on carbon dioxide removal technologies (IPCC, 2023). Yet, these technologies and their impacts are still largely unknown, and some researchers have compared their use to literal gambling (Fulvi & Wodak, 2024). This makes it seem as if techno-fixes are our last hope: “gambling on their [carbon removal technologies] efficacy appears to be our last-ditch option” (Fulvi & Wodak, 2024, p. 300). Such statements reflect the extent to which techno-religious, solutionist narratives are already embedded in even the most prestigious global institutions such as the IPCC.

A similar dynamic can be seen in the debate around solar geoengineering – “shooting aerosol particles into the stratosphere to block some of the incoming sunlight and thereby cool the Earth” (Malm, 2022, p. 4). Paul Crutzen, the author who coined the term *Anthropocene*, – introduced this idea as a last resort if greenhouse gas emission were not sufficiently reduced (Crutzen, 2006). Solar geoengineering is thus no longer a distant possibility, but a very tangible techno-fix. In 2019, “723 climate negotiators and scientists, working with the UNFCCC and IPCC” (the major global organizations involved in climate policies), were polled on their opinion on using solar geoengineering as an emergency solution: “52 per cent approved of deployment” (Malm, 2022, p. 34). This demonstrates, that the religion-like faith in enhanced human capacity to control the climate crisis through technology is already present in mainstream debates and policy proposals.

Thus, while the Transhumanist Anthropocene does not constitute an entirely new epoch but rather a specific dimension, it critically outlines a distinct trajectory for our future. It draws attention to a new dimension of this epoch's dynamics: the reinforced anthropocentrism, techno-solutionism, and the imperative of human enhancement. Whether the formal recognition of a Transhumanist Anthropocene is warranted remains an open question, and we explicitly put this notion up for debate. Yet, with this concept, we point to an increasingly dominant trajectory shaping the future of the Anthropocene, which deserves heightened awareness in academic and political discourse.

We believe that, in contrast to the scenarios of the good (deliberate action for the good), the bad (planetary destabilization), and the ugly (green but inhumane), the Transhumanist Anthropocene tells a different story. Its ambitions resemble a high-stakes and dangerous bet on “a story of epic future returns” (Thomas, 2024, p. 215). This bet profoundly influences the (im)possibility of future paths. It appears increasingly unlikely that democratic control or oversight can be exercised over the processes unfolding as a result of transhumanist digitalization. The promises of transhumanism largely function as a mystical smokescreen. The question about the future of the Anthropocene is no longer one of good, bad or ugly. Rather, as we have shown above, the future is becoming increasingly narrow and harder to control.

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