

## THE HUMAN SCIENCES AND CLIMATE CHANGE: A CRISIS OF ANTHROPOCENTRISM

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It is only in the last decade that the interpretive social sciences and the humanities have turned their attention to the deep practical challenges and theoretical questions raised by climate change.<sup>1</sup> One reason, perhaps, for this delay is that the discussion of climate change occurred in scientific and policy circles in which few humanists have historically participated. It was scientists and policy makers who shaped the United Nations Framework Convention on Climate Change (1992) and the well-known Kyoto Protocol (1997). It was not until 2007, with the appearance of the Fourth Assessment Report of the Inter-Governmental Panel on Climate Change (IPCC), that climate change became a topic of sustained interest in popular media. The IPCC Fourth Report marked the beginning of a broad effort to communicate the scientific consensus that the earth's climate was changing, that these changes were anthropogenic in origin, and that widespread use of fossil fuels produced the greenhouse gases responsible. Scientists and policy experts argued that carbon emissions should be kept low enough to prevent the earth from warming more than 2 °C. To live within this "carbon budget," they advocated a world-wide effort to develop renewable energy sources. To deal with consequences of climate change already believed to be inevitable, they advocated steps to mitigate global warming, sea-level rise, severe weather, and ecological stress.

Though humanists were relatively absent from these debates, questions of justice and value central to the humanities were not. The issue of "climate justice" – equitable distribution of the burdens of climate policy among developed and less-developed nations – featured prominently. Environmental activists, particularly those

from less-developed countries, argued that developed nations were responsible for the overwhelming majority of fossil fuel use, past and present, and therefore bore overwhelming responsibility for climate change itself. Less-developed nations ought to have the right to industrialize – and therefore to use fossil fuels – in their effort to lift their populations out of poverty, while the burden of carbon restrictions should be borne by those countries that had already industrialized.<sup>2</sup> Such arguments proved persuasive in general – if not to economic nationalists in the developed world – and UN declarations since the 1990s have asserted that countries have "common but differentiated responsibilities" to mitigate climate change.<sup>3</sup> A second question of justice has had less clear-cut policy implications: the question of what duty the living owe those yet unborn. Because contemporary use of fossil fuels will shape the climate that future generations will confront, equity, as well as prudence, argues for cautious stewardship. Though it is often acknowledged that we must shoulder the responsibility for our great-grandchildren's climate, this principle receives little serious discussion. The unborn cannot press for clarification.

That the foundational UN climate policy debates centered around such basic questions of justice underscores that although "climate change" may be a geophysical phenomenon, any human discussion of climate change will be shot through with questions of human value. The very notion of "dangerous climate change" is one such example. As the American historian Julia Adeney Thomas has observed, "danger" is not a scientifically defined concept. When speaking of something dangerous, we invoke human values, human notions of scale and proportion, and human priorities. These are by their very nature open to the debate and contestation that characterize the study of the humanities.<sup>4</sup>

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It comes as no surprise, then, that over the last decade humanists and interpretive social scientists have taken up questions of climate change.<sup>5</sup> As they do, the contentiousness of the human sciences comes to the fore. Global discussion on climate change therefore reflects the old distinctions between the “two cultures” in interesting ways. Climate scientists refute persistent public skepticism about their conclusions with appeals to consensus and the rhetoric of statistical analysis. They speak of “such-and-such percentage of climatologists and geophysicists” who agree with “x or y level of confidence” in particular conclusions or predictions. Indeed, if geophysical scientists could not make such statements of consensus, their skeptics could with some reason announce that the science of climate change remains “unsettled.” In contrast, humanists and interpretive social scientists fear no comparable body of public skepticism. Perhaps the practical stakes are simply lower: humanists do not speak directly to governments, and their interpretations rarely shape budgets or policy directly. Yet their disciplines are nevertheless always “unsettled.” Scholars in the same field may hold radically different views about their discipline’s foundational principles, and may see their differently-minded colleagues as misguided, mischievous, or less intelligent.

The human sciences’ possible responses to climate change are already partially in evidence. Marxists of various sorts – with all the internal differences that they would themselves regard as significant – attribute the origins of the climate crisis to the capitalist mode of production. The end of capitalism remains the most urgent goal even in the midst of climate change crisis: as climate change is only a symptom of capitalism, the best treatment for the symptom is to cure the disease. Certainly, environmentally-minded Marxists try to infuse their analysis with a recognition of the complex interrelationships among humans and their environments. Yet scholars on the left are typically suspicious of explanations which suggest that all humans are complicit in greenhouse gas emissions. They instead analyze how distinctions of class, race, and gender run through culture, society, and state, and look for the origins of climate change in these differentiated human institutions. With such intellectually and politically fruitful commitment to the analysis of human difference, they reject words like “Anthropocene” and “anthropogenic” that seem at first blush to veil these differences behind a supposed common humanity.

At the other end of the spectrum of views is the recent encyclical of Pope Francis. Francis examines climate change and its impact on contemporary inequity through a

Christian critique of consumerist capitalism that in some regards is not too dissimilar from that of a neo-Marxist theorist. He also emphasizes an issue of perspective that Marxists, by the nature of their conceptual framework, could discuss only with difficulty: anthropocentrism. Francis argues that a misunderstanding about “man’s dominion over nature” has colored our interpretation of the Biblical story of Genesis. Humans, he claims, have generally understood “dominion” as “sovereignty.” Yet the God of Genesis intended humanity not to claim exclusive ownership, but only to take care of his garden as a gardener would. Francis thus advocates a form of “responsible stewardship” of the planet’s biome which is quite different from those who urge humanity to assume the role of the “god species” – an “enlightened anthropocentrism” inconsistent with current capitalist practices that devalue human labor and the environment alike.<sup>6</sup>

What might this “enlightened anthropocentrism” look like? We might take some inspiration from a range of contemporary developments in the humanities, including new materialism, post humanism, and the actor-network theory of Bruno Latour. It is rapidly becoming clear that an approach to the world that places humans at the center – including the assumption, implicit or explicit, that the planet exists simply to supply the needs of human flourishing and human flourishing alone – is ultimately self-defeating. Both the planet’s current ecology and human flourishing itself will be best served if we place humans and human needs in the context of the intertwined biological and geophysical systems that have supported complex life *in general* for hundreds of millions of years. In this spirit, marxists like Jason Moore look for ways to place the history of capitalism in the context of “the web of life.”<sup>7</sup> Other scholars turn humanist criticism on the work the planet itself does to produce fossil fuels. Others in the human sciences are working across the “two cultures” divide to engage with earth systems scientists over the biological and geophysical significance of the “Great Acceleration” of postwar industrial activity or the nine so-called “planetary boundaries” that humans may cross only at their peril.<sup>8</sup>

We should not expect a consensus from the humanities on this or any other intellectually fertile domain. Nevertheless, I see an emerging common ground of contestation, a series of observations and perspectives that scholars in the humanities and interpretive human sciences will hold in common even as we argue over our differences. In an age in which the human ability to reshape the planet’s climate is a central fact of public discussion, it is ironic that non-anthropocentric perspectives will be increasingly

important to humanistic scholarship. To take one example, the humanities' longstanding focus on human welfare and on the problems of justice between humans – a strictly anthropocentric justice – will be inadequate in the era of climate change. Philosophers have already enlarged the sphere of human justice to include animals – though only some animals, as philosophies of animal rights frequently depend on a threshold of sentience. Such philosophies will have to confront the manifest difficulty of widening the ethical community to include insects, plants, bacteria, and viruses. Decades of ecological scholarship teach us that these different forms of life are interdependent, and that we depend on them for our own existence. Yet we do not know how to include them in a truly broad non-anthropocentric perspective suited to an age in which humans have overshot ecological limits.

More broadly, the scientific literature on climate change that is produced by geologists, geochemists, biologists, and earth systems scientists emphasizes the deep historical connections between geology and biology. An awareness of these connections, of the “deep time” in which human histories and cultures exists, will increasingly inform the humanistic social sciences.<sup>9</sup> The climate crisis makes us more aware of the obsessively human-centered preoccupations of the social sciences. This anthropocentrism may be necessary and even valuable; it has yielded profound insights into the structure of human society and culture. Yet it will increasingly seem inadequate when seen alongside humans' effects on other forms of life and human transformations of the planet. Scholars in the humanities will continue our usual disputations about human justice and injustice – inequality, inequity, and iniquity. Yet our inevitable anthropocentrism will be supplemented – not replaced – by “deep time” perspectives that try to transcend the human point of view.

Pope Francis turns, understandably and thoughtfully, to the Bible to develop a non-anthropocentric perspective. For religious and secular people alike, non-anthropocentric perspectives can also emerge from two central branches of modern science, geology and biology, and in particular from the evolutionary history of life. The history of the planet's development, the history of climate, and the evolutionary history of life cannot be told from any anthropocentric perspective. They are necessarily interrelated stories of “deep time.” They make us aware that humans come very late in this history of this molten-cored, oxygen-rich, teeming planet. It never worked toward our arrival, and

we do not represent any point of culmination in its story. If humanists and social scientists, without giving up their legitimate concerns for human stories, could develop a spirit of conversation with the “deep time” sciences of geology and biology, we could develop the dialectic of anthropocentric and non-anthropocentric perspectives that our climate crisis provokes in us, and in our scholarship.

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### References

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9. Stephen Jay Gould, *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time* (Cambridge, MA: Harvard University Press, 2001); Martin J.S. Rudwick, *Earth's Deep History: How It Was Discovered and Why It Matters* (Chicago: University of Chicago Press, 2014). For one example of historical scholarship informed by “deep time,” see Daniel Lord Smail, *Deep History and the Brain* (Berkeley: University of California Press, 2008).