

Planetary Boundaries and Historical Time: Dipesh Chakrabarty's Defence of Shared Political Responsibility for Climate Change

Borders are a perennial concept in political thinking, whether real and material or imagined and metaphorical. Here, I draw attention to the notion of planetary boundaries as an imagined border in the sense of being drawn into the future, and that is also material in its emergent reality in the geophysical effects of climate change. It is a concept that has the capacity to shape two fundamental ideas in political thinking of the Anthropocene, namely political responsibility and burden sharing. This essay will first set out in very broad strokes a key dividing line on the question of responsibility for past human actions that have led to the current crisis of climate change. The divide is between those who view political responsibility as arising out of humanity's contribution-in-common to crossing planetary boundaries of habitability, and those who prefer to replace the term Anthropocene with the term Capitalocene. Here, the argument is that responsibility for the current predicament lies with those states and markets that have benefited in the past and are continuing to benefit from climate changing structures of extractive colonialism and global capitalism. The second part of the essay will focus on the historian Dipesh Chakrabarty's defence of shared responsibility of humanity as a whole for the effects of anthropogenic climate change, past and present. As a postcolonial thinker known for his seminal work in Subaltern Studies, Chakrabarty's turn from anti-capitalist critiques to a seemingly old-fashioned liberal universalism is worth exploring. Rather

than liberal revisionism, we can find new ground being staked out in political thinking. This ground enables the encounter of the natural with the social sciences, and justice-sensitive with justice-blind modes of collective action.

What Are Planetary Boundaries and How Did We Reach Them?

The influential concept of 'planetary boundaries' was proposed in 2009 by a group of natural scientists as a quantitative measure of an environmentally safe operating space (SOS) for humanity to continue to develop their contemporary societies.¹ The boundaries are not fixed and one-dimensional. Rather, they denote human-determined judgements about the risks and uncertainties of destabilising the known Earth System (ES) that characterised the most recent geological period of the Holocene, a period that has lasted for over 11,000 years. Planetary boundaries as an idea aims at a risk-aware definition of the environmental limits within which human beings and most other known life forms that are not yet extinct can survive and thrive. This concept has been added to over the years, but the basic forms of boundaries have remained. These are 'global biogeochemical cycles of nitrogen, phosphorus, carbon, and water; the major physical circulation systems of the planet (the climate, stratosphere, ocean systems); biophysical features of Earth that contribute to the underlying resilience of its self-regulatory capacity

¹ J. Rockström, W. Steffan, K. Noone, *et al.*, 'A safe operating space for humanity', *Nature*, 461, (2009).

(marine and terrestrial biodiversity, land systems); and two critical features associated with anthropogenic global change (aerosol loading and chemical pollution).² Major changes to any of these boundaries would have far reaching consequences for regional and global habitability of the planet. In the extreme case, the risks to human and non-human life forms are existential, one of the key reasons that climate change has become *the* defining paradigm of the social sciences in the twenty-first century.

So how was the Earth System destabilised in the first place? This is not only a question for natural scientists to answer but has become a point of contention for the social sciences and humanities as well. Our deepening understanding of anthropogenic climate change has done two things. It has propelled human beings to the centre of causal chains of action and effect. In other words, human action is changing the world and the planet as we know it, but to our detriment. Second, the question of anthropogenic climate change also serves, paradoxically, to decentre the Western-centric, liberal-universalist image of rational human beings in full control of their actions. Instead, the emphasis has now shifted to replace this image with that of enmeshed, entangled and interdependent human societies that are inextricably connected with their environments and wholly dependent on a relatively stable Earth System that has so far allowed for biological life on this planet to emerge and be sustained. A key question, therefore, is when and how human societies made their impact known on the planet by effecting gradual, then sudden changes to the Earth System. Some trace this impact back to deep historical time with the emergence of farming communities. Other, and more influential ideas relate the dramatic changes in planetary habitability to the era of industrialisation that went hand in hand with the extraction and exploitation of natural and human resources on a large scale. Yet others connect

contemporary crises to colonial expansionism coupled with warfare as the dominant form of living. The dividing line is sharpest between the first notion, that seeks to explain change and crises as the cumulative effect of *all* human action on this planet, and the other points of view that are distinctive but connect on the answer that systematic exploitation is the reason for these crises, whether through empire or capitalism. An example for the first point of view can be found in the controversial work of William Ruddiman, leading to a shorthand known as the Ruddiman Hypothesis.³ Ruddiman's assertion is that the focus on our greenhouse gas emitting actions over the past two centuries has deflected from pre-industrial land clearing practices, also known as deforestation, and other agricultural practices that meant CO₂ concentrations in the atmosphere started rising ca. 8,000 years ago and not just 200 years ago. This remains a contested idea, both in the natural and social sciences. Fiercely opposed are those who prefer to use the term Capitalocene instead of Anthropocene to make clear that only a small and powerful subsection of humanity is ultimately responsible for our reaching of planetary boundaries.⁴ Preferring to go back further back in time, political thinkers like Jairus Grove have used the term 'martial Eurocene' to first highlight early modern inter-European and then global shifts to the annihilation of difference and extermination of all but elite life forms.⁵ Each of these viewpoints carries different implications for political responsibility and burden sharing.

Proponents of the term Capitalocene, and thereby critics of global capitalism, have no faith in interspecies solidarity as a route to solving the various crises of this era of disruptive climate change. For some thinkers, like Slavoj Žižek, capitalism has to be abolished altogether before meaningful, positive change can happen.⁶ Similarly, but in less revolutionary tones, others argue

² Ibid.

³ W.F. Ruddiman, 'The Anthropogenic Greenhouse Era Began Thousands of Years Ago', *Climatic Change*, Vol. 61, No. 3, (2003), pp. 261–293.

⁴ J.W. Moore, 'The Capitalocene, Part I: on the nature and origins of our ecological crisis', *Journal of Peasant Studies*, Vol. 44, No. 3, (2017).

⁵ J.V. Grove, *Savage Ecology*, Duke University Press, Durham and London (2019).

⁶ S. Žižek, *Living in the End Times*, Verso, London and New York (2010), pp. 330–6.

that it will require the solidarity of subaltern groups to counter the economic and ecological power of global and national elites.⁷ These visions constitute the coming together of large-scale structural changes and mass agency. Against this possibly equally homogenised future, thinkers like Grove, Donna Haraway, Claire Colebrooke, and Eduardo Viveiros de Castro, among others, pin their hopes on fringe commitments to, “minor traditions, incipient practices, novel senses of belonging, and anachronistic ways of life, both futural and deeply old”.⁸ Grove also lists the Indian historian Dipesh Chakrabarty as somebody seeking a new kind of social science for a ‘wilder’ and more creative way of being in the fragile world. I will now turn to Chakrabarty’s views on reconsidering political thinking for a new and also very old world.

Geological Time and Historical Time: Contingency and Freedom

Chakrabarty’s work reflects the productive crossing over of multiple boundaries in the social sciences - from South Asian history and literature to Marxist political economy, to globalisation and large-scale planetary history. For him, questions of justice are ultimately questions of meaning, belonging and difference. These are ideas that are put to work in his recent turn to the politics of the Anthropocene. His distinct contributions to the fields of Indian history and postcolonial studies, in particular to the Subaltern Studies group, emanated from his critique of classical Marxist and liberal universalism and rationalism that account for two deficiencies to his mind - epistemological and ethical. On the former, he believed that neither classical Marxism nor European liberalism has an answer to the question of how abstract thought and universal concepts relate to human rootedness, belonging and difference that drive humans’ quest for meaning. On the latter, Chakrabarty contends that the processes of modernisation that stem from

Eurocentric thought were more often than not accompanied by repression and violence, and thus the opposite of the ethical claims of modern Western political thought to justice and equality.⁹

However, the challenge of social justice today cannot be decoupled from anthropogenic climate change. At this historical stage, in which the climate sciences meet with the social sciences and humanities, Dipesh Chakrabarty’s influential contribution to political theory is to welcome the encounter between the planetary and the human. Noting that social scientists lacked the conceptual and methodological tools needed for this necessary enmeshment of fundamentally two different modes of thinking, he writes that,

as the crisis gathered momentum in the last few years, I realized that all my readings in theories of globalization, Marxist analysis of capital, subaltern studies, and postcolonial criticism over the last twenty-five years, while enormously useful in studying globalization, had not really prepared me for making sense of this planetary conjuncture within which humanity finds itself today¹⁰

Chakrabarty posits that a key assumption spanning centuries of thought on ‘man and nature’ was the relatively slow pace of change of humankind’s external environment compared with fast moving changes within human societies. Human history did not appear to have any impact on ‘eternal’ nature, nor did the seemingly slow changes in environmental conditions impose binding constraints on how human societies functioned.¹¹

To understand these connections, that are now that are now apparent in the material realities of the climate crisis, we have to re-think time as simultaneously planetary or geological time and historical time. Climate change is part of the planet’s

⁷ R. Emmett and T. Lekan, (eds.) *Whose Anthropocene? Revisiting Dipesh Chakrabarty’s “Four Theses”*, RCC Perspectives Transformations in Environment and Society, (2016).

⁸ J.V. Grove, *Savage Ecology*, p. 279.

⁹ M. Dimova-Cookson, ‘Subaltern Studies, Post-Colonial Marxism, and “Finding Your Place to Begin from”’: An Interview with Dipesh Chakrabarty’, *Dialogues with Contemporary Political Theorists*, (2012), p. 66.

¹⁰ D. Chakrabarty, ‘The Climate of History: Four Theses’, *Critical Inquiry*, Vol. 35, No. 2, (2009), p. 199.

¹¹ *Ibid.*, p. 204.

natural climatic conditions that have changed over the ca. 4.5 billion years of its existence. These changes have also enabled the emergence of basic life on earth, not long after the planet was formed. To be able to imagine such vast scales of time, natural scientists use planet-centred geological time scales, to also answer, “general questions of habitability of a planet, questions to which humans are not central”.¹² Geological time is a measurement of changes to the planet such as the emergence and also extinction of certain life forms. These are known as boundary events. Ever greater consensus is forming around the idea that the Anthropocene is a specific, human-triggered boundary event. Historical time on the other hand is human-centred and not planet-centred, although clearly based on planetary conditions that so far have been conducive to hosting life on earth. It is based on recording, tracking and tracing events that have communicable meaning for humans. Although part of geological time, historical time is recent and is recorded on much more comprehensible scales. Historical time can be divided into deep and recorded history, that is to say from the time human societies began to the time societies began to record and transmit information through written signs. Deep history increasingly matters for Chakrabarty in that it aims to understand trends and processes in the evolution and spread of human societies on this planet. Deep history has a vital role in bringing to the table a sense of contingency in human affairs, thus countering teleological readings of history that foreground European dominance within recorded history of the last four hundred years.

For Chakrabarty, the motivating principle of most human action from deep time onwards is the quest for freedom. The term freedom encapsulates diverse imageries of human autonomy in a creative sense, but also as a tool for escaping injustice, oppression, inequality and uniformity foisted on by humans or human-made systems.¹³ Freedom is also about the ability to work with natural and human

contingency rather than being overwhelmed by developments outside of our control. Many freedoms have a long history, going back to the beginnings of agriculture more than 10,000 years ago. These are material freedoms, such as the freedom to be free from threats of starvation, disease, early mortality, and burdensome manual labour. Alongside are the freedoms to consume goods and to reproduce in large numbers. From the mid-twentieth century onwards, we can track an exponential rise in the use of cheap and plentiful fossil fuels that are used globally in transportation, food production, medicine, and consumer goods. Many of these freedoms enabled more people, including the poor, to live longer lives.¹⁴

This view of a *longue durée* of human history, that contains universal aspirations for freedoms as its *Leitmotif*, means Chakrabarty does not believe that critiques of globalisation and capitalism will suffice in combating the ills of the Anthropocene. It is the current endpoint of an unintended meshing of deep human history with planetary time and boundary events, some of which were favourable to life and some of which, as in the current period, are lethal. Anthropogenic climate change, therefore, “is not inherently—or logically—a problem of past or accumulated intrahuman injustice”.¹⁵ Here, in taking a classical liberal position on the universalism of human aspirations and rights, Chakrabarty hypothesises that a non-capitalist, egalitarian and just distribution of wealth would equally have led to the kind of population growth and growth in consumption we are witnessing today. The conclusion is that the overall outcomes for global warming would not be different but could indeed be worse. Today, the freedoms we have as a result of the use of fossil fuels are now turning into the unfreedoms of hitting planetary boundaries. The viability of our lives underpinned by the simultaneous exercise of freedoms and modes of exploitation - without which many of these freedoms would not be possible - is now in question.

¹² D. Chakrabarty, *The Crises of Civilization. Exploring Global and Planetary Histories*, Oxford University Press, New Delhi (2018), p. 25.

¹³ D. Chakrabarty, ‘The Climate of History’, p. 208.

¹⁴ D. Chakrabarty, ‘The Politics of Climate Change Is More Than the Politics of Capitalism’, *Theory, Culture and Society*, Vol. 34, Nos. 2–3, (2017), p. 28.

¹⁵ D. Chakrabarty, ‘Climate and capital: On conjoined histories’, *Critical Inquiry*, Vol. 41, No. 1, (2014), p. 11.

Political Responsibility and Burden Sharing

What is to be done now and who is to take responsibility for future agency and structural changes to our socio-economic and political systems? Chakrabarty's main answer is insightful in that it sidesteps both liberal-institutionalist and Marxist-revolutionary answers. The former seeks to resolve our problems through the acquisition of greater knowledge and application of expertise, and the latter does this through class-based action against elites and capitalist structures. For Chakrabarty, these approaches on their own are unable to do justice to the two modes of being that characterise human societies. Freedom through difference opens spaces for unpredictability, calling for localised and differentiated approaches to the climate crisis. Yet, the quest for freedom in its various facets also has a universal appeal, seemingly from the formation of early human societies onwards. There is, therefore, a sense of common ground, but one that is not to be found on the basis of sameness of values, ways of life, cultures, and economies. Rather, it is found in an awareness of our species having had a collective impact through historical time, so much so that this impact is felt in geological time reaching unprecedented boundary events and crossing vital planetary boundaries. Responding to these social and natural challenges means operating at two levels simultaneously. It necessitates both differentiated and localised action as well as confirming shared species responsibility. Human beings, in this view, are both political subjects and geophysical forces.

Chakrabarty contends that contemporary political thinking in the era of climate change has to constantly move between justice-based approaches to power, domination and difference, and justice-blind approaches to planetary tipping points that threaten the existence of the human species and non-human species in their entirety. This is not an easy task and requires immense judgement as to when and how these different modes of thinking are to play out in concrete action. In particular, justice-blindness is not a way of thinking that comes naturally to us. Chakrabarty draws on the German philosopher Karl Jasper's notion

of 'epochal consciousness' to show how this mode of thinking is possible. Epochal consciousness is a form of consciousness that arises at momentous times in human history as a, "shared perspectival and ethical space" that is pre-political in the sense of being apart from humanity's divisions through competition and conflict.¹⁶ Momentous times can be achievements like the moon landing or dangers such as the detonation of the first nuclear weapon. Epochal consciousness does not lend itself to solutions to shared problems as much as it constitutes a collective ethical position towards the world. Without this ethical position of species solidarity, differentiated action - whether through institutional changes, whether intended or accidental, whether elite-driven or subaltern-driven - will not halt the collective impact of our species on the planet. Our awareness of planetary boundaries thus connects with a crucial but understated awareness of our own borderlands of human subject and agent, and collective species being. Finding concrete political solutions that match this awareness is the next step, and one that has yet to be taken.



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¹⁶ D. Chakrabarty, 'The Human Condition in the Anthropocene', *The Tanner Lectures in Human Values*, (2015), p.144.

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