Anthropocene

By Stacey Balkan | October 20, 2017

Coastal subsidence, warming ocean temperatures, and rising sea levels have left cities like Miami and Mumbai particularly vulnerable as increased cyclonic activity threatens already compromised urban infrastructures. Atmospheric carbon, the primary cause of global warming and thus sea-level rise, has surpassed the threshold for sustaining life (McKibben 2008; Jones 2017). The earth is currently experiencing its sixth mass extinction event with nearly 100 species disappearing daily (Dawson 2016, 9; Broswimmer 2002, 1); approximately two-thirds of global coral reef systems have died; and endemic drought and famine have and will continue to cause mass displacement in the form of so-called climate refugees. These phenomena, among others, have amplified the material legacy of combined and uneven development, especially in the Global South where colonial-era plantation regimes laid the groundwork for centuries of ecological and economic devastation.[1]

Attributed to human consumption in the form of carbon-based industry, primarily agriculture, such cataclysmic shifts in the global climate have given rise to a new term: the Anthropocene. The Anthropocene is a stratigraphic designation used to describe the most recent period of the Cenozoic era — an era spanning some 65 million years and often referred to as the "Age of Mammals." The term was first proposed in 2000 by atmospheric chemist and Nobel laureate Paul J. Crutzen and biologist Eugene F. Stoermer to describe the impact of "human activities on earth and atmosphere, and at all, including global, scales" (2000, 17). The previous geological designation of a Holocene epoch, which was proposed by Sir Charles Lyell in 1833, was dated to 11,700 BCE to mark the beginnings of agriculture.

Despite numerous Victorian-era works that evinced a clear interest in the pernicious effects of coal on earth's atmosphere — from Charles Dickens's *Hard Times* (1854) to John Ruskin's *Storm Cloud of the Nineteenth Century* (1884) — along with earlier interest in "desiccation," or artificially-induced drought which would stymy plantation economies and force further imperialist expansion, the focus on anthropogenic climate change seems to have receded in the popular imagination. It was usurped by a period of marked industrial growth, which would ultimately (if inaccurately) be described as a "revolution," and which scholars are now reflecting upon as a possible point of origin for a discrete Anthropocene (Friedrich & Damassa 2014). The Anthropocene narrative as such generally begins with James Watts's 1784 invention of the modern steam engine, although some would posit the 1769 invention of the spinning jenny as a more suitable point of origin (Morton 2013; Lewis & Maslin 2015; McGuire 2013).

Renewed interest in a putative Anthropocene has been galvanized by extraordinary weather events, whose effects have been characterized in terms of "combined and uneven disaster" — the term "natural disaster" eschewing the intentional "logic of uneven development, inherent in [global] capital," whose byproduct is the disproportionate impact of storms like

Hurricane Katrina, which hit the Gulf Coast of the United States in 2005 (Dawson 2017; Smith 1984, 6). The genesis of the period, however, is contested. Competing views locate the origins of the Anthropocene either in a prehistoric era of nascent agrarianism during the Neolithic Revolution (10,000 – 8,000 BCE); during the rise of carbon economies like that of coal (1000 CE); amidst rounds of capital accumulation during the long sixteenth century, primarily by colonial powers in the Global South; at the height of the industrial revolution in Europe; or more recently during what has been called the "great acceleration" (Lewis & Maslin 2015).

Also of recent coinage, the "great acceleration" refers to the post-war industrial boom responsible for an unprecedented increase in atmospheric carbon — elevated considerably since the first readings at the Mauna Loa observatory in the late 1950s. The "great acceleration" narrative is particularly appealing to market strategists who favor technological means of assuaging the impact of anthropogenic climate change**.** If the problem can be attributed to the post-war moment, notable for its industrial and technological virtuosity, then it follows that a solution might be similarly grounded. This allows for investment in something like "green capitalism" and thus absolves the market of its complicity in the climate crisis. Exemplary works in this vein include Michael Bloomberg and Karl Pope's *Climate of Hope: How Cities, Businesses, and Citizens Can Save the Planet* (2017).

Critics of such "green" capitalist initiatives tend to focus on the epoch's *longue durée*, primarily the imperialist origins of the carbon ecomony. For instance, Jeremy Davies in *The Birth of the Anthropocene* (2016) traces the epochal transformations of the planet, offering a theory of anthropogenic climate change inextricably bound to the intellectual, economic, and political traditions that accompanied such shifts. Davies's work is aligned with scholars in the field of postcolonial studies interested in the environmental consequences of colonial-era plantation economies as well as emergent/carbon-based means of transport.

In the area of literary studies, Rob Nixon and Amitav Ghosh proffer similar theories. Both favor an Anthropocene narrative that emphasizes what Nixon has called "slow violence": a type of environmental violence that cannot be captured within the spectacular, if eschatological, tradition of popular climate fiction, and whose roots are to be found in a particular mode of development. The focus of Nixon's *Slow Violence and the Environmentalism of the Poor* (2011) is, in part, the impact of environmental violence on vulnerable communities, or "ecosystem people" (449). Ghosh's *The Great Derangement: Climate Change and the Unthinkable* (2015, 2016) similarly foregrounds the role of uneven development in the creation and impact of slow violence, while also taking up issues of narrative representation. Notable for its indictment of western complacency in the face of ecological crisis — the titular "derangement "— Ghosh is primarily interested in the disproportionate impact of anthropogenic climate change on postcolonial states. In his "alternative history of the carbon economy," the novelist traces the use of fossil fuels — wood, coal, and petrol — to rural China, India, and Myanmar where imperial hegemons like Great Britain insured the failure of local economies, and where desertification, prolonged drought, and an increase in extreme weather events like cyclones now plague local communities (Ghosh 2015).

Nixon and Ghosh's work is part of the emergent academic field of Environmental Humanities, which includes noted environmental historians such as Ramachandra Guha, Alfred Crosby

and William Cronon. Cronon's 1995 essay "The Trouble with Wilderness," which traces the ideological and aesthetic traditions responsible for the "invention of wilderness" as well as the cultivation of a dangerous dualism that would foster the continued plunder of public lands, is widely seen as a point of departure for the field (1995, 79). More recently, researchers within the Energy Humanities — Stephanie LeMenager, Imre Szeman, and others — look specifically at the cultural resonances of fossil fuels. Their collective work attests to the immanence of economic development to any theory of anthropogenic climate change; and their colleagues across the humanities and social sciences increasingly question the term Anthropocene as a sufficient means of characterizing an epoch of persistently uneven development.

Anthropocence or Capitalocene: The Origins and Limitations of a Term

Ecological crisis, whether in the form of extreme shifts in climate or unprecedented weather events, finds its roots in a fundamentally Judeo-Christian ethos that posits human mastery as its central organizing principle, itself an outgrowth of earlier modes of human social organization predicated upon the separation of the human from the nonhuman: "fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that crawl on the earth" (*Genesis* 1: 28). As it obtains in the western episteme — particularly within Enlightenment philosophies so central to current economic practice — we see the tenets laid down in Genesis expressed in what is now deemed a principally Cartesian orientation to development. Rene Descartes's *Meditations on First Philosophy* (1641) presented an epistemological argument for the separation of mind and matter, subject and object. Severing human society from nature engendered a particular worldview that would accommodate an unsustainable and environmentally exploitative development model: "Capitalism's governing conceit is that it may do with Nature as it pleases, that Nature is external and may be fragmented, quantified and rationalized to serve economic growth, social development or some other higher good" (Moore 2017, 601).

Development as such also found eloquent expression in John Locke's *Second Treatise on Government* (1689): "As much land as a man tills, plants, improves, cultivates, and can use the product of, so much is his property" (2002, 14). In transforming life into commodity, Locke's treatise would prove indispensable to the imperial-era trading companies, whose systems of land tenure — dependent as they were on enclosing commonly held peasant land — thrived on principles of agricultural "improvement" that would deny the validity of traditional modes of farming and animal husbandry. Accompanied by Carl Linnaeus's *Systema Naturae* (1735), emergent theories of improvement would then be augmented by new taxonomies of plant species that allowed for colonial-era monocultures. The plantation systems cultivated by agents of the various East India Companies would be amongst the first large-scale emitters of carbon dioxide (Brooke 2014; Ghosh 2016) .

Efforts toward elaborating the connections between the Anthropocene and empire have focused primarily on the colonial origins of global capitalism as a means of recognizing the pitfalls of an historic narrative that posits an undifferentiated *Anthropos*. For example, in Dipesh Chakrabarty's influential 2009 essay "The Climate of History: Four Theses," the historian asks his readers to "put global histories of capital in conversation with the species history of humans" — that is, "to mix together the immiscible chronologies of capital and species history…while retaining what is of obvious value in our postcolonial suspicion of the

universal" (2009, 212, 220). In a similar vein, Mike Davis, in *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (2000), focuses on the intersections between histories of climate and colonial occupation: "colonial expansion," he remarks, "uncannily syncopated the rhythms of natural disaster and epidemic disease" exacerbating Victorian-era famines in India, China, and Brazil (12). Meanwhile historian Jason Moore has urged the adoption of another term altogether: the "Capitalocene," which he dates to 1450 CE, in order to acknowledge the imbrications between capital accumulation and anthropogenic climate change.

Other variations exist as well. Moving toward a post-humanist (as opposed to post-human) discourse that recognizes the strange intimacies between Enlightenment Humanism, environmental devastation, and the current round of extinctions, Donna Haraway has offered the term "Cthulucene," "a name for an elsewhere and elsewhen that was, still is, and might yet be" (Haraway 2016, 31). Such interventions, however, have yet to coalesce in a radical politics. Thus, historians Christophe Bonneuil and Jean-Baptiste Fressoz, in their recent book *The Shock of the Anthropocene: The Earth, History and Us* (2016), present multiple formulations of our dystopian present in an effort to trace the material/environmental legacy of carbon (Thermocene), war (Thanatocene), consumption (Phagocene), and development (Capitalocene), while making it clear that such historiographic contestations do little to mitigate current crises.

Other scholars suggest direct political action. Ashley Dawson, in *Extinction: A Radical History,* remarks: "In order to respond adequately to this planetary crisis, we need to transgress the boundaries that tend to keep science, environmentalism, and radical politics separate" (2016, 15). This is precisely the thrust of the Environmental Humanities, and it is clear that anything short of a robust interdisciplinary practice will fail to affect real change. Nonetheless, the term Anthropocene — in its ability to conjure a single, transcendent villain — remains the most popular characterization of the climate crisis; and "green" capitalist initiatives from desalination to de-extinction remain the most palatable solutions for the dominant neoliberal imagination. Indeed, instantiating a conventionally "green capitalist" position, Michael Bloomberg suggests: "Instead of arguing about making sacrifices, let's talk about how we can make money" (2017, 3). Such sentiments will surely resonate with an American populace for whom the very notion of social sacrifice is anathema to the gospel of consumer capitalism.

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[1] The concept of "combined and uneven development" derives from Marx and refers to the uneven topographies of economic development under capitalism. Applying it in a contemporary and global context, Neil Smith asserts that "[t]he logic of capital development derives specifically from the opposed tendencies, inherent in capital, toward the differentiation but simultaneous equalization of the levels and conditions of production…The pattern which results in the landscape is well known: development at one pole and underdevelopment at the other" (Smith 1984, 16).

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