**Framing**

#### **The anthropocene inscribes whiteness as a base principle. The conception of the anthropocene as a universalizing concept buys into a liberal forgetting built on the affirmation of white progress. The anthropocene has racist and colonial roots, to divorce it from this is historically amnesiatic and sustains a space obsessed with technocratic crisis management which has no care for the histories of subjugation and control that have shaped those crises in the first place.**

**Baldwin and Erickson 20**[Andrew Baldwin is an assistant professor at Durham University, Bruce Erickson is an assistant professor at the University of Manitoba, “Introduction: Whiteness, coloniality, and the Anthropocene,” Sagepub, <https://doi.org/10.1177%2F0263775820904485>]

In A Billion Black Anthropocene or None, Kathryn Yusoff (2018), for example, brings the Anthropocene’s racial unevenness sharply into focus. There she explains how the debate among geologists and Earth systems scientists over when the Anthropocene first began has always implicitly been one about its conditions of emergence in historical racial violence. Simon Lewis and Mark Maslin’s (2015, 2017) much discussed Orbis Spike hypothesis is a case in point (see also Davis and Todd, 2017). It holds that the dip spike in atmospheric carbon in 1610 is the direct consequence of intensive carbon sequestration that followed a period of land decultivation after the decimation of Indigenous peoples in the Americas over the intervening years from 1492. Thus to speak of the **Anthropocene is** partly to speak of how this **history of ‘murder, enslavement, famine and disease’** (Yusoff, 2018: 31) **inscribes ‘colonialism (and race) into global environmental change’** (Yusoff, 2018: 32). Or consider 18th century industrialism. **Inseparable from the American plantation economy, it relied on the conversion of enslaved labour into sugar (energy) which in turn fuelled the labouring classes of industrial Europe, i**ncluding the mining of coal. Yusoff (2018) names this the ‘slave-sugar-coal nexus’. And the mid-20th century, discussed earlier, provides another episode in the Anthropocene’s racial history. Referred to as the ‘Great Acceleration’, this period witnessed a sudden and coincident spike in, among other things, stratospheric ozone, atmospheric carbon dioxide, ocean acidification, and shrimp farming (Steffen et al., 2015, 2007). **It is also marked by the bio- and lithospheric absorption of nuclear radioisotopes resulting from the proliferation of nuclear weapons testing** (Zalasiewicz et al., 2015). The **disproportionate irradiation of Indigenous peoples and people of colour** that **resulted from [scientific]** these **tests,** and the nuclear age more generally, inscribes onto this proposed Anthropocene boundary yet another racial history, what Yusoff calls ‘nuclear colonialism’ (see also Stanley, 2013). It was precisely this geo-chemical signature the AWG had in mind when it took the decision to date the Anthropocene at the mid-20th century. When we argue, then, that **talking about the Anthropocene today is also to talk about race,** what we mean is that the **Anthropocene**, like most political concepts**, is inescapably racial:** it is both **marked by the impacts of racial categorisation and** at the same time **is an emerging part of the production of race as an on-going structure of our lives.** The **signature of the Anthropocene is the signature of racism**, the global colour line inscribed into planetary history recalibrated as geology. It **bears the geological traces of white supremacy as much as it does Indigenous dispossession, primitive accumulation, and the plantation economy.** A marker of premature death, the **Anthropocene is as much geo-political as it is necropolitical** (Eichen: 35–54). Which makes it all the more pressing that those of us in the interpretative social science and humanities grappling with the Anthropocene concept acknowledge Zoe Todd’s (2015) insight that the **Anthropocene is a ‘white public space’: a space which ‘erases the differential histories and relationships that have led to current environmental crises’. The inherent danger of the Anthropocene concept is that in establishing a boundary between itself and the Holocene, stratigraphers risk dissimulating the Anthropocene’s conditions of possibility in European imperialism and corresponding regimes of white supremacy**. While those proposed starting dates for the Anthropocene reflect the material geographies of race and racism, it is the conceptual work of the **Anthropocene, as a universalising framework** for planetary history, which **entrenches whiteness as a base principle of understanding environmental changes** at the same time its relevance for analysing ecological and social circumstances is denied (Todd, 2015). **When the category of the Anthropos is assumed to be universal, it repeats the ‘liberal forgetting’** of modernity as **a racial project built upon the affirmation of white progress** (Lowe, 2015: 39). This is not to cry foul of stratigraphy, even while acknowledging that the AWG is comprised overwhelmingly of white men (Raworth, 2014). It is simply to suggest that how we approach the Anthropocene, whether as an object of scientific research or philosophical or political reflection, has significant political consequences. The Anthropocene is not a neutral concept but can either occasion public debate on the histories and legacies of race and racism or it can be used to obscure those very same histories in the service of white public space. Fortunately, a growing conversation seems to be unfolding about the relationship between the Anthropocene and race. This is both welcome and timely. The collection of essays presented in this special issue is therefore of a piece with this expanding volume of work, united in the view that the Anthropocene concept warrants sustained and rigorous analysis through the twinned approaches of critical race theory and decolonial theorisation. Our hope is that these essays will contribute to an expanding critical pedagogy of the Anthropocene, whether conceived as decolonial (Davis and Todd, 2017; Todd, 2015), anti-racist (Pulido, 2018; Verges, 2017), or feminist (Grusin, 2017; Haraway, 2015). One of the key commonalities running across the articles that comprise this special issue is that each contributes to this pedagogy by interrogating, in broad ways, the construction of whiteness through the Anthropocene. While it is clear that the Anthropocene is certainly not a simple practice of colonial environmentalism, these contributions clarify the ways in which whiteness is fundamental to how the Anthropocene has been articulated in many instances. First, they help us to appreciate how the Anthropocene can be conceptualised as a naming event arising in response to a distinctly white, or at least European, ontological crisis – the end of the human, the end of history, or what Isabelle Stengers (2015: 43) has called the ‘intrusion of Gaia’. In this sense, these contributions direct us to understand the Anthropocene as a situated attempt to repossess Earth through naming amid the very undoing of whiteness. And second, as Todd (2015) argues, the Anthropocene is a naming event unfolding within a genre of white epistemology**;** only when scrubbed clean of its particularity does the Anthropocene acquire its unmarked universality. The trouble, however, and this is Todd’s point, is that even as a growing number of scholars in the humanities and interpretative social sciences decentre the Anthropocene’s white androcentrism, **the Anthropocene remains a white public space.** Its **whiteness determines not only who can be heard in that space but also the very terms on which the Anthropocene debate unfolds as an object of public concern**. For example, the Anthropocene now dominates how the contemporary planetary crisis is conceptualised. Yet it does so by prioritising the methods and the institutions of stratigraphy and Earth system science, while **subordinating other epistemologies that would narrate the environmental crisis through a different set of histories, politics, and territorialities.** At this point, as editors of this collection, it is worth acknowledging our whiteness, as we are both directly implicated in the very dynamics Todd illuminates. We both work in Anglo institutions in the West and benefit regularly from white privilege, even at that same time as we work to question and decentre white privilege as an onto-epistemic structure. Our aim in bringing scholars together to think through race, whiteness, and the Anthropocene has been not simply to illustrate the importance of whiteness to the oncoming crises, but to mobilise the critique of whiteness in order to insist upon the need for a space more conducive for the telling of other stories and for other storytellers. Unless whiteness is recognised not as an identity but as an onto-epistemic structure that limits the diverse ontologies and materialities of our worlds, then it will simply end up being reified as the problem of our time: ‘for ever and ever, amen’. This is certainly far from the case, yet the institutional structures from which the Anthropocene discourse emanates and the diversity of those working within them leaves much to be desired. Implicated as we, as white, Anglo, male academics, are, our goal is to promote the conditions through which whiteness can be seen as a condition to be overcome, not a fact of nature. Indeed, looking at the broader geopolitical struggles that are unfolding alongside the Anthropocene and its discourse we also see very different, nonwhite, forms of ethno-nationalisms rising across the globe. These are similarly intertwined with the rapacious growth of capitalism and the seemingly endless accumulation of land and wealth at the expense of peoples and ecologies that are the signs of the Anthropocene (cf. Gergan, 2017; Sze, 2015). This is to say that even while the Anthropocene is a white concept, its material dimensions are not wholly reducible to whiteness, and thus demand a politics that sees the Anthropocene as a broadly racialised landscape. Whiteness is also often assumed to be part of a binary with blackness (MoretonRobinson, 2015). This conception, however, simplifies the production of race and creates hierarchies of difference. The articles in this special issue attempt to move beyond this binary, by highlighting how whiteness does not simply designate a subject position but is bound up with ontology that produces race as a central feature of the ‘human’ (Sheshadri-Crooks, 2002). From that perspective, one danger held by Anthropocene discourse is that whiteness is projected unconsciously as the universal source of global impacts. In reading the Anthropocene (as naming, discourse and activism) as an outcome of the ‘overarching political, economic, and social system of domination’ (Diangelo, 2018: 28) of whiteness, we hope not to re-inscribe whiteness into the future, but to show the cracks in this rhetoric to enable the possibility of other stories coming out. In rethinking the Anthropocene, it is our hope that these can lead to spaces for other histories – and futures – to be told, work that is indeed already happening (Karera, 2019; Todd, 2015). The focus on narrative here is important. Narrative is precisely that which gives knowledge its meaning. **Abstract concepts like the Anthropocene must be narrated in order to be comprehensible; narrative is partly what allows these concepts to resonate with their audiences.** In the absence of a compelling narrative, such concepts become meaningless. This is especially so for concepts like the Anthropocene, which acquire their public significance precisely because they resonate meaningfully with various publics. If the Anthropocene is to impel a transformation of values it can only do so **if comprehensible to the widest possible audience**. And it is here, once again, that race and racism become of fundamental importance. This is because, as Stuart Hall (2017: 33) once described it, ‘hateful as racism may be as a historical fact, it is nevertheless also a system of meaning’. In other words, racism is a very powerful means by which the world is rendered meaningful. It invents ‘race’ as part of a classificatory schema, which only then does it use to retroactively ‘translat[e] historically specific structures into the timeless language of nature’ (Hall, 1980: 342).

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### Space privatization relies on animal testing, Foster 21

News, BBC. “Nasa to Launch Baby Squid to International Space Station.” BBC News, BBC News, 3 June 2021, www.bbc.com/news/science-environment-57339989#:~:text=More%20than%20100%20baby%20squid,Station%20(ISS)%20on%20Thursday.&text=The%20launch%20at%2013%3A29,be%20broadcast%20live%20by%20Nasa.. Accessed 31 Jan. 2022.// AB

**More than 100 baby squid and 5,000 microscopic animals are set to be launched to the International Space Station (ISS) on Thursday.** The creatures, along with other equipment for experiments, will head to the ISS **aboard Space X's Falcon 9 rocket**. Its hoped that the experiments will be able to help scientists understand the effects of spaceflight. The launch at 13:29 EDT (17:29 GMT) will be broadcast live by Nasa. The 128 baby bobtail squid will be used as part of research into the effects of spaceflight on beneficial interactions between microbes and animals. The squid have an immune system which is similar to that of humans. Nasa says the experiment could support the [**development of protective measures to preserve astronaut health during long space missions**](https://www.nasa.gov/mission_pages/station/research/news/spacex-22-research-highlights). "Animals, including humans, rely on our microbes to maintain a healthy digestive and immune system. We do not fully understand how spaceflight alters these beneficial interactions," Jamie Foster, the experiment's principal investigator said. She added that the squid will be able to address "these important issues in animal health". The squid will be frozen before their return to Earth.They are also joined on the Space X rocket by 5,000 tardigrades, more commonly referred to as water bears. **The microscopic animals can tolerate environments more extreme than most life forms can.** This makes them perfect for studying how life responds and adapts to extreme environments. **It is hoped that this information can then be used to understand the stress factors affecting humans in space.**

### Routine violence against animals left unchallenged by humans logically manifests into justification of dehumanization perpetuated by systemic violence.

**Meyer**, Eric D. “Beyond Ecological Democracy: Black Feminist Thought and the End of Man.” *Carroll.edu*, 18 Sept. 20**19**, scholars.carroll.edu/handle/20.500.12647/7310, https://scholars.carroll.edu/handle/20.500.12647/7310. Accessed 31 Jan. 2022. //AB

‌Second, the omission of animals and animality from Homo Sacer remains striking, given the book’s concentration on “bare life.” Human politics subject animal lives to constitutive ambiguities as pervasively as they do human beings. I would argue that on Agamben’s logic in Homo Sacer, the **human collaboration that colonizes, exploits, and excludes animals represents a political relation** more originary than the (intra-human) practice of the ban. Through **domestication or exploitation, select animals are knit into the socio-political order as the foundation of agriculture and commerce**; such bare lives are politically transformed through inclusion. Other animals (and any animals of the former category who resist their placement within the political order), stand outside the law, subject to unimpugnable killing that is neither murder nor sacrifice. Returning to Wildlife Services for a moment, the **inclusive exclusion of the cow within the human political order (as living meat) differs from the exclusive inclusion of the coyote or wolf (as enemies and targets of state-sanctioned violence),** but **the human approach to both animals establishes and polices the boundary of political order as we conceive it. Distinctions between killing, murder, slaughter, and sacrifice** are **worked out, first and foremost, through animal blood**. **Victims of routinized, systemic violence are** almost **always animalized first, because of widespread** social, legal, and religious **acceptance of routine violence against animals as non-culpable.** The political threat of the “ban” in both its ancient and contemporary configuration is that it reduces a human being to the state of “living like an animal” or being consigned to the space of the animals— exposed to the beasts and living like the beasts.

### The notion that humans can just leave behind the mess they have created on earth and escape to space is anthropocentric insofar as it is framed on the idea that humans need to exploit space in order to survive. Rhetoric claiming space as a magical solution for racism and climate change views earth as a “throwaway” problem to get to the next level.

Spector, Sam; **Higham,** James E.S. (20**19**). Space tourism in the Anthropocene. Annals of Tourism Research, 79(), 102772–. doi:10.1016/j.annals.2019.102772// (ZW)

While discussions regarding the Anthropocene pertain primarily to the terrestrial environment, there are interesting parallels with discourses about outer space. **Pro-space advocates frequently cite benefits ‘for humankind.’** This type of discourse is pervasive in the space tourism industry (e.g. Davenport, 2018; Kemp, 2007). For instance, Jeff Bezos (founder of the spaceflight company ‘Blue Origin’) discussed “having millions of people and then billions of people and then finally a trillion people in space” (quoted in Clifford, 2018, n.p.). The Space Tourism Society (2019), a pro-space advocacy group, says that it “believes that space tourism is the most logical endeavor for private enterprise to pursue towards the goal of expanding humankind into space” and that its mission is “to make space tourism available to as many people as possible as soon as possible” (n.p.). Virgin Galactic's Richard Branson (n.d.) said, “We are at the vanguard of a new industry determined to pioneer twenty-first century spacecraft, which will open space to everybody – and change the world for good” (n.p.). **Discourse**s propagated **by the space tourism industry** thus **sell the notion that a significant proportion of humans will** soon **be able to travel into space, or** at least **benefit from others engaging in spaceflight.** Precisely how the benefits of space will be democratised, if at all, is not explained. **The ‘overview effect,’** which **results from viewing Earth from outer space** (White, 2014), further **illustrates the dynamic of discussing of the species en masse.** Speaking of his experience of spaceflight and looking back at Earth from space, astronaut Gene Cernan commented that, “You don't see the barriers of color and religion and politics that divide this world” (cited in White, 2014, p. 37). Edgar Mitchell noted that he felt an “overwhelming sense of oneness and connectedness” (cited in Hunt, 2015, p. 73). Yuri Artyushkin said, “The feeling of unity is not simply an observation. With it comes a strong sense of compassion and concern for the state of our planet and the effect humans are having on it. It isn't important in which sea or lake you observe a slick of pollution or in the forests of which country a fire breaks out, or on which continent a hurricane arises. You are standing guard over the whole of our Earth” (cited in Jaffe, 2011, p. 9). **These narratives** adopt an abstract and undifferentiated view of humankind and **are deeply problematic**. For **those not capable of leaving Earth, the racial barri**e**rs, polluted lakes, and** myriad **other issues that astronauts cannot see from space** do in fact **matter** a great deal. Discourses of **‘benefits for all’** also **underlie discussions regarding the survival imperative,** which is **predicated on the notion that ‘the species’ must extend into space in order to survive.** SpaceX's Elon Musk (2013) has stated that “The future of humanity is going to bifurcate in two directions: Either it's going to become multiplanetary, or it's going to remain confined to one planet and eventually there's going to be an extinction event” (n.p.). The late physicist and cosmologist Stephen Hawking (2010) argued, “Our only chance of long-term survival is not to remain inward looking on planet Earth but to spread out into space” (n.p.). Likewise, Carl Sagan (1994) declared that “we have a basic responsibility to our species to venture to other worlds” (p. 312). But who earns inclusion in the ‘humanity,’ ‘our,’ and ‘we’ referred to by Musk, Hawking, and Sagan? Increased access to space, facilitated by the commercial spaceflight industry (Federal Aviation Administration, 2018), is also projected to enable the mining of space resources. There is an immense amount of wealth even in the nearby cosmos (Lewis, 1997; Spector & Higham, 2019), and companies have begun forming with the aim of capitalising on space-based resources. As with narratives about private spaceflight and the overview effect, space resources are often positioned as capable of benefiting everyone. For instance, the Organisation for Economic Co-operation and Development's (2012) ‘Handbook on Measuring the Space Economy’ defines the space economy as “the full range of activities and the use of resources that create and provide value and benefits to human beings in the course of exploring, understanding, managing and utilising space” (p. 20). The Handbook has a section on socioeconomic impacts, but that section **does not discuss global inequality**; it instead states, “The main message is that many space-based services have positive impacts on society” (Organisation for Economic Co-operation and Development, 2012, p. 89). **The lack of known lifeforms in the areas proposed for space settlements and mining operations abets those who advocate substantively altering such areas** (Spector & Higham, 2019).

### Space exploration relies on an anthropocentric worldview that separates us from nature—the affirmative values only what we perceive to be useful to the continuation of the human race.

**Salideh 9**

(Eligar Sadeh is an Assistant Professor in the Department of Space Studies at the University of North Dakota, “Spacepower and the environment”, http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch13.pdf)

**In the anthropocentric view, humans are treated as ends in and of themselves and act as moral agents in relation to the environment.** Nature is of instrumental value in that it contributes to human life. Anthropocentrism is rooted in the principle of nature as a utility for human ends. In this vein, the environment can be both exploited and protected to safeguard and further human interests and the persistence of human civilization. The exploitation-of-nature argument is based on the exploitation of the environment to enhance human well being. **This view allows humans to extract resources from space and planetary bodies and to create human-supported biospheres in space and on planetary surfaces and terraform celestial bodies.** In the realm of national security, such a view suggests spacepower projection without regard for the contamination of the space environment. This is the **unregulated view that can lead to a tragedy of the commons of space.** The perpetuation of the human species that is linked to spacepower considerations suggests that extending a human presence in space takes place without regard for environmental protection. 48 The exploitation-of-nature argument underlies the view on spacepower discussed in chapter 9 in this book, which examines the use of the Moon's resources for national economic development. Indicative of this is the new U.S. policy "to incorporate the Solar System in our economic sphere," with the fundamental goal of exploration being to advance scientific, security, and economic interests through a robust space exploration program. 49The protection-of-nature argument begins to limit the extent to which resources in space can be incorporated exclusively into the U.S. economic sphere. **The argument is that the environment needs to be protected, not because it has intrinsic value of its own, but to safeguard human ends.** Environmental protection of some sort is consequently promoted due to instrumental ends that include preventing contamination of planets hospitable to life forms for scientific inquiry; 50 conserving natural resources in space for economic development purposes (that is, a measured distribution of resources so that all can partake and benefit); preserving resources for future generations; preserving aesthetics of planetary surfaces and interplanetary space for human enjoyment; and mitigating environmental contamination, such as orbital debris, to ensure freedom of action in space. International space law is in congruence with these views and designates space and celestial bodies as common resources to be protected from contamination by anthropogenic activities. Indicative of international space law and environmental protection are the planetary protection provisions advanced by the International Council for Science Committee on Space Research (COSPAR), with the first formal guidelines established in 1969 and most recently updated in 2005. COSPAR planetary protection policies are directed at fulfilling the provisions of the 1967 Outer Space Treaty to avoid the harmful contamination of the Moon and other celestial bodies, with foremost thought given to preserving the scientific integrity of planetary bodies. These policies set the context for NASA's planetary protection policies that establish formal guidelines for planetary protection and stipulate that NASA will not participate in international missions unless all partners agree to follow COSPAR's planetary protection policies. COSPAR also formed a panel on planetary protection that is concerned with the development, maintenance, and promulgation of planetary protection knowledge, policy, and plans to prevent the harmful effects of biological contamination on celestial bodies.

### Humanity’s obsession with space disregards the practicality and environmental harms of space travel, which creates a feedback loops of destruction -Chatlani ‘17

“The Space Review: Is the Purpose of Deep Space Exploration Pure Science or Proving Humanity’s Worth?” Thespacereview.com, 2017, www.thespacereview.com/article/3145/1. Accessed 1 Feb. 2022.//ZW

Humanity’s imagination has been, and will always be, a central theme to space exploration. It’s **the curiosity of what could be known** that intrinsically **drives us to explore frontiers and search for answers.** But, there’s **another factor involved as people advance into different environments: personal desire.** Howard E. McCurdy, in his book Space and the American Imagination, charts over the development of the Space Age where these two factors intersect and how it has affected American decision-making when it came to planetary exploration. McCurdy says that, more often than not, the intricacies of elements like “cosmic radiation or toxic atmospheres” are replaced by “metaphors” of innovation and discovery. These ideas were so compelling and satisfying for the desires of the American public that even the **wildest notions extraterrestrial exploration seem**ed **believable.** However, as he comments on a photo of the 1997 Pathfinder mission to Mars, “the reality of space exploration, during the early years of venture,” was far different from the “romantic vision offered by advocates of cosmic flight.” This reality, he writes, means that “truth or validity of the vision” is often irrelevant to the feasibility of its undertaking. Once scientists embarked on space research, they could not have anticipated how truly costly and difficult the process would have been, or the fact that finding lifeforms in other worlds would have probably fallen short. Yet, this pristine vision of exploration could persist beyond the scientific actuality. And, one thing was always clear: when it came to Earthlings considering space travel, the Earth still had to somehow be involved. NASA could have very well developed an “impressive program of scientific discovery,” centered on “satellite technology, or the emerging science of remote sensing,” but it would not have satisfied the public’s hungry imagination to see itself in a new light. “If technological civilizations engage in space exploration for sufficiently long periods of time (say millions of years), they may do so in forms that are unrecognizable to species just beginning the venture,” wrote McCurdy. “Yet for earthlings contemplating the possibility of space travel in its initial stages, the vision of human travel to and from the Moon and inner planets dominated their collective imagination.” This empirical **root of a human-centric mindset** could **explain why for** so **many space industry leaders the statement, “We need to get to space because…”** almost certainly **ends with a clause on humanity or the fate of the Earth.** As McCurdy even says, NASA could have very well developed an “impressive program of scientific discovery,” centered on “satellite technology, or the emerging science of remote sensing,” but it would not have satisfied the public’s hungry imagination to see itself in a new light. The human simply could not be taken out of the equation. Subsequently, leaders of rocket societies, lacking an eminent US scientist to serve as a spokesperson, committed themselves to the grandiose goal of human spaceflight well before the technology had even been conceived. And today, this divide between the scientist and the American public seems to persist. For instance, the Pew Research Center found in its 2015 report, “Public and Scientists’ Views on Science and Society,” that while both groups value contributions of science, there are large gaps on how each perceive technical aspects of scientific issues. The center’s 2014 survey of adults and scientists from the American Association for Advancement of Science, found that 59 percent of Americans “view that human astronauts are an essential part of future U.S. space exploration,” while only 47 percent of AAAS scientists say they are essential. Even more reflective of the divide between the public and scientific experts is the fact that the original Space Act, which laid out the eight main objectives of the US civilian space program. contained no mention of humanity’s hold over space as an environment. Rather, at the forefront of NASA’s mission was the “expansion of human knowledge of phenomena in the atmosphere and space,” the establishment of studies that would use aerospace activities “for peaceful and scientific purposes,” and “the preservation of the role of the United States as a leader in aeronautical and space science and technology,” according to research from the Committee on Human Spaceflight. NASA’s plan intended for a balanced program of science and the possibility of human flight to the Moon beyond 1970. But it was this drive within the American imagination and a desire for international primacy that McCurdy writes about, which pushed Congress to increase NASA’s budget by 89 percent and extraordinarily put a man on the Moon safely before the end of the decade. The spirit of the human undoubtedly resulted in one of the nation’s greatest scientific triumphs of the century. This reality cannot be underplayed. Still, in 1986, the National Commission on Space in a report to Congress made it very clear that that while there is “no doubt that exploring, prospecting and settling Mars should be the ultimate goal of human space exploration,” NASA should maintain a strategy to “continue an orderly expansion outward from Earth.” The authors of the report note that every scientific advisory panel that has come together on human spaceflight says that first and foremost the mission of the program should be to “promote science, technology, engineering, mathematics, and education.” McCurdy later goes on to outline this prevailing gap between NASA’s actual experience in trying to build technology and a persistent desire within the public for the romanticized “space station.” Many looked toward this technology as a pathway for colonizing other worlds, perhaps providing an escape from the difficulties that exist on Earth. He summarizes the point succinctly in another piece for Technology In Society, where he writes, “ultimately, the willingness to invest in human space flight gained justification from a general cultural desire to extend some part of humanity into the cosmos.” He quotes NASA official Frank Martin, who also perfectly characterizes public reaction to technological innovations that don’t involve humans: “We don’t give ticker tape parades for robots.” The subject of human-prioritized space exploration, which emphasizes the importance of preserving humanity, has a potential consequence of not only undervalued scientific knowledge, but also manipulated knowledge. These statements suggest that humans will always be at the forefront of space travel and that entrepreneurs interested in getting to space, like Musk, are perhaps not so nefarious in spreading doomsday rhetoric. Rather, they are exploiting a clear reality—the only way to make their missions a possibility in the public’s eye is for the “technical” aspects of science to sit in the backseat. “Given sufficient time, a new space exploration paradigm may emerge. Over the years advocates of robotic and human cooperation have envisioned the two exploring space together,” writes McCurdy in his article. “But even in this vision, the two remained separate entities—master and servant, owner and slave, flesh and machine. The human condition and undervaluing of science. The empirical evidence of emphasis on humanity within space exploration is likely to elicit a response of “So what?” It’s valid for anyone to buy into the lofty sentiments of space entrepreneurs who essentially say that leaving Earth is the only option for humanity’s survival. “I really think there are two fundamental paths [for humanity]: One path is we stay on Earth forever, and some eventual extinction event wipes us out,” said Musk at the 67th International Astronautical Congress in Guadalajara, Mexico, in September. “The alternative is, become a spacefaring and multi-planetary species.” Even Hannah Arendt, a Jewish-American philosopher, as early as 1958, pondered the possibility of re-creating life beyond the Earth when she witnessed the Soviets launch Sputnik I into cosmos just a year before. She predicted in her book The Human Condition the emergence of theories that are now being supported by leading space figures: Foremost in our minds at this moment is of course the enormously increased human power of destruction, that we are able to destroy all organic life on earth and shall probably be able one day to destroy even the earth itself… However, no less awesome and no less difficult to come to terms with is the corresponding new creative power…we have begun to populate the space surrounding the earth with man-made stars, creating as it were, in the form of satellites new heavenly bodies, and we hope that in a not very distant future we shall be able to perform what times before us regarded as the greatest, the deepest, and holiest secrets of nature, to create or re-create the miracle of life… The subject of human-prioritized space exploration, which emphasizes the importance of preserving humanity, has a potential consequence of not only undervalued scientific knowledge, but also manipulated knowledge, she writes. Scientific pursuits, especially the conquest of space, move forward with an explicit point of proving the “stature of man.” For instance, when it comes to Mars exploration, Robert Markley in his article, “Red Planet Scientific and Cultural Encounters,” charts NASA and the public’s interest in continuing to research even the possibility of going to the Red Planet. He argues that each renewed endeavor was the product of whether or not the NASA was able to find details on Mars that pointed toward life. Whether or not a mission was too much of an investment depended on public interest so much so that decisions were made even if it wasn’t the right time. The Mars Mariner program, he writes, was “an ambitious prelude to a heroic but overhyped strategy to colonize Mars before 2020.” There wasn’t enough valuable emphasis on the technological advances or feasibility of the idea. And of course, the US had to scale it back because it was too far of a leap. The same mentality persists now and will have the consequence of undermining the importance of scientific certainty. Arendt, in her book, offers a historical example of Galileo’s discovery of the telescope. Rather than being seen as having great potential for scientific innovation and discovery, it was turned into an affirmation of humanity’s potential. Its main purpose was therefore undermined: **Instead of the dichotomy between earth and sky we have a new one between man and the universe,** or between the capacities of the human mind for understanding and the universal laws which man can discover and handle without true comprehension. With eager **private sector leaders** now **see**ing **space an absolute for human beings, there is a grave potential that failure to check ambitions with fact and scientific reality will render space unusable.** When it comes to outer space, the threat of astrophysics was the “abstraction of thought from reason and common sense,” writes Lisa Messeri in her book Placing Outer Space: An Earthly Ethnography of Other Worlds. For her, the proof lies within the real gap between public views and the scientific community’s views the feasibility of certain space activities. Messeri shows how Arendt’s point about the manipulation of scientific knowledge for the purpose of proving humanity’s worth is still a valid concern: In searching for habitable planets, astronomers confront the changing ways they can inhabit their places of science. No longer do they simply dwell at the observatory; they also inhabit increasingly distributed sociotechnical networks… Going to the observatory will not soon fade from practice, but it will be driven more and more by a need to be in place and connect to history of the pression less and less by a scientific need… the making of habitability as the definitive metric of an exoplanet that would have the greatest human significance. The increasing insignificance of science in favor of lofty **humanistic ambitions** presents a general disservice to society. And it’s a trend that will ultimately be our **undo**ing in **space.** While there is discussion about the need to go to deep space, there is far less conversation on what must be done and considered from a scientific point before traversing new environments. **Continued de-emphasis on the research will mean that we miss important realities on the feasibility of our endeavors. To** put into perspective the real world impact of such ignorance just on one level, officials at NASA now estimates that **there are more than 500,000 pieces of debris in Earth orbit.** A hypervelocity impact with one of these **objects produces enough kinetic energy that even the smallest fragment could completely destroy a satellite.** NASA scientist Donald Kessler recognized the danger of space debris as early as 1978, predicting that debris could cascade in a chain reaction that made low Earth orbit unusable for spacecraft. Thus, seeing **space as the Plan B and making humans the point of exploration** may have an unintended consequence: **[cause]** environmental and commercial **destruction** on Earth could be manifested within this extraterrestrial environment. Perhaps, an emphasis on scientific reality could mitigate the side effects of our unchecked ambitions.

### Anthropocentrism causes extinction – it divorces our relationship with the natural world and makes ecocide on a cosmic scale inevitable

**Gottlieb 94** [Roger S. Gottlieb, Professor of Humanities at Worcester Polytechnic Institute, holds a Ph.D. in Philosophy from Brandeis University, 1994 (“Ethics and Trauma: Levinas, Feminism, and Deep Ecology,” Crosscurrents: A Journal of Religion and Intellectual Life, Summer, <http://www.crosscurrents.org/feministecology.htm>]

Here I will at least begin in agreement with Levinas. As he rejects an ethics proceeding on the basis of self-interest, so I believe **the anthropocentric perspectives of conservation or liberal environmentalism cannot take us far enough. Our relations with nonhuman nature are poisoned and not just because we have set up feedback loops that already lead to mass starvations, skyrocketing environmental disease rates, and devastation of natural resources**. **The problem with ecocide is not just that it hurts human beings. Our uncaring violence also violates the very ground of our being, our natural body, our home. Such violence is done not simply to the other – as if the rainforest, the river, the atmosphere, the species made extinct are totally different from ourselves**. Rather, **we have crucified ourselves-in-relation-to-the-other, fracturing a mode of being in which self and other can no more be conceived as fully in isolation from each other than can a mother and a nursing child**. We are that child, and nonhuman nature is that mother. If this image seems too maudlin, let us remember that other lactating women can feed an infant, but we have only one earth mother. What moral stance will be shaped by our personal sense that we are poisoning ourselves, our environment, and so many kindred spirits of the air, water, and forests? To begin, we may see this tragic situation as setting the limits to Levinas's perspective. **The other which is nonhuman nature** is not simply known by a "trace," nor is it something of which all knowledge is necessarily instrumental. This other **is inside us as well as outside us. We prove it with every breath we take, every bit of food we eat, every glass of water we drink**. We do not have to find shadowy traces on or in the faces of trees or lakes, topsoil or air: we are made from them. Levinas denies this sense of connection with nature. Our "natural" side represents for him a threat of simple consumption or use of the other, a spontaneous response which must be obliterated by the power of ethics in general (and, for him in particular, Jewish religious law(23) ). A "natural" [response lacks discipline](https://essaydocs.org/who-should-crowd-out.html); without the capacity to heed the call of the other, unable to sublate the self's egoism. Worship of nature would ultimately result in an "everything-is-permitted" mentality, a close relative of Nazism itself. For Levinas, to think of people as "natural" beings is to assimilate them to a totality, a category or species which makes no room for the kind of individuality required by ethics.(24) He refers to the "elemental" or the "there is" as unmanaged, unaltered, "natural" conditions or forces that are essentially alien to the categories and conditions of moral life.(25) One can only lament that Levinas has read nature -- as to some extent (despite his intentions) he has read selfhood -- through the lens of masculine culture. **It is precisely our sense of belonging to nature as system, as interaction, as interdependence, which can provide the basis for an ethics appropriate to the trauma of ecocide**. As cultural feminism sought to expand our sense of personal identity to a sense of inter-identification with the human other, so **this ecological ethics would expand our personal and species sense of identity into an inter-identification with the natural world**. **Such a realization can lead us to an ethics appropriate to our time, a dimension of which has come to be known as "deep ecology."**(26) **For this ethics, we do not begin from the uniqueness of our human selfhood, existing against a taken-for-granted background of earth and sky. Nor is our body somehow irrelevant to ethical relations, with knowledge of it reduced always to tactics of domination. Our knowledge does not assimilate the other to the same, but reveals and furthers the continuing dance of interdependence. And our ethical motivation is neither rationalist system nor individualistic self-interest, but a sense of connection to all of life**. The deep ecology sense of self-realization goes beyond the modern Western sense of "self" as an isolated ego striving for hedonistic gratification. . . . . Self, in this sense, is experienced as integrated with the whole of nature.(27) Having gained distance and sophistication of perception [from the development of science and political freedoms] we can turn and recognize who we have been all along. . . . we are our world knowing itself. We can relinquish our separateness. We can come home again -- and participate in our world in a richer, more responsible and poignantly beautiful way.(28) Ecological ways of knowing nature are necessarily participatory. [This] knowledge is ecological and plural, reflecting both the diversity of natural ecosystems and the diversity in cultures that nature-based living gives rise to. The recovery of the feminine principle is based on inclusiveness. It is a recovery in nature, woman and man of creative forms of being and perceiving. In nature it implies seeing nature as a live organism. In woman it implies seeing women as productive and active. Finally, in men the recovery of the feminine principle implies a relocation of action and activity to create life-enhancing, not life-reducing and life-threatening societies.(29) In this context, the knowing ego is not set against a world it seeks to control, but one of which it is a part. To continue the feminist perspective, the mother knows or seeks to know the child's needs. Does it make sense to think of her answering the call of the child in abstraction from such knowledge? Is such knowledge necessarily domination? Or is it essential to a project of care, respect and love, precisely because the knower has an intimate, emotional connection with the known?(30) Our ecological vision locates us in such close relation with our natural home that knowledge of it is knowledge of ourselves. And **this is not**, contrary to Levinas's fear, **reducing the other to the same, but a celebration of a larger, more inclusive, and still complex and articulated self**.(31) The noble and terrible burden of Levinas's individuated responsibility for sheer existence gives way to a different dream, a different prayer: [Being rock](https://essaydocs.org/chapter-10-mainstream-rock-punk-and-new-wave-v2.html), being gas, being mist, being Mind, Being the mesons traveling among the galaxies with the speed of light, You have come here, my beloved one. . . . You have manifested yourself as trees, as grass, as butterflies, as single-celled beings, and as chrysanthemums; but the eyes with which you looked at me this morning tell me you have never died.(32) In this prayer, **we are, quite simply, all in it together**. And, **although this new ecological Holocaust -- this creation of planet Auschwitz – is under way, it is not yet final. We have time to step back from the brink, to repair our world. But only if we see that world not as an other across an irreducible gap of loneliness and unchosen obligation, but as a part of ourselves as we are part of it, to be redeemed not out of duty, but out of love; neither for our selves nor for the other, but for us all**.

**Resolved: the appropriation of outer space is unjust. The ROJ is to vote for the best debater who dismantles the Anthropocene worldview**

### Vote aff to adopt a critical pedagogy that ‘unthinks the human’ – education policy is key to fostering a holistic and animal-centered mode of liberation from anthropocentric bias – our critical discourse is mutually exclusive from theirs

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CRITICAL PEDAGOGY

Like other Western academic disciplines, education and pedagogy have arguably been complicit in a generally anthropocentric and speciesist orientation from the beginning. In our current times of environmental crisis, however, these **errors need to be corrected, and education policy should confront head-on the problem of how to foster holistic, ecological and animal-centred models of pedagogy** such that the discipline is part of the solution rather than problem. Philosophers such as Steven Best, Peter McLaren and Anthony Nocella (Best, et al., 2007; Nocella II, 2007), as well as educational theorists such as Pedersen draw inspiration from the critical pedagogy of Paulo Freire (1973) and his followers, which is presented as a ‘radical education method and process for liberation’ that ‘promotes education as a non-violent form of radical social change’ (Nocella II, 2007, p. 5). These philosophers acknowledge critical pedagogy as a humans, **engaging educational experience in the classroom and using** (critical) **literacy as a tool for exploring and promoting personal and social transformation via** what Freire call**s conscientisation,** awareness of the self in context: ‘One aim of critical pedagogy is to challenge value structures that lead to oppressive, alienating, and subordinative social practices, and raise questions about how these are reproduced in school’ **(**Pedersen, 2010a, p. 3). Best, McLaren and Nocella (2007) point out, however, that critical pedagogy remained human-centred and wedded to a flawed speciesist paradigm in its theorisation of the relation of humans, animals and the natural world. Richard Kahn (n.d., p. 7), too, refers to Freire's ‘anthropocentric humanism that tended to articulate human freedom at the expense of objectified animal and natural domains’. This diagnosis has led to several revisions and transformations of critical pedagogy over the last few decades and advocacy of a range of approaches based on Freire's work, including revolutionary critical pedagogy (Best, et al., 2007), critical animal pedagogy (see Dinker and Pedersen, 2016) and ecopedagogy (see Kahn, 2008, Kahn n.d.). Revolutionary critical pedagogy poses questions that include the following:Who benefits from the education system as it now stands? Who stands to profit from existing educational arrangements? Who stands to suffer? In whose interests do existing pedagogical practices serve? What is the relationship between pedagogical practices and education as a system of social mediation and the reproduction of the status quo (i.e., the capitalist system)? (Best, et al., 2007, p. 510) Best, McLaren and Nocella defend an approach to **critical pedagogy** that **enables teachers and students to begin to understand their experiences and subjectivities**, which ‘are constructed through the intersection of a multiplicity of forces linked to the modes and social relations of production, to spaces and places of capitalist production and circulation, to systems of mediation that involve their families, their religious upbringing, their class and racial formations, as well as organisations linked to both the state and civil society’ (ibid., p. 509). Critical pedagogy, according to the authors, is ‘a form of **education which emerges from critical compassion**’ (ibid.; Nocella II, 2007, p. 5), a concept that remains largely unexplained. Perhaps ‘critical empathy’ would be a more appropriate term for the kind of understanding envisaged here: a combination of critical examination a**nd the ability ‘to connect theory and action, while bringing up questions related to the experiences, history, and socio-political formation of different individuals and groups**’ (Best, et al., 2007, p. 509). Nocella provides the example of understanding and appreciation of the actions of the Animal Liberation Front by employing a critical pedagogy approach. When different powers are engaged ‘an intellectual understanding of justice, an emotional understanding of animals’ suffering, [and] a spiritual understanding of the unity of all life …, critical pedagogy becomes possible’ (Nocella II, 2007, p. 6) and emerges, I would suggest, from critical empathy. Revolutionary critical pedagogy also tends to be critical of the view that education and legislation are the only defensible tools in the struggle against oppression and for advancing liberatory goals. Thus, Best dismisses both animal welfare and animal approaches that ‘uncritically rely on education’ and ‘legislative campaigns’ for ‘exaggerating the efficacy of rational argument and moral persuasion on human beings who are deeply irrational, self-interested, or hateful and violent towards animals’, and for being naïve to the fact that both education and legislation are more often than not representative of capitalist interests (Best, 2014, pp. 83, 84). Nocella agrees: Those who champion education and legislation as the sole tools of struggle project a rationalist belief that discounts the irrational forces often ruling the human psyche, the sadistic pleasure all too many derive from torture and killing, the deep psychological mechanisms human beings use to resist change and unpleasant realities, the mechanisms of detachment and compartmentalisation that allow them to ignore the enormity of animal suffering, the vested interests they have in exploiting animals, and their identities as members of a species they believe is the preordained master of the Earth. (Nocella II, 2007, p. 4) Best, McLaren and Nocella are not dismissive of education as a whole. They acknowledge that there are ‘forms of education … that anger, awaken, inspire, and empower people toward action and change’ (Best, 2014, p. 106; see also p. 15). Even militants concede the need for mainstream, non-violent tactics such as education. The combination of tactics considered here includes public education, which may work in some instances but certainly not in all (ibid., pp. 74–76). Revolutionary critical pedagogy, as defended by these authors, involves dialogue with radicals, militants and dissidents, and is seen as being inextricably bound up with inspiration to act. Unfortunately, questionable political endorsements—such as the premature elevation of Venezuela's Hugo Chavez, despite his anti-democratic tendencies (see Best, et al., 2007, p. 516) —and the sweeping dismissal of ‘bourgeois individualism’ (p. 515) get in the way of an otherwise compelling attack on ‘aggressive capitalist globalisation policies’ (p. 499). After demonstrating how education (like our social and cultural life as a whole) is permeated by relations with animals that are ‘asymmetrically imbued with power’, manifest in ‘the use of animals as dissection “specimens” in school laboratories or as food in the school canteen, … animal-assisted interventions …, some versions of outdoor education, study visits to zoos and farms, and so on’, Dinker and Pedersen (2016, p. 415) offer critical animal pedagogy as an alternative form of education. **Critical animal pedagogy involves taking ‘an epistemological and pedagogical step aside’ and ‘unthinking’, as it were, ‘our parasitic selves’, that is ‘unthinking the human’ (pp. 416, 417). It constitutes an alternative approach to education ‘where students at all levels across the curriculum are invited to explore both a critical analysis and a radically transformative approach to animals and affect in education’** (p. 418). Depending on students’ age and education level, they may engage in activities like ‘investigating students’ own emotional encounter or relation with an animal’ (free-roaming, feral urban or companion); ‘reflecting on and sharing ethological insights about animals’ own feelings towards species kin, their environments, as well as towards humans they encounter’; ‘critical discourse analysis of a range of animal-related education materials’; ‘study visits to farms as well as animal shelters and sanctuaries, interviewing managers and employees/volunteers at these sites about their emotions for their animals and how they feel about their confinement and killing’; ‘watching and discussing film documentaries from slaughterhouses and other sites of animal abuse, as well as documentaries from animal shelters and animal rescue operations, exploring the different emotional responses they invoke (in both humans and animals)’; ‘discussing why we mourn the death of some animals and not others’; and ‘critically examining any anthropocentric bias of all the above’ (p. 419). These suggestions, it should be noted, are several removes from MacCormack's ‘“hands-off” approach to animal pedagogies’, which appears to ‘a priori rule out the possibility of encounters with animals or intersubjectivity in human-animal relationships’ (pp. 416- 417). It is all the more puzzling, then, that Dinker and Pedersen conclude by arguing ‘for the absence … of animals in education’, and that:unthinking the human … asks us to leave alone, to exercise non-intervention … It asks education to create a paradoxical, but urgent safe space for animals, beyond the reach of human interference and beyond the reach of education itself. (pp. 426-427) As a purely liberationist project this makes sense, also in the Freirean understanding of critical pedagogy leading to the educator's or researcher's own liberation (see Nocella II, 2007, p. 6), but it is unclear what then remains of education, of learning with, from and for animals.