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Dipesh Chakrabarty

Whose Anthropocene? A Response

I am very grateful to the editors and contributors for the honor of making an essay of mine the main focus of the February 2015 University of South Carolina workshop that led to this volume, and for the volume itself. It is an enormous privilege for any author to have an article of his or hers submitted to critical interrogation by such learned and thoughtful colleagues from a variety of disciplines, attempting conversation across the human and the natural sciences, which is not an easy task even under the most favorable of circumstances. As the main beneficiary of this exercise, however, I thank not only the colleagues whose opinions are represented in this volume but also those who participated in the original workshop and thus gave me a number of exciting opportunities to share my work and thoughts in the enriching week we spent together in Columbia, South Carolina, in February 2015.

In the interest of space and time, I have organized my responses to my generous interlocutors under five headings, in order to discuss some of the questions that to me appear crucial to debates on global warming: (a) the importance, to social scientists, of the biogeological aspects of climate change (a point raised by Carol Boggs and Lori A. Ziolkowski), (b) Anthropocene and the inequities of a capitalist mode of production (Kathleen McAfee, Jessica Barnes, Carol Hee, Laura A. Watt), (c) politics and law in and of the Anthropocene (John M. Meyer, Barnes, Josh Eagle), (d) the usefulness or otherwise of species-thinking (Lisa Sideris, McAfee, Barnes), and (e) the kind of stories we need to tell in these times (Daniel deB. Richter, Alexa Weik von Mossner, Timothy J. LeCain, Sideris, Hee). Needless to say, I do not have space to address every question raised though I do not deny their importance. Nor do I hope—or even wish—to resolve all these questions to everybody's satisfaction. Many of the questions we discuss here belong to ongoing debates, and I do not claim to possess any final answers. Climate change itself is an unfolding problem, and human responses to it—both practical and intellectual—will no doubt vary with the actual futures we come to face. Even this short list of issues I have used to organize this response says something about the times we are passing through. Ten years ago, before the fourth aggregate report of the IPCC became the subject of great publicity in print and electronic media, a typical laundry list of questions to debate in a forum such as this would have been different. Climate change is with us; it has happened, and continues to happen. But

debates in the social and human sciences are still in their infancy. Many of us attack the problem with weapons forged in times when globalization (of media, capital) seemed to be the key issue for the world. Globalization and global warming are connected, but are not identical problems. The questions they raise, and the methods by which we define these problems, are related but have some distinct differences. It is through debates such as this that these differences will emerge more clearly.

Biogeological Aspects of Climate Change

I fundamentally agree with Boggs that one can no longer separate the biological agency of humans from their geological agency in the way in which I appeared to do in my essay “The Climate of History,” though the separation continues to mark much of the policy literature. One generally finds two approaches to the problem of climate change. One dominant approach is to look on the phenomenon simply as a one-dimensional challenge: How do humans achieve a reduction in their emissions of greenhouse gases (GHGs) in the coming few decades? The climate problem is seen in this approach as a challenge of how to source the energy needed for the human pursuit of some universally accepted ends of economic development, so that billions of humans are pulled out of poverty. The main solution proposed here is for humanity to make a transition to renewable energy as quickly as technology and market signals permit. The accompanying issues of justice concern relations between poor and rich nations and between present and future generations: What would be a fair distribution of the “right to emit GHGs”—since GHGs are seen as scarce resources—between nations in the process of this transition to renewables? Should not the less developed and more populous countries (like China and India) have a greater right to pollute, while the developed nations take on more responsibility to make deep cuts in their emissions? The question of how much sacrifice the living should make as they curb emissions, to ensure that unborn humans inherit a world that enables a better quality of life than the present generation, remains a more intractable one, and its political force is reduced by the fact that the unborn are not here to argue about their share of the atmospheric commons.

Within this broad description of the first approach, however, are nested many disagreements. Most imagine the problem to be mainly one of replacing fossil fuel-based energy sources by renewables; many also assume that the same mode of production and con-

sumption of goods will continue. These latter analysts imagine a future in which the world is more technologically advanced and connected than now, but with the critical difference that a consumerist paradise will be within the reach of most, if not all, humans. Some others—on the left—would agree that a turn to renewables is in order, but argue that because it is capitalism’s constant urge to “accumulate” that has precipitated the climate crisis, the crisis itself provides yet another opportunity to renew and reinvigorate Marx’s critique of capital. I am not sure about the kind of economy that these latter scholars visualize as replacing the global capitalist regime, but there is clearly an assumption that a globalized, crowded (nine to ten billion people), and technologically connected post-capitalist world can somehow come into being and avoid the pitfalls of the drive to accumulate. And then there are those who think of not just transitioning to renewable sources of energy but of actually scaling back the economy, de-growing it, and thus reducing the ecological footprint of humans while desiring a world marked by equality and social justice for all. Still others think—in a scenario called “the convergence scenario”—of reaching a state of economic equilibrium globally whereby all humans live at more or less the same standard of living. And then, of course, there are those who think of the most desirable future as capitalist or market-based growth with sustainability.

Against all this, there is another way to view climate change: as part of a complex family of interconnected problems, all adding up to the larger issue of a growing human footprint on the planet that has, over the last couple of centuries and especially since the end of the Second World War, seen a definite ecological overshoot on the part of humanity. This overshoot, of course, has a long history but one that has picked up pace in more recent times. The Israeli historian Yuval Noah Harari explains the issue well in his book, *Sapiens: A Brief History of Humankind*. “One of the most common uses of early stone tools,” writes Harari, “was to crack open bones in order to get to the marrow. Some researchers believe that this was our original niche.” Why? Because, Harari explains, “genus *Homo*’s position in the food chain was, until quite recently, solidly in the middle.”¹ Humans could eat dead animals only after lions, hyenas, and foxes had had their shares and cleaned the bones off all the flesh sticking to them! It is only “in the last 100,000 years,” says Harari, “that man jumped to the top of the food chain.”² This has not been an evolutionary change. As Harari explains:

1 Yuval Noah Harari, *Sapiens: A Brief History of Humankind* (New York: Harper Collins, 2015), 9.

2 Ibid.

Other animals at the top of the pyramid, such as lions and sharks, evolved into that position very gradually, over millions of years. This enables the ecosystem to develop checks and balances that prevent lions and sharks from wreaking too much havoc. As the lions became deadlier, so gazelles evolved to run faster, hyenas to cooperate better, and rhinoceroses to be more bad-tempered. In contrast, humankind ascended to the top so quickly that the ecosystem was not given time to adjust.³

The problem of humans' ecological footprint, we can say, was ratcheted up over the last 500 years with European expansion and colonization of faraway lands inhabited by other peoples, and the subsequent rise of industrial civilization. But a further ratcheting up by several significant notches happened after the end of the Second World War when human numbers and consumption rose exponentially, thanks to the widespread use of fossil fuels, not only in the transport sector but also in agriculture and medicine. GHG emissions gave humans the capacity to interfere in Earth systems processes that regulate the climate of the whole planet, in short yielding the geological agency that I wrote about in my essay under discussion. This planet-wide geological agency of humans, however, cannot be separated—as Boggs and Ziolkowski usefully remind us—from the way humans interfere in the distribution of natural life on the planet. Not only have marine creatures not had the evolutionary time to adjust to our new-found capacity to hunt them out of existence through deep-sea fishing technology, but our GHG emissions now also acidify the oceans, threatening the biodiversity of the great seas, and thus endangering the very same food chain that feeds us. Ziolkowski is thus absolutely right to point out that it is the human record left in the rocks of this planet as fossils and other forms of evidence—such as terraforming of the ocean bed—that will constitute the long-term record of the Anthropocene, perhaps more so than the excess GHGs in the atmosphere. If human-driven extinction of other species results—say, in the next few centuries—in a Great Extinction event, then (my geologist friends tell me), even the epoch-level name of the Anthropocene may be too low in the hierarchy of geological periods.⁴

Viewed thus, climate change indeed points to what Boggs calls a “biogeological force of humanity.” Boggs, Ziolkowski, and Richter remind us that the climate change problem

3 Ibid., 11–12.

4 “If global warming and a sixth extinction take place in the next couple of centuries, then an epoch will seem too low a category in the hierarchy [of the geological timetable].” Personal communication with Professor Jan Zalasiewicz, 30 September 2015.

is not a problem to be studied in isolation from the general complex of ecological problems that humans now face on various scales—from the local to the planetary—creating new conflicts and exacerbating old ones between and inside nations. There is no single silver bullet that solves all the problems at once; nothing that works like the mantra of transition to renewables to avoid an average rise of 2°C in the surface temperature of the planet. What we face does indeed look like a wicked problem, one that we may diagnose but not be able to “solve” once and for all.⁵

Anthropocene and the Inequities of Capitalism

Here let me address some critical questions raised by McAfee that have also been raised by others in additional contexts. I am a little surprised that she finds my position to be the same as E. O. Wilson’s, who recommends that we think of ourselves as a species and act as a rational species. Let me put aside for the moment the questions I actually raised about our not having ontological access to our being-a-species, which makes the question of acting like a “rational species” very problematic. I thought I had also argued for a double position (in the “Four Theses” essay): of both acknowledging the role of (scientific) reason in defining and adapting to climate change—for without scientific research and verification, there is no problem called “global warming”—but also of maintaining a postcolonial vigilance against “universals” that actually hide particular interests. I also cautioned that human politics—even leftist politics—could never be about rationality alone. This is the reason that I struggled somewhat towards the conclusion of that essay with Adorno’s idea of a negative universal. I tend to share her criticisms of ecomodernists who plan for a “good Anthropocene” and I am sympathetic towards Clive Hamilton’s critique of the “good Anthropocene” thesis. But surely the findings of science do more than simply reflect relations of power (which they also do)? I would repeat something I have said in that essay and elsewhere: that climate change would only accentuate the inequities of the global capitalist order as the impact of climate change—for now and in the immediate future—falls more heavily on poorer nations and on the poor of the rich nations.

5 See the detailed and excellent discussion in Frank P. Incropera, *Climate Change: A Wicked Problem—Complexity and Uncertainty at the Intersection of Science, Economics, Politics, and Human Behavior* (New York: Cambridge University Press, 2016).

I say “for now and the immediate future” for a good reason. For there is a more basic misunderstanding at work when I get criticized for saying that there is one respect in which the crisis of climate change is different from the crises of capitalism: in the case of the crisis posed by climate change, I said: “There are no lifeboats for the rich,” meaning that the rich could not escape this crisis. Andreas Malm and Alf Hornborg took me to task for saying this and others have too. Now McAfee, citing them, repeats the charge: “Contra Chakrabarty, the rich may face the same storms and they *do* have lifeboats.” Barnes is also in strong agreement with McAfee and others on this point. I give examples of Australian or Californian fires, but she remains incredulous: “I am not fully convinced by this argument. As a large body of scholarship within environmental justice and political ecology has demonstrated, the burden of environmental risks, whether climate change-related or not, falls unevenly on different social groups, mediated by class, race, gender, and ethnicity. Fires in wealthy neighborhoods may be devastating, but are probably less devastating to households that have home insurance, have invested in fire safety measures, or own cars to flee in response to warnings.”

I find it ironic that some scholars on the left should speak with a similar assumption to that made by members of the rich who do not necessarily deny climate change but believe that, whatever the extent of the warming and destabilization of the climate, they will always be able to buy their way out of the problem! This is understandable coming from economics textbooks that envision capitalism as an economic system that will always face periodic crises and overcome them, but never face a crisis of such proportions that it could upset all capitalist calculations. It is easy to think within that logic that climate change was just another of those business cycle-type challenges that the rich had to ride out from time to time. Why would scholars on the left write from the same assumptions? Climate change is not a standard business cycle crisis. Nor is it a standard “environmental crisis” amenable to risk-management strategies. The danger of a climate tipping point is unpredictable but real.

Left unmitigated, climate change affects us all, rich and poor. They are not affected in the same way, but they are all affected. A runaway global warming leading to a Great Extinction event will not serve the rich very well. A massive collapse of human population caused by climate dislocation—were it to happen—would no doubt hurt the poor much more than the rich. But would it not also rob global capitalism of its reserve army of “cheap” labor on which it has so far depended? A world with freakish weather,

more storms, floods, droughts, and frequent extreme weather events cannot be beneficial to the rich who live today or to their descendants who will have to live on a much more unfriendly planet. Remember that the American scientist James Hansen's book, *Storms for My Grandchildren*, spoke of the perils that future generations of Americans will face. Hansen's book was about his own grandchildren, not the grandchildren of friends Hansen may have in India or China. Besides, if the rich could simply buy their way out of this crisis and only the poor suffered, why would the rich nations do anything about global warming unless the poor of the world were powerful enough to force them to be altruistic? Rich nations were never known for their altruism!

McAfee recommends a politics of solidarity of the poor: "Today reality calls for a politics that identifies and forges links among the multiple fractions of humanity who comprise the *majority* of us and who are impoverished, materially and otherwise, by the effects of global warming and other ongoing consequences of capitalism and colonialism." I wish her well with that project, but I do not know that politics will ever correspond to any one, single reading of "reality." A better case for rich nations and classes to act on climate change is couched in terms of their enlightened self-interest. The science of global warming allows us to do so by precisely making the point that for all its differential impact, it is a crisis for the rich and their descendants as well—as Hansen's popular book amply makes clear. So yes, a politics of even broader solidarity is called for.

Politics in/of the Anthropocene

Meyer and Barnes are both sensitive to social justice questions, and are concerned to ensure that there is no "climate reductionism" in operation in our discussions, occluding from view issues of human inequality and oppression. But they do not reduce the climate problem to human injustice alone. While the point of their cautionary words is well taken, I find myself in broad agreement with them.

The more difficult question to ponder is whether or not the climate crisis—as symptomatic of humanity's ecological overshoot—also signals the first glimpse we might have of a possible limit to our very human-centered thinking about justice, and thus to our political thought as well. Global warming accentuates the planetary tendency

towards human-driven extinction of many other species, with some scientists suggesting that the planet may have already entered the beginnings of a long (in human terms) Great Extinction event.⁶ Anthropogenic climate change thus produces a crisis in the distribution of natural reproductive life on the planet. But our political and justice-related thinking remains very human-focused. We still do not know how to think conceptually—politically or in accordance with theories of justice—about justice towards nonhuman forms of life, not to speak of the inanimate world. Thinkers of animal rights have extended questions of justice towards some animals, but their theories are limited by strict requirements relating to the threshold of sentience in animals. Besides, some philosophers also argue that, whatever the practical value of a category such as life in biology, “life as such” cannot be a strict philosophical category. Yet we cannot think “extinction” without using the category “life,” however difficult it may be to define it. The really difficult issue that arises when scholars write about humans being stewards of the planet is what our relationship, conceptually, would be to bacteria and viruses, given that many of them are not friendly to the human form of life (while many are). Yet it is undeniable that the natural history of species life on this planet involves the histories and activities of bacteria and viruses.

So while I agree that politics as we know it continues and will continue into the Anthropocene, and that there is no politics of the Anthropocene as such (but much politics about the label “Anthropocene,” as we know!), a deepening of the climate crisis and of the ecological overshoot of which it is a symptom may indeed lead us to rethink the European tradition of political thought that has, since the seventeenth century and thanks to European expansion, become everybody’s inheritance today.

Species Thinking

Now to the question of whether or not we should think of humans through the biological category of “species,” alongside other historical categories such as “capitalism,” as we think through this crisis. I find Sideris’s words of caution valuable. And I have never subscribed to the idea of “consilience” of the sciences, though some big names in the subfield of Big History recommend it. Nor have I ever invested our species with

6 Gerardo Ceballos et al., “Accelerated Modern Human-induced Species Losses: Entering the Sixth Mass Extinction,” *Science Advances* 1, no. 5 (2015): 1–5.

any particular moral significance that could work as a telos for human history. Let this not be a debate about E. O. Wilson. He is a serious and respected thinker, but there can be legitimate disagreements over his work. The question is not about him but rather about human beings as a biological species, and how we might make room for that natural history in our accounts: Can the story of ecological overshoot by humans be thought of not simply as the story of modernization and its inherent inequalities but also as the story of a particular species—*Homo sapiens*—coming to dominate the biosphere to such an extent that its own existence was challenged? Think of the story as Harari tells it. Today with their consumption, numbers, technology and so on, humans—yes, all humans, rich and poor—put pressure on the biosphere (the rich and poor do it in different ways and for different reasons) and disturb what I called above the distribution of life on the planet. Harari puts the point well: “Humankind ascended to the top [of the food chain] so quickly that the ecosystem was not given time to adjust. Moreover, humans themselves failed to adjust. Most top predators of the planet are majestic creatures. Millions of years of domination have filled them with self-confidence. *Sapiens* by contrast is more like a banana republic dictator. Having so recently been one of the underdogs of the savannah, we are full of fears and anxieties over our position. . . .” He concludes: “Many historical calamities, from deadly wars to ecological catastrophes, have resulted from this over-hasty jump.”⁷

If one could imagine someone watching the development of life on this planet on an evolutionary scale, they would have a story to tell about *Homo sapiens* rising to the top of the food chain within a very, very short period in that history. The more involved story of rich-poor differences would be a matter of finer resolution in that story. As I have said elsewhere, the ecological overshoot of humanity requires us to both zoom into the details of intra-human injustice—otherwise we do not see the suffering of many humans—and to zoom out of that history, or else we do not see the suffering of other species and, in a manner of speaking, of the planet.⁸ Zooming in and zooming out are about shuttling between different scales, perspectives, and different levels of abstraction. One level of abstraction does not cancel out the other or render it invalid. But my point is that the human story can no longer be told from the perspective of the 500 years (at most) of capitalism alone.

7 Harari, *Sapiens*, 11–12.

8 Dipesh Chakrabarty, “The Human Significance of the Anthropocene,” in *Modernity Reset*, ed. Bruno Latour (Cambridge, MA: MIT Press, forthcoming).

Humans remain a species in spite of all our differentiation. Suppose all the radical arguments about the rich always having lifeboats and therefore being able to buy their way out of all calamities including a Great Extinction event are true; and imagine a world in which some very large-scale species extinction has happened and that the survivors among humans are only those who happened to be privileged and belonged to the richer classes. Would not their survival also constitute a survival of the species eventually (even if the survivors quickly differentiated themselves into, as seems to be the human wont, dominant and subordinate groups)?

Stories We Tell, and Questions of Hope

Faced with the problem of the ecological over-reach of humans, what kind of stories do we now tell about ourselves, and how? Many scholars have challenged, both in writing and in conversation, my proposition that because we do not have any ontological access to our “being species” we cannot experience being a species, and have suggested that creative and imaginative work of fiction, films, music, and painting, may indeed enable us to have such access. Here I must say that my statement was intended as a provocation to both thought and action, though I stand by the philosophical claim that I was making. But I am a deep believer in the role of the arts and imaginative work in this crisis, and have no problems accepting the general points made by Richter, Weik von Mossner, and others. Even angry, anti-capitalist narratives blaming the rich for all the ills of humanity may have a positive political role to play in this crisis.

One point I would make in response to Richter’s proposition about the need for a Virgilian “Georgic” narrative, however, is that the scholarship collected here already documents the multiple and sometimes contradictory narratives that we produce to explain our situation to ourselves. Hee documents the story of the business sector optimistically embracing a sustainability narrative, though she herself points out the need, ultimately, for a change in our consumerist lifestyle, a point that many sections of business may not yet agree with. They would rather combine sustainability with consumerism in their pursuit of an Edenic story of profits and plenty. Watt, on the other hand, shows in her extremely thoughtful statement how difficult it is for us in our comfortable everyday lives to let go of some of the luxuries (such as a 24-hour supply of hot water) that we have come to consider basic—not just to our sense of hygiene and cleanliness but to our

deepest sense of ourselves as well! And LeCain ends his powerful opening neomaterialist essay on a note that is far from the Georgic one that Richter is looking for. He writes: “It is difficult to predict what the history of the ‘nonhuman human’—the human who is as much coal, oil, and other things as culture and idea—might look like. But I think it is safe to say that phenomena like justice and freedom, as well as their opposites, will increasingly be understood not solely as human ideas or creations, but as products of the powerful material things we partner with.” LeCain gives agency to an entangled entity—humans partnering somewhat blindly with other materials as they seek to make themselves at home in a planet that was not necessarily designed to see humans as the culminating point of its history! Yet this partnership is all we have, and the stories we tell about it will change and become richer in their diversity as the ecological crisis unfolds. All I can say at this stage is that if there is one source of hope, it lies in human creativity and resilience. Its expression will take multiple narratives and forms. A crisis is indeed a time for renewed creativity.

Let me then, in the end, thank all my colleagues here again for the honor they have done me by responding in such generous, critical, and vigorous fashion to some thoughts I put out once, having been jolted out of my comfortable niche in postcolonial studies by the crisis of climate change. Nature is perhaps not dialectical in the way that Friedrich Engels once thought it was, but thinking still is! That is why I am as grateful for affirmative thoughts as I am for the thoughts that resist mine, for how would thinking proceed if not by pitting itself against all that resists it? A crisis not only invites renewed creativity in the domain of arts alone; it also calls for some new and creative thinking too. And that remains a collective, human task in the end, one in which we all participate, whatever our differences.