IAN BAUCOM

HISTORY 4° CELSIUS

Search for a Method in the Age of the Anthropocene

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Specters of the Atlantic

Specters of the Atlantic: Finance Capital, Slavery, and the Philosophy of History, volume 1

History 4° Celsius: Search for a Method in the Age of the Anthropocene, volume 2

Search for a Method in the Age of the Anthropocene

IAN BAUCOM

Duke University Press Durham and London 2020

Printed in the United States of America on acid-free paper ∞
Designed by Courtney Leigh Richardson
Typeset in Whitman and Avenir by Copperline Book Services

Library of Congress Cataloging-in-Publication Data
Names: Baucom, Ian, [date] author.
Title: History 4° celsius : search for a method in the age of the Anthropocene / Ian Baucom.
Other titles: History 4 degrees celsius | Theory in forms.
Description: Durham : Duke University Press, 2020. | Series: Theory in forms | Includes bibliographical references and index.
Identifiers: LCCN 2020005103 (print) | LCCN 2020005104 (ebook)
ISBN 9781478007876 (hardcover)
ISBN 9781478008392 (paperback)
ISBN 9781478012030 (ebook)
Subjects: LCSH: Slave trade—Ghana—History. | Climatic changes—Economic aspects—History. | Climatic changes—Social aspects—History. | Capitalism—Environmental aspects—History. | Capitalism—Social aspects—History. | Geology, Stratigraphic—Anthropocene.
Classification: LCC HT1394.G48 B38 2020 (print) | LCC HT1394.G48 (ebook) | DDC 306.3/6209667—dc23
LC record available at https://lccn.loc.gov/2020005103
LC ebook record available at https://lccn.loc.gov/2020005104

COVER ART: *Seascape*. Courtesy of Getty Images/Claudio Pennini/EyeEm

This book is dedicated to Srinivas Aravamudan: incomparable scholar, world dean and diplomat of the humanities, beloved friend, older brother. It would not exist without him. Nor would I.

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ACKNOWLEDGMENTS

I have more people to thank for their thought, insight, encouragement, and friendship as I've worked on this book than I can adequately acknowledge. Two immediately stand out for having prompted me into thought: Debjani Ganguly, whose astonishing conference on the Anthropocene Humanities, friendship, and intellectual companionship over so many years have so deeply shaped and inspired me; and Dipesh Chakrabarty, without whose writing and conversation I could not have begun to imagine this work. Along the way from beginning to consider this project to completing the text, I've been given the gift of touchstone friendships and critical co-travelers. Srinivas, Jim Chandler, Achille Mbembe, Ranji Khanna, Charlie Piot, Sarah Nuttall, Anne Allison, Ken Wissoker, Willis Jenkins, Karen McGlathery, Amitav Ghosh, Tim Murray, Renate Ferro, Amanda Anderson, Laurent Dubois, Premesh Lalu, Kathy Woodward, Gary Tomlinson, Rosi Braidotti, Sara Guyer, Julia Adeney Thomas, Ato Quayson, Matthew Omelsky, Ainehi Edoro, Chad Wellmon, Matthew Burtner, Chris Chia, Raffaele Laudani, Steve Arata, Andy Stauffer, Bruce Holzinger, Jim Seitz, John Parker, all the students in my Anthropocene seminar at the School for Criticism and Theory: I am more profoundly in your debt than you possibly know. For those I've failed to name, please know that I know you, and everything you've made possible. Last in name but first in my love: Wendy, Gabriel, Leah, Kiran, Camden, Tristan—not one thought, hope, moment of joy, or dream for the future without you.

1. Of Forces and Forcings

The strip of land between Keta and Axim on the coast of Ghana has come to occupy a singular place in recent histories of the modern world. There is a bleak reason for that. Or, more precisely, a forty-eight-count bundle of reasons. As Stephanie Smallwood, Saidiya Hartman, and Bayo Holsey, among others, have reminded us, the Ghanaian coast is more than a coast.[1] It is an archipelago of no fewer than forty-eight gateposts onto a living diasporic modernity, forty-eight "factories" of the modern scattered along this scant 335 miles of shoreline. Built over the course of the seventeenth and eighteenth centuries by successive waves of Portuguese, Spanish, Dutch, English, Danish, and Swedish merchants, the forts were castles turned trading posts and slaveholding barracoons: "factories" in which hundreds of thousands of Africans captured for sale to the Americas saw their lives rendered subject to "practices" of restraint, measurement, and violence "designed to promote the pretense that human beings could convincingly play the part of their antithesis—bodies animated only by others' calculated investment in their physical capacities."[2] As file after file of captives was marched to this factory-crowded Atlantic littoral—year after year, decade after decade, century after century—the culture and machinery of transatlantic slavery continuously transformed Ghana's shore into what Smallwood appositely calls a "stage" for the constitutive "activities and practices" of the modern. That stage was peopled by the children, men, and women who were drawn from across the interior of the continent, held in the dungeons, suffering the violence of their fraudulent commodification and, even in that suffering, beginning to craft the practices of survival, the repertoires of creolization, and the orientations toward a long and still unfinished politics of freedom, which, in Paul Gilroy's terms, made of them, as they made of themselves

in the most constrained of situations, a vanguard of the world's first "truly modern people."[3]

Eddying around these captives and these factories were other spiraling circles of actors for whom the Ghanaian "Gold Coast" had become an equally powerful vortex of the modern: the Asante, Akwamu, and other political elites organizing their war-making projects, their strategies for plundering prisoners from the hinterlands, and their unfolding state forms in relation to the relentless demand for saleable labor in the Caribbean and in North and South America, much as their political counterparts and distant co-beneficiaries in Spain, the Dutch Republics, France, and England were crafting their post-Westphalian war-making projects and their own unfolding state forms in relation to the social and market worlds of the West African littoral and the transatlantic colonies.[4] Allied to, servicing, and profiting from these political actors were the merchant agents of the seventeenth- through nineteenth-century Dutch and English chartered companies, and other European slave-trading nationals. For these commercial agents, the factories were not merely storehouses of captive labor but, in Giovanni Arrighi's terms, "spaces-of-flow" for modern capital's ever more globe-crossing routes of circulation, "Bizensone Fairs" (as Saidiya Hartman has also suggested) of an Atlantic cycle of capital accumulation drawing together European textile manufacturing, the plantation economies of the "New World," the world trade in gold bullion, and the speculative revolutions in modern finance capital that could not have come into being without the slave trade and the array of financial instruments, bills of exchange, joint-stock schemes, credit networks, and insurance mechanisms it helped launch.[5]

Of the forty-eight slave factories strung along the Ghanaian coast, one has previously been of particular interest to me. In 1781 Captain Luke Collingwood called at Fort William in Anomabo, where he loaded the majority of the slaves aboard his ship, the *Zong*, prior to setting sail for Jamaica. Before he made port in the Caribbean, he determined to drown rather than sell 132 of those stolen captives and to claim the thirty pounds per head that the ship's marine insurance contract had established as their valuation. If, as I have argued in the first volume of this series, that decision—that violent conversion of human life into a legally enforceable quantum of speculative value—proved emblematic of the coming into being of a hypercapitalized long contemporaneity stretching from the late eighteenth century into our present, then it is vital to recall that what transpired aboard the *Zong* could

not have occurred without what had first taken place at Fort William.[6] The *Zong*'s was but one voyage, embarking from but one of the dozens of Gold Coast slave factories over a multicentury period of time, and the history of its Atlantic passage—as the history of any slave voyage—is linked to and emerged from a vast factory system taking shape on West Africa's Atlantic shore, a system encompassing not only Fort William but Fort Santo Antonio, Fort Metal Cross, Fort San Sebastian, Fort Batenstein, Fort Coenraadsburg, Fort Amsterdam, Fort Lijdzaamheid, Fort Goede Hoop, Fort Orange, Ussher Fort, Teshie Fort, Fort Gross-Friedrichsburg, Fort Prinzenstein, Fort Apollonia, Osu Castle, Cape Coast Castle, Elmina Castle, and the scores of other factories stretching all along the coast of West Africa, siphoning not hundreds or thousands but millions of lives.

The camp, Giorgio Agamben has argued, must be regarded as an emblem of the modern, as embodying a definitive modern *nomos* of the earth through the violent and defining relationship it establishes between sovereign power and bare, eradicable life.[7] To the camp we must add another emblematic institution of the modern, another site or archipelago of sites, drawing together sovereign power, disposable life, transnational capital, the culture of créolité, and the politics of survival: the slave factories of the Atlantic coast of Africa. Individually, each of these places, every one—Fort William, Fort Amsterdam, Elmina Castle—resides in the history of the world as a place of singular violence. Collectively, in their arrayed series, sustaining and replicating themselves over centuries of time, they reappear as representative places: places in which the key nomological codes of cultural, social, political, and capital life governing one of the dominant stages of modernity have been written; places of stunning constraint, which, for that very reason, also became staging grounds for one of the world's great, enduring, and still incomplete politics of freedom; emblematic places of the contending forces and force fields of the modern.

That is one understanding we can and must have of the coast of Ghana: an understanding of its fundamental centrality to the history of the modern world.

There is now another conception of that coast with which we must also come to terms, a conception less of the shore's remaking of and by the forces of modern history than of its reconstitution by the forcings of climate change. That new understanding is thrown into sharp relief by a single image—one of a series of ten photographs collectively entitled "We Were Once Three Miles from the Sea," taken by the Ghanaian photographer Nyani Quarmyne

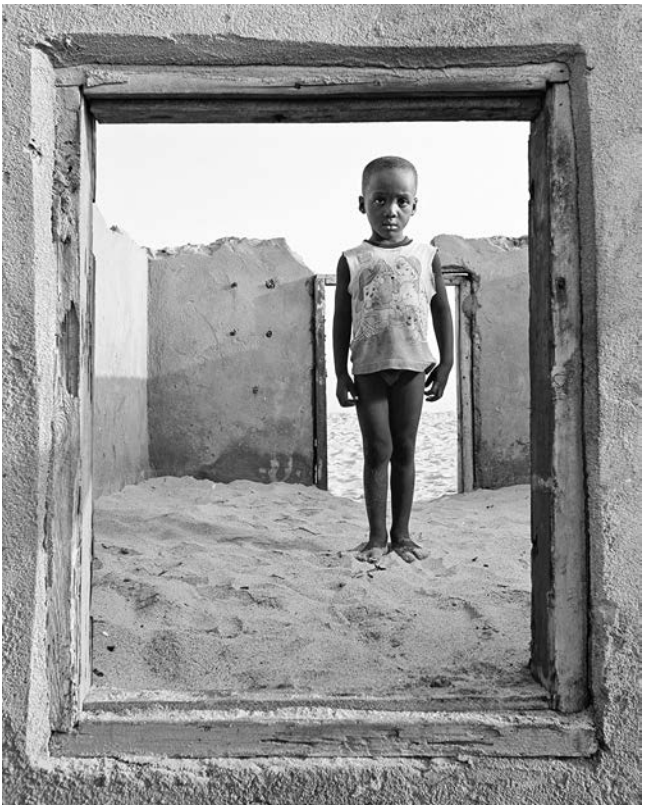

Figure 1.1. Collins Kusietey, "We Were Once Three Miles from the Sea." © Nyani Quarmyne/Panos Pictures.

of the villages of Totope, Azizakpe, Akplabanya, Lolonyakope, and Azizanya near the mouth of the Volta River, along the coast from Fort William, between March 2010 and February 2011. Seven-year-old Collins Kusietey stands in a roofless, plaster-walled house, half-filled with beach sand that the encroaching waves and advancing shoreline have piled into his home.

He is staring directly at us, half dressed, framed by a gold-painted window aperture. The image is profoundly unsettling, both beautiful and overwhelmed by a sense of wrongness pervading its carefully ordered visual space: the wrongness of the presence of that sand in his house; the wrongness of his extreme precariousness and vulnerability in life and before the lens of the camera; the wrongness of the ocean, somewhere back behind him, slowly rising, worldwide, millimeter by millimeter, as the glaciers and

ice sheets melt, but here in Totope, near Ada, on the shore of one of the slave forts of the transatlantic slave trade, leaping suddenly, massively, devastatingly higher in one of those terrible local asymmetries of a global condition.

As we regard this image, what do we see?

The Black Atlantic? Or the Atlantic?

The forces of history? Or the forcings of what we have recently come to understand as the Anthropocene?

While I was gathering notes for this book, the *New York Times* published a front-page story under the bleak headline "Heat-Trapping Gas Passes Milestone, Raising Fears." In the dire news it communicates, the efficiency with which it shares that news, and the hybrid mathematics of time it draws on for that communiqué, the story provides an unfortunately perfect précis of many of my core concerns. "The level of the most important heat-trapping gas in the atmosphere, carbon dioxide," the *Times* account opens, "has passed a long-feared milestone, scientists reported on Friday, reaching a concentration not seen on the earth for millions of years. Scientific monitors reported that the gas had reached an average daily level that surpassed 400 parts per million."[8] Following those opening sentences, the news gets worse, and worse in a distinctive way, not only tending toward a catastrophic result, but moving in that ruinous future direction through a distinctive marshaling of moments, periods, and timescales that have made climate reporting one of the outer frontiers of a new theory of historical time.

The story continues:

> The best available evidence suggests the amount of the gas in the air has not been this high for at least three million years. Carbon dioxide above 400 parts per million was first seen in the Arctic last year. . . . [but] the average reading for an entire day surpassed that level . . . for the first time in the 24 hours that ended at 8 p.m. Eastern Daylight Time [on May 9, 2013]. . . . From studying air bubbles trapped in Antarctic ice, scientists know that going back 800,000 years, the carbon dioxide level oscillated in a tight band, from about 180 parts per million in the depths of ice ages, to about 280 during the warm periods between. . . . For the entire period of human civilization, roughly 8,000 years, the carbon dioxide level was relatively stable near that upper bound. But the burning of fossil fuels has caused a 41 percent increase in the heat-trapping gas since the Industrial Revolution. Indirect measurements suggest that the last time the carbon dioxide level

> was this high was at least three million years ago, during an epoch called the Pliocene. Geological research shows that the climate then was far warmer than today, the world's ice caps were smaller, and the sea level might have been as much as 60 or 80 feet higher. Experts fear that humanity may be precipitating a return to such conditions—except this time, billions of people are in harm's way.[9]

These are not the sorts of dilemmas that as a literary scholar I was trained to address. As I completed my graduate education and began my career in the mid-1990s, the looming planetary crisis of climate change had not yet become a matter of broad common recognition and concern. Even within the deeply historically minded field of postcolonial studies, the modes of conceiving of historical time that this story treats as virtual commonplaces were largely inconceivable—both in their dizzying jumps between temporal scales (from a particular hour on a particular day; to the approximately sixty years in which we have been keeping accurate measurements of carbon dioxide emissions; to the segment of time since the Industrial Revolution; to "the entire [8,000-year] period of human civilization"; to the 800,000-year history of Antarctic Ice; to the three million years since the epoch of the Pliocene) and in the theory of historical periodization enabling those scale-shifting moves. While I have for some time accepted the force of Frederic Jameson's dictum that "we cannot not periodize," until recently it would not have occurred to me that postcolonial study, critical theory, or the humanities disciplines in general needed to periodize in relation to capital *and* also to carbon, in postmodernities *and* in parts per million, in dates *and* in degrees Celsius.[10]

As the crisis of climate change has become as starkly apparent as these news accounts reveal, I have joined other scholars in the humanities wrestling with precisely such questions. Like many colleagues in postcolonial studies, I have been doing so in relation to the pioneering work of Rob Nixon, Ramachandra Guha, Elizabeth Povinelli, and, more centrally still, Dipesh Chakrabarty, who has published a series of highly influential essays (most notably "The Climate of History: Four Theses," "Postcolonial Studies and the Challenge of Climate Change," "Climate and Capital: On Conjoined Histories," and "The Planet: An Emergent Humanist Category") arguing that climate change demands a fundamental reformulation of postcolonial studies' grounding interpretive protocols: its anti-universalism, its tendency to maintain a distinction between "human" and "natural" history, and its prioritization of cultural difference over humanity's collective "species" be-

ing.[11] In the epoch of the Anthropocene, addressing what it means for humanity to have become such a "geophysical" force is, Chakrabarty suggests, among the foremost tasks of critical thought and an inescapable frontier of postcolonial critique.

When I first read the first of these pieces, "The Climate of History: Four Theses," Chakrabarty's essay struck me with a force I can attribute to very few other pieces of contemporary theory I have encountered over the past quarter century—as much for the iconoclastic power of its argument as for the significance of the climate-historical dilemma it and the subsequent essays identify as a now inescapable condition of critical thought. I highlight this primarily to register that sense of his work's generative force and importance, particularly since, in the pages that follow, I will disagree with Chakrabarty as often as I will build on the challenges he maintains this Anthropocene "planetary conjuncture" puts to the core analytic strategies of the field and to my own previous attempts to consider the ways in which postcolonial studies might help us understand the making of the modern world.[12] If, heretofore, the questions I have addressed in my research have been questions firmly within the literary, legal, and archival realm of recorded human history—questions of the passage of bodies, laws, financial instruments, philosophical systems, narratives, political theories, and war machines in and around the port cities, capitals, coastlines, underwater burial grounds, and imperial littorals of the British empire and the Black Atlantic world—Chakrabarty's new work, and the rapidly emerging science of the Anthropocene on which it draws, suggests that if we are to continue to speak of the modern, we now need to do so with *natural* history (and, more crucially, the indistinction of human and natural history) also in mind.

This is far from a straightforward task. It is not simply a matter of addressing the political and cultural histories of modernity on the one hand and the modern world's natural history on the other. Speaking from within a moment in which the distinction between human and natural history has collapsed implies speaking from within a moment in which, as Chakrabarty has further argued, we are compelled to ask whether "the ideas about the human that usually sustain the discipline of history," and the methodological commitments of the humanities more generally, can survive that collapse—whether the philosophical discourse of modernity has anything to say to the discourse of the planet's anthropogenetically altered "natural" or *postnatural* history.[13]

The book that follows constitutes my attempt to answer that question, and to answer it strongly in the affirmative, to insist that what we know of the poetics of relation, of war zones and contact zones, of sovereignty, of bare life, raced life, and precarious life, of aesthetics, affects, and genres has a continued salience as we confront the crisis of climate change—even as what we are learning of climate change must re-affect our understanding of the enduring and future conditions of human history, culture, and experience across not only the Atlantic but all the world. Or, to reduce it to a formula, the argument that follows is that our understanding of the *force* of human politics, history, and culture must be held in interpretive tension and dialectical exchange with what we are discovering of the *forcings* of climate change as we address the fully planetary condition of the Anthropocene.[14] As the second volume in what I project to be a three-volume series on the place (and unfinished business) of the Black Atlantic in the making of the modern and postmodern world, this text seeks to put my earlier investigation of transatlantic slavery, speculative discourse, and finance capital in the making of the modern into relation with the overlapping place of carbon, climate, and environmental subalternity as these have also shaped the Atlantic—and, in shaping the Atlantic, have significantly shaped the modern in its now simultaneously "global" and "planetary" moment of arrival.[15]

To simply insist on the pertinence, significance, and power of our prior conceptions of history and interpretive protocols to the planetary conjuncture in which we find ourselves is, however, not enough. If we wish to find in the legacies and futures of those modes of understanding not only the continued relevance of the critical humanities to our times but the keys to rendering an engaged humanities a force contending with (perhaps even equal to) the planetary forcings of climate change we now confront, then—it is also my argument here—we will need to find a method for doing so, a method adequate to the situation of our multiscaled, period-multiplying Anthropocene times. Doing so means that we will also need to find a method capable of extending and reinventing a tradition of critical thought that has long understood its vocation as simultaneously descriptive and transformative: a method oriented to mapping the situation in which we find ourselves and to making something emancipatory of that situation; a method of thought committed, in the terms of Marx's "Theses on Feuerbach," not only to "interpret[ing] the world" but also "to chang[ing] it."[16]

What is the nature of that planetary world? What form does it take, not only, as I will repeatedly ask, as it comes to bear on the Ghanaian coast, on this one day, March 7, 2010, throwing into stark and ominous relief the image of this one child, Collins Kusietey standing in this one place in the dawning epoch of the Anthropocene, but the world in its planetary generality? What is this new world of the Anthropocene? What planetary conjuncture does it describe?

At its most technical sense, the answer is clear enough. First introduced by the atmospheric chemist and Nobel laureate Paul Crutzen and his colleague Eugene F. Stoermer in a 2000 newsletter of the International Geosphere-Biosphere Programme, the term *Anthropocene* is intended to identify a new epoch of geological time (following the Holocene) in which the core geological condition and future of the planet have been fundamentally reconstituted by human actions, anthropogenetic global warming (AGW) foremost among them. As Crutzen and Stoermer put it:

> Considering [the] . . . major and still growing impacts of human activities on earth and atmosphere, and at all, including global, scales, it seems to us more than appropriate to emphasize the central role of mankind in geology and ecology by proposing to use the term "Anthropocene" for the current geological epoch. The impacts of current human activities will continue over long periods. According to a study by Berger and Loutre, because of the anthropogenic emissions of CO_2 [carbon dioxide], climate may depart significantly from natural behaviour over the next 50,000 years. To assign a more specific date to the onset of the "Anthropocene" seems somewhat arbitrary, but we propose the latter part of the 18th century, although we are aware that alternative proposals can be made (some may even want to include the entire Holocene). However, we choose this date because, during the past two centuries, the global effects of human activities have become clearly noticeable. This is the period when data retrieved from glacial ice cores show the beginning of a growth in the atmospheric concentrations of several "greenhouse gases," in particular CO_2 and CH_4 [methane]. Such a starting date also coincides with James Watt's invention of the steam engine in 1784.[17]

Crutzen and Stoermer's proposition presented two fundamental questions for debate by the scientific communities charged with formally identi-

fying the earth's periods of geological time: the International Union of Geological Sciences and the International Commission on Stratigraphy. Should this new epoch be officially recognized? And if so, from what point should it be dated? To grasp the magnitude of those questions, which the geologist Jan Zalasiewicz has called "arguably the most important . . . of our age—scientifically, socially and politically," we must first grasp where the epoch sits as a formal unit of measure within the continuum of "deep time."[18] That order of geological measure begins with *eons*, which encompass "hundreds of millions—or indeed billions—of years," and proceeds

> through smaller packages of time, such as the *eras* [lasting for scores of millions of years]. . . . These in turn are subdivided into *periods* of geological time, such as the Cambrian or Cretaceous. . . . Periods are divided further into *epochs* and *ages* . . . so well constrained that we can correlate such units globally and reconstruct the appearance and conditions of our planet for many hundreds of different time slices. The last period of time, the Quaternary, began just 2.6 Ma [million years ago], and includes two epochs, the Pleistocene and the Holocene. The latter—by far the shortest in the geological time scale—began only about 11,500 years ago, witnessed by changes in climate that manifest in an ice core from Greenland. . . . We distinguish it as an epoch for practical purposes, in that many of the surface bodies of sediment on which we live—the soils, river deposits, deltas, coastal plains and so on—were formed during this time.[19]

Within this orderly "slicing" of the immense expanses of the geological time scale, the significance of the question of the Anthropocene becomes apparent to Zalasiewicz et al. Have the "anthropogenic changes to the Earth's climate, land, oceans and biosphere," produced in a shockingly brief period of geological time, been so great that "an epoch-scale boundary has been crossed"? Their firm and grim conclusion is that that boundary has been crossed, not over the course of millennia, or millions of years, but "within the last two centuries," a mere geological instant whose numbingly accelerated pace of change, by the calculations of the University of Chicago geophysicist David Archer, has nevertheless succeeded in establishing a novel set of boundary conditions for the earth's climate that will endure for somewhere between the next 3,000 and 100,000 years.[20]

As Archer's work stresses, grasping the magnitude of the effect of post-eighteenth-century carbon dioxide and other greenhouse gas emissions on

the geological future of the planet requires understanding the relative significance of these gases as one of four "agents of climate change called climate forcings that can warm or cool the climate." Two of these forcings are human-driven (anthropogenic): greenhouse gases and "sulfur from coal burning, which forms a haze in the atmosphere reflecting sunlight back to space to cool the Earth." The other two climate forcings are "natural": "volcanic eruptions and changes in the intensity of the Sun" caused either by sun flares ("long, slow flickers in the fires of the Sun" spanning decades or centuries) or by 10,000-year "wobbles" in the earth's orbital trajectory around the sun.[21] The relative impact of these four forcings can be compared by measuring their positive or negative effect on the average distribution of energy over a given area of the earth's surface, a measurement calculated "in terms of watts per square meter [w/m^2]."[22] Across the deep history of the planet, volcanic eruptions, whose sulfur emissions deflect sunlight and so cool the earth, have carried the greatest immediate capacity to effect climate change (at a rate of forcing of approximately negative 10 w/m^2), while solar flares (whose impact has generally been at the level of 0.1 w/m^2) have exerted the weakest event effect.[23]

Magisterially framing these episodic downward and upward bounces, however, have been the effects on the climate of cyclical 10,000-year-long wobbles in the earth's orbit around the sun. As Archer explains, these "orbital variations drive the climate by allowing ice sheets to grow or causing them to melt" and are thus responsible for establishing parametric conditions for the earth's climate by settling the planet into alternately glacial and interglacial multimillennial ages (we are now in an interglacial age). Across the deep history of the planet, the forcing effects of sun flares, volcanic eruptions, and human actions have always been framed (or, so to speak, provincialized) by these massive orbital forcings.[24] Archer's bleak warning is that over the past 250 years (and even more intensely over the past half century—the period of global warming often referred to as the "great acceleration") this has changed. We have now released so much carbon dioxide into the atmosphere (350 gigatons since 1750, with a total of 2,000 gigatons possible by the end of the twenty-first century at current rates of emission) that we risk not simply accelerating the melting of the polar ice caps but deferring the planet's anticipated cyclical transition into the next glacial age for anywhere between 50,000 and 130,000 years.

"Human climate forcing," in Archer's daunting summary, "has the potential to overwhelm the orbital climate forcing, taking control of the ice ages.

Mankind is becoming a force in climate comparable to the orbital variations that drive the glacial cycles."[25] "The practical implication," he concludes, "is that natural cooling driven by orbital variation is unlikely to save us from global warming. . . . [By] releasing CO_2, humankind has [acquired] the capacity to overpower the climate impact of Earth's orbit, taking the reins of the climate system that has operated on Earth for millions of years."[26] With such bleak findings in mind, it is perhaps no surprise that subsequent to the 2011 publication of the *Philosophical Transactions* special issue on the Anthropocene, the International Union of Geological Sciences (IUGS) and its official Subcommission on Quaternary Stratigraphy has formed a Working Group on the Anthropocene, convened by Zalasiewicz (the special issue editor), whose task is to forward a proposal to formally acknowledge the Anthropocene as a "defined geological unit within the Geological Time Scale."[27] At the time of my writing, the IUGS had not yet ruled, but as the final line of the Working Group on the Anthropocene's official website indicates: "It is widely agreed that the Earth is currently in this state."[28]

Thus the view from the geosciences.

But how does that enter into exchange with the view from the "human sciences"? How does it reframe the view from Totope?

When we first looked at this line of coast, we could not but see a multicentury process of the coming into being of the modern; a great play of historical forces; the African, European, and American agents of those forces; the complex co-constitution and dialectical interplay of sovereign power, capital, and disposable life; the subaltern refusal of disposability; the determination to survival; the creolization of culture; and the sweeping global necessity of a politics of freedom: in a word, the Black Atlantic and its defining place in the history of the modern. If we now regard this string of villages not only as dispersed minor capitols of the time-accumulating Black Atlantic but also as the outposts of the millennial coming into being of the Anthropocene, must we see the relation between time and power fundamentally differently? Should we radically elongate our scales of time and radically disperse our conceptions of power across a mingled human and natural spectrum? Or does this "both/and" formulation (this invitation to see Collins Kusietey's ocean-eaten home both as an outpost of the Black Atlantic and as a ruinous frontier of the Anthropocene) avoid the starker point?

If, indeed, we "cannot not periodize," then does seeing the village of Totope through the geo-optics of the Anthropocene so provincialize our existing periodizations of human history that we must set aside what we have known of this village and this coast's place in the history of Black Atlantic modernity and see them instead and solely within an epoch of geological time stretching from now into the almost unimaginable future? Must Totope take its place in an epoch in which, by virtue of the interplay between the planet's carbon cycle, the earth's multimillennial patterns of orbit around the sun, and the cumulative effects of human-generated (anthropogenic) warming, the distinction between human and natural history has not only collapsed but been so utterly swept away that all those *forces* of history that for so long have been the key focus of one or other order of critical materialist thought retreat in significance in comparison with the *forcing* power of climate change spreading over the planet, calving ice-sheets from the poles, melting glaciers, destabilizing the West Antarctic Ice Shelf, raising sea levels, and generally making the sovereignty of ice (resilient or dissolving), rather than the sovereignty of nations, empire, or capital, sovereign over this little seven-year-old boy, and the village, nation, Atlantic world, global commons, human species, and planetary ensemble he is made to stand in for?

What does it mean to see this snapshot of the Ghanaian coast through the lens of the Anthropocene? What do we recognize in the waters rising up behind Collins Kusietey's shoulder? The Black Atlantic or the Atlantic? The force of history or the forcings of climate change? An ocean-fronting world "still" made, in Christina Sharpe's resonant terms, in the "wake" of slavery: made and made and made again in the unending wake of the dungeon, wake of the factory, wake of the hold, wake of the plantation, wake of the door of no return?[29] Or do we see a world radically and singularly remade in the wake of carbon accumulating in the atmosphere? Do we see a postcolony unendingly subject to Sharpe's "pervasive," repeating, unending "weather" system and world "climate" of "antiblackness"?[30] Or do we see a planet subject to a radically new, anthropogenetically altered climate of life? Do we see the sovereignty of race-capital or the sovereignty of ice? An enduring call to the politics of human freedom and the task of critical thought in advancing that project or a new call to some other project of planetary politics? A human-produced system of enclosure, spreading from the Gold Coast's slave factories, across the waters to the New World plantations, and then, over the centuries, circling and re-circling back, through and around

a circum-Atlantic archipelago of post-emancipation ghettos and postcolonial shantytowns? Or something else, something post-human, a new barracoon, rising up, millimeter by millimeter, yard by shore-encroaching yard, against which critical thought must now reorient itself and its unending spirit of emancipation and futures-shaping possibility?

Or are those false choices? Is it possible to see both these things at once? Is it possible to hold both the periods of human history and the epochs of geological time, the dynamics of forces and the operations of forcings, in concert and dialectical interplay with one another?

And if so, how so?

Those are the key questions of this book—and in a certain sense, as I have already indicated, their answer is quite direct.

Can we hold the view from the Anthropocene and the view from the Middle Passage in concert? Can we think simultaneously through historical periods and geological epochs, in time scales of centuries and across multimillennial spans? Can we think, in tandem, Sharpe's unchanged climate of antiblackness structuring the globe and Chakrabarty's new climate of history? Can we discern in the current conditions of the Ghanaian coast a new "poetics of relation" braiding together the factory production of the modern, an Atlantic cycle of capital accumulation, the orbital passages of the earth around the sun, the contemporary anthropogenic overwhelming of the planet's glacial cycles, and the slow but relentless rise in the level of the sea?

We can, and we must.

We can for the simple reason that the play of historical forces and climate forcings are not autonomous from one another but exacerbate and intensify one another. We can because, over the centuries, the forces requisite to the slave trade, the forces of modern power, and the forces of global capital concentrated in the Ghanaian factories have continuously gone to work on the forcings of the carbon cycle. In their encounter with and acceleration of an age of fossil fuels, those forces have helped create and intensify the global practices of consumption and the cycles of carbon accumulation that have thrown us into the planetary moment of the Anthropocene. But there is more than this. The intimate interrelationship also works the other way around. While the forcings of climate change are, by one order of measurement, smoothly, evenly, spherically distributed across the planet, they are also asymmetrical in their impact on the globe; both indifferent and highly

uneven in their distribution of vulnerabilities; implacably unaware of and accelerating the material residues and impacts of prior and current human historical forces, including those forces of history that continue to structure the composition of life along the Ghanaian coast and to make of it not only a geological but a *human* shore.

Can we frame a dialectic of forces and forcings? We can, and we must.

But to insist so requires naming four key things. The first is the necessity of exploring the relation between a longstanding tradition of historical materialist thought (what I will refer to as *Materialism I*) oriented toward addressing the sort of historical forces animating the operations of the coastal, Black Atlantic factory system I have sketched, and an emerging, newer materialism (which I will call *Materialism II*) specifically attuned to numbering a post-human realm of carbon, sun flares, wattage, glaciers, heat waves, ocean deserts, orbital wobbles, and radiative forcings ("hyper-objects," according to Timothy Morton, or "vibrant matter," for Jane Bennett) as among humanity's Anthropocene fields of "circumstance"—as, in Bruno Latour's, Morton's, Donna Haraway's, Achille Mbembe's, and Pope Francis's terms, the planetary co-"actants," "strange strangers," "cosmological assemblages," and "companion species" of our "common home."[31]

The second element to approach carefully is the question of method, moving beyond the assertion that we *can* hold these two materialisms in concert to a detailed inquiry on *how* we might do so. In developing that inquiry on method, one of my chief purposes will be to underscore that this relation is not nearly as obvious, smoothly bidirectional, or matter-of-fact as my previous comments might imply. As Chakrabarty has made manifest in his discussions of this exact issue, the magnitude of the methodological challenge climate change puts to many of the long-standing disciplinary assumptions of the humanities cannot be overstated. Surveying the enormity of planetary transformation that climate change is producing, he has offered this stunning admission: "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 today."[32] This warrants a pause, and I will return to the implications of this statement throughout much of my argument. While—as I have already indicated—my ultimate conclusion tends in a different direction (by claiming that globalization

theory, subaltern studies, postcolonial criticism, Black Studies and Black Atlantic Studies, and the range of other critical materialist practices that fall under the rubric of Materialism I remain vital to making sense of our current planetary conjuncture), I am in complete agreement that those practices of critique cannot do so alone. To borrow another of Chakrabarty's formulations, these grounding practices of historicist thought (Materialism I) are to the emerging epistemologies and ontologies of the Anthropocene (Materialism II) as Enlightenment thought itself is to postcolonial theory: "indispensable" *and* "inadequate."[33] We must therefore take seriously the methodological challenge Chakrabarty highlights. Detailing the relationship between a particular tradition of subaltern and postcolonial critique and the new materialist epistemologies associated with the work of Latour, Bennett, Morton, and others in their reciprocal insufficiency, mutual necessity, and complementary interdetermination as paradigms for responding to the challenges of the Anthropocene is the second key labor of this book.

The third is to consider how the relation of these two materialisms invites us not only to generate new forms of critical method but to consider the possibility that their coming together reveals the emergence of a new order of Anthropocene time: an order of time knotting together what I will call the historical, the infra-historical, and the supra-historical; an order of time whose comprehension requires a braiding together of the epistemologies and ontologies of a classically progressive historicism, a counter-historicist subaltern conception of "now-being," and a post-humanist articulation of object-oriented time; a deeply hybrid order of time I understand the globe/planet now to be entering under the advent of the Anthropocene.

The fourth key question is not only whether this dialectic of forces and forcings can be imagined, or how it can best be framed, but *why* it must be articulated. From the particular positional grounds of postcolonial, diaspora, and Black Atlantic studies, that question translates in this way: why should a range of knowledge fields long attuned to aligning their practices of understanding to advancing those global projects of freedom that, in Chakrabarty's terms, have provided "the most important motif of written accounts of human history of [the past] two hundred and fifty years," now turn attention from the subordinating forces of race and capital and empire to Archer's planetary "forcings"?[34]

The answer is as evident as it is necessary to state. It is because these new forcings, as they impact the conditions of life on the planet, manifest themselves also as forces of profound violence and unfreedom; as forcing-forces

for the reactivation of old and the animation of new modes of subalternality, inequality, and vulnerability; as the magnifiers and accelerators, in Rob Nixon's terms, of an extraordinarily extensive process of "slow violence" visiting its devastation on the twenty-first century's "wretched of the eaarth."[35]

To put it another way: "Men make their own history," as Marx observed in a famous passage from *The Eighteenth Brumaire of Louis Bonaparte*, "but they do not make it just as they please, they do not make it under circumstances chosen by themselves, but under circumstances directly found, given, and transmitted by the past."[36] We are long accustomed to understanding how complex, and how disposed to human constraint, is that field of "circumstances . . . transmitted by the past." Much of the work of the humanities and interpretive social sciences for the past decades (and more) has been to identify the range of forces creating these circumstances of unfreedom (forces of racialization, of normalization, of gendering, of dispossession, of biopoliticization) and of directing the opposing force of critique against them. The epoch of the Anthropocene does not leave that work behind. Indeed, one of the key epistemological and methodological imperatives of philosophical critique in the epoch of the Anthropocene is to link our prior investigations of such forces to an examination of these newly visible climate forcings, to understand how the prior and enduring conditions of unfreedom these prior and enduring forces have layered around human life are now being exacerbated and intensified, slowly and explosively, by the forcings of the Anthropocene.

As Ato Quayson has observed, crossing over to the geological epoch of the Anthropocene does not mean crossing into a historical or geopolitical tabula rasa. To say that the human has been "converted into a geophysical force" does not mean that humanity ceases to be, simultaneously, a "sociopolitical category" structured by a multitude of historical and anthropological differences, nor does it mean that we should now adopt a hermeneutic of planetary "equivalence" that would treat "the climate change displacing hundreds of thousands in today's southern Sudan" as purely identical with "the climate change that led to Hurricane Katrina and the terrible displacements that ensued in New Orleans in 2005." "Man-as-geophysical force," Quayson entirely correctly concludes, is "in each instance . . . the product of specific political, social, cultural, and economic realities."[37] To attend to the forcings of the Anthropocene is, therefore, crucially, also to attend to the legacy and persistence of those political, social, cultural, and economic forces that unevenly structure human life on the globe and unevenly dis-

tribute the lived effects and vulnerabilities of climate across the planet. It is, in short, to attend to the complex dialectic of forces and forcings. It is also, reciprocally, to grasp the intensifying power of these forcings as historical forces, to address carbon as a forcing-force with the force-power to disrupt and devastate polities, economies, societies, cultures.

How significant is the combined geological and geopolitical power of those CO_2 forcings? How fully are they reshaping the "circumstances" under which history can be made and experienced across the planet-world and in the contemporary postcolony?

There is no unitary answer, but according to the projections of the working group of the Fifth Assessment Report (AR5) of the United Nations Intergovernmental Panel on Climate Change (IPCC), there are now four distinct "climate futures" or routes toward which we may be hurtling. By the terms of the report, each "Representative Concentration Pathway" (RCP) predicts "scenarios" for the future according to anticipated average "radiative forcing values" for the planet in the year 2100.[38] Each of those pathways is calculated in units of measure with which we are now familiar, w/m^2 (watts per meter squared), and are named by those measures. Thus the IPCC's four climate futures are identified as RCP2.6 (a future scenario with a planetary 2.6 w/m^2 increase in radiative forcing) and, respectively, RCP4.5, RCP6, and RCP8.5. Subtending each of these pathways are a bundle of climate "drivers" effecting radiative forcing, including estimates of global population growth, patterns of future land use, changes in global GDP, technological development, and, most crucially, "increase[s] in the atmospheric concentration of CO_2."[39] As might be anticipated, the mildest pathway, resulting from the lowest increase in radiative forcing (RCP2.6), would require the virtually immediate adoption of "stringent climate policies to limit emissions."[40] Representative Concentration Pathway 4.5, correspondingly, would result from the implementation of more modest "climate policy scenarios." RCP6 and RCP8.5, by contrast, represent "forcing pathway[s]" into the future in the general or wholesale absence of global climate policies and significant changes in patterns of world carbon emission. To each of these avenues to the future, the IPCC report then assigns a predicted change in "global mean surface temperature," calculated in degrees Celsius (by the year 2100).

For RCP2.6 that anticipated change by the end of the current century would be between 0.3°C and 1.7°C.

For RCP4.5 it would be between 1.1°C and 2.6°C.

For RCP6 it would be between 1.4°C and 3.1°C.

For RCP8.5 it would be between 2.6°C and 4.8°C.[41]

None of those scenarios are good. As the report makes clear, each pathway will generate "changes in all components of the climate system," altering the "global water cycle," negatively impacting air quality, exacerbating ocean warming, decreasing Arctic sea ice and "global glacier volume," accelerating the rise of sea levels, and increasing "ocean acidification."[42] The truly catastrophic results of climate change, however, attend the last two pathways, RCP6 and RCP8.5, as temperature change in these scenarios approaches or crosses the four degrees Celsius (4°C) line that gives the title to this volume. The initial document of the Fifth Assessment Report does not spell out the consequence of that order of temperature rise, but a report issued a few months earlier by the World Bank does. The full title of the report is "4° —Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided."[43] It is one of many similar documents produced between Climate Change 2007, the IPCC's Fourth Assessment Report, the Fifth Assessment Report, and the landmark December 2015 Paris climate accord, the key purpose of which was not so much to prevent climate change as to desperately attempt to keep the planet within the 2°C threshold of heating predicted by RCP2.6 rather than crossing into RCP8.5 and a 4°C change above average pre–industrial era temperature levels. Like virtually all of the documents produced within this period of climate discourse, the World Bank report makes for chastening reading, if only for the simple clarity of the danger threshold it identifies: the 4°C world we must prevent but, which, if current emission trends continue unabated, will become our world "within this century."[44]

What does it look like, that 4°C world the future may well inherit from its carbon-era present and carbon-era past (that past, which, in this sense, is not so much past as it is accumulating, moment by moment, one carbon part per million in the atmosphere)?

Whatever else it will be, the World Bank report indicates a 4°C world will be changed comprehensively and disastrously across almost every sector of analysis. It will be a world in which "extreme weather events" will intensify both in frequency and in scale, with "heat waves such as [the one] in Russia in 2010 [which killed an estimated 55,000 people] likely to become the new normal summer."[45] It will be a world in which, for "regions such as the Mediterranean, North Africa, the Middle East, and the Tibetan Plateau, almost all summer months are likely to be warmer than the most extreme heat waves currently experienced."[46] It will be a world in which, as warm-

ing "strengthens the [planetary] hydrologic cycle . . . [and] dry regions . . . become drier and wet regions . . . wetter," there will be increased mass flooding in some regions of the globe (much of the Northern Hemisphere, East Africa, and South and Southeast Asia), and the simultaneous sprawl of aridity and desertification in other zones, leading to "dramatic reductions in global agricultural production," with "35 percent of [all sub-Saharan African] cropland . . . expected to become unsuitable for cultivation."[47]

It will be a world in which melting Greenland, Antarctic, and Arctic sea ice "will likely lead to a sea level rise of 0.5 to 1 meter, and possibly more, by 2100, with several meters [and possibly significantly] more to be realized in the coming centuries."[48] It will be a world in which coastal communities around the world, and a "highly vulnerable" archipelago of cities in Mozambique, Madagascar, Mexico, Venezuela, India, Bangladesh, Indonesia, the Philippines, and Vietnam will, in consequence, find themselves exposed to "extreme floods" and "coastal inundation."[49] It will be a world in which such "large scale extreme" flooding "events" will drown people, collapse buildings, "induce nutritional deficits" due to the loss of arable land, and increase "diarrheal and respiratory diseases" by introducing "contaminants and diseases into healthy water supplies."[50] It will be a world in which, even as such coastal flooding exerts massive impacts on human health, compounding chronic "changes in temperature, precipitation rates, and humidity [will further] influence vector-borne diseases (malaria and dengue fever) as well as hantaviruses, leishmaniasis, Lyme disease, and schistosomiasis," and exacerbate respiratory disorders and heart and blood vessel diseases" due to "heat-amplified levels of smog."[51]

Farther out to sea, the oceans will intensify their rate of acidification, leading to a significant loss in biodiversity in the Atlantic, Pacific, and Indian Oceans' marine ecosystems; correspondingly dramatic reductions of fishery yields; and the widespread dissolving of coral reefs, with "profound consequence for [the reefs'] dependent species and for the people who depend on them for food, income, tourism, and shoreline protection."[52]

And these, the World Bank report indicates, are just some of the likely *linear* effects of warming. "Lurking in the tails of the probability distributions," it more ominously warns, "are likely to be many unpleasant surprises . . . [as] extremes, including heat waves, droughts, flooding events, and tropical cyclone intensity, are expected to respond *nonlinearly* . . . [leading to an] evolving cascade of risks," including "largescale displacements of populations, with manifold consequences for human security, health, and economic and trade

systems"; "the risk of crossing activation thresholds for nonlinear tipping elements in the Earth System"; and, as the report notes in a concluding gesture toward just how much the damage might exceed its probability calculations and risk scenarios, "the likelihood of transitions to unprecedented climate regimes."[53]

What will a 4°C world look like? A world of the long catastrophe; a world that finds itself, at best, entering the moment of "ultra-history," in Giorgio Agamben's term; a world in the long interregnum between the accumulating certainty of the devastated and the uncertainty of the new.[54] In the language of the eschatological and apocalyptic tradition on which Slavoj Žižek has drawn, it looks like a world of "the End Times": a world possessed of a "new heaven and a new earth."[55] Or as Bill McKibben's evocative neologism has it, it will be the world of a new "Eaarth": a world radically different from what we have heretofore understood the planet to be.[56]

Why should a knowledge field long attuned to advancing those global projects of freedom that have provided "the most important motif of written accounts of human history of [the past] two hundred and fifty years" now add to its analysis of the subordinating forces of race and capital and empire an encounter with Representative Concentration Pathways and planetary climate forcings?[57]

Why should a discourse on the Black Atlantic now also become a discourse on the Atlantic Ocean?

Because, to return to the place where I began, the slave factories on the Black Atlantic coast of Ghana and the village of Totope that was once (but is no longer) three miles from the sea do not belong to separate worlds but to overlapping worlds. Because, if we have known, or thought we have known, what challenges to freedom the slave factories presented, we now need also to ask what challenges to freedom those rising waters threaten.

Or let me put it this way:

Achille Mbembe opens the introductory chapter ("The Becoming Black of the World") of his magisterial *Critique of Black Reason* thus: "I envision this book as a river with many tributaries, since history and all things flow toward us now. Europe is no longer the center of gravity of the world. This is the significant event, the fundamental experience, of our era."[58] The "us" in Mbembe's epoch-claiming statement is a black "us," a black "we" whose history, condition, and future has now become the history, condition, and future of the world (or, as he also indicates, the "planet").[59] By his account,

three "critical moments in the biography of the vertiginous assemblage that is Blackness" have led to this epochal becoming-black of the world.[60] The "first arrived with the organized despoliation of the Atlantic slave trade (from the fifteenth through the nineteenth century) through which men and women from Africa were transformed into human-objects, human-commodities, human-money."[61] The "second moment corresponded with the birth of writing near the end of the eighteenth century, when Blacks, as beings-taken-by-others, began leaving traces in a language all of their own and at the same time demanded the status of full subjects in the world of the living."[62] The "third moment—the early twenty-first century—is one marked by the globalization of markets, the privatization of the world under the aegis of neoliberalism, and the increasing imbrication of the financial markets, the postimperial military complex, and electronic and digital technologies."[63]

The capture and thingification of black life; the revolt and rehumanization of black life; the reactive financialization and equitization of black life: these, for Mbembe, are the three epochs in the history of Blackness. And they are equally and at the same time more than that. They are, in his counter-Hegelian response to Hegel, the three epochs in the history of the modern world.[64] They are the three serially accumulating epochs of a contemporary world era in which all human life on the planet falls available for subaltern capture; all human life finds itself called and stirred by that incomplete "promise of liberty and universal equality" that has been the beacon of black political struggle "throughout the modern period";[65] and all human life—planetwide, whether captive, in revolt, or putatively "free"—lies endlessly susceptible, endlessly exposed, to becoming a tradeable/abandonable/superfluous good and quantum of metrical-virtual value or threat, an "animate thing made up of coded digital data."[66] As Mbembe summarizes his argument: "Across early capitalism, the term 'Black' referred only to the condition imposed on peoples of African origin (different forms of depredation, dispossession of all power of self-determination, and, most of all, dispossession of the future and of time, the two matrices of the possible). Now, for the first time in human history, the term 'Black' has been generalized. This new fungibility, this solubility, institutionalized as a new norm of existence and expanded to the entire planet, is what I call the Becoming Black of the world."[67]

My arguments in what follows are in agreement, particularly with the corresponding point on which Mbembe insists: as critical thought in the conjoined eras of late capital and the Anthropocene (or as Jason W. Moore

and others have indicated, in the age of the "Capitalocene") turns from the category of the human to the category of species, that does not entail leaving behind the history of race—neither the forces of history through which race has been subalternized, captured, dungeoned, traded, or financialized, nor the forces of liberatory revolt and struggle for freedom against all these closures, enclosures, distributions, trades, and financializations, what, in summary, Sharpe calls the force of those new "ecologies" of freedom "produce[d] out of the weather" of black being—but that, instead, we must read the contemporary discourse on species as raced; must read the turn to "species" as an extension and planetary expansion of the history of race and blackness; must read "species" as a critical instance of the vulnerable, disposable, subaltern, precarious "becoming black" of human life across the planet.[68] As Mbembe efficiently puts it, "We [must] understand that as humanity becomes fungible, racism will simply reconstitute itself in the interstices of a new language on 'species.'"[69]

On these lines, Mbembe and Gilroy, despite all their other differences, are in agreement, particularly as Gilroy, in his 2014 Tanner Lectures on Human Values (written to mark the twentieth anniversary of the publication of *The Black Atlantic*) insists that the Black Atlantic archive remains utterly central to the task of articulating a trans-planetary politics of freedom adequate and responsive to the contemporary discourse on species: a politics, in his terms, that depends on the "elaboration of a planetary humanism" flowing from the histories, situations, and practices of Black Atlantic art, struggle, and thought.[70] Mbembe, of course, is far less sanguine regarding the appeal to a planetary "humanism," and I will be returning to this point of difference in what follows. For the moment, however, I wish merely to mark the significance that both Mbembe and Gilroy place on the continued urgency of a black radical tradition to our not merely "global" but "planetary" moment (or, as Chakrabarty has it, to that "planetary conjuncture within which we find ourselves"). Beyond this, Gilroy and Mbembe share something else. They share the conviction that the necessity of such a planetary encounter with the black force of history must now also encompass an encounter with the forcings of the Anthropocene; an encounter with a mode of vulnerability/disposability appearing not only under the generalized "aegis of neoliberalism" but under the crash of the climate-and-capital-changed oceans, coasts, cities, and political orderings of a new Anthropocene nomos of the Eaarth; an encounter with a new mode of precariousness to which

black life is, at once, singularly subject and of which black life (or, to be more precise to Mbembe, black "forms of life") is/are prophetic of the "generalized" "becoming-black," planetwide, of the "species."

Gilroy is entirely direct in drawing this connection between the ongoing, on-flowing currents of Black Atlantic history and the rising, surging lap of the Atlantic Ocean and the world's other climate-altered seas. As he indicates in the opening sentences of his first Tanner Lecture ("Suffering and Infrahumanity"):

> The invitation to deliver these lectures coincided with the twentieth birthday of the publication of my book *The Black Atlantic*. That anniversary provided me with a cue to reflect critically on its reception, reach, and travel as well as to return to and develop a number of its key themes. Of course, the book's intervention resonates differently now that the "grey vault" of the sea is rising and smaller boats sweep fleeing Africans northward to fortified Europe rather than westward into the colonial nomos of plantation slavery.[71]

Despite those changes in circumstance, he continues: "[the] radical tradition of the black Atlantic," outlined by the earlier book, "remain[s] . . . an incendiary object. . . . [I]t is still endowed with the capacity to articulate conceptions of freedom, autonomy, and resistance that, though they derive from the struggle against racial slavery, remain not only intelligible but in some undefined ways also risky and relevant, even dangerous."[72] Holding that tradition together, he concludes, "is the overriding ethical and political task that can be said to distinguish the black Atlantic tradition, namely, the fashioning of a humanism made, as Aime Cesaire put it in the final sentence of his *Discourse on Colonialism*, 'to the measure of the world.' This is the task that I have described elsewhere as the elaboration of a planetary humanism. . . . We will need all its appeal as the sea levels rise and the fortifications placed around the citadels of overdevelopment crack open, releasing the pressure for new collectivities and solidarities as well as new modes of accountability to one another."[73]

While Mbembe, as I have already noted, would hesitate over that humanist inflection of a Black Atlantic tradition, he is nevertheless as convinced as Gilroy that any liberatory politics of the present must be routed through the force of black reason (where reason must be read, overlappingly, as thought/epistemology/purpose/aspiration/form/structure of time). Like Gilroy, he is further convinced that any such politics of the present (and its futures) can-

not conceive of our present as an abstract contemporaneity but must grasp it as an epoch structured by an entangled congeries of "processes."[74] I have already mentioned three of those processes (as Mbembe outlines them in the introduction to *Critique of Black Reason*), all of which, notably, concern the planetary generalization (from "blackness" to "the species") of situations of human life: the capture and thingification of life; the revolt and rehumanization of life; the financialization and equitization of life.

To these three constitutive orderings of the human, Mbembe adds another in his essay "Decolonizing Knowledge and the Question of the Archive":

> [W]e can no longer think about "the human" in the same terms we were used to until quite recently. . . . an epoch-scale boundary has been crossed within the last two centuries of human life on Earth . . . we have, as a consequence, entered an entirely new deep, geological time, that of the Anthropocene. . . . The scale, magnitude and significance of this environmental change—in other words the future evolution of the biosphere and of Earth's environmental life support systems particularly in the context of the Earth's geological history—this is arguably the most important question facing . . . humanity since at stake is the very possibility of its extinction. We therefore have to rethink the human not from the perspective of its mastery of the Creation as we used to, but from the perspective of its finitude and its possible extinction. . . . This rethinking of the human has unfolded along several lines and has yielded a number of preliminary conclusions I would like to summarize. The first is that humans are part of a very long, deep history that is not simply theirs; that history is vastly older than the very existence of the human race which, in fact, is very recent. And they share this deep history with various forms of other living entities and species. Our history is therefore one of entanglement with multiple other species. And this being the case, the dualistic partitions of minds from bodies, meaning and matter or nature from culture can no longer hold.[75]

Two points are worth registering here. The first is that as Mbembe marks this Anthropocene reordering of the human, he takes a step further than Gilroy in articulating a renovated philosophy of history that recognition demands. While never turning from the centrality of the histories of race (and the force of those histories) to our multi-entangled present, he nevertheless indicates that while the history of race is indissociable from the history of

"the human race," human history can no longer disentangle itself from a deeper history of "other" forms of "entities and species."

It is at such moments that we can begin to see Mbembe and Gilroy parting ways on the need to link a contemporary black politics of the planetary to an a priori commitment to humanism. But that "deep time" and multispecies troubling of the humanist boundary (while certainly central to my own arguments) is not the most remarkable thing to note in Mbembe's comments. The second and more original of his arguments is that the Anthropocene-trespassed human/nonhuman boundaries he registers in this essay are not at odds but consistent with the digitally trespassed human/nonhuman boundaries he delineates in *Critique of Black Reason*. In both texts, he suggests, the central dilemma of "life" in the epoch of planetary entanglement is the dilemma of human life animated by and along with a vast bundle of nonhuman counteragents: the dilemma, as he puts it, of "animism," which has also been the ontological question and possibility on which a sustained, radical, and non-humanist reason of black thought has long nourished itself in its own encounters and contestations with the traditions of Enlightenment reason (most notably, the Enlightenment insistence on "the dualistic partitions of minds from bodies, meaning [from] matter, nature from culture").

Entangled with the screen, entangled with nonhuman biotic forms of life, entangled with data, entangled with surging oceans, entangled with equity bundles, entangled with the geological, entangled with algorithms, entangled with gene-coding, entangled with sun flares, entangled with derivatives—the human in the epoch of the planetary contemporary, Mbembe indicates, can no longer be imagined to hold its humanist core. Things fall apart—and together. The Eurocentric order of Enlightenment reason cannot hold: "[C]apitalism and animism—long and painstakingly kept apart from each other—have finally tended to merge."[76] A black ontology of the entanglement of human and nonhuman life, things, and matters—precarious and possible, abject and hopeful, dismissed and liberatory—becomes the ontology of the human species in its generalized totality—"a new norm of existence . . . expanded to the entire planet."

> History and all things flow toward us now. Europe is no longer the center of gravity of the world. This is the significant event, the fundamental experience, of our era.

Thus, Mbembe's answer to Gilroy's call for a planetary humanism:

~~~ In place of a planetary humanism (nourished on the Black Atlantic tradition), a planetary animism (nourished by the black reason of that tradition of struggle, practice, and thought).

Or, to reduce things to one of the core arguments I will be developing:

~~~ Thus the difference between what I will be calling a (humanist) Materialism I and a (post-humanist) Materialism II in their responses to the dilemmas of our time.

However, as I have already indicated, and will be insisting on throughout, my ultimate purpose is not to hold these humanist and post-humanist responses to the crisis of our planetary time in irreconcilable tension with one another but to discover the points of their intersecting swerve. Finding those points of convergence, while attending to the significant differences of these approaches, will take up a substantial portion of this book. But one thing, one point of convergence, is already abundantly clear. Gilroy and Mbembe swerve together where Quarmyne's art also meets and extends what they hold to be the defining feature of the Black Atlantic tradition: they meet at the point of (and at the struggle for) freedom. Which is not to say that freedom will look the same in its humanist and post-humanist guises. But it is to say that all three of their bodies of work (as, also, this book) are sustained and driven by an investigation of the nature of freedom in our planetary times. And it is to say that I am in full agreement that in that search for such a conception of freedom adequate to our times (and in the corresponding search for a method of inquiry adequate to the task of the critical humanities in the epoch of the Anthropocene), Gilroy's Black Atlantic tradition and Mbembe's "becoming black of the world" articulate themselves as organizational starting grounds. As Gilroy, to repeat, says, "We will need all its [the Black Atlantic archive's] appeal as the sea levels rise and the fortifications placed around the citadels of overdevelopment crack open, releasing the pressure for new collectivities and solidarities as well as new modes of accountability to one another."[77]

As Mbembe—convergently and differentially—puts it:

The term "Black" was the product of a social and technological machine tightly linked to the emergence and globalization of capital. It was invented to signify exclusion, brutalization, and degradation, to point to a limit constantly conjured and abhorred. . . . But there is also

> a manifest dualism to blackness. In a spectacular reversal, it becomes the symbol of a conscious desire for life, a force springing forth, buoyant and plastic, fully engaged in the act of creation and capable of living in the midst of several times and several histories at once. . . . [Must we then] forget Blackness? Or perhaps, on the contrary, must we hold onto its false power, its luminous fluid, and crystalline character—that strange subject, slippery, serial, and plastic, always masked, firmly camped on both sides of the mirror, constantly skirting the edge of the frame? And if, by chance, in the midst of all this torment, Blackness survives all those who invented it, and if all of subaltern humanity becomes Black in a reversal to which only history knows the secret, what risks would a Becoming-Black-of-the World pose to the promise of liberty and universal equality for which the term "Black" has stood throughout the modern period?[78]

What risks does the Becoming-Black-of-the-World pose to antecedent Enlightenment notions of liberty and equality? What reinventions of freedom do Mbembe's "Black Reason" and Gilroy's "Black Atlantic tradition" demand? What new collectivities, solidarities, and modes of accountability do they variously and convergently invite? What promise can they offer to a seven-year-old boy standing on the fringe of one of the Black Atlantic's ocean-devoured shores?

The ensuing portions of this book constitute my attempt to take up these questions and concerns, building on the work of scholars across the disciplines who have begun to outline the terms for a method of critical thought adequate to this threshold-crossing moment of humanity's transit into a 4°C world—and to the call of liberatory thought in the midst of that epochal passage.

In the section of the book that follows, I provisionally put on hold a detailed reengagement with the contemporary West African scene that Quarmyne's images bring to light in order to trace the broad outlines of such a "method" for apprehending this alternatured planetary world. While the methodological reflections of this section flow from the intention to return to my site of departure—to that March morning of 2010 and the image of Collins Kusietey standing in his Anthropocene-altered slave-coast shore—they are also explicitly more general in scope, driven by the challenge of finding a method adequate to Gilroy and Mbembe's planetary moment, or, in McKibben and Chakrabarty's blended terms, to the Eaarth-

spanning "planetary conjuncture" in which we find ourselves. The section thus begins by establishing a broader historical framework for the recent round of critical work directly engaging the theoretical and philosophical challenges of the Anthropocene. It does so by addressing a prior moment of philosophical debate, one that does not in any simple sense produce our theoretical contemporaneity but, which, nevertheless, played a crucial role in reopening for late twentieth- and early twenty-first-century debate a series of eighteenth- and nineteenth-century questions on the relation between freedom and finitude, the actor and the situation, and the interchanges and interminglings of human and extra-human history. In doing so, this moment helped articulate what I understand to be the key set of questions at the heart of our current theoretical and methodological problematic.

The moment I have in mind is that of the early 1960s—one generally characterized in histories of theory as marking the beginning of the transition from structuralist to poststructuralist epistemologies but highlighted for my purposes by Claude Levi-Strauss's celebrated 1962 dispute with Jean Paul Sartre on the adequacy of historical method to a properly dialectical understanding of the human "situation." This is a moment, consequently, of less interest to me for what it reveals regarding structuralism's contention with, and triumph over, existentialism (in advance of its subsequent poststructural defeat), than for the ways in which, by reviving a debate on Marx's *Eighteenth Brumaire*, and in throwing open the question of how to gauge the pertinence of a Marxist dialectic of freedom and circumstance to humanity's nonhuman fields of circumstantial determination, Sartre and Lévi-Strauss's heated quarrel helped open for investigation many of the animating questions of the various post-humanist epistemologies that have emerged in the ensuing years—particularly the "new materialisms" that have risen to such prominence in the early decades of the twenty-first century.

While not figuring themselves in relation to the Sartre/Lévi-Strauss debate, these new materialisms share and extend some of its crucial features, taking something (however paradoxically) from both sides. From the Sartrean-Marxist side of the debate, in particular, they take the call for a search for critical method adequate to indicating, in Sartre's terms, how we may "succeed in making *of* what [we have] been made."[79] From Lévi-Strauss's side of the debate, they take the argument that the "human" situation is inadequately addressed by the "historian's code," that the "circumstance," or situation, of our times must be understood to encompass multiple scales and orders of time radically exceeding what a classically

historical (and residually humanist) materialism (Marxist or Sartrean) renders available for investigation and critique: most significantly, an array of extra-historical, infra-historical, and supra-historical orders of human/nonhuman being and time.

Having sketched this broader historical framework for our current critical engagement with the dilemmas of the Anthropocene, I return to Chakrabarty to discuss the ways in which his earlier writings and his recent work on climate change further extend the debate between these historical and extra-historical materialisms while adding a particular, postcolonial inflection to that debate's terms of inquiry. I pursue this reading by considering the relation between his earlier conceptualization (in *Provincializing Europe: Postcolonial Thought and Historical Difference*) of two forms of history (an Enlightenment form he calls History 1 and a subaltern form he calls History 2) and the new dilemma of history emerging from the bundle of climate change essays he has published since 2009. Despite its enormously rich considerations of the methodological challenges the Anthropocene poses to the "historian's code," Chakrabarty's new mode of understanding, I suggest, nevertheless bypasses the full multiscale temporality of our planetary present. I argue, therefore, that while drawing on Chakrabarty's recent work (and the moments of Enlightenment and Marxist/subaltern thought preceding it), we need to continue in a search for method adequate to the heterochronic situation of our Anthropocene time.

In making that argument, I am guided by a series of framing questions. If it is the case that a rapidly arriving Anthropocene world is temporally multiple, and that to its multiple temporalities there is a correspondingly multiple and heterogeneous set of orientations to the future, then what are the strands of time of which that world is composed? How, further, might we understand those temporal orders to relate to one another? Where might we look for models of their relationship? What projects of future-fashioning do they variously imply? And how, as they orient us to the future, do they reopen or renovate the question of freedom?

I respond to these questions by returning to Sartre to consider what his reflections on "totalizing" method (particularly in *Critique of Dialectical Reason*) may still have to teach us as we attempt to consider the emergingly "total" Anthropocene condition of the planet, and where they fall short in addressing a "situation" that radically exceeds reduction to a persistently humanist "historian's code." The Anthropocene, to put it another way, may

register the present and coming *total* history of the planet, and Sartre's method may provide an avenue to grasping such a totality, but his persistent tendency to render the "situation" of dialectical critique exclusively isomorphic with human history also underscores the limits of an older historical materialism's capacity to address not only the historical forces of climate change but also the supra-historical forcings of the Anthropocene. To consider how we might more fully address the situation-altering and situation-expanding effects of those forcings, I turn to Walter Benjamin, particularly to the relatively underexamined eighteenth (and final) thesis in his "Theses on the Philosophy of History," which dramatically scales up his prior account of the complex *now-being* (*jetztzeit*) of historical time to include a range of evolutionary and geological orders among humanity's temporal fields of circumstance.

Working from that text, I argue that Benjamin provides us not only with a model for a renovated philosophy of history but with a method for grasping an internally heterogeneous "totality" structured by a series of biographical, biological, nomological, geological, cosmological, and theological scales of being and time. With this fuller sense of how to fashion a method for grasping the plural temporalities and mixed ontology of the Anthropocene more firmly in place, I conclude this section on method by addressing the ways in which aesthetic experience—particularly the aesthetic experience of encountering the new forms of "character" emerging in recent climate-change novels and visual art—vitally supplements philosophical critique in helping reveal what it means for human life to be distributed across this range of temporal scales and ontological registers; what it means for the human to be, simultaneously, a bearer of rights, a subject of cultural difference, an expression of co-evolutionary deep time, a geophysical force, and a measure of the infinite; what it means to pose the question of freedom from within these multiple "situations" of human and nonhuman life—serially, and all at once.

In the third section of the book, I return to directly reengage the text's Atlantic scene of departure. Having outlined a general method of approach, I begin the section by asking how that method comes to bear on the twenty-first-century Ghanaian shore, and how, reciprocally, thinking from this shore shows us how the discourses of the Anthropocene Atlantic and the "historical" Black Atlantic enter into exchange with one other (through that dialectic of forcings and forces I have been tracing). I take that question up

through the question of form. Identifying a series of temporal scales ordering the epochal time of the Anthropocene (a biographical scale, a nomological scale, a biological scale, a zoëlogical scale, a geological scale, and a cosmological scale), I then ask how Quarmyne's work might help us more fully understand the form of these time scales' relation to one another. If the Anthropocene, to put it another way, should be grasped as a "totality" (as encompassing the "total" future history of the planet) but needs at the same time to be understood as an internally heterogeneous totality (as producing different effects when we approach it through the perspective of an individual human life within a particular historical order *and* from the perspective of humanity in its "species" being), then how can we understand those different orders to relate to one another? What form does their relation take when that relationship is simultaneously indexed to a singular situation (the situation confronting Collins Kusietey on the morning of March 7, 2010, in the village of Totope, Ghana) and to Chakrabarty's "planetary conjuncture"?

In addressing those questions, I return one last time to *Critique of Dialectical Reason* to discuss the ways in which a scaled-up version of Sartre's analysis of environmental change might cause us to regard climate change as a "counterfinality" (that is, as one of those apparently background environments of human activity that has been so transformed by prior human actions that it has trespassed the boundary between material background and human foreground to become a counteragent of history). I then turn to Timothy Morton's work to discuss the differences between this Sartrean (and still humanistically materialist) conception of counterfinality and Morton's new posthuman materialist reading of the Anthropocene as a "hyperobject." With that framework more clearly articulated, I return to Gilroy and Mbembe, to consider the ways in which their two versions of the black planetary map further develop the distinctions and potential points of convergence between these two materialisms, particularly as they both—similarly and quite dissimilarly—draw on the work of Frantz Fanon as pivotal to the questions of our planetary contemporaneity and future. In so doing, I ask how Quarmyne's arresting series of images—and the insight Sharpe's analysis provides in allowing us to regard those images as a form of "wakework"—can help make sense of the nature of the complex interrelationship between these two materialisms (Materialism I and Materialism II, as I have been calling them), subtending the dialectical interplay of the forces and forcings of our times.

In concluding, I return to the question of freedom that has been running through the entire text. In doing so I seek to respond to three key issues. The first is to directly address the question of why a project of freedom could or should continue to provide a central aspirational ground for a Black Atlantic Anthropocene political imaginary when quite arguably it is an *excess* of freedom (of capital growth, of consumption) that has helped create the catastrophic conditions of planetary climate change coming ashore around the world but with especially devastating effect in the outposts of the global postcolony. The second is to suggest that any answer to the question of freedom will necessarily vary depending on the scale at which the query is put. The challenge of freedom from exposure to the conditions of extreme vulnerability that climate change produces will, that is, look very different at the biographical scale of an individual human life (for which ideals of the dignity of personhood and an allied body of individual human rights remain crucial) than when it is posed at the zoëlogical scale of humanity's being as one planetary species among others (for which a more radically posthumanist conception of freedom more indebted to Latour's notion of the parliament of things or Mbembe's cosmological assemblages might provide a more significant response).

With that multiplicity of "freedoms" across the scales of the Anthropocene register in mind, I finally suggest that Quarmyne's work can help us frame a new conception of freedom (flowing from the subaltern particularity of the Black Atlantic but fully aspirational for a world, in its planetary totality, increasingly being remade in the image of the Anthropocene postcolony): a conception proceeding from the notion that freedom need not necessarily be held to begin and end with the freedom from constraint and the urge to self-protection—either individually or collectively (as it does for much Enlightenment thought)—but can instead be understood as emerging, simultaneously, from an ethic of being undone; an ethic of being decomposed and recomposed through our entangling set of relationships to the biological, and the zoëlogical, and the geological, and the cosmological orders and times of planetary life. Understood in this sense, to speak of freedom is to speak of an ethic reoriented *from* a solitary desire for immunity from the forces and forcings of our epoch *toward*, instead, a determination to refashion the biographical and nomological orders of our lives (our habits of dwelling, consuming, legislating) in relation to these forces and forcings of planetary life. From "freedom from" to "freedom toward": that,

as I understand it, is one project for the future of our situation; one orientation for making something of what we have been made; one disposition toward the future that I believe we must pursue as we engage that dialectic of forces and forcings that has become one of the great hallmarks of our multilayered, multitemporal "epoch," planetwide, and as it comes ocean-crashing to ground on the vanishing edge of the Ghanaian shore.

NOTES

CHAPTER 1. Of Forces and Forcings

1. See Stephanie E. Smallwood, *Saltwater Slavery: A Middle Passage from Africa to American Diaspora* (Cambridge, MA: Harvard University Press, 2008); Saidiya Hartman, *Lose Your Mother: A Journey along the Atlantic Slave Route* (New York: Farrar, Straus and Giroux, 2008); Bayo Holsey, *Routes of Remembrance: Refashioning the Slave Trade in Ghana* (Chicago: University of Chicago Press, 2008).

2. Smallwood, *Saltwater Slavery*, 35.

3. Paul Gilroy, *The Black Atlantic: Modernity and Double Consciousness* (Cambridge, MA: Harvard University Press, 1993), 221.

4. See Smallwood, *Saltwater Slavery*, 9–32.

5. Giovanni Arrighi, *The Long Twentieth Century: Money, Power and the Origins of Our Times* (New York: Verso, 1994); Hartman, *Lose Your Mother.*

6. Ian Baucom, *Specters of the Atlantic: Finance Capital, Slavery, and the Philosophy of History* (Durham, NC: Duke University Press, 2005).

7. Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen (Stanford, CA: Stanford University Press, 1998).

8. Justin Gillis, "Heat-Trapping Gas Passes Milestone, Raising Fears," *New York Times*, May 10, 2013, accessed October 14, 2013, http://www.nytimes.com/2013/05/11/science/earth/carbon-dioxide-level-passes-long-feared-milestone.html.

9. Gillis, "Heat-Trapping Gas."

10. Fredric Jameson, *A Singular Modernity: Essay on the Ontology of the Present* (New York: Verso, 2002), 29.

11. See Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2013); Ramachandra Guha, *Environmentalism: A Global History* (London: Pearson, 1999); *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya* (Berkeley: University of California Press, 1990); Elizabeth A. Povinelli, *Geontologies: A Requiem to Late Liberalism* (Durham, NC: Duke University Press, 2016); Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (winter 2009): 197–222; "Postcolonial Studies and the Challenge of Climate Change," *New Literary History* 43, no. 1 (winter 2012): 1–18; "Climate and Capital:

On Conjoined Histories," *Critical Inquiry* 41, no. 1 (autumn 2014): 1–23; "The Planet: An Emergent Humanist Category, *Critical Inquiry* 46, no. 1 (autumn 2019): 1–31.

12. Perhaps the most significant of those disagreements comes from my sense that while climate change does indeed call us to rethink the question of the human under the category of "species," the profoundly uneven conditions of human vulnerability to the catastrophic effects of global warming also demand that we apprehend climate change as accentuating and intensifying long-standing patterns of human division between worlds of relative security and worlds of extreme precariousness. The time of the Anthropocene, I have thus come to think, is not so much a unitary time (of humanity's catastrophic species-being) as a mixed time in which individual, historical, biological, and geological orders of human (and nonhuman) being and time have entered into highly complex forms of relation with one another. See Chakrabarty, "The Climate of History: Four Theses."

13. Chakrabarty, "The Climate of History: Four Theses," 198.

14. I address the meaning and relation of these two terms, *force* and *forcing*, in detail in the sections that follow. Most broadly, by *force* I am referring to the powers of social, cultural, and political organization (and disruption) proper to the legal, economic, bureaucratic, and other institutions of "human" history; by *forcing* I have in mind the radiative pressures (from carbon dioxide emissions, sulfur, solar flaring, etc.) effecting changes in the mean surface temperature of the earth.

15. As I currently project it, that sequence of volumes involves three unfolding areas of focus: capital (in chapter 1), climate (in chapter 2), and war (in chapter 3).

16. See Friedrich Engels, "Ludwig Feuerbach and the End of Classical German Philosophy . . . With Notes on Feuerbach by Karl Marx 1845" (Berlin: Verlag von J. H. W. Dietz, 1888), 69–72.

17. See P. J. Crutzen, "Geology of Mankind," *Nature* 415 (2002): 23.

18. Jan Zalasiewicz, Mark Williams, Alan Haywood, and Michael Ellis, "Introduction: The Anthropocene: A New Epoch of Geological Time?," in *Philosophical Transactions of the Royal Society* (2011): 369, 838.

19. Zalasiewicz et al., "Introduction," 837 (emphasis added).

20. Zalasiewicz et al., "Introduction," 840.

21. David Archer, *The Long Thaw: How Humans Are Changing the Next 100,000 Years of Earth's Climate*, Kindle edition (Princeton, NJ: Princeton University Press, 2008), Kindle locations 551–53. I am indebted to Dipesh Chakrabarty's work for bringing Archer's scholarship to my attention.

22. Archer, *The Long Thaw*, Kindle location 555.

23. Archer, *The Long Thaw*, 40.

24. Archer, *The Long Thaw*, 76.

25. Archer, *The Long Thaw*, 6–7.

26. Archer, *The Long Thaw*, 157.

27. Subcommission on Quaternary Stratigraphy, "Working Group on the 'Anthropocene,'" Working Group Convenor: Jan Zalasiewicz, accessed December 9, 2019, http://quaternary.stratigraphy.org/workinggroups/Anthropocene/.

28. Subcommission on Quaternary Stratigraphy, "Working Group on the 'Anthropocene.'"

29. See Christina Sharpe, *In the Wake: On Blackness and Being* (Durham, NC: Duke University Press, 2016), 118 and throughout.

30. Sharpe, *In the Wake*, 106.

31. See Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010); Donna Haraway, *The Companion Species Manifesto* (Chicago: Prickly Paradigm Press, 2003); Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2009); Achille Mbembe, *Critique of Black Reason*, trans. Laurent Dubois (Durham, NC: Duke University Press, 2017), 181; Tim Morton, *The Ecological Thought* (Cambridge, MA: Harvard University Press, 2012), 15; Tim Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013); Pope Francis, *Laudato Si': On Care for Our Common Home* [Encyclical Letter] (Vatican City, Italy: Libreria Editrice Vaticana, 2015).

32. Chakrabarty, "The Climate of History," 199.

33. Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (Princeton, NJ: Princeton University Press, 2007), 6.

34. Chakrabarty, "The Climate of History," 208.

35. See Rob Nixon, *Slow Violence*. For reasons that will become evident in what follows, I have substituted Bill McKibben's neologism "Eaarth" for the standard denomination of the planet in Frantz Fanon's *Wretched of the Earth*. See Bill McKibben, *Eaarth: Making Life on a Tough New Planet* (New York: Henry Holt, 2010).

36. Karl Marx, *The Eighteenth Brumaire of Louis Bonaparte: Cambridge Texts in the History of Political Thought* (Cambridge: Cambridge University Press, 1996).

37. Ato Quayson, "The Sighs of History: Postcolonial Debris and the Question of (Literary) History," in *New Literary History* 43, no. 2 (spring 2012): 368–69. Quayson's essay is one of a series in a special edition of *New Literary History* responding to Chakrabarty's "The Climate of History" and Robert Young's "Postcolonial Remains," both published in the previous edition, *New Literary History* 43, no. 1 (winter 2012): 19–42.

38. IPCC, *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, ed. T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P. M. Midgley, eds. (Cambridge: Cambridge University Press), released September 27, 2013, http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf, accessed October 16, 2013.

39. IPCC, *Climate Change 2013: The Physical Science Basis*, accessed December 17, 2013.

40. Detlef van Vuuren et al., "The Representative Concentration Pathways: An Overview," in *Climatic Change* 109 (2011): 5–31, 20.

41. IPCC, *Climate Change 2013: The Physical Science Basis*, 15.

42. IPCC, *Climate Change 2013: The Physical Science Basis*, 14, 16, 16, 17, 17, 18, 19.

43. *Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided*, A Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics (November 2012), http://climatechange.worldbank.org/sites/default/files/Turn_Down_the_heat_Why_a_4_degree_centrigrade_warmer_world_must_be_avoided.pdf), accessed October 14, 2013.

44. *Turn Down the Heat*, 1.

45. *Turn Down the Heat*, xv.

46. *Turn Down the Heat*, xv.

47. *Turn Down the Heat*, 15, 26, 62.

48. *Turn Down the Heat*, xv.

49. *Turn Down the Heat*, xvi, xv.

50. *Turn Down the Heat*, xvii.

51. *Turn Down the Heat*, xvii.

52. *Turn Down the Heat*, xv.

53. *Turn Down the Heat*, 60.

54. Giorgio Agamben, *The Open: Man and Animal* (Stanford, CA: Stanford University Press, 2004).

55. Slavoj Žižek, *Living in the End Times* (New York: Verso, 2011).

56. McKibben, *Eaarth: Making a Life on a Tough New Planet*.

57. Chakrabarty, "The Climate of History," 208.

58. Mbembe, *Critique of Black Reason*, 1 (emphasis added).

59. Mbembe, *Critique of Black Reason*, 6.

60. Mbembe, *Critique of Black Reason*, 2.

61. Mbembe, *Critique of Black Reason*, 2.

62. Mbembe, *Critique of Black Reason*, 3.

63. Mbembe, *Critique of Black Reason*, 3.

64. For Hegel's infamous dismissal of Africa from the philosophy of history, see G. W. F. Hegel, *The Philosophy of History* (New York: Dover, 2004).

65. Mbembe, *Critique of Black Reason*, 7.

66. Mbembe, *Critique of Black Reason*, 5.

67. Mbembe, *Critique of Black Reason*, 5–6.

68. See Jason W. Moore, ed., *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism* (Oakland, CA: Kairos Press, 2016), and Sharpe, *In the Wake*, 106.

69. Mbembe, *Critique of Black Reason*, 6.

70. Paul Gilroy, "Suffering and Infrahumanity," Tanner Lectures on Human Values (2014), 28.

71. Gilroy, "Suffering and Infrahumanity," 21.

72. Gilroy, "Suffering and Infrahumanity," 21.

73. Gilroy, "Suffering and Infrahumanity," 28, emphasis added.

74. Achille Mbembe, "Decolonizing Knowledge and the Question of the Archive," https://wiser.wits.ac.za/system/files/Achille%20Mbembe%20-%20Decolonizing%20Knowledge%20and%20the%20Question%20of%20the%20Archive.pdf, accessed January 3, 2019, n.p.

75. Mbembe, "Decolonizing Knowledge and the Question of the Archive."

76. Mbembe, *Critique of Black Reason*, 4.

77. Gilroy, "Suffering and Infrahumanity," 28.

78. Mbembe, *Critique of Black Reason*, 6–7.

79. Jean Paul Sartre, *Search for a Method*, trans. Hazel E. Barnes (New York: Vintage, 1968), 91.

CHAPTER 2. History 4° Celsius

Epigraphs: Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (winter 2009): 206; Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), 5.

1. Claude Lévi-Strauss, *The Savage Mind* (Chicago: University of Chicago Press, 1962), 258–59.

2. Lévi-Strauss, *The Savage Mind*, 259.

3. Lévi-Strauss, *The Savage Mind*, 259.

4. Lévi-Strauss, *The Savage Mind*, 261.

5. Lévi-Strauss, *The Savage Mind*, 260.

6. Lévi-Strauss, *The Savage Mind*, 260.

7. Karl Marx, *Later Political Writings*, trans. and ed. Terrell Carver (Cambridge: Cambridge University Press, 1996), 32.

8. Jean Paul Sartre, *Search for a Method*, trans. Hazel E. Barnes (New York: Vintage, 1968), 45, 91.

9. Sartre, *Search for a Method*, 48, 53; David Sherman, *Sartre and Adorno: The Dialectics of Subjectivity* (New York, SUNY Press, 2008), 261.

10. Sherman, *Sartre and Adorno*, 261.

11. Lévi-Strauss, *The Savage Mind*, 260.

12. It is vital to note that, in this context, *epoch* does not refer to a geological epoch but to an extended period of human historical time. The relation of these two conceptions of *epoch* to one another emerges subsequently—and as a crucial concern of this book—as the geological turn to the discourses of the Anthropocene emerge over recent years.

13. Lévi-Strauss, *The Savage Mind*, 262.

14. Lévi-Strauss, *The Savage Mind*, 262.

15. Lévi-Strauss, *The Savage Mind*, 262.

16. Lévi-Strauss, *The Savage Mind*, 248.

17. Lévi-Strauss, *The Savage Mind*, 245, 246, 247, 245.

18. See James Chandler, *England in 1819: The Politics of Literary Culture and the Case of Romantic Historicism* (Chicago: University of Chicago Press, 1999), particularly the introduction and chapter 1.

19. Catherine Malabou, *What Should We Do with Our Brain?*, trans. Sebastian Rand (New York: Fordham University Press, 2008), 5 and throughout. For additional influential recent work in the neurohumanites, see also William Connolly, *Neuropolitics:*