

# Education as Performative Contradiction: Limits (And Possibilities) of Subjectification in the Anthropocene

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**Abstract.** An environmentally reoriented educational policy is oftentimes regarded as the premier locus for a societal response to the climate crisis. As observed by Gough (2021), a general belief shared among both policy makers and academics is a consensus that education needs to be perceived less as an instrument for securing sociocultural reproduction and transmission of existing knowledge and more as a catalyst for social and cultural change. The aim of this article is a critical investigation into possibilities and obstacles for education to achieve such change, given the condition of ‘ontological insecurity’ (Hamilton, 2017) that the Anthropocene implies. It is divided into three parts: 1) following Chakrabarty, I identify the politico-aesthetic challenges posed by anthropogenic climate change and formulate their relevance as an educational ordeal; 2) I enquire about the challenges and possibilities for environmental education to foster societal change and conclude that, while a general policy change toward sustainable education may be insufficient, education remains a premier site where negotiations could take place between the deep-seated beliefs about subjectivity and an open anticipation of unforeseen modes of agency; 3) after providing a comparative analysis of classical humanist *Bildung* and post-humanist accounts of subjectification in education, I conclude that these approaches constitute a performative contradiction, which allows the experiential challenges of the Anthropocene to be approached in terms of a reimagined aesthetic education thematized as a critique of (human) capacity.

**Keywords:** education, ontological insecurity, environmental and sustainable education, performative contradiction, subjectification.

## Ugdymas kaip performatyvi prieštara: subjektyvumo ribotumai (ir galimybės) Antropocene

**Santrauka.** Aplinkodairiniu požiūriu orientuota švietimo politika dažnai laikoma bene pagrindine visuomenės atsako į pasaulinę klimato krizę priemone. Kaip pastebi Gough (2021), tiek politikos formuotojai, tiek mokslininkai laikosi bendros nuomonės, kad į švietimą reikia žiūrėti ne tiek kaip į priemonę, užtikrinančią sociokultūrinę reprodukciją ir esamų žinių perdavimą, o veikiau kaip į socialinių ir kultūrinių pokyčių katalizatorių. Šiame straipsnyje siekiama kritiškai įvertinti galimybes ir kliūtis tokiems pokyčiams įvykti švietimo srityje, atsižvelgiant į „ontolo-

This publication is part of Vilnius University research project “Theory of Milieu: Philosophical Premises of Environmental Education.” This project has received funding from the Research Council of Lithuania (LMTLT), project No. S-MIP-22-63.

Straipsnis parengtas vykdant projektą „The Theory of Milieu: S-MIP-22-63“, kurį finansavo Lietuvos mokslo taryba (LMT).

**Received:** 19/09/2024. **Accepted:** 11/11/2024

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ginio nesaugumo“ (Hamilton, 2017) būklę, kurią suponuoja antropoceno samprata. Tekstas suskirstytas į tris dalis: 1) sekant Chakrabarty, išryškinamos ir susiejamos dėl antropogeninės klimato kaitos kylančios politinės ir estetiškos problemos bei svarstoma jų reikšmė bei edukacijai metami iššūkiai; 2) Antroje dalyje vertinamos edukacinio atsako į šiuos iššūkius galimybės bei jų efektyvumas. Daroma išvada, kad plataus masto programiniai pokyčiai dažnai yra priešaringi ir nepakankami, tačiau edukacija išlieka svarbiausia terpe deryboms tarp giliai įsišaknijusių įsitikinimų apie subjektyvumą ir naujų, dar nežinomų santykiavimo su aplinka formų; 3) trečiajame skyriuje svarstoma galimybės naujai edukacinės subjektifikacijos interpretacijai antropoceno sąlygomis. Pateikęs klasikinio humanistinio *Bildung* ir posthumanistinio subjektyvacijos švietimo srityje sampratų lyginamąją analizę, darau išvadą, kad šie požiūriai sudaro performatyvią priešpriešą, kuri leidžia į patirtines antropoceno problemas pažvelgti naujai iš estetiškos edukacijos (tematizuotos kaip (žmogaus) gebos kritika) perspektyvos.

**Pagrindiniai žodžiai:** ugdymas, ontologinis nesaugumas, aplinkodairinis ir tvarus ugdymas, performatyvi priešara, subjektyvumas.

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## 1. Anthropocene's Experiential Problem is an Educational Problem

The observed changes in Earth's biosphere – a long neglected result of human economic development – have mandated debates about a planetary transition into a new geological era, one which Paul J. Crutzen and Eugene F. Stoermer influentially dubbed the ‘Anthropocene’ (Crutzen & Stoermer, 2021, p. 20). Since its initial inception, the latter term has rapidly spread from specialized discussions within the sphere of natural sciences towards becoming a major discursive backdrop for interdisciplinary polemics in social sciences, humanities and the arts (see Brauch, 2021, for a detailed topology of the term). The heated debate about the meaning and implications of the term is, perhaps, unsurprising, given that a definitive description of this condition has proven to be elusive both in terms of science and politics. For one, any attempt at a definition of the Anthropocene necessarily involves simultaneously conjoining seemingly irreconcilable scales of human history and ‘deep’ geological time: the workings of societal systems and planetary cycles. Such incompatibility of discursive frameworks results in a dissonance that puts into question any privileged treatment of human development in the context of planetary life and underscores pressing issues of environmental, social and historical justice. As Simon L. Lewis & Mark A. Maslin have observed, whatever the narrative deployed about the origins or cause of the Anthropocene, it “will affect the stories people construct about the ongoing development of human societies” (Lewis & Maslin, 2015, p. 178). Hence, Frank P. Incropera has famously dubbed anthropogenic climate change “a prototypical wicked problem” (Incropera, 2015, p. xxii), permeating all aspects of societal strata for which “in pluralistic societies with diverse interests and traditions there is seldom consensus on the nature of the problem, much less its solution” (ibid., p. xxi).

This ‘wickedness’ stems from anthropogenic climate change being neither simply a threat posed to societies from ‘the outside’, nor a problem waiting for its immanent solution. To a degree, the Anthropocene could be characterized as a state of crisis in human self-understanding as it lays bare the contradictions inherent to the narrative of liberatory modernization among the backdrop of an indifferent ‘nature’ – a framework dubbed by Bruno Latour as our “modern constitution” (Latour, 1993, p. 13). As much as the Anthropocene is a multifaceted phenomenon enmeshing ‘all humanity’ within networks made up of a plethora of non-human actors agenting on different scales, it exceeds any

readily available epistemo-political frameworks and challenges our ideas of freedom and rational autonomy. As Dipesh Chakrabarty put it:

Whatever our socioeconomic and technological choices, whatever the rights we wish to celebrate as our freedom, we cannot afford to destabilize conditions <...> that work like boundary parameters of human existence. These parameters are independent of capitalism or socialism. (Chakrabarty, 2021, p. 41)

Chakrabarty highlights that the contradictory character of the Anthropocene translates not only into pressing ecological, but also societal issues of intergenerational and transnational justice (Chakrabarty, 2021, p. 56). Being wicked problems themselves, they complicate, if not outright contradict, the prospect of a global unified ‘subject’ capable of a collective response to planetary challenges. Even more troubling is that whatever this response might look like, it would have to be enacted against a backdrop of profound ontological insecurity, resulting from “spatiotemporal uncertainty of not knowing which dangers to confront, which to ignore, and what effect our behavior today ultimately creates in the future” (Hamilton, 2017, p. 586). The dissonance between these spatiotemporal scales obstructs not only the possibility to make sense of our experiences related to the Anthropocene but bars access to a positive understanding of the totality of the problem as well as obscures our role in relation to it on an individual and social level. The forces, agencies and networks at play here are often incongruous with the spectrum of what can be experienced or properly understood by humans, despite some having a shared point of origin with them. The condition that we find ourselves in, thus, upsets the certainty of our everyday categories of experience. According to Chakrabarty,

the mode of being in which humans collectively may act as a geological force is not the mode of being in which humans—individually and collectively—can become conscious of being such a force. (Chakrabarty, 2021, p. 185)

Hence, even before they can be rendered meaningfully as problems of politics, changes to life-supporting planetary systems are revealed as phenomenological and aesthetic challenges that prompt us to reimagine our relationship with planetary life-systems:

...we have to begin to think of humanity as not only a planetwide diaspora of a biological species but also of this diaspora as constituting a minority form of life, the mainstay of biological life on the planet being microbial. We will have to make our way toward an order that presently seems unimaginable: an order that is not necessarily human dominant. (Chakrabarty, 2021, p. 203)

If so, then any societal ‘response’ to anthropogenic climate change is to begin by imagining, thinking and enacting this ‘presently unimaginable’ order of things *both* from within and without the bounds of what can presently be understood as our ‘modern constitution’: to reconsider our regulative ideas and habits of thought. This includes our habitual use of concepts like ‘reason’, ‘knowledge’, ‘autonomy’ and the plausibility of prevailing political and societal aspirations. As much as we are required to critically understand the inner workings, causes and implications of the Anthropocene to our

communal life, we must also recognize that there are and will be aspects of it that limit this understanding. The challenge revolves around reconsidering our agency in a world where ideals of rational autonomy and freedom, especially as mediated by vectors of economic development and political power, are revealed to be at least in part inadequate for addressing ontological insecurity brought about by radical alterity and incomprehensibility of more-than-human networks operating on planetary scale. That being so, more than anything else, the Anthropocene poses an educational challenge as well as a challenge for education to an extent that, as Nathan Snaza put it, “every theory of political action that requires a shift away from how things operate in the present is also, and must need be, at least implicitly a pedagogy” (Snaza, 2018, p. 341).

Given the perspectival shift that the ontological uncertainty demands, the set of educational questions quickly gets exceedingly large in number and also in scope. Akin to the ambiguous societal challenges described above, the ordeal that education and pedagogy is faced with envelops not only the politico-pragmatic question of “what ought to be done?”, but also experiential-aesthetic questions of how one might perceive and situate oneself individually and collectively in ways unprecedented and unanticipated by established societal and cultural formations. In this light, the question posed by David A. Greenwood has an increasingly pressing ring to it: “how do we step back and consider the role of education on a fast-changing planet that is very different from the one that even our recent ancestors inhabited?” (Greenwood, 2014, 279).

## **2. Future in/for Education: Challenges and an Opportunity**

In the West, an environmentally reoriented educational policy is oftentimes regarded as *the* response to the crisis of the anthropogenic climate. To give just one example, a UNESCO program issued in 2017 dubbed environmental education as “the most powerful element in preparing societies for the global challenges that climate change brings” (UNESCO, 2017, p. 2). In 2020, it reiterated the urgency for reforms further in its roadmap for *Education for Sustainable Development for 2030*, which

...aims to review the purposes and values that underpin education and reorient all levels of education and learning to contribute to sustainable development and to strengthen education and learning in all activities that promote sustainable development. Given the fact there is very little time left to achieve the SDGs, it is crucial to accelerate ESD in the decade of action to deliver the Goals. (UNESCO 2020, p. 12)

This perceived urgency has prompted discussions among educationalists and today constitutes one of the main currents of debates among philosophers, practitioners, theorists and policy makers in the field. Enthusiasm for reform is evident and, while already enrooted in the premise of environmental education (Hart & Nolan, 1999, p. 42; Gough, 2013, p. 16), it provides for new incentives to reconsider the role that education ought to undertake in a time of crisis. As observed by Annette Gough (2021), a general belief shared among both policy makers and academics is a consensus that education needs to be perceived less as an instrument for securing sociocultural reproduction and transmis-

sion of existing knowledge and more as a catalyst for social and cultural change. Education in the Anthropocene, as Gough stresses:

<...> needs to be socially reconstructive and transformative – business as usual and social reproduction in a neo-liberal and neo-conservative agenda will not work as society and our environment has changed so much. Many of the elements of that education have surfaced previously – in interventions such as socially critical schools and environmental education – but we need these and more as we confront the future. (Gough, 2021)

For some, the Anthropocene seems to suggest a new frame of reference for reimagining the public purpose of education in general. For instance, Reinhold Leinfelder views the Anthropocene as “a conceptual framework, that could provide a solid basis for envisioning a sustainable human presence on Earth in which humans would no longer be “invaders” but rather “participants” in shaping the natural environment” (Leinfelder, 2013, p. 9). According to his idea, furthering scientific progress and technological appropriation in an educational context could tame the Anthropocene and redefine the human as an integral part of a technologically reconstructed (neo)nature (ibid., p. 26). For Mitchell Thomashow, “the perceptual challenge of global environmental change is an unprecedented and exhilarating educational opportunity” for a place-based environmental education (Thomashow, 2002, p. 13), whereas, for Jane Gilbert, the Anthropocene “could be the “crisis to end all crises”, the catalyst needed to provoke real change” (Gilbert, 2016, p. 3). Different as they may be, such approaches tend to imply that, given enough innovation in science and governance, disaster can be avoided and “the future does not have to be bleak” (Bennett et al., 2016, p. 441).

For the less optimistic, however, the Anthropocene mandates a critical scrutiny of presuppositions ingrained in educational institutions and their humanist legacy. Thus, Stefan Herbrechter advocates for a critical posthumanist project centered around “un-learning to be human” – a pedagogy that seeks to deconstruct the “anthropological machine” (Agamben, 2003) that reproduces what it seeks to overcome by repression and is critical to “technological determinism with its emphasis on artificial intelligence and its focus on technological solutions, as well as the instrumentalization of education as such” (Herbrechter, 2023, p. 223; p. 216). Accordingly, Nathan Snaza (2013) proposes a project of *Bewildering Education* which emphasizes the need to question the very foundations of education stemming from the anthropocentric ideals of the Enlightenment: universal and autonomous (human) subjectivity, belief in technological progress and an instrumental understanding of rationality. In a similar vein, Helena Pedersen (2010) questions specieist definitions ingrained in educational policy, while Richard Kahn (2011) considers this issue from an animal studies perspective and proposes a critical eco-pedagogical approach to include non-human perspectives in the curriculum.

Despite a wide spectrum of ideas from educators and rhetoric of urgency from legislators, many of the more radical suggestions are being left on the fringes of institutional policy making. As noted by Beier, instead of provoking qualitative societal change, hastily ushered education reforms tend to be “based on postures of adaptation, maintenance and, ultimately, survival” (Beier, 2017, p. 284) of the prevailing *status quo* and followed

by “the expansion of “there is no alternative” rhetoric” (2017, p. 283). Similarly, Richard Kahn has doubted if such generalized reforms would not end up being “a pedagogical seduction developed by and for big business-as-usual in the name of combating social and ecological catastrophes” (Kahn, 2010, p. 17).

Nevertheless, employing the Anthropocene as a discursive framework for legitimizing reforms carries significant risks. When applied to education, the figure of ‘crisis’, as recognized by Apple (1992), Foster (2011), Slater (2015), Nordin (2014) among others, may serve less for facilitating social transformation, but rather for ensuring the reproduction of preexisting societal and economic norms. A common thread of concern is that ecological crisis may serve as a narrative to offload responsibility to individuals, social and educational institutions while postponing solutions of current problems to future generations and promoting means of recovery in line with the agenda of neoliberal economic development. Such reforms tend to view education simultaneously as the site where the structural crisis is taken to have its historical point of origin (e.g., irresponsible consumption habits, lack of environmental awareness, low political and technological literacy, etc.) as well as the site where solutions for its consequences are to be implemented from the outside (e.g., via new online education technologies, cooperation between the public and private sectors, etc.). Such cyclical neoliberal logic may escalate the anthropocenic ontological insecurity even further, resulting in what Graham B. Slater refers to as a “social ontology of crisis” which

...comes to subsume ontological categories like time, space, possibility, and experience into the penumbra of crisis. The social terrain of neoliberalism is articulated in increasingly precarious terms, thus producing increasingly precarious subjectivities. (Slater, 2015, p. 7)

Thus, if response to a state of crisis is taken as a framework for educational policies, it risks 1) foreclosing the development of a level of subjective autonomy and political imagination needed for actual societal change on behalf of the students, and 2) delegitimizing education as a site where the students may get to know the world they are encountering, rather than being forced to react to it. By offloading the responsibility for the current crisis to teachers and students as if it was a future credit, such a framework threatens to arrest students’ freedom to assess and imagine their own future independently of state and market interests and has the effect of disincentivizing responsibility for it once their time comes to do so. For example, while considering how the notion of ‘future’ is articulated in the campaign of “Education for Sustainable Development,” Anne-Katrin Holfelder highlighted the discontinuity between the idea that a sustainable future can be achieved if the people are properly educated, and an enrooted public belief that the future is non-shapeable and pre-determined. Throughout her argument, she shows how both common educational approaches as well as those geared toward sustainability may imply and further an understanding of future that is foreclosed beyond the scope of meaningful political action. Holfelder writes:

In the first case, future is not understood as open and left to the next generation. Education serves rather as an instrument for attaining some specified objective. In the second case, future

is not considered as the result of human actions, it is reduced to being just something we react to. In both cases, education is a means, a qualification which can be reached. And in both cases, the understanding of education contradicts the importance we attach to self-determination and openness. (Holfelder, 2019, p. 944)

Education is confronted by serious dilemmas: how can it be transformative if, by posing solutions in advance, be they of economic or ecological nature, it risks to programmatically disassociate students from their emphatic relation with their future as something open for them to determine? How should we even understand futurity in an educational context overshadowed by potentially irreversible and unpredictable planetary changes? What are education's responsibilities in fostering students' capacity to imagine a future in a state of ontological insecurity. For Holfelder, "it is questionable whether the mere promise of a theoretical possibility for change is sufficient motivation for transforming a pessimistic society" (Holfelder, 2019, p. 950).

It is indeed questionable if top-down policy reforms blanketed on public education have the power to usher changes towards societal forms that "presently seem unimaginable." Perhaps, paradoxically, a better start for coping with these challenges would be a recognition that it is unlikely that we can educate ourselves towards a desired future envisioned from today's perspective. Durkheim was famously skeptical about the powers of education to change society, and his words may have some ring here: "[e]ven if through some incomprehensible miracle a pedagogical system were constituted in opposition to the social system," he wrote, "this very antagonism would rob it of all effect" (Durkheim, 2002, p. 340).

If an educational reform is insufficient to facilitate a change in how humans relate to their environments, is the whole ordeal irrelevant? In her essay *The Crisis in Education*, Hannah Arendt engaged with education's role in the process of the renewal of society. For Arendt, education is continuously caught in a balancing act between past and present, which ultimately involves both claiming the world for what it is as well as letting go of it for the sake of the new generation: "[e]ducation is the point at which we decide whether we love the world enough to assume responsibility for it and by the same token save it from that ruin which, except for renewal, except for the coming of the new and young, would be inevitable" (Arendt, 2006, p. 196). We may note that while education is complicit in the process of renewal, it ultimately is not the source from which it stems. The educator's role is not to provide a vision of the future for the students to participate in, but rather to take responsibility for the world as it exists – to secure the possibility for the new that the students bring with themselves to come to pass. Arendt explicitly warns against foreclosing it:

But even the children one wishes to educate to be citizens of a utopian morrow are actually denied their own future role in the body politic, for, from the standpoint of the new ones, whatever new the adult world may propose is necessarily older than they themselves. (Arendt, 2006, p. 177)

According to Arendt, at the center of the process of renewal is a specific relation between the one teaching, and the one taught. On the side of the teacher, the relation-

ship is defined as responsibility taken, on the one hand, for the world as it exists, and on the other – for keeping open the possibility for the students to inherit and question the world and their relations within it. For Arendt, “educators here stand in relation to the young as representatives of a world for which they must assume responsibility although they themselves did not make it, and even though they may, secretly or openly, wish it were other than it is” (Arendt, 2006, p. 189). Far from conformist, such responsibility translates into authority if the world is not stripped from its complexity by offering a predefined narrative, allowing the student to experience it equally as welcoming and resisting her needs. As noted by Toscano and Quay:

If intergenerational renewal is at all viable, according to Arendt, then the young must not simply be choosing amongst already given options (including scientifically informed visions of the past, present and the future), but must courageously and imaginatively bring new ways of being into existence. (Toscano & Quay, 2023, p. 1145)

If so, then the nexus of the educational challenges revolves around reimagining the possibilities of subjectification under the conditions of anthropocenic ontological insecurity. Key here is getting to terms with the fact that, under these conditions, ideas historically associated with the subject formation in education – such as reason, autonomy, and freedom – have become unstable and are unable to retain a positive normative value under pressure from more-than-human actors and planetary forces involved. If these ideas, constitutive for our understanding of liberal public education, are imported uncritically, then “we run the risk of enforcing a momentary ethics temporarily satisfied through contained activity and manipulation” (Sonu & Snaza, 2015, p. 264). Conversely, their critical scrutiny may provide an opportunity. As observed by Carry Campbell, “educational theory becomes of renewed significance as a field of discourse as it allows us to pose critical questions and actions that reframe and reinterpret questions about freedom and agency in the face of the “limits and limitations” <...> imposed on us through the Anthropocene” (Campbell, 2024, p. 93). Education is confronted with ambiguous experiences of alterity and is deprived of any shelter of a ready-made normative framework that would otherwise help to dispel these ambiguities away. Yet, there is a real possibility that, via careful intervention, these experiences of precarity could become a point of departure towards a human agency reimagined and performed in ways yet unforeseen. This possibility lies in education’s unique role as a middle ground for change – a site where difficult and risky negotiations could take place between deep-seated beliefs about subjectivity and an open anticipation of new, unforeseen modes of agency. These negotiations require us to embrace complexity and limitations as qualifiers for a redefinition of our ‘guiding metaphors’ (Greenwood, 2014, p. 283) in order to accommodate the associative milieus in which we find ourselves.

### **3. Performative Contradiction: Limits (And Possibilities) of Subjectification**

If we contend, as argued above, that a reconsideration of subjectification is a premier educational task under given circumstances, we are still left with daunting questions



regarding possible parameters that could inform such an endeavor. Given its loose definition, talk about ‘subjectification’ as an educational idea might appear akin to conjuring an ur-concept which, while being genetically constitutive for education, can just as well be watered down and become vague and even redundant. Although it is not possible to give an elaborate conceptual genealogy of the idea of educational subjectification here, it is appropriate to frame our discussion by critically outlining the significance of its classical variant, particularly the German humanist *Bildung*.

Gaining traction in the 18<sup>th</sup> century in the German idealist tradition, and notably elaborated as an educational idea by Wilhelm von Humboldt (2017), *Bildung* is widely appropriated internationally and remains one of the most influential educational concepts providing the basis for thinking education as a program for social transformation through individual edification. In fact, the weight of this idea is so intertwined with strands of democratic, liberal and critical education (see, for example, Lovlie & Standish, 2002, for a detailed analysis) that, according to Rebekka Horlacher, it:

appears in the writings of almost every philosopher of education whose thought is not narrowly restricted by utilitarian, rationalist, or empiricist convictions, for *Bildung* is encountered in not only every process of education and formation but also every process of human development, growth, and aging. (Horlacher, 2015, p. 2)

The idea of *Bildung*, thus, provides a general normative frame for thinking the meaning and purpose of education and so, if we are to reconsider how ‘subjectification’ could look like under conditions of ontological insecurity, we need to critically investigate its conceptual import.

Marina F. Bykova explains that *Bildung* combines two different ideas which are reflected in the dual etymology of the concept expressed by “the two pairs of Latin words: *forma—formatio* and *imago—imitatio*” (Bykova 2016, p. 137). While the former pair implies the process of giving form to a concrete object, the latter pair expresses the relationship between an original image and its reproduction. As Bykova clarifies:

It should be understood not only as the idea of formation or shaping the whole into a living whole, so that it is organized according to rules proper to life, in particular to a physical life. It also includes an idea of forming by a model, which should be reproduced and imitated in a certain type of form that can closely match the valuable *Vorbild*. (ibid.)

Michaela Vogt and Till Neuhaus elaborate on this dual character of the term by distinguishing between its stable core and a historically changing peripheral which they describe respectively as its ‘superstrate’ and ‘substrate’ (Vogt & Neuhaus, 2021, p. 163). The former, as they explain, consists of a bottom-up process of combining the Greek ideals of theoretical (*arête*) and practical (*phronesis*) wisdom via the individual’s capacity for independent action as the basis for altering the community or the state (ibid., p. 162). The substrate correlates as the shifting balance between *Bildung* is understood as “the search for truth” and *Bildung* “as a means for an individual’s desired end” (ibid., p. 162). It follows that the concept’s mutability is driven by historically changing views on

the interlinked dimensions of normativity and critique: either its normative character is weakened, or efforts are made to re-emphasize its universal and ideal aspirations. This tension has allowed *Bildung* to historically lend itself to different educational agendas while retaining its own conceptual coherence. It can be perceived as both a normalizing framework for reaffirming the universal and cosmopolitan character of education, while also being employed as a critical concept aimed at resistance to education's bureaucratization and reduction to quantitative methodologies or external demands. Due to its mobility, Horlacher described *Bildung* as a 'fuzzy' concept (Horlacher, 2014, p. 42). Being historically adaptable, it grounds an idea of educational purpose and is critical towards practices based on purely empirical data (Horlacher, 2015, p. 127). This dynamic tension between normative and critical parameters of *Bildung* is hinged on a commitment to universal validity of discursive rationality. Reason here serves as the cosmopolitan ideal according to which the individual is to be formed, as well as the aspired goal that is to be internalized and actualized as its own measure applied to the experiencing of the world. Conceived as such, *Bildung* remains essential to conceptions of rational autonomy and the process of humanization via edification, as it provides the groundwork for a modern conception of the subject as capable of acting under self-given 'law' (Masschelein & Ricken, 2003, p. 143).

Despite its astounding flexibility as both a critical and a normative concept, *Bildung* might be also seen as a victim of its own success. As Roger Barnett observed, employing *Bildung* as a critical ideal may serve as an 'avoidance strategy' aimed at evading important matters related to pressing challenges and possible alternatives to the current state of education (Barnett, 2024, p. 51). Often, he writes, it is "used defensively, to protect the citadel of true education, assumed to have been present in the past" (2024, p. 54). A more general line of reproval was voiced by Masschelein and Ricken, asserting that, even in its most critical flavors, *Bildung* presupposes in advance an "an understanding of what is human (an understanding of humanity) and how we can attain it" (Masschelein & Ricken, 2003, p. 142). It is this preconception – an immanent teleology towards a positive identity of what a human ought to be – that proved troublesome for educators in search of new possibilities of subjectification. For instance, Nathan Snaza reminds us that

...the production of the "human" and its "proper" also produces, in the same movement or machination, the "constitutive outside" of the human: the inhuman, the animal, the native, the slave, the machine, etc. There could be no "human" without these others. (Snaza, 2013, p. 46)

Snaza observes that the identity of the 'human' as it is employed in education is reproduced by projecting a categorical alterity onto non-human others as to reinforce and secure its role as a central point of reference. In effect, such subjectification conceptually and experientially impedes understanding of those not identical to its ideal – obscuring or rendering abstract the different modes of being, acting and sense-making exercised by non-human agents and forces, but also the 'other' humans, those not partaking in the same paths of cultural and economic development. Assuming that the autonomy of subjectivity is decentered amidst the heterogenous forces at play in processes of climate

change, *Bildung* may as well lose its legitimacy as a mode of subjectification once its normative superstrate is compromised by this newfound insecurity. In that case, an altogether different fabulation of subjectification may be needed.

In search of alternatives, one might be tempted to steer towards a growing literature proposing a variety of post-humanist approaches to subjectification (see Taylor, 2017; Snaza & Weaver, 2015; Pedersen, 2010b; Waterman-Evans, 2022; Herbrechter, 2018; Hilli & Tigerstedt, 2020, among others). It must be noted, however, that ‘posthumanism’ is often employed as an umbrella term denoting a broad and non-homogenous field of research which offers diverse and possibly incompatible perspectives to theorizing agency. This multiplicity leads to posthumanism being thematized very broadly when appropriated to education, with its potential being understood primarily as an instrument for critique (Snaza, 2015, 5). Generally, posthumanism questions the stability of identities, boundaries and power relations associated with human subjectivity. “In the posthuman view” – writes Hayles – “conscious agency has never been ‘in control’ ” (Hayles, 1999, p. 288). According to her, a grounding subjective rational agency, the spontaneity of the *I*, the control of nature via means of science and technology are delusional in keeping us blind to aspects of the world that cannot be subsumed under these notions. By highlighting dogmatic aspects of rationality, she calls for a paradigmatic shift from the couplings of presence/absence, teleology/causality to a cybernetics-inspired processual logic of emergent patterns/randomness, thus signaling:

<...> the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice. (Hayles, 1999, p. 286)

In contrast to the supposedly ‘closed’ subjectivity of *Bildung*, a ‘posthuman’ agency in educational context is sometimes elaborated as a response to an “overwhelming subject fatigue” (Pedersen & Pini, 2017, p. 1051). It is portrayed as open and relational, performative, defying a final determination – an open-ended loop of interaction, rather than a stable starting point of knowledge. It is important to stress, however, that such ‘decentering’ of subjectivity can just as well prove problematic if imported in the fold of education wholesale.

While approaches informed by the actor-network theory, cybernetics and symplectic relationality lend themselves well for an expanded understanding of complex interconnectedness and performativity of dissimilar phenomena, they can also result in a situation where “people don’t make sense; the world makes sense” (St. Pierre, 2017, p. 6). Put otherwise, they risk to downplay experiences of difference inherent to subjective individuation all too easily, rendering them difficult to grasp, treated merely provisionally as an “abstract or general principle” (Gough, 2004, p. 4). Hence, there is an immense difficulty in a *general application* of such approaches as frameworks for educational subjectification as they tend to require “a fundamental alienation of our existing conceptions and accounts of the world” (Häkli, 2018, p. 4). Bereft of any normative framework

of subjectivity, it proves difficult to address questions of ethics as well as explore the possibilities of intentional political action (Swyngedouw & Ernstson, 2018) that are crucial for any educational approach that aims to take the contradictory implications of the Anthropocene seriously. Therefore, Snaza and Weaver, foremost advocates of the post-human perspective to education, recognize that these approaches cannot (as of yet) serve either as a general theory of educational subjectification, or as its practical program:

given our saturation in humanism, it is not even remotely possible at the present moment to conceptually or practically lay out a theory of posthumanist education or outline the contours of a posthumanist pedagogy. (Snaza, 2015, p. 3)

It becomes clear that the search for a reimagined approach to subjectification in the face of a looming ontological insecurity lends itself to no easy, predetermined solutions. Apparently, when examined together, the different approaches to subjectification outlined above seem to relate as if in a parallax view: while both are required to fully grasp the problem at hand, they each articulate a different perspective on the matter, while at least partially disqualifying and obscuring the view of one another in the process. However, I would like to propose that, instead of a dead end, the very incommensurability of these approaches can be instructive – it reveals how, in the aesthetic challenges of the Anthropocene, as discussed in the first part of this essay, education can play a crucial role. The question of subjectification appears here to be hinging on a performative contradiction related to the very limitations and differences of these approaches by foregrounding the parameters of the limitations of our experience in terms of agency and relationality. While it demonstrates that neither the ‘closed’ identity of the subject of *Bildung*, nor the ‘open’ agential relationality are sufficient to fully grasp and respond to experiential challenges we are being confronted with, the limitations and the experiential limits they communicate can be conceived as precisely the promising locus where negotiations for a new understanding of subjectification could be articulated critically.

More exactly, subjectification in the face of this contradiction appears to be neither a teleological formation towards self-identity, nor the dissolution of this identity into networks of distributed agencies. Rather, it can be defined in emphatic terms as an aesthetic capacity to recognize, respond and balance within limitations imposed by human and non-human others, or in the words of Gert Biesta, it can be defined along the lines of ‘qualified’ freedom. He elaborates:

...at one end of the spectrum we encounter the risk of world-destruction, at the other end we find the existential risk of self-destruction: when confronted with this double-bind, out of frustration, we step back and withdraw ourselves from the situation. This suggests that the existential challenge — which is lifelong — is that of trying to stay in the difficult “middle ground” in between world-destruction and self-destruction. (Biesta, 2020, p. 97)

How can this balance be achieved? If “being a subject” is not understood in terms of a substantial identity but rather is to be continually performed in an ongoing parley between the projected needs and capacities of the self and the pushback of its milieu,

then the way we conceive openness and closure of subjectivity need not be categorically separated but can be put in productive tension. At stake is an aesthetic rearticulation of the very meaning of limit, the closure of subjectivity, as here its identity is perpetually reinforced, as well as challenged, by its participation with and response to experiences of difference brought about by the world. In this context, it is apt to quote Cary Wolfe:

the very thing that separates us from the world connects us to the world, and self-referential, autopoietic closure, far from indicating a kind of solipsistic neo-Kantian idealism, actually is generative of openness to the environment. (Wolfe, 2010, p. 21)

Recognition of closure as a point for departure towards openness entails a rethinking of subjectivity as in principle vulnerable and co-dependent on both human and non-human others. By articulating limit in terms of a capacity to respond, act and perceive, closure allows for, as Wolfe suggests, “broadening possible environmental contacts; closure increases, by constituting elements more capable of being determined, the complexity of the environment that is possible for the system” (ibid.). It is the qualities and capacities that are produced because of these negotiated interactions, that – *via their limitations* – underwrite the multiplicity of virtual and actual possibilities for subjectivity.

If we subscribe to Biesta’s definition of subjectification as freedom ‘qualified’ by its limits, as well as the above conceptualization of subjective closure as productive precisely due to these limits, then educational subjectification can also be defined as a critique of (human) capacity. In other words, it becomes a challenge to perceive our capacities as at the same time constituting our limitations and vice versa. As such, it implies that the experiential challenge of the Anthropocene can be approached in terms of reimagined aesthetic education thematized as “the capacity to liberate ourselves continuously from the very faculties that, paradoxically, constitute us” (Huhn, 2015, p. 178).

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