

*There Is No Anthropocene: Climate Change, Species-Talk, and Political Economy**

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The Anthropocene is different. It is one of those moments where a scientific realisation, like Copernicus grasping that the Earth goes round the sun, could fundamentally change people's view of things far beyond science. It means more than rewriting some textbooks. It means thinking afresh about the relationship between people and their world and acting accordingly.

—*The Economist*¹

Developing nations with some of the fastest-rising levels of carbon pollution are going to have to take action to meet this challenge alongside us. They're watching what we do, but we've got to make sure that they're stepping up to the plate as well. We compete for business with them, but we also share a planet. And we have to all shoulder the responsibility for keeping the planet habitable, or we're going to suffer the consequences—together.

—Barack Obama²

The Anthropocene concept carries a message that is simple and, purportedly, revolutionary: we live now in a geological epoch defined by *Homo sapiens*. That is to say, the human species has radically reshaped the Earth

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1. "Welcome to the Anthropocene," *Economist*, May 26, 2011, <http://www.economist.com/node/18744401>.

2. Barack Obama, "Remarks by the President on Climate Change," June 25, 2013, <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>.

and its systems to the point that they no longer resemble those of the prior epoch, the Holocene. This idea has proven seductive—analysts and commentators in mainstream and academic publications now routinely refer to the Anthropocene in writings on environmental issues such as climate change. But I suggest, contra the *Economist*, that the Anthropocene concept says less about the “relationship between people and their world” and says more about contemporary politics. The true importance of the Anthropocene concept lies in its ability to transform how we envision and discuss history, society, and politics. How so? The power of the Anthropocene lies precisely within the name itself and in the universalist discourses it engenders. It is an accusation, a responsabilization, and a call to action levied upon humankind. And here, in the assimilation of all social difference, in the elimination of differential political-economic histories and the power relations therein, and in the obscuring of the particular institutions and structures that govern our (side of the) relationship with nature, begin the politics of the Anthropocene.

The Anthropocene concept names the “anthropos” as being responsible for our ecological crisis. But who *is/are* the anthropos? Because this Greek term is only uncomfortably deployed in the English context, anthropos becomes translated as human species, humanity, humankind, we, and us. In this manner, Anthropocene proponents build a discourse that I call “species-talk.” In species-talk, all living and dead humans are absorbed into a single body (e.g., humankind) that becomes the universal subject of history. Second, it is through this universal that we understand our relations to the Other, that is, nature.³ Species-talk is the logical outcome of a narrative that only contains two actors, humans and nature. While

3. This tendency to pronounce a universal human species has been with us since the early discussions of climate change and sustainability. For example, the Brundtland Report begins by arguing that “humanity” is fundamentally altering our Earth systems. See the report of the World Commission on Environment and Development, *Our Common Future*, §1, available online at <http://www.un-documents.net/our-common-future.pdf>. Just as there are precedents to the Anthropocene, there are precedents to my critique. Critics like Sheila Jasanoff argue that the totalizing vision of environmentalism represents environmental issues in a way that eliminates “persons, places, and political boundaries.” Sheila Jasanoff, “Heaven and Earth: The Politics of Environmental Images,” in *Earthly Politics: Local and Global in Environmental Governance*, ed. Sheila Jasanoff and Marybeth Long Martello (Cambridge, MA: The MIT Press, 2004), p. 46. Likewise, Arturo Escobar criticizes the way in which the “scientist-manager” of the West speaks for the global “we.” Arturo Escobar, “Constructing Nature: Elements for a Poststructural Political Ecology,” in *Liberation Ecologies: Environment, Development and Social Movements*, ed. Richard Peet and Michael Watts (London: Routledge, 1996), p. 50.

differential power relations within the human species are elided, the power struggle between humankind and nature is accentuated. Though humanity may have “developed and thrived”⁴ through our intensive use of the Earth, this is ultimately unsustainable. Should we not change course, in the not too distant future nature will fail to deliver the “ecosystem services” necessary to human survival. Ironically, our power over nature may be our own undoing: the specter of catastrophe looms over the entire species. The enfolding of man into a single story, with a single past and a single future/demise, is the most powerful (and problematic) aspect of the discourse.

Underscoring the seductive quality of the discourse is the manner in which political and social thinkers have quickly adopted the concept. Some, like William Connolly, deploy the term in its simple statistigraphical sense to refer to the contemporary epoch: “Could the implacable force of climate change provide an impetus to transform [our] intellectual condition during the late stages of the Anthropocene?”⁵ For others, the concept proves more consequential. Academics like Dipesh Chakrabarty and J. K. Gibson-Graham have come to see history, society, and ecology through the Anthropocene lens, and correspondingly fall into species-talk in their efforts to navigate humanity out of the ecological crisis. For instance, the latter argue that the Anthropocene was born out of a chauvinistic humanism that only recognizes human beings as members of the “community” and as worthy of moral consideration. To escape the Anthropocene, they argue, we must radically transform our ontology, eliminate the (false) barrier between man and ecology, and extend ethical relations to all agents in the ecosystem.⁶

This species-talk is dangerous for at least two reasons. First, in species-talk we focus solely upon the power relations between anthropos and nature, and elide the history of power relations that exist *within* the human species, a history of political-economic relations and human Others. The notion that we must extend our community and ethics to include the agents

4. Will Steffen et al., “The Anthropocene: Conceptual and Historical Perspectives,” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369, no. 1938 (2011): 860.

5. William E. Connolly, “Steps toward an Ecology of Late Capitalism,” *Theory & Event* 15, no. 1 (2012). By “intellectual predicament,” Connolly is specifically referring to the inability of political economists and those producing the “philosophy of becoming” (e.g., Deleuzians) to combine and theorize our ecological predicament.

6. J. K. Gibson-Graham, “A Feminist Project of Belonging for the Anthropocene,” *Gender, Place and Culture* 18, no. 1 (2011): 3; J. K. Gibson-Graham and Gerda Roelvink, “An Economic Ethics for the Anthropocene,” *Antipode* 41, no. s1 (2010).

of nature begs the question of the actuality of the former. Second, by generalizing responsibility we overlook the particular political-economic structures that have contributed to the ecological crisis and have impeded attempts at international environmental governance.⁷ I seek to break open the “We” of species-talk and examine the manner in which political-economic relations have benefitted some and harmed others, centralized some and marginalized others, be it individual persons, subalterns, nations, and states, or rivers, mountains, seas, and atmosphere. In recovering this history, I seek to centralize capitalism within the green discourse and provide a political-economic lens through which we might understand both social and ecological problems.⁸

I buttress my claims by taking the Anthropocene to Copenhagen. Through the example of Copenhagen we can learn several things. First, I note the resemblance between the universalization of responsibility found in the Anthropocene discourse and the United States’ pursuit of a single-track treaty on climate governance.⁹ The assertion of a common ecological responsibility/fate interfaces well with the United States’ desire to put economic competitors like China and India on the list of countries facing binding emissions targets under the UN Framework Convention on Climate Change. Second, I highlight the political confrontations that emerge when those who espouse universal narratives are confronted by groups who do not recognize the universal. Countries like Venezuela have pointed toward differential political-economic histories to reject the bargaining position of the United States and preserve the notion of differential responsibility for climate change (a cornerstone of the Kyoto Protocol).

7. Eileen Crist makes a helpful critique of the climate change discourse, noting its overemphasis on technology and inattention toward the effects of “industrial-consumer civilization.” Yet she herself deploys species-talk in calling attention to the biodiversity crisis. As she puts it, “while species and ecosystems have faced climate shifts during life’s long tenure, species and ecosystems have never faced climate change on a planet dominated by *Homo sapiens*.” See Eileen Crist, “Beyond the Climate Crisis: A Critique of Climate Change Discourse,” *Telos* 141 (2007): 34, 41.

8. In this I follow an example set by others, including Michael Watts and Neil Smith, who demonstrate the usefulness of a historical materialist lens in telling the story of the Other, whether it be the colonized or the environment. See Michael Watts, *Silent Violence: Food, Famine, and Peasantry in Northern Nigeria* (Berkeley: Univ. of California Press, 1983); Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space* (Athens: Univ. of Georgia Press, 2008).

9. By “single-track,” I mean a treaty that would legally bind all industrial countries, including those currently exempted under the Kyoto Protocol, such as China or India.

Third, I juxtapose the failure of Copenhagen to produce a meaningful intergovernmental accord to the concomitant growth in the international carbon market. The same economic motivations that undercut cooperation on climate governance spur the commoditization of carbon and the development of pollution markets. The political-economic lens not only highlights the politics buried in the Anthropocene concept but also provides a tool for understanding actually existing environmental politics.

Finally, I suggest that the Anthropocene discourse demonstrates the importance of critical theory—the revelation of power relations, struggle, and difference (of interests, outcomes) that are concealed on the surface of thought and practice—to the study of environmental politics. The realization of anthropogenic climate change and its associated dangers has eliminated the progressivism of liberalism and turned scientists into seers of an uncertain future. Without wishing to question the veracity of anthropogenic climate change and biodiversity losses, I argue that (with climate catastrophism as the subtext) scientists make sweeping generalizations about mankind and find an audience eager to adopt their ideas. In this context, it is imperative that social scientists and theorists work to reveal the politics that are buried under narratives like the Anthropocene and demonstrate why the adoption of this term is politically problematic. Critical theory is often necessary for putting politics back into the discussion of the environment.

The Anthropocene as Discourse

In this paper I treat the Anthropocene as a concept and discourse, taking seriously both the etymology of the concept and the arguments that proponents build around it. As the concept comes to frame the manner in which we think about the ecological crisis, it becomes important to submit it to criticism, to see what type of politics benefit from its deployment (e.g., in interstate climate negotiations) and what is left at the margin. This means engaging the concept and discourse on its own terms. I do this by outlining the concept and the conclusions drawn from it in the scientific literature.

As a statistical concept, the Anthropocene identifies a new geological epoch in which the human species has become a “geological” force. In the words of the concept’s proponents, “humankind, our own species, has become so large and active that it now rivals some of the great forces of Nature in its impact on the functioning of the Earth system.”¹⁰

10. Steffen et al., “The Anthropocene: Conceptual and Historical Perspectives,” p. 843.

The revolutionary nature of this development, in which one species arises to affect the total Earth system, has rendered the contemporary era qualitatively different from the prior epoch, the Holocene. This requires that we rethink geological time and define a new epoch. The Anthropocene concept therefore represents both the judgment that our contemporary era is qualitatively different from the prior epoch, the Holocene, and the determination that the human species is the primary protagonist in this transformation. Hence the naming of this new “-cene” after the “anthropos.”

As such, the Anthropocene operates on different registers. First, as an attempt to alter the stratigraphical record, the Anthropocene is an attempt to (re)write history.¹¹ How those who propose we recognize and name a new epoch *tell* this history is therefore of great importance. Second, this new epoch needs a name; the “Anthropocene” is also a naming. By naming this new epoch after the “anthropos,” scientists lay at the feet of humanity the responsibility not only for this massive destruction of our “ecosystem services” but also for finding and applying future remedies.¹² Finally, the Anthropocene is an imperative to know the Earth. Human responsibility and agency demand the development of new holistic fields of knowledge. By naming the human species a geological agent, a collective force operating on a massive scale, the Anthropocene discourse necessitates a science of these macro-scale transformations.

One expression of this call to knowledge is the burgeoning field of Earth system science, a grand attempt to systematize the total Earth ecosystem such that we might better know the boundaries to our existence and how we have come to push against them. Earth system science is notable for two things: its attempt to know the entirety of the Earth “system of systems,” and its depiction of humanity as a unit within the system. Through its systematization, this science sees the globe as a “single, self-regulating system comprised of physical, chemical, biological and human components.”¹³ From the scientific perspective, the treating of humanity as a “component” or unit within the ecological system makes sense; the goal

11. Dipesh Chakrabarty, “The Climate of History: Four Theses,” *Critical Inquiry* 35, no. 2 (2009).

12. Steffen et al., “The Anthropocene: Conceptual and Historical Perspectives,” pp. 842–43.

13. Eva Löwbrand, Johannes Stripple, and Bo Wiman, “Earth System Governmentality: Reflections on Science in the Anthropocene,” *Global Environmental Change* 19, no. 1 (2009): 9.

is to understand anthropogenic effects upon the Earth system. But from a political perspective, the term anthropogenic is problematic. Just which “anthropos” are responsible?

The call to knowledge in the Anthropocene and the science that responds both eliminate this question. In its stead, the Anthropocene builds a new universal subject through a rhetoric I term “species-talk.”¹⁴ By this, I refer to the flattening of the vast diversity of persons, cultures, ideologies, agencies, and histories into a single signifier, whether humanity, mankind, *homo sapiens*, or simply “We.” The “talk” aspect of species-talk comes into being when proponents of the Anthropocene concept build a discourse around this universal subject. This is done by examining “our” effect on nature. First, Anthropocene proponents seek to convince the reader that “humankind, our own species . . . now rivals some of the great forces of Nature.”¹⁵ Or, put another way, science now tells us of “the capability of contemporary human civilization to influence the environment at the scale of the Earth as a single, evolving planetary system.”¹⁶ This leads to the second point: a warning. Our destruction of the “broad range of ecosystem services that support human (and other) life” has placed “humanity at a crossroads.”¹⁷ Ironically, We have become so powerful as a species that We now stand at an existential precipice. Proponents form a discourse out of this curious combination of power and precarity, commonly built and experienced by Us all.¹⁸ Escaping this existential predicament will require “scientists and engineers to guide society toward environmentally sustainable management. . . . This will require appropriate human behavior at all scales.”¹⁹ Scientists deem themselves responsible for charting the path (“appropriate human behavior”) that we must follow to escape our predicament.

14. Chakrabarty uses a similar phrasing in “Climate of History,” p. 216.

15. Steffen et al., “The Anthropocene: Conceptual and Historical Perspectives,” p. 843.

16. *Ibid.*, p. 842.

17. *Ibid.*, pp. 842–43; Will Steffen et al., “The Anthropocene: From Global Change to Planetary Stewardship,” *Ambio: A Journal of the Human Environment* 40, no. 7 (2011): 739.

18. For historical precedents to these visions of environmental catastrophe, see Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, MA: Harvard UP, 1995), ch. 9.

19. Paul J. Crutzen, “Geology of Mankind,” *Nature* 415, no. 6867 (2002): 23. This quotation calls to mind the concern of Löwbrand et al. regarding the ability of the Anthropocene discourse to privilege a scientific-technical elite. Löwbrand, Stripple, and Wiman, “Earth System Governmentality,” pp. 11–12.

The single Us elides any trace of power relations that may exist among communities, societies, and states, representing instead the struggle between monolithic humankind and the systems of nature. On one hand, there are the innumerable species and systems we threaten through our “behavior”; on the other, the total power of the Earth system to snuff us out in turn.

The manner in which proponents tell the history of this relation, that between universal We and the global ecosystem, is significant for it corresponds to and bolsters the cosmopolitan flattening of humanity. In defining the new epoch, Anthropocene proponents narrate the rise of the human species, from being merely *erectus* and relatively benign to *sapiens* and all-too-powerful.²⁰ Scientists demonstrate that with each successive leap in resource exploitation and technology, beginning 8,000 years ago with agriculture and intensifying greatly in the nineteenth century with fossil fuels, industrialization, and synthetic nitrates, human intervention into nature dramatically increased in scale. “The result of these and other energy-dependent processes and activities was a significant increase in the *human enterprise and its imprint* on the environment.”²¹ The “enterprise,” in these terms, appears to be collectively produced and therefore a collective responsibility.

Who develops these technologies, who uses them, who benefits and loses, and who is left out of this picture—these are questions that go unmentioned. At best, the narrative notes the rise of markets, free trade, and the growth imperative of neoclassical economics.²² But these are scant mentions in a literature that typically speaks in the most general terms about the drivers of the problem, using phrases like “the burgeoning human enterprise on the Earth system.”²³ For instance, while Steffen et al. note that “the world’s wealthy countries account for 80% of the cumulative emissions of CO₂ since 1751,”²⁴ in the next paragraph they state:

20. Will Steffen, Paul J. Crutzen, and John R. McNeill, “The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature,” *Ambio: A Journal of the Human Environment* 36, no. 8 (2007): 614–15.

21. Steffen et al., “The Anthropocene: Conceptual and Historical Perspectives,” p. 848, emphasis added.

22. *Ibid.*, 850.

23. *Ibid.*

24. Steffen et al., “The Anthropocene: From Global Change to Planetary Stewardship,” p. 746.

Understanding the trajectory of the human enterprise from our long past as hunter-gathers to the Great Acceleration [the post–World War II era of intensive resource exploitation] and into the twenty-first century provides an essential context for the transformation from resource exploitation toward stewardship of the Earth System.²⁵

Again, we encounter the trope of the “human enterprise.” Admission of the *particular* responsibility for climate change is overwhelmed by the drive to universalize history and responsibility. In another example of this tendency, Crutzen is careful to note that the changes in the Earth’s systems “have largely been caused by only 25% of the world’s population.” But this admission comes in the context of an article that chronicles “mankind’s growing influence on the environment” that has resulted in a “many ways human-dominated” geological epoch.²⁶ In the Anthropocene discourse, species-talk wins out in the end.

Species-Talk and Social Thought

The catastrophic imaginary of the Anthropocene has moved many outside of the hard sciences to take up the concept and deploy it for political purposes. Two tendencies characterize this literature, itself composed by a diverse body of scholars. First, the argument that the only way to combat the Anthropocene is to assimilate difference and think in terms of the human We. Accordingly, the authors of this discourse de-emphasize stories of human difference, omitting power relations between different human groups, and instead emphasize and seek to ameliorate power relations between the human species and nature. Notably, some have sought to use the specter of the Anthropocene to advance an “ecological ethic”—the idea that we share an existential and moral bond with nature. The goal for those like J. K. Gibson-Graham is to construct a universal ecological community, the unity of nature and man, or what I call here the “eco-We.”

To travel this analytical distance, we should first note the seamless entry of the Anthropocene into social theory. Gerda Roelvink notes that “in their announcement of the Anthropocene, scientists are calling us to consider ourselves not as a number of different groups but as a single, universal, and transhistorical collective—as a species. Likewise, social theorists argue that understanding climate change and the challenges it

25. Ibid.

26. Crutzen, “Geology of Mankind,” p. 23.

presents to humanity requires that we think in terms of species.”²⁷ What moves these authors to so readily adopt the concept, its cosmopolitanism, and its species-talk? As Dipesh Chakrabarty puts it, the Anthropocene is “a universal that arises from a shared sense of catastrophe.”²⁸ The *shared* nature of the threat generates a new species-We; to backstop this argument, Chakrabarty claims that “there are no lifeboats here for the rich and the privileged.”²⁹ If the Anthropocene in the long run indiscriminately threatens all people, then the only logical response is one that universalizes responsibility for action.

This requires dislodging the politics of difference. For Chakrabarty, a postcolonial historian with a “suspicion of the universal,” this is an especially sensitive aspect of the discourse.³⁰ He acknowledges that the “idea of species, it is feared... may introduce a powerful degree of essentialism in our understanding of humans.”³¹ For instance, this essentialism, “the talk of species or mankind,” may “simply serve to hide the reality of capitalist production and the logic of imperial... domination.”³² Would capitalism and “imperial domination” benefit from a discourse that generalizes responsibility for the ecological crisis to the entire species? Chakrabarty poses the question but pivots around it. Capitalism, it seems, is more important as an irony of history. This contingent artifact of human history has through its (negative) effect on the environment revealed to us the basic truth of our existence: that humankind relies on an ecological system that must remain within certain “boundary parameters” should we wish to maintain human civilization.³³ Having led us into the crisis, the *particularities* of capitalism and the “industrial way of life” are central to our ecological past and our future. But the crisis also underscores the *universal* ecological basis for life and our shared responsibility for maintaining it. And so, while it “seems true that the crisis of climate change has been necessitated by the high-energy-consuming models of society that capitalist industrialization has created and promoted,” the ecological boundary parameters of our existence are “independent of capitalism or

27. Gerda Roelvink, “Rethinking Species-Being in the Anthropocene,” *Rethinking Marxism* 25, no. 1 (2013): 53.

28. Chakrabarty, “Climate of History,” p. 222.

29. *Ibid.*, p. 221.

30. *Ibid.*, p. 220.

31. *Ibid.*, p. 214.

32. *Ibid.*, p. 216.

33. *Ibid.*, p. 217.

socialism. They have been stable for much longer than the histories of these institutions and have allowed human beings to become the dominant species on earth.”³⁴

Thus it is that Chakrabarty would have us dwell simultaneously in “chronologies of capital and species history.”³⁵ This is a political impossibility—the latter presumes a common history and future for a species that dwells within systems of political-economic inequalities (i.e., the former). For instance, when he states that “we have now ourselves become a geological agent disturbing these parametric conditions needed for our own existence,” or that there are no “lifeboats” for the wealthy, he requires us to forget the fractures within this so-called “agent” and the manner in which some have considerably greater agency, including greater ability to weather the proverbial storm.³⁶ Climate change is indeed anthropogenic, but there is no universal anthropos behind it. Climate change may be catastrophic, but not in equal quality or quantity to all. The “emergent, new universal history of humans” that Chakrabarty outlines steers us clear of these politics.³⁷

The species-talk of the Anthropocene also has its effects felt in ethics. Eva Lövbrand, Gibson-Graham, and Roelvink spring from the Anthropocene discourse to argue for the ethical inclusion of the “more than human” (that is, all parts of the ecological system) into the collective Us. By this, Gibson-Graham mean “actively *connecting* with the more than human” and establishing “human relations of mutuality with the more than human.”³⁸ While we might wonder what this verb “connecting” means in practice, what is more important is the fact that “human” operates as an unproblematic and settled term in this discourse. As with Chakrabarty, the authors intend to reinforce this We-thinking by rejecting claims to difference.³⁹ Writes Gibson-Graham: “What is required at the moment for our . . . project of belonging is not something deconstruction can provide. What critics of separateness and separation thinking are asking us to do

34. *Ibid.*, p. 218.

35. *Ibid.*, p. 220.

36. *Ibid.*, pp. 218, 222.

37. *Ibid.*, p. 222.

38. Gibson-Graham, “Feminist Project of Belonging,” p. 5; Gibson-Graham and Roelvink, “An Economic Ethics for the Anthropocene,” p. 331.

39. To be clear, Chakrabarty’s involvement in the Anthropocene discourse does not extend to this advocacy for an ecological ethic, though his species-talk serves as a foundation for it.

is to think connection rather than separation, interdependence rather than autonomy.”⁴⁰ The specter of the Anthropocene “requires” this transcending of difference. In its place must arise a new universal subject through an awareness of our ecological connections, our Natural nature. The combination of catastrophe and connection orders the construction of this total community.⁴¹ This is, I argue, political ecology without the politics. Whether through a shared sense of responsibility or a shared existential destination, previous dividing lines and histories that shaped our understanding of society and politics are swept away. The anthropological content of the Anthropocene is virtually empty.

The Threat of the Anthropocene

The telling of a single history, of a common responsibility for the ecological crisis, pushes to the side and out of sight a political-economic system that has a particular history, has benefitted particular groups of people, and has differentially affected ecologies the world over. Indeed, the threat of the Anthropocene is that it would elide factors central to the ecological crisis, such as the provisioning of goods through an economic system premised in competition, profit, and growth. Second, how can a discourse that universalizes responsibility mobilize an opposition to the problem? Those who speak in terms of species-talk fail to grasp a moment in which we might articulate a unique political group, bringing together those damaged politically, socially, and ecologically by the political economy with those possessing a personal commitment to abstract values like nature, humanity, future generations, etc.

Thus I suggest, contra Chakrabarty, that we pivot *toward* the history of the political economy and *away* from universal narratives like the Anthropocene, both to understand our present crisis as well as set the ground for a political coalition necessary to escape it. For example, rather than treat the Industrial Revolution as a contingent artifact of history, one that has caused us to realize our universal reliance on the ecology and universal fate if we do not alter course, I suggest we do the opposite, highlighting

40. Gibson-Graham, “Feminist Project of Belonging,” p. 5.

41. I would suggest, following Andrew Dobson, that the opposite result is more likely: the lack of a political/politicized subject. Who may resist when all are guilty? From what corner does politics spark? Discourse that universalizes responsibility assumes a universal political subject, which Dobson rightly considers utopian. See Andrew Dobson, *Green Political Thought* (London: Routledge, 2007), pp. 135, 161.

the politics behind these economic and technological transformations. We might ask who commanded the technologies of the Industrial Revolution and for what purpose? Who gained, and who lost?

Notably, the Industrial Revolution functioned within an international political system premised in colonialism, and its technologies operated to enrich some while they simultaneously immiserated others and despoiled their natural systems. As but one example, the construction of the Indian railroad system under British rule required the felling of vast Himalayan forests. Timber was necessary to build rail ties and carriages, and it was even used as fuel in engine boilers. This was not done to enrich Indians, rather “dominion enabled Britain to build, *at Indian cost*, a system of road and rail transport which linked the colonial ports to their hinterlands and tilted the terms of trade in favour of her own nationals who dominated India’s foreign [*sic*] trade.”⁴² Resource extraction and trade demanded effective transportation systems, the building of which had the side effect of deforesting Indian landscapes. Forests were so damaged by this process that the British declared a state monopoly over them, instituting a regulatory regime to manage future harvests. “Railway expansion continued unabated, and the methods by which private enterprise were working the forests forced the state to step in to safeguard ‘their long-term imperial interests.’”⁴³ Exploitation of the local environment therefore generated an early example of scientific management, deepening the role of the colonial state. Notably, the new forestry regime restricted traditional uses of the forests by local populations.⁴⁴ Technology, environment, and governance thus form an interlocking history featuring steep asymmetries of power, responsibility, and outcomes.

But primitive accumulation of this variety, with these social and environmental effects, is not limited to the nineteenth century. Anna Tsing’s environmental history *Friction* gives us an account of contemporary processes by which political-economic actors work across space and through nodes of power to violate some persons and places in order to enrich others. Tsing documents the processes of “frontier capitalism”: the operations

42. Ramachandra Guha, “Forestry in British and Post-British India: A Historical Analysis,” *Economic and Political Weekly* 18, no. 44 (1983): 1884, emphasis in original.

43. *Ibid.*, p. 1844.

44. Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham, NC: Duke UP 2005); Raymond L. Bryant, “Power, Knowledge and Political Ecology in the Third World: A Review,” *Progress in Physical Geography* 22, no. 1 (1998): sections III–IV.

of firms at geographical and regulatory margins, where with minimal institutional hindrance they may convert agrarians into proletarians and turn nature into economic resources.⁴⁵ Through Tsing's account we know that Borneo's rainforests are not destroyed by some myopic universal subject (Us) but rather by a combination of domestic and international forces unleashed upon a landscape and its inhabitants. We see that a small group of persons—the Suharto family—opens a frontier space, permitting companies, foreign and domestic, to operate upon the land. These firms enter to exploit the local resources—both human (labor) and land (timber, palm oil, minerals)—in order to generate profits. Amid this chaotic scene of extraction, exploitation, and destruction are the people whose socio-ecological system predates the intrusion of capital: the Dayak people. Their way of life is destroyed when business and migrant labor descend upon their territory, transforming it into a resource zone. Where do they fit into the Anthropocene's We?

And what of the workers in this scenario, the Javanese migrants and proletarianized Dayak cutting and burning down the rainforest? Do they share the same responsibility for the destruction as those who profit off their labor? Or rather, should we emphasize the manner in which our political economy generates material insecurity and forces people to choose between land and their bellies? The title of Richard White's excellent essay, "Are You an Environmentalist or Do You Work for a Living?" exemplifies this drama, in which timber workers are forced to choose between logging or unemployment in a depressed regional economy.⁴⁶

Green theories must represent those with different histories, those who stand at the short end of the power asymmetries of the global political economy. In many ways, this is a familiar argument and we already have at our disposal several concepts that point to this differential history. The concept of "common but differentiated responsibility," as elaborated within the UN Framework Convention on Climate Change, expresses the historical fact that not all states share the same responsibility for the present composition of the atmosphere vis-à-vis greenhouse gases. The idea of a "carbon footprint" presents a more mundane, individualistic example of

45. Anna Lowenhaupt Tsing, *Friction: An Ethnography of Global Connection* (Princeton, NJ: Princeton UP, 2005), ch. 1.

46. Richard White, "'Are You an Environmentalist or Do You Work for a Living?': Work and Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996).

this differential responsibility. More significant, the concept of “environmental justice” points toward the skewed distribution of environmental ills and natural disasters. For instance, affluent areas tend to receive greater state expenditures in disaster prevention.⁴⁷ Affluence also enables the distancing of waste to far-off places.⁴⁸

But green theories must name the political-economic structures that generate these differences as well as those structures that inhibit a transition to an ecological polity. Furthermore, by eliding the particular histories of persons violated by the political-economic system, whether in frontier capitalism, environmental injustice, or banal consumerism, proponents of the Anthropocene miss an opportunity to pair the extraordinary data on climate change and biodiversity losses with these social ills. That human and environmental harms have a common cause in the political economy means that social justice and environmentalism have a common cause as well.

The political-economic *production* of (eroded) nature is omitted from the Anthropocene discourse at a great cost to both its incisiveness and political utility to the environmental movement. The idea of “producing” nature comes from Neil Smith, whose *Uneven Development* explores the manner in which the “material substratum” of existence “is more and more the product of social organization.”⁴⁹ Several examples can serve to make this idea more tangible: agriculture, landscape, and parks are all obvious examples of “produced” nature, where man’s labor with the land produces a hybrid form. One might think of a hedgerowed countryside or Manhattan’s Central Park. One might also think of state and national parks, such as Yellowstone, which are produced as wilderness zones. Less conspicuous is the anthropogenic production of the atmosphere, evidenced in the ballooning of carbon dioxide levels. In related fashion, an ice-free summer Arctic, malarial Egypt, and Borneo’s rainforests are examples of human industry.⁵⁰

47. Michael Eric Dyson, *Come Hell or High Water: Hurricane Katrina and the Color of Disaster* (New York: Basic Books, 2006).

48. Thomas Princen, “Distancing: Consumption and the Severing of Feedback,” in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: The MIT Press, 2002).

49. Smith, *Uneven Development*, pp. 49–50.

50. See “Can the Mosquito Speak?” in Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: Univ. of California Press, 2002); Tsing, *Friction*, passim.

But what specifically shapes our production of nature? Following Marx, Smith focuses on the manner in which capitalism mediates the relationship between man and nature, that is, how we organize industry and labor and the ends to which our industry aims. Capitalism functions through competition, money, and a profit imperative, and the logics endemic to each have negative effects on how we use nature. On one hand, the fact that money is accumulable and fungible *incentivizes* growth and the externalization of costs. On the other, competition and the profit imperative *coerce* firms to grow and externalize costs. In sum, the logics of capitalism prompt firms to make greater use of the Earth and dis-incentivize the internalization and diminution of environmental costs. And whether the efficiencies engendered by technology in a landscape of inter-firm competition can help “dematerialize” our economy (that is, reduce material throughput) is intimately tied to the question of whether increased efficiencies lead to decreased costs of production, which may prompt profit-seeking enterprises to make more use of the Earth’s resources (the so-called “rebound effect”).⁵¹ The problematic rate, extent, and manner by which we use the Earth must be connected to the logics of capitalism, rather than technology or anthropocentrism.

This mode of analysis grants us an additional benefit. Through a “green” historical materialism, or one that attends to the ecological effects wrought by the political economy over time and across space, we see precisely the global cleavages covered over by the Anthropocene. We see the rendering of difference via the relations and geographies of production, consumption, and waste disposal. Furthermore, through historical materialism we see how the ecological crisis is not the result of a universal subject (the human species, We) but rather the creation of a universal *object*, the reduction of nature to resource or material to be extracted and manipulated for the sake of the economy.⁵²

51. Emily Matthews, *The Weight of Nations: Material Outflows from Industrial Economies* (Washington, DC: World Resources Institute, 2000); Lorna A. Greening, David L. Greene, and Carmen Difiglio, “Energy Efficiency and Consumption—the Rebound Effect—a Survey,” *Energy Policy* 28, no. 6 (2000); Steve Sorrell and John Dimitropoulos, “The Rebound Effect: Microeconomic Definitions, Limitations and Extensions,” *Ecological Economics* 65, no. 3 (2008); Reinhard Madlener and Blake Alcott, “Energy Rebound and Economic Growth: A Review of the Main Issues and Research Needs,” *Energy* 34, no. 3 (2009).

52. Smith, *Uneven Development*, p. 71; Donald Worster, *Nature’s Economy* (Cambridge: Cambridge UP, 1994), see ch. 2, “The Empire of Reason.”

The Anthropocene Goes to Copenhagen

International climate governance is relevant to this discussion in two ways: first, in demonstrating the manner in which the capitalist market mediates our ecological relations; and second, in providing a political-discursive setting against which we can contrast the Anthropocene's insights.

Most notably, the economic interests of the largest economies have inhibited the collective production of a regulatory regime over greenhouse gasses. The role of the economy in mediating the United States' position on climate change has been clear since the passage of the U.S. Senate's Byrd-Hagel Resolution (1997). Trading on the power of the Senate over international lawmaking, the Byrd-Hagel Resolution is a preemptive statement regarding the position of the U.S. Senate on climate change treaties. The resolution is short and direct:

That it is the sense of the Senate that—(1) the United States should not be a signatory to any protocol to, or other agreement regarding, the United Nations Framework Convention on Climate Change of 1992, at negotiations in Kyoto in December 1997, or thereafter, which would—(A) mandate new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties, unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period, or (B) would result in serious harm to the economy of the United States.⁵³

The resolution passed by a vote of 95-0, including several yeas from senators typically associated with environmental politics, such as Ted Kennedy. The statement plainly states that the United States is unwilling to assent to any international treaty that pursues a two-track approach to greenhouse gas regulation unless the economies of its largest economic competitors, including China and India, are included in the ranks of those with mandatory emissions limits. In short, the accord must be “symmetrical” in regard to the largest economies. Fierce international competition for profits and growth intervenes against any “asymmetrical” move made by those with ulterior logics (i.e., a concern over climate change).

The course of climate change negotiations, from Rio in 1992 to Copenhagen in 2009, has centered on the degree to which the United States

53. U.S. Congress, Senate, S. Res. 98, 105th Cong., 1st sess., 1997.

can press for a symmetrical binding agreement on emission reductions.⁵⁴ Though the Copenhagen Accord maintains the language of common but differentiated responsibility on paper, actual negotiations have revolved around the United States' ability to erode this principle.⁵⁵ Premised in the idea of a "common threat" facing all nations upon the globe, the United States has attempted to enmesh major non-Annex I countries like China and India in a climate regime with binding targets and external audits.⁵⁶ As Obama argues in the epigraph above, "we have to all shoulder the responsibility for keeping the planet habitable, or we're going to suffer the consequences—together." It must be noted that the Anthropocene discourse stands at a hair's breadth from Obama's assertion. Additionally, we must note the diverse ends to which these ideas can be put. While Gibson-Graham deploys the Anthropocene to argue for a new ecological ethic, the United States uses a similar discourse as leverage over its economic rivals.⁵⁷

Within the context of the Anthropocene discussion, Copenhagen presents us with two important lessons. First, we see that economic *realpolitik* has forced a confrontation between the United States and China, with each trying to protect its domestic economy and ultimately sinking all attempts at a multilateral binding agreement on emissions reductions.⁵⁸ As Obama noted to a group of environmental groups in San Francisco, concerns over jobs and industries mediate our politics of nature, not the other way around: "You may be concerned about the temperature of the planet, but it's probably not rising to your No. 1 concern. And if people think, well, that's shortsighted, that's what happens when you're struggling to get by."⁵⁹

54. Daniel Bodansky, "The Copenhagen Climate Change Conference: A Postmortem," *American Journal of International Law* 104, no. 2 (2010); J. Timmons Roberts, "Multipolarity and the New World (Dis)Order: US Hegemonic Decline and the Fragmentation of the Global Climate Regime," *Global Environmental Change* 21, no. 3 (2011).

55. David Corn, "In Copenhagen, U.S. vs. China," *Atlantic*, December 17, 2009, <http://www.theatlantic.com/magazine/archive/2009/12/in-copenhagen-us-vs-china/307809/>.

56. To see a glimpse of this universalizing discourse, see the U.S. State Department, "Our Common Purpose," p. 12, <http://www.state.gov/documents/organization/133389.pdf>.

57. This is a particularly high-level example of what Timothy Luke calls "green hustling," or the purposing of environmental rhetoric for the sake of ulterior political/economic motives. See Timothy Luke, "Regarding Nature, Anti-Industrialism and Deep Ecology: A Response to McLaughlin," *Telos* 97 (Fall 1993): 159–66.

58. Roberts, "Multipolarity and the New World (Dis)Order," p. 781.

59. Michael D. Shear, "Obama Tells Donors of Tough Politics of Environment," *New York Times*, April 4, 2013, <http://www.nytimes.com/2013/04/05/us/politics/obama-donors-keystone-pipeline.html>.

Second, there is a corresponding danger in political-ecologic discourses that seek to universalize the ecological crisis, namely, that they can provide rhetorical cover for positions and policies that masquerade as green but are instead premised in base economic concerns. The Anthropocene discourse can be used quite cynically in pursuit of a national *realpolitik* that seeks to deflect responsibility and ensnare economic competitors within a constricting regime.

Where climate governance *has* advanced has been in the development of the international carbon market. In other words, market-based “solutions” to the climate problem have flourished while interstate negotiations have foundered. It has proven dramatically easier to develop new markets than constrain them. Our focus on the failures of interstate negotiations “overemphasises the centrality of inter-state negotiations and masks the ongoing development of alternative governance arrangements, in particular the ‘global carbon market.’”⁶⁰ This warning is important given the “deep consensus that continues around the importance of carbon markets to climate governance.”⁶¹ The synthesis of the Kyoto Protocol’s Clean Development Mechanism (CDM) with the EU Emissions Trading System (ETS) is one example of the deepening of the carbon market. The CDM “establishes a carbon market for emission reductions achieved in the global South . . . which can be bought by developed countries to offset their greenhouse gas emissions.”⁶² Specifically, countries participating in the EU system can purchase offsets from projects operating under the CDM. As we will see below, this leads to complaints from groups like ALBA that the developed countries are not serious about curbing their emissions nor are they changing their mindset regarding the commodification of nature. Instead, they continue to leverage capital over the peoples and land of the global South.⁶³

The comparison between the “two Copenhagens,” or the failure of the official conference and the success of concurrent efforts to develop and deepen the global carbon market, presents another indication of the ability of capital to mediate our relationship to nature. That the market-based

60. Steven Bernstein et al., “A Tale of Two Copenhagens: Carbon Markets and Climate Governance,” *Millennium: Journal of International Studies* 39, no. 1 (2010): 163.

61. *Ibid.*, p. 166.

62. Chris Paul Methmann, “The Sky Is the Limit: Global Warming as Global Governmentality,” *European Journal of International Relations* (2011): 70.

63. The Alianza Bolivariana para los Pueblos de Nuestra América is an intergovernmental alliance that includes eight countries, including Bolivia, Venezuela, and Cuba.

solution within the Kyoto Protocol (the CDM) would emerge as the most successful form of global climate governance is not surprising, nor is it surprising that pressure to enact binding emissions reductions have failed. The latter operate on logics (social, scientific) that are ulterior to those that operate within capitalism, in particular its neoliberal variant. For instance, the conversion of a pollutant, carbon dioxide, into a commodity and financial asset is in keeping with an economic system that seeks to commoditize and financialize everything.⁶⁴ But the stakes go beyond whether this is ducking responsibility or engendering financial fraud, though these are very important issues.⁶⁵ Global carbon markets also enable a new form of exploitation of the South, this time displacing persons and radically altering ecosystems in the name of carbon offsets.⁶⁶ It is hard to maintain the discourse of the Us in the presence of such stories.

By rejecting the universal history-telling of the North and critiquing the marketization of carbon politics, the ALBA countries provide a counternarrative that centers the politics of climate change on capitalism and the history of development. Mobilizing concepts antithetical to the universalizing discourse of the Anthropocene, such as climactic debt, adaptation debt, and historical responsibility, countries like Venezuela highlight the role capitalism and colonialism have played in the ecological crisis, as well as naming the countries that have historically benefitted from these arrangements. Under these arguments, countries sharing a disproportionate responsibility for the carbon loading of the atmosphere have a responsibility (i.e., “debt”) to assist countries that suffer the most immediate consequences, particularly those with few resources to mitigate against damages. At Copenhagen, ALBA were infuriated by what they saw as an attempt by the developed countries to “forget the Kyoto Protocol” and transfer “their obligations onto us...so they can continue contaminating and destroying on the basis of their patterns of exploitation,

64. David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford UP, 2005), p. 33.

65. Interpol, *Guide to Carbon Trading Crime* (Lyon: Interpol Environmental Crime Programme, 2013).

66. Fernanda Almeida et al., “Status of Forest Carbon Rights and Implications for Communities, the Carbon Trade, and REDD+ Investments” (Washington, DC: Rights Resources Initiative, 2014). For a specific case, see Friends of the Earth International, “Land, Life, and Justice: How Land Grabbing in Uganda is Affecting the Environment, Livelihoods and Food Sovereignty of Communities,” April 2012, <http://www.foei.org/en/resources/publications/pdfs/2012/land-life-justice/view>.

production, and consumption.”⁶⁷ Furthermore, ALBA criticized carbon markets for enabling “those who cause climate change [to] continue contaminating, while the weight of emissions reductions transfers to the developing countries.”⁶⁸ In other words, the carbon market would turn the global South into a carbon sink such that the global North can continue industry-as-usual. The carbon trade is central to today’s political economy of ecological difference.

The universalisms of the Anthropocene falter once confronted by the asymmetrical histories of colonialism, development, and global political economy. To this story of the South, with Michael Eric Dyson’s book on Hurricane Katrina in mind, one might add that steep political-economic asymmetries exist within rich countries as well, leading to differential human outcomes vis-à-vis natural disasters. We do not live in the Anthropocene but rather in an era of arrangements by which business and political elite adapt capitalism to changing circumstances, turning externalities (carbon dioxide pollution) into markets, making profits while working under the guise of environmentalism. Meanwhile, those who have the least ability to adapt to and cope with the social and environmental damages wrought in the political economy are pushed to the side, both politically in terms of climate governance and discursively in terms of the Anthropocene.⁶⁹

Conclusion

The Anthropocene threatens to become the primary reference by which we understand the present day as it pertains to the global ecology. Through an all-encompassing rhetoric paired with a catastrophist imaginary, the Anthropocene pushes a new universal history and subject. Representing a crystallization of ecological thought and activism, the term pronounces a We subject—the anthropos—that has threatened its object to the point that this object, Nature (or in the parlance, the “Earth system”), may no longer come to tolerate it. The concept seduces the reader through its direct and

67. ALBA Countries, “ALBA Declaration on Copenhagen Climate Summit,” trans. Tamara Pearson, <http://venezuelanalysis.com/analysis/5038>. For more documents on ALBA’s stance versus climate change and international cooperation, see the group’s website, <http://www.alba-tcp.org/>.

68. Ibid.

69. By “least ability” to adapt and cope, I refer to the fact that affluence enables options that the poor do not have. Financial resources make disaster mitigation, translocation, disaster cleanup, and rebuilding much easier.

damning injunction against “business as usual,” declaring that humans must take responsibility for their actions or face sure catastrophe.

Though this rhetoric is effective for drawing attention to the ecological crisis, raising the alarm over the state of the atmosphere and global biodiversity, the term is equally dangerous as a matter of social theory. By generalizing responsibility and guilt for our contemporary ecological disasters to the point that it encompasses the human species, the Anthropocene concept and discourse elide a history of asymmetrical political-economic relations. Indeed, it has generated calls for an eco-We, the great fusion of humanity and nature. By furthering the Anthropocene discourse’s silence regarding the political economy, this empty cosmopolitanism provides no ground for politics but rather removes it. Instead, the Anthropocene discourse and social theory’s eco-We provide rhetorical cover for the global economic *realpolitik* and fail to provide insight into the political-economic drivers of the ecological crisis.