Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism

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"A revolutionary new phase of earth history, the *Anthropocene*, has been unleashed by human action, and the prospects for this blue sphere and the mass of humanity are not good. We had best start thinking in revolutionary terms about the forces turning the world upside down if we are to put brakes on the madness. A good place to begin is this book, whose remarkable authors bring together history and theory, politics and ecology, economy and culture, to force a deep look at the origins of global transformation. In short, the enemy to be met is not us, dear Pogo, but capitalism, whose unrelenting exploitation of (wo)man and nature is driving us all to the end(s) of the earth."
—Richard Walker, professor emeritus of geography, University of California, Berkeley, and author of *The Capitalist Imperative*, *The New Social Economy*, *The Conquest of Bread*, and *The Country in the City*

"This volume puts the inadequate term 'Anthropocene' in its place and suggests a much more appropriate alternative. We live in the 'age of capital,' the Capitalocene, the contributors argue, and the urgent, frightening and hopeful consequences of this reality check become apparent in chapters that forces the reader to think. In a time when there is generally no time or space to think (meaning: to go beyond the thoughtlessness that is the hallmark of 'business as usual') we need a book like this more than ever. Confronting and thinking the Capitalocene we must. This book is a great place to start."
—Bram Büscher, professor of sociology, Wageningen University, and author of *Transforming the Frontier: Peace Parks and the Politics of Neoliberal Conservation in Southern Africa*.

"For more than a decade, earth system scientists have espoused the idea of a new geological age, the Anthropocene, as a means of understand the system environmental changes to our planet in recent decades. Yet we cannot tackle the problem of climate change without a full account of its historical roots. In this pioneering volume, leading critics call for a different conceptual framework, which places global change in a new, ecologically oriented history of capitalism—the Capitalocene. No scholar or activist interested in the debate about the Anthropocene will want to miss this volume."
—Fredrik Albritton Jonsson, associate professor of history, University of Chicago, and author of *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism*

"Attempts to build political alliances around the project of rebalancing relations between 'society' and 'nature' have always stumbled when they encounter the thousands of communities and groups that would prefer not to have much truck with this dualism at all. The idea that global warming is a matter of the advent of an 'anthropocene era' is getting to be a particular obstacle to effective climate action—one that this book provides brilliant new intellectual tools for overcoming."

—Larry Lohmann, The Corner House

Anthropocene or Capitalocene?

In ancient Greek philosophy, *kairos* signifies the right time or the "moment of transition." We believe that we live in such a transitional period. The most important task of social science in time of transformation is to transform itself into a force of liberation. Kairos, an editorial imprint of the Anthropology and Social Change department housed in the California Institute of Integral Studies, publishes groundbreaking works in critical social sciences, including anthropology, sociology, geography, theory of education, political ecology, political theory, and history.

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For my father,
Who taught me that it is the conversation that counts

Contents

Acknowledgments

It was a spring day in southern Sweden in 2009. I was talking with Andreas Malm, then a PhD student at Lund University. "Forget the Anthropocene," he said. "We should call it the *Capitalocene*!"

At the time, I didn't pay much attention to it. "Yes, of course," I thought. But I didn't have a sense of what the Capitalocene might mean, beyond a reasonable—but not particularly interesting—claim that capitalism is the pivot of today's biospheric crisis.

This was also a time when I began to rethink much of environmental studies' conventional wisdom. This conventional wisdom had become atmospheric. It said, in effect, that the job of environmental studies scholars is to study "the" environment, and therefore to study the environmental context, conditions, and consequences *of* social relations. The social relations themselves—not least, but not only, those of political economy—were generally outside the field's core concerns. That didn't seem right to me. Weren't all those "social relations" *already* bundled within the web of life? Were not world trade, imperialism, class structure, gender relations, racial orders—and much more—not just producers of environmental changes but also *products* of the web of life? At some high level of abstraction, that argument was widely accepted. But at a practical, analytical level, such ideas were exceedingly marginal.

That has now changed. The idea of the Capitalocene as a multispecies assemblage, a world-ecology of capital, power, and nature, is part of the global conversation—for scholars, but also for a growing layer of activists.

This book is one product of the conversations that germinated in Sweden, beginning that spring of 2009. Those conversations would

eventually give rise to the world-ecology perspective, in which the relations of capital, power, and nature form an evolving, uneven, and patterned whole in the modern world. Rather than pursue a "theory of everything," the early world-ecology conversation began with special group of graduate students at Lund University interested in pushing the boundaries of how we think space, geography, and nature in capitalism. These students included: Diana C. Gildea, Erik Jonsson, Cheryl Sjöström, Holly Jean Buck, Bruno Portillo, Geannine Chabaneix, Jenica Frisque, Xiao Yu, and Jessica C. Marx. Holly Buck deserves special credit for insisting that the Anthropocene, for all its many problems, remained a useful way of speaking to a wider audience. *This* is what we call a productive disagreement!

Special thanks go to a number of individuals. First, special thanks to my colleagues at Binghamton University: to Bat-Ami Bar On, the director of the university's Institute for Advanced Studies in the Humanities, and to Donald G. Nieman, provost, for allowing me release time from teaching to complete this book. Thanks also to Denis O'Hearn, my department chair, for providing a congenial atmosphere to complete this project. I would also like to thank the many generous scholars around the world who have invited me for talks, and the audiences who sat patiently through those talks—your responses and conversations have enriched the present dialogue in ways that are often not so obvious, but no less profound for it.

The arguments you find in this book owe everything to a wonderful community of radical intellectuals who encouraged, in large ways and small, the Anthropocene/Capitalocene and world-ecology conversations: Haroon Akram-Lodhi, Elmar Altvater, Gennaro Avallone, Henry Bernstein, Jay Bolthouse, Neil Brenner, Alvin Camba, Christopher Cox, Sharae Deckard, Marion Dixon, Joshua Eichen, Harriet Friedmann, Paul K. Gellert, Aaron Jakes, Fredrik Albritton Jonsson, Ashok Kumbamu, Benjamin Kunkel, Rebecca Lave, Emanuele Leonardi, Kirk Lawrence, Sasha Lilley, Larry Lohmann, Philip McMichael, Michael Niblett, Kerstin Oloff, Andrew Pragacz, Larry Reynolds, Marcus Taylor, Eric Vanhaute, Tony Weis, and Anna Zalik. I am especially grateful for continuing conversations with Diana C. Gildea, Christian Parenti, Raj Patel, and Marge Thomas. Ramsey Kanaan and the team at PM Press were exemplary and encouraging at every step. Naomi Schulz compiled and helped to format the bibliography. And finally, I am inspired by and grateful for Diana's and Malcolm's unflinching joy and love in making life—and in transforming the world as we know it.

INTRODUCTION

Anthropocene or Capitalocene?
Nature, History, and the Crisis of Capitalism

Jason W. Moore

The news is not good on planet Earth. Humanity—and the rest of life with it—is now on the threshold of what earth system scientists call a "state shift." This moment is dramatized in the growing awareness of climate change—among scholars, and also among a wider concerned public. But our moment involves far more than bad climate. We are living through a transition in planetary life with the "potential to transform Earth rapidly and irreversibly into a state unknown in human experience" (Barnosky et al. 2012, 52).

The zeitgeist of the twenty-first century is therefore understandably infused with a sense of urgency, among citizens, activists, and scholars (e.g., Foster et al. 2010; Hansen 2009; Parenti 2011; Klein 2014). The reality is quite real. And, in any reasonable evaluation, the situation is deteriorating. Weekly, even daily, the research mounts. "Human pressures" are pushing the conditions of biospheric stability—climate and biodiversity above all—to the breaking point (Steffen et al. 2015; Mace et al. 2014; Dirzo et al. 2014). Multiple "planetary boundaries" are now being crossed—or soon will be (Rockström et al. 2009). The conditions of life on planet Earth are changing, rapidly and fundamentally.

Awareness of this difficult situation has been building for some time. But the reality of a *crisis*—understood as a fundamental turning point in the life of a system, *any* system—is often difficult to understand, interpret, and act upon. Crises are not easily understood by those who live through them. The philosophies, concepts, and stories we use to make sense of an increasingly explosive and uncertain global present are—nearly always—ideas inherited from a different time and place. The kind of thinking that created today's global turbulence is unlikely to help us solve it.[1]

Modes of thought are tenacious. They are no easier to transcend than the "modes of production" they reflect and help to shape. This collection of essays is one effort to extend and nurture a global conversation over such a new mode of thought. Our point of departure is the Anthropocene concept, the most influential concept in environmental studies over the past decade. The essays in this book offer distinctive critiques of the Anthropocene argument—which is in fact a family of arguments with many variations. But the intention is to move beyond critique. The Anthropocene is a worthy point of departure not only for its popularity but, more importantly, because it poses questions that are fundamental to our times: How do humans fit within the web of life? How have various human organizations and processes—states and empires, world markets, urbanization, and much beyond—reshaped planetary life? The Anthropocene perspective is rightly powerful and influential for bringing these questions into the academic mainstream—and even (but unevenly) into popular awareness.

The work of this book is to encourage a debate—and to nurture a perspective—that moves beyond Green Arithmetic: the idea that our histories may be considered and narrated by adding up Humanity (or Society) and Nature, or even Capitalism plus Nature. For such dualisms are part of the problem—they are fundamental to the thinking that has brought the biosphere to its present transition toward a less habitable world. It is still only dimly realized that the categories of "Society" and "Nature"—Society without nature, Nature without humans—are part of the problem, intellectually and politically. No less than the binaries of Eurocentrism, racism, and sexism, Nature/Society is directly implicated in the modern world's colossal violence, inequality, and oppression. This argument against dualism implicates something abstract—Nature/Society—but nevertheless quite material. For the abstraction Nature/Society historically conforms to a seemingly endless series of *human* exclusions—never mind the rationalizing disciplines and exterminist policies imposed upon extrahuman natures. These exclusions correspond to a long history of subordinating women, colonial populations, and peoples of color—humans rarely accorded membership in Adam Smith's "civilized society" ([1776] 1937).

These are certainly questions of oppression. And they are also fundamental to capitalism's political economy, which rests upon an audacious accumulation strategy: Cheap Nature. For capitalism, Nature is "cheap" in a double sense: to make Nature's elements "cheap" in price; and also *to*

cheapen, to degrade or to render inferior in an ethico-political sense, the better to make Nature cheap in price. These two moments are entwined at every moment, and in every major capitalist transformation of the past five centuries (Moore 2015a).

This matters for our analytics, and also for our politics. Efforts to transcend capitalism in any egalitarian and broadly sustainable fashion will be stymied so long as the radical political imagination is captive to capitalism's either/or organization of reality: Nature/Society. And relatedly, efforts to discern capitalism's limits today—such discernment is crucial to any antisystemic strategy—cannot advance much further by encasing reality in dualisms that are immanent to capitalist development.

The Anthropocene argument shows Nature/Society dualism at its highest stage of development. And if the Anthropocene—as a historical rather than geological argument—is inadequate, it is nevertheless an argument that merits our appreciation. New thinking emerges in many tentative steps. There are many conceptual halfway houses en route to a new synthesis. The Anthropocene concept is surely the most influential of these halfway houses. No concept grounded in historical change has been so influential across the spectrum of Green Thought; no other socio-ecological concept has so gripped popular attention.

Formulated by Paul Crutzen and Eugene Stoermer in 2000, the Anthropocene concept proceeds from an eminently reasonable position: the biosphere and geological time has been fundamentally transformed by human activity. A new conceptualization of geological time—one that includes "mankind" as a "major geological force"—is necessary. This was a surely a courageous proposal. For to propose humanity as a geological agent is to transgress one of modernity's fundamental intellectual boundaries. Scholars call this the "Two Cultures," of the "natural" and "human" sciences (Snow 1957). At its best, the Anthropocene concept entwines human history and natural history—even if the "why" and the "how" remain unclear, and hotly debated. Such murkiness surely accounts for the concept's popularity. Like globalization in the 1990s, the Anthropocene has become a buzzword that can mean all things to all people. Nevertheless, reinforced by earlier developments in environmental history (e.g., Worster 1988), the Anthropocene as an argument has gradually crystallized: "Human action" plus "Nature" equals "planetary crisis" (Chakrabarty 2009; e.g., Steffen et al. 2007). Green Arithmetic, formulating history as the aggregation of human and natural relations, had triumphed.

Green Arithmetic. It is a curious term, but I can think none better to describe the basic procedure of environmental studies over the past few decades: Society plus Nature = History. Today it is Humanity, or Society, or Capitalism plus Nature = Catastrophe. I do not wish to disparage this model. It has been a powerful one. It has provided the philosophical basis for studies that have delivered a wealth of knowledge about environmental change. These studies, in turn, have allowed a deeper understanding of the *what* of the biosphere's unfolding "state shift." But they have not facilitated—indeed they have stymied—our understanding of *how* the present crisis will unfold in a world-system that is a *world-ecology*, joining power, nature, and accumulation in a dialectical and unstable unity.[2] This book seeks to transcend the limits of Green Arithmetic. This allows us to pursue, in Donna Haraway's words, "wonderful, messy tales" of multispecies history—tales that point to the possibilities "for getting on now, as well as in deep earth history" (see her "Staying with the Trouble" in this volume).

Green Arithmetic works when we assume Society plus Nature add up. But do they? In my view, this "adding up" was necessary—and for a long time very productive. The consolidation of the historical social sciences in the century after 1870s proceeded as if nature did not exist. There were some exceptions (e.g., Mumford 1934), but none that unsettled the status quo until the 1970s. Then, energized by the "new" social movements—not least around race, gender, and environment—we saw an important intellectual revolt. The blank spots in the dominant cognitive mapping of reality were filled in; the old, nature-blind, cognitive map was challenged. In environmental studies, radicals argued for a relational view of humanity-in-nature, and nature-in-humanity (e.g., Harvey 1974; Naess 1973). But that relational critique remained, for the most part, philosophical. Above all, our concepts of "big history"—imperialism, capitalism, industrialization, commercialization, patriarchy, racial formations—remained *social* processes. Environmental consequences were added on, but the conception of history as social history did not fundamentally change.

Today a new conceptual wind blows. It seems we are now ready to ask, and even to begin to answer, a big question about big history: What if these world-historical processes are not only producers, but also products of changes in the web of life? The question turns inside out a whole series of premises that have become staples of Green Thought. Two are especially salient. First, we are led to ask questions not about humanity's

separation from nature, but about how humans—and human organizations (e.g., empires, world markets)—*fit* within the web of life, and vice versa. This allows us to begin posing situated questions, in Donna Haraway's sense (1988). We start to see human organization as something more-than-human and less-than-social. We begin to see human organization as utterly, completely, and variably porous within the web of life. Second, we can begin asking questions about something possibly more significant than the "degradation" of nature. There is no doubt that capitalism imposes a relentless pattern of violence on nature, humans included. But capitalism works because violence is part of a larger repertoire of strategies that "put nature to work." Thus, our question incorporates but moves beyond the degradation of nature thesis: How does modernity put nature to work? How do specific combinations of human and extra-human activity work—or *limit*—the endless accumulation of capital? Such questions—these are far from the only ones!—point toward a new thinking about humanity in the web of life.

Anthropocene or Capitalocene? An Evolving Conversation

The chapters in this volume defy easy summary. But two common themes emerge. First, the essays all suggest that the Anthropocene argument poses questions that it cannot answer. The Anthropocene sounds the alarm—and what an alarm it is! But it cannot explain how these alarming changes came about. Questions of capitalism, power and class, anthropocentrism, dualist framings of "nature" and "society," and the role of states and empires—all are frequently bracketed by the dominant Anthropocene perspective. Second, the contributors to *Anthropocene or Capitalocene?* all seek to go beyond critique. All argue for reconstructions that point to a new way of thinking humanity-in-nature, and nature-in-humanity.

The first thing I wish to say is that Capitalocene is an ugly word for an ugly system. As Haraway points out, "the Capitalocene" seems to be one of those words floating in the ether, one crystallized by several scholars at once—many of them independently. I first heard the word in 2009 from Andreas Malm. The radical economist David Ruccio seems to have first publicized the concept, on his blog in 2011 (Ruccio 2011). By 2012, Haraway began to use the concept in her public lectures (Haraway 2015). That same year, Tony Weis and I were discussing the concept in relation to what would become *The Ecological Hoofprint*, his groundbreaking work on the meat-industrial complex (2013). My formulation of the Capitalocene took

shape in the early months of 2013, as my discontent with the Anthropocene argument began to grow.

The Capitalocene. As I think the contributions to this volume clarify, the Capitalocene does not stand for capitalism as an economic and social system. It is not a radical inflection of Green Arithmetic. Rather, the Capitalocene signifies capitalism as a way of organizing nature—as a multispecies, situated, capitalist world-ecology. I will try to use the word sparingly. There have been many other wordplays—Anthrobscene (Parikka 2014), econocene (Norgaard 2013), technocene (Hornborg 2015), misanthropocene (Patel 2013), and perhaps most delightfully, *man*thropocene (Raworth 2014). All are useful. But none captures the basic historical pattern modern of world history as the "Age of Capital"—and the era of capitalism as a world-ecology of power, capital, and nature.

In Part I, Eileen Crist and Donna J. Haraway take apart the Anthropocene concept and point to the possibilities for an alternative. Crist cautions powerfully against the Anthropocene argument—and other "Promethean self-portrait[s]." These tend to reinvent, and at time subtly recuperate, neo-Malthusian thought. While many defenders of the Anthropocene concept point to the ways it has opened discussion, Crist sees this opening as exceedingly selective. For Crist, the concept "shrinks the discursive space of challenging the [human] domination of the biosphere, offering instead a techno-scientific pitch for its rationalization." Drawing on Thomas Berry, Crist orients us toward a different—and more hopeful—framing of our present and possible futures. This would be not an "age of Man" but an "ecozoic": a vision of humanity-in-nature as a "union-in-diversity," in which humanity may embrace "Earth's integral living community."

Donna J. Haraway elaborates the spirit of Crist's "ecozoic" perspective, taking it—as she so often does—toward a new vision: the *Chthulucene*. Here the autopoietic, closed system mirage of capital (or "society") is revealed as partial and illusory. Such closed system thinking cannot help us to think through the liberatory possibilities of a messy, muddled, interspecies future. This Chthulucene—admittedly a word that does not roll easily off the tongue—is not autopoietic but sympoietic: "always partnered all the way down, with no starting and subsequently interacting 'units.'" For Haraway, the problem of the Anthropocene is fundamentally a problem of thinking humanity's place in the web of life: "*It matters what thoughts think thoughts*." But, Haraway argues forcefully, even poetically,

the issue is not "merely" thinking, it is how thought and messy life-making unfold in ways that are "always partnered." The Anthropocene, then, is not only poor thinking—a narrative of "the self-making Human, the human-making machine of history." It is also poor history: "Coal and the steam engine did not determine the story, and besides the dates are all wrong, not because one has to go back to the last ice age, but because one has to at least include the great market and commodity reworldings of the long sixteenth and seventeenth centuries of the current era, even if we think (wrongly) that we can remain Euro-centered in thinking about 'globalizing' transformations shaping the Capitalocene."

The historical geography of the Capitalocene moves to center stage in Part II. In "The Rise of Cheap Nature," I argue for an interpretive frame for capitalism's history that builds on Haraway's longstanding critique of "human exceptionalism" (2008). Capitalism is a way of organizing *nature as a whole* . . . a nature in which human organizations (classes, empires, markets, etc.) not only make environments, but are simultaneously made by the historical flux and flow of the web of life. In this perspective, capitalism is a world-ecology that joins the accumulation of capital, the pursuit of power, and the co-production of nature in successive historical configurations. I show that the emphasis on the Industrial Revolution as the origin of modernity flows from a historical method that privileges environmental consequences and occludes the geographies of capital and power. Green Thought's love affair with the Industrial Revolution has undermined efforts to locate the origins of today's crises in the epoch-making transformations of capital, power, and nature that began in the "long" sixteenth century (Braudel 1953). The origins of today's inseparable but distinct crises of capital accumulation and biospheric stability are found in a series of landscape, class, territorial, and technical transformations that emerged in the three centuries after 1450.

Justin McBrien agrees that we are living in the Capitalocene, highlighting capitalism's drive toward extinction in a world-ecological sense. Extinction, McBrien argues, is more than a biological process suffered by other species. It signifies also the "extinguishing of cultures and languages," genocide, and spectrum of biospheric changes understood as anthropogenic. McBrien demonstrates that the very conception of these changes as anthropogenic is premised on the systematic conceptual exclusion of capitalism. These conceptions are, in McBrien's narrative, a product of modern science, at once opposing and entwined within webs

of imperial power and capital accumulation. Far from merely an output of the system—as in Green Arithmetic—he shows that "accumulation by extinction" has been fundamental to capitalism from the beginning. The Capitalocene, in this view, is also a Necrocene: "The accumulation of capital is the accumulation of potential extinction—a potential increasingly activated in recent decades." Far from embracing planetary catastrophism and the apocalyptic vistas of many environmentalists, McBrien shows how catastrophism itself has been a form of knowledge situated within the successive ecological regimes of postwar and neoliberal capitalism. Catastrophism, in this reading, has rendered both poles of the environmentalist binary—"sustainability or collapse?" (Costanza et al. 2007)—mirror images of each other.

Elmer Altvater moves beyond political economy to include Weber's "European rationality of world domination" and to challenge the core assumptions of modern rationality. On the one hand, Altvater sees the origins of capitalism in the "long" sixteenth century and the invention of Cheap Nature. On the other hand, he sees a decisive shift in the transition from the "formal" to the "real" subsumption of labor by capital in the late eighteenth and early nineteenth centuries. Altvater calls these two periodizations the "Braudel" and the "Polanyi" hypotheses—after Fernand Braudel and Karl Polanyi. Far from competing, these periodizations are best seen in the totality of historical capitalism: *both* positions, Braudel and Polanyi's, are correct. Importantly, for Altvater, the Capitalocene is not only a question of capital accumulation but of rationalization—immanent to the accumulation process. Charting the contradictions between the firm-level calculation of costs—and the microeconomic "rationality" of externalization—he illuminates a broader set of problems within capitalist modernity and its capacity to address climate change. Using geoengineering as an optic, Altvater pinpoints the trap of bourgeois rationality in relation to biospheric change today. The geoengineers'

> task is much greater than building a car or a dam or a hotel; the geoengineers are tasked with controlling whole earth systems in order to combat—or at least to reduce—the negative consequences of capitalist externalization. However, the required internalization of externalized emissions is the internalization of external effects into production costs at the level of the corporation. Then indeed—*in principle*—the prices could "tell the truth," as in the neoclassical

> textbooks. But we would not be wiser still. Why? Because many interdependencies in society and nature *cannot be expressed in terms of prices*. Any effective rationalization would have to be holistic; it would have to be qualitative and consider much more than price alone. But that is impossible because it contradicts capitalist rationality, which is committed to fixing the parts and not the whole. In such a scenario, capitalist modernization through externalization would—*inevitably*—come to an end. The Four Cheaps would disappear behind the "event horizon." Would it be possible for geoengineers to bring the necessary moderation of modernization *and* of capitalist dynamics in coincidence? They cannot, for the engineers are not qualified to work holistically.

In Part III, questions of culture and politics in the Capitalocene move to center stage. In Chapter Six, Daniel Hartley asks how culture matters to thinking about the Anthropocene and Capitalocene. Drawing on the world-ecology perspective, he suggests that the concepts "abstract social nature" (Moore 2014b, 2015a) and "cultural fix" (Shapiro 2014) provide rough—yet partial—guides to the history of capitalism in the web of life. Warning of the dangers that might separate "science" and "culture" in capitalist environment-making, Hartley points to the relations between science and culture, capital and nature, as fundamental to the historical geographies of endless accumulation. In this formulation, he argues powerfully for the analytical incorporation of those relations—racism, sexism, and other "cultural" forms—that "appear to have no immediate relation to ecology, but which are in fact" fundamental to humanity's diverse relations within the web of life."

Christian Parenti, in the concluding chapter, takes us from culture to the politics of the Capitalocene. Parenti's innovation is twofold. First, he reconstructs the modern state as fundamentally an environment-making process. The modern state is not only a producer of environmental changes. In equal measure, state power, as Parenti shows in his exploration of early American history, develops *through* environmental transformation. Secondly, the modern state works through a peculiar valuation of nature—what Marx calls value as abstract social labor. Parenti's insight is that power, value, and nature are thinkable only in relation to each other. Thus, the modern state "is at the heart of the value form." Why? "Because "the use values of nonhuman nature are . . . central sources of value, and

it is the state that delivers these." Far from operating outside or above "nature," in Parenti's account the state becomes the pivotal organizational nexus of the relation between modern territory, nature as tap and sink, and capital accumulation. The political implications of this analysis are crucial. The state is not only analytically central to the making of the capitalist world-ecology, but is the only institution large enough and powerful enough to allow for a progressive response to the escalating challenges of climate change.

Toward the Chtulucene . . . (and/or) a Socialist World-Ecology?

Reflecting a diversity of perspectives around a common theme—how the modern world has organized human and extra-human natures—the book's essays are joyfully varied. They point toward a new synthesis, even a new paradigm. I have called this paradigm *world-ecology*, although we may yet find a better phrase for it. This new thinking—whatever name we give it—reflects (and shapes?) a certain zeitgeist. The notion that humans are a part of nature, that the whole of nature makes us, is one readily accepted by a growing layer of the world's populations. University students and many activists seem especially receptive; but this zeitgeist reaches well beyond. It is revealed dramatically in many of our era's emergent movements—food sovereignty, climate justice, "right to the city," degrowth, and many others. These movements represent a "new ontological politics" (Moore 2015b). All organize not only for a more equitable distribution of wealth: they call for a *new conception of wealth*, in which equity and sustainability in the reproduction of life (of *all* life) is central to our vision of the future. In these movements, we find hope for the realization of Haraway's sympoietic vision: the *Chthulucene*.

Whatever name we attach to it, the sympoietic vision shares a new ontology that meshes with—and learns from—movements around food sovereignty and climate justice (see e.g., Wittman et al. 2011; McMichael 2013; Bond 2012). The new ontological politics is so hopeful—without waxing romantic—because it offers not merely a distributional, but an ontological, vision. That vision questions the whole model of how capitalism values nature, and humans within it. For food and climate justice movements—of course there are important variations—the questions of equality, sustainable, and democracy are thinkable only through and in relation to each other. They have made, as never before, food, climate, and the web of life fundamental to older radical vistas of equality among humans.

Importantly, these movements' relational vision of humanity-in-nature occurs at a time when the capitalist model is showing signs of exhaustion. If it has been nothing else, capitalism has been a system of getting nature—human nature too!—to work for free or very low-cost. Capitalism's "law" of value—how and what it prioritizes in the web of life—has always been a law of Cheap Nature. (Absurd, yes! For nature is never cheap.) The weird and dynamic process of putting nature to work on the cheap has been the basis for modernity's accomplishments—its hunger for, and it capacity to extract the Four Cheaps: food, energy, raw materials, and human life. These capacities are now wearing thin. Industrial agricultural productivity has stalled since the mid-1980s. So has labor productivity in industry—since the 1970s. The contradictions of capitalism dramatized by biospheric instability reveal modernity's accomplishment as premised on an active and ongoing theft: of our times, of planetary life, of our—and our children's—futures (Moore 2015a).

The breakdown of capitalism today is—and at the same time is not—the old story of crisis and the end of capitalism. As capital progressively internalizes the costs of climate change, massive biodiversity loss, toxification, epidemic disease, and many other biophysical costs, new movements are gaining strength. These are challenging not only capitalism's unequal distribution—pay the "ecological debt"!—but the very way we think about *what* is being distributed. The exhaustion of capitalism's valuation of reality is simultaneously internal to capital and giving rise to the new ontological politics outside that value system—and in direct to response to its breakdown. We see as never before the flowering of an ontological imagination beyond Cartesian dualism, one that carries forth the possibility of alternative valuations of food, climate, nature, and everything else. They are revealing capitalism's law of value as the value of nothing—or at any rate, of nothing particularly valuable (Patel 2009). And they point toward a world-ecology in which power, wealth, and re/production are forged in conversation with needs of the web of life, and humanity's place within it.

Notes

1 A phrase, or some variant, frequently attributed to Albert Einstein.

2 Key texts in world-ecology include Moore 2015a; Bolthouse 2014; Büscher and Fletcher 2015; Camba 2015; Campbell and Niblett 2016; Cox 2015; Deckard 2015; Dixon 2015; El-Khoury 2015; Gill 2015; Jakes forthcoming; Kröger 2015; Lohmann 2016; Marley 2015; Niblett 2013; Oloff 2012; Ortiz 2014; Parenti 2014; Weis 2013.