

## CAPITALISM AND PLANETARY JUSTICE IN THE “WEB OF LIFE”: AN INTERVIEW WITH JASON W. MOORE

Michael Gaffney, Claire Ravenscroft, & Casey Williams

In February 2019, the *Polygraph* issue 28 editors spoke with scholar Jason W. Moore about Cheap Nature, social reproduction, the labor theory of value, the Green New Deal, and other topics related to the issue theme, “Marxism and Climate Change.” Their conversation has been edited for length and content.

**Polygraph Editors (PE):** This issue of *Polygraph* represents an attempt to better understand the contributions that Marxist thought—defined as a set of methodological and political commitments—can make to the study of climate change. To that end, we are hoping this interview can clarify the stakes of some of your arguments, how you situate yourself in contemporary eco-Marxist debates about value and labor, and what your prescriptions for political praxis might be. Our first question is going to relate most of all to this third topic—praxis. Today, Representative Alexandria Ocasio-Cortez and Senator Ed Markey have introduced congressional resolutions for what many are calling a “Green New Deal.” Short of literally using a Marxist vocabulary, this resolution aptly identifies how late capitalism’s erosion of its own basic social reproductive capacities, its recurrent and continual crises of overproduction and overaccumulation, and the advance of extreme climate change driven primarily by carbon emissions at the hand of ever-increasing production intersect with one another and constitute a single political crisis. How does a political program like the Green New Deal work with your analytics of capitalism as a world-ecology or as part of the web of life, especially as these involve recurrent or terminal crises? If such a program seems at odds with your analytics in any way, whether by preserving a Cartesian dualism or by mobilizing the state as the agent of a climate program, what praxis do you see as emerging from the framework of the web of life?

**Jason W. Moore (JWM):** It’s easy to get lost in the headlines. Is the Green New Deal, understood as a new set of demands for economic and

environmental justice, a break with the “jobs vs. environment” rift that has dominated since the 1970s? Maybe. But the iron grip of “sustainable development” has yet to be broken—the social democratic petrofantasy that endless accumulation can coexist with diversity and well-being in the web of life. I’m also wary of the historical metaphor. Of course all metaphors are imperfect. There were many positive features of the New Deal of the 1930s: electrification, social security, federally funded arts programs, and much beyond. At its core, however, the New Deal was an effort by relatively enlightened ruling strata to contain workers’ power, which in the early years of the Great Depression involved wage demands but pivoted on a revolt against brutal and arbitrary factory regimes. There’s a connection—we can debate how tight a connection—between New Deal labor law and its empowerment of labor bureaucrats, and the postwar destruction of American working class power through anti-communist repression, the Taft-Hartley Act (1947), and the Autoworkers’ no-strike pledge in the so-called “Treaty of Detroit” (1950). Nor was the New Deal effective in resolving the Great Depression. As [John Kenneth] Galbraith noted in the 1950s, it was the “great mobilization” for World War II that finally solved the unemployment crisis.

None of that says we shouldn’t use the language of the Green New Deal. Politics is messy and one takes the opportunities as they come. There’s a political opening. The Green New Deal is part of a moment of widening possibilities: for building a politics of planetary justice, fusing climate justice, state-enforced decarbonization, and decommodification. Let’s be clear, however, that any effective decarbonization, agro-ecological restructuring, and decommodification will amplify the ongoing crisis of Cheap Nature and above all the Four Cheaps: labor, food, energy, and raw materials. In a sense, the ruling class response that egalitarian decarbonization is too expensive is, from the standpoint of capital entirely correct. The mass of capital floating around the world, looking for someplace profitable to land, continues to grow; the opportunities for profitable investment continue to contract. While the climate crisis poses intractable middle-run problems to endless accumulation—which has sustained itself since the 1940s by enclosing the atmospheric commons—an egalitarian Green New Deal would pose short-run problems for capital, and destabilize the global casino of bloated and volatile financial markets.

We have to assess the possibilities for capitalism’s ability to restructure its way out of the present stagnation. Rising inequality as such is not new,

although its contemporary dimensions are impressive. What's different is the absence of frontiers of Cheap Nature, sufficient to reduce the systemwide costs of production and therefore to absorb a rising mass of capital—as we've just seen. It's not just that the frontiers are smaller than ever before, relative to the mass of capital, which is greater than ever before. It's that the climate crisis represents not only the “end” of Cheap Nature frontiers, but their *implosion*. That is, the climate crisis now marks an inflection point. For capital, the web of life is no longer a place “out there” where cheap life and labor and “resources” can be extracted; it's a place, one that includes radical movements as well, that is enforcing rising costs of capitalist reproduction. There's no better example of this than the ongoing crisis of cash crop agriculture. Physical and even labor productivity growth has been slowing now for the better part of three decades; agro-biotech has been ineffective at reviving agricultural productivity; climate change is suppressing yield growth for cereal and other crops; and food justice movements are insisting on, and implementing, a fundamentally different model, premised on reproductive justice for humans and the rest of life. Those are all connected intimately, and together they are a dagger plunged in the heart of the capitalist world-ecology, which is premised on an agricultural revolution model that has, for five centuries, produced more and more food with less and less average labor power. A Green New Deal in agriculture, and furthermore one that challenges the architecture of the global food economy, would entail a reversal of that agricultural revolution model—a reversal that's necessary for a just and egalitarian decarbonization strategy. And that in turn would destabilize the capital accumulation model as we've known it since 1492.

For praxis, I think that we are at a moment of reinvention and rethinking. Many of the old orthodoxies, Marxist and otherwise, are wearing thin. My own position is delightfully uncomfortable in all this. On the one hand, the orthodox Marxists dismiss me for rejecting Marx. On the other hand, there's a spectrum of anti-communist perspectives in the environmental humanities and social sciences which dismisses me for being a Marxist. My view about theory is that theory resolves nothing, and that the big questions of philosophy, theory, and praxis are most fruitfully addressed on the terrain of historical interpretation. That's why I'm always surprised—perhaps I shouldn't be!—that the critics want to engage world-ecology as theory abstracted from history... including those self-styled “materialists” who criticize my idealism by reasserting their theories rather than by debating historical questions.

There are really two dimensions of praxis. One is praxis in a Philosophy of Praxis sense, in Gramsci's sense. How do we take that seriously? I think we can begin by acknowledging that most discussions in Marxism—even so-called ecological Marxism—have been reluctant to situate webs of life as active relations of environment-making. When ecological Marxists embrace concepts like the ecological footprint, they are reproducing an alienated view of the web of life. Both Environmentalism and Marxism have tended to reduce webs of life to extra-human natures, and then to reduce these to passive entities that need to be “saved” and are in danger of being “destroyed.” The prevalence of footprint metaphors is a good example. Webs of life are reduced to the status of passive mud and dirt. An emancipatory philosophy of praxis will, by contrast, insist not only on the specificities of human organization *within* the web of life, but on the ways that human relations of power and re/production are shaped, channeled, and influenced by webs of life that are inside, outside, and connective all at once. This entails a transition from an analytics and politics of “the environment” towards a praxis of *environment-making*, one rooted in what I've called the *oikeios*: the creative, generative, and multi-layered pulse of life-making. From this perspective, human organization—from family formation to financial expropriations—is not only a producer of webs of life, but a product of them. This means that “natural history,” in a fully activated sense of the term, must be brought into the center of our analysis of capitalism. If we are unable to appreciate, for example, how racialized labor, transnational commodity production, and global conquest allowed capitalism to escape its previous great climate crisis—during the long, cold seventeenth century—then we are likely to misrecognize key elements of capitalist rule and crisis-fixing strategies in an era of climate apartheid. Revolutionary praxis will need to fully internalize the dynamic and co-productive relations of humans with and within the web of life if we are to understand capitalism's limits today. Without such a fundamental renewal, movements will remain trapped in the fragmentation of politics—not least but not only between labor, anti-colonial, feminist, and environmentalist politics—that constitute a major barrier to a radical praxis committed to the liberation of life.

As for eco-Marxism, the term has been appropriated over the past few years by scholars seeking to defend the “true Marx” against the heretics. My Marxism is unorthodox because I agree with Marx, who was

unorthodox. But let me pause just for a moment to remind readers perhaps unfamiliar with the situation. I wrote a book, *Capitalism in the Web of Life*, which argues for: the centrality of class struggle, the continuing relevance of Marx's value thinking, the world-historical character of capitalist development, the tendency towards accumulation crisis, the fundamental role of imperialism in capital accumulation, the ontological unity of humans and the rest of nature. I could go on and on. If you're a Marxist and you're calling this perspective anti-Marxist, well, maybe, just maybe, I'm not the source of the problem. To be sure, there are always grounds for sharp debate, but engaging in either/or polemics is rarely useful in these situations.

We need a Marxism that is fearless about its own reinvention. For me, Marx is a thinker who insists on *transformative* connections. Marx's insight was not simply that the "economic" relation of capital and labor and the "social" relation of bourgeois and proletarian are fundamentally linked, but that these linked relations are concrete expressions of the *value relation*. There are two implications here. One is that Marx is not studying "capital-labor relations" in *Capital*: he's unpacking and elaborating the law of value—capitalism's value relations which reproduce varied configurations of capital and labor, but not only capital and labor. Second, these value relations are themselves historical, because the geographical relations and conditions of capital's global expansion and the class struggles that follow are antagonistic—that is, the law of value creates the conditions for its own transcendence. Capitalism's law of value is itself a praxis, whose historical-geographical conditions of possibility are themselves transformed by that praxis.

Now, all of that is framed at a very high level of abstraction. But I've made the point because the dominant tendency in ecological Marxism has been to explore "capital-nature" relations abstracted from value relations. This is a procedure widespread across the social sciences, and allows webs of life to be treated as a variable, as an additional factor alongside labor, empire, race, and all the rest. But the very essence of Marx's imagination—at least in my reading—is to reject such procedures in favor of dialectical formulations of *becoming*, especially but not only in relation to webs of life.

**PE:** Who is or what is the working class? It sounds like one of the advantages of thinking through the web of life is that we get an expanded conception of who is put to work and also who and what has the potential to resist. So I want to ask you if you can clarify the political stakes of thinking through

the web of life—and again, in terms of praxis, by which I mean a strategic project of capitalism’s abolition on the part of workers or another subject of history, possibly the web of life. I also wonder if you might situate this discussion in response to some of your critics, like John Bellamy Foster and Andreas Malm, who see it as a revision of Marx’s Labor Theory of Value—one that expands what they see as a relatively narrow capital-labor relationship to something that takes into account what they consider to be capitalist inputs but not value-producing activity as such.

**JWM:** There’s something funny—and by funny, I mean weird—going on with Foster and Malm. Malm thinks I’m Latourian—which is weird, because I wrote *Web of Life* as a critique of Latourian flat ontologies and a rejection of his undialectical hybridity. I mean, that’s right there in the opening pages of the book. Malm’s criticism leads me to the conclusion that not only does he not understand—or apparently, wish to understand—my arguments, but that he doesn’t understand Latour either. Malm says, “Well, we need to emphasize the specificity of the social.” No kidding! That’s absolutely correct. But you cannot understand the specificity of the social if you first abstract the web of life from it. Malm’s perspective replays the error struggled against by anti-racist and feminist Marxists for most the twentieth century: one does not *first* establish the “specific class relation” and *then* specify its racialized and gendered moments. The same is true for the web of life. To abstract class formation and class struggle from the web of life not only leads to all manner of historical misrecognitions, but replays interpretively the practical violence of modern imperialism. To reduce the question of Nature and Civilization to “semantics” (that’s Malm’s phrasing) is to embrace the colonizer’s model of the world—in which indigenous peoples, Africans, Slavs, Celts, and of course virtually all women were assigned and geographically redeployed to a zone of Nature (“the home,” labor and “native” reserves, plantations). Just take a moment to reflect on all manner of liberation movements: all insist that the language of domination is tightly linked to the political practice of domination. The self-activation of the oppressed depends on what [Paulo] Freire calls the “pedagogy of the oppressed,” and faith in the capacity of the re/producing classes to transcend the categories and technologies of domination.

As for Foster and value relations, that’s a little strange, too. First of all, every generation revises Marx’s theory of value. This is true even for orthodox interpretations. Second, Foster is heir to the monopoly capital

tradition associated with *Monthly Review*. In American Marxism, this was the most influential revision of Marxist value thinking in the twentieth century! There's a half-century of Marxist critique that says [Paul A.] Baran and [Paul] Sweezy are "not really" Marxists because they abandoned value theory in their concept of the economic surplus. And finally, the metabolic rift school had no use for value relations until I published *Web of Life*. Anyone can check on this. There were a few mentions, but it had no analytical traction. Read Foster and his brilliant students, who have produced tons of great work—none of which engaged value relations, socially necessary labor time, the tendency towards accumulation crisis. They did use an exchange-value and use-value opposition, which came perilously close to reproducing neoclassical notions of utility and price. I don't think they're neoliberals, of course; I *do* think that Foster standing on the grounds of Marxist orthodoxy (whatever that might mean) is pretty silly. Foster is, like every great and imaginative Marxist, a reinventor. He's reimagined historical materialism in ways that have made possible further reimaginings of capitalism in the web of life. He just doesn't like my reinvention of Marx, and that's produced a situation that is in successive turns tragic and comic: "My Marx is better than your Marx, and therefore you are not Marxist." Indeed, Foster has gone further, calling me explicitly a friend of the climate deniers. One has to laugh or cry when one reads such statements. Or both. Such a waste.

I often assign Foster and Malm to my students. Both have so many great things to say. I remind my students something I borrow from the great geographer Derek Gregory: the ethic of reading. This is simple enough: do your best to evaluate arguments on their own terms and assess them accordingly. If your argument is strong, polemics are unnecessary. From Foster, I learned the ethics of reading Marx, which I also share with my students all the time. From Foster, I learned that we need to understand Marx's thought as an evolving, whole system on its own terms. We need to read Marx in a situated and historical way. Now, at least in relation to my work, Foster violates all his own rules that he applies to reading Marx. This is all the more striking because Foster is such a gifted intellectual historian and interlocutor of Marx.

I'm for a Marxism without adjectives. Dialectics tells us that life is about becoming. Think of that great phrase from the manifesto: "all that is solid melts into air."<sup>1</sup> That's the spirit of Marxism as a living, breathing tradition. We're all going to disagree over which elements of life should be



rethought. For me, thinking about value relations led me out of economism, and towards thinking the law of value in its double register: as an ethico-political project, and as a dynamic of socially necessary labor time and abstract social labor under capitalism. That double register is fundamental to grasping the climate crisis as a class struggle. Class struggles are really class struggles over socially necessary labor time today, which is a regime that's in crisis. As I mentioned, there's a long-term secular stagnation in labor productivity growth, agricultural productivity growth, and in the growth of surplus absorption outlets. If we understand that socially necessary labor time is affected not just by class struggles at the point of production, but by strategies of appropriation of the unpaid work of "women, nature, and colonies," to quote Maria Mies, then we understand class struggles as struggles in a much wider sense.<sup>2</sup> Those struggles include global patriarchy and the world color line and the Promethean domination of Nature. They include the defense of commons and commoning; they include worker control movements; they include movements to socialize the relations and forces of reproduction. This includes, especially, the world's food system, as well as the whole range of processes—including what Naomi Klein calls "blockadia" in confronting fossil fuel infrastructures—to slow down socially necessary labor time in an era when everything that capitalism has done over the past three decades, technologically and politically, has focused on accelerating the turnover time of capital.<sup>3</sup> I think that's why David Harvey's "time-space compression" is so important.<sup>4</sup> We need to realize capital strives to reduce what he calls "socially necessary labor time." This is fundamentally a co-productive dynamic between humans and the rest of nature, and it's a class struggle between some humans (capital) and the rest of life. In that sense I think it can give us ways to understand the geographical and social vulnerabilities of late capitalism in an era of secular stagnation.

**PE:** Let's think about socially necessary labor time. What is the point of Silvia Federici's intervention, for instance?<sup>5</sup> It's to highlight a contradiction. It's not that we want to be fully involved in the capitalist system. We just want to show that capitalism requires unwaged labor, and that this creates new possibilities for political interventions on the part of social reproducers, outside of the workplace. I think I'm starting to understand better how unpaid nature fits into your schema—insofar as it's about social reproduction, and it's about the conditions for social reproduction—but I



wonder if there's any more clarification you can give? I think some people interpret what you're saying to be a clean extension of Federici, and they say: "Well you know a tree is not a woman. It can't make political claims like a social reproducer in the home can." Maybe you can help clarify some misunderstandings that arise from this line of thinking.

**JWM:** It's a fantastic question. Part of the problem with that critique is how it misses Federici's historical argument about the creation of the Man/Woman binary as a set of real abstractions pivotal to capitalism's class structures and struggles. Historically, Man/Woman and White/Not-White and Civilization/Nature were decisive moments of primitive accumulation, of class formation and therefore class struggle. The socialist-feminist Ynestra King once likened the gendered counter-revolution of early capitalism to a form of human sacrifice for this very reason: female bodies were relocated from the zone of Civilization (white, male, bourgeois) to the zone of Nature, of Savagery, of the Home.<sup>6</sup> The dynamics of human reproduction, and the reproduction of other webs of life, are reshaped and subordinated to capitalist agencies, who talk about Christianizing or Civilizing or Developing. This is the significance of "big 'N' Nature" as real abstraction and capitalist praxis. While Malm dismisses this as semantics and Foster as social constructivism, I see this as the cultural materialism, and the geocultural crucible, of imperialism and world accumulation. The binary of civilization and savagery has been, and remains, a tool of empire and class rule, a set of cultural claims and political priorities that relocate most humans into that Nature, the better their lives and labors can be cheapened. Obviously I'm not saying "tree" and "woman" (or "peasant" or "slave") are the same; I'm saying that capitalism works through a real abstraction, a governing abstraction, Nature, that locates "tree" and "woman" as two different sources of unpaid work within the same *practical* category of rule. Federici drives this home when she narrates how, in the gendered-classed counter-revolution of early capitalism, women became the "savages of Europe." Women were supposedly wild and needed civilizing. My point is about *capitalism's* abstractions, which are real conditions of bourgeois rule, and are doubly violent—abstracting specificities in the imposition of alienated and dominating power relations, but also practically, materially violent in all sorts of ways.

Thanks to the pioneering work of Marxist-feminists we now have a term in our radical vocabulary of "unpaid work." We understand that unpaid

work is fundamental to capital accumulation and a relation of domination. Therefore, struggles against unpaid work, and against gender domination in the home, are also struggles that directly impact the value of labor power, in a classical Marxist frame. I realize that there are lots of debates and disagreements and nuances with all of this. For me, as an environmental historian who came to be very inspired by Marxist-feminism, I wanted to understand the dynamics of the reproduction of capitalism as a whole, in a combined and uneven and multilayered way.

If we take reproduction as a central question—really, it is the question of capital, too—if we take that logic and move it outwards, then we have a dynamic that looks in some ways very similar to the great Marxist-feminist question, which is: How is the reproduction time of “life” and the reproduction time of capital at once a political economic relation, a socio-ecological relation, and a relation of power and resistance? I use the language of “unpaid work” as a shorthand. It’s a way of talking about the repertoire of capitalist and territorial strategies that seek to take advantage of, build upon, and feed upon the unpaid work of humans and the rest of nature outside of capital’s reproduction costs, and yet inside the dynamic of advancing labor productivity. This is *accumulation by appropriation*—accumulation by extra-economic means, especially through those real-world abstractions of race, gender, nation, and Nature.

**PE:** Thinking of it in terms of reproduction costs, and saying we need to think about the reproduction time of the web of life as being essential to the way capital negotiates its own reproduction costs, makes sense. I wonder, though, what this means politically? How does the web of life, i.e., non-human beings, figure in emancipatory politics? For instance, you’ve mentioned in some of your work that there’s a sense in which nature “resists.”

**JWM:** There are two parts to this important question. One is about the class struggle and reproduction costs. I would remind readers that most class struggles for most of the history of capitalism have been about the terms of socio-ecological reproduction from the vantage point of the re/producing classes. This has always been the case with agrarian questions of labor-in-nature—from sixteenth century peasant revolts to food sovereignty today. As we have seen with the National Nurses United and recent teachers’ strikes, social reproduction has recently been the flashpoint of the class struggle in the United States. The recent socialist

upsurge is largely about social reproduction, too. And the movement for climate justice is a reproductive justice struggle—not just because of the irreversible state shift now occurring in the biosphere, but also because the climate crisis signals an unprecedented destabilization of the planetary conditions of reproduction of daily life for the 99 percent.

Now for the question of resistance. All webs of life evolve to adjust to, and transform, their environments at multiple geographical scales. This is arguably one of human sociality's greatest strengths, its capacities for adaptation and environment-making, enabled by cooperation and symbolic communication and therefore collective memory. Extra-human natures also evolve to resist the capitalogenic transformations of the biosphere. The geobiosphere is responding to capitalogenic climate change. So-called "superweeds" in modern industrial agriculture are another example, where the weeds evolve faster than the herbicide regimes can control them.

There's a tendency in environmental studies to say, "Well, humans have agency and so does the rest of nature." I'm not sure that I want to propose anything like a final word about this matter, but I would insist that "agency"—a term that became popular amongst academics during the worldwide defeat of the Left that we call the neoliberal era—is always a bundled relation. The exercise of ruling class power under capitalism, for instance, is always premised on capacities to control not only human beings but also crucial elements of the web of life, from urban environments to cash-crop landscapes.

That said, the core thrust of my *Web of Life* is that capitalism and its class struggles and everything else unfolds within the web of life. I cautioned against those who would replace "society" and "nature" with human and extra-human natures. That would simply re-brand the binary. Instead, I've argued that all human sociality is already within the web of life, including our symbolic communications: thinking, doing, and being form uneven but unbroken relations, always ongoing.

**PE:** It seems to me that there's a lot of slippage when it comes to thinking about the social and the natural, and how they relate, and what it means to separate them. There's a lot of slippage between ontological and discursive claims. It's not always clear when people are making some kind of ontological claim about interconnection or reciprocal production, and when they're making epistemological claims about the way these categories confront us in reified life under capitalism.

**JWM:** In *Web of Life*, I offered a dialectic of “process and project.” This seeks to connect the geographical and material transformations of bodies, landscapes, and climate with the cultural political economy of endless accumulation, enabled through civilizing projects of every kind. In this way of seeing, there’s *process*: capitalism moves in and through the web of life in a very messy and contentious and conflict-driven way. On the other hand, capitalism is founded on a *project* to remake the world through a binary code—indeed, a proliferation of binary codes—starting with Civilization and Savagery. The first moment derives from a materialist ontology: reality is material that we can know through praxis. The second is partly epistemological, but beyond that, capitalism’s project is about a material revolution that is linked to real abstractions, governing abstractions that guide the rich and powerful. The problem of Society and Nature is not only that they’re misleading and partial descriptions and interpretive frames. That’s true but that’s not the novelty of the world-ecology conversation. The core contribution is to show how this binary is a way of determining whose lives and whose work is valued, and whose is devalued and destroyed in the capitalist world-ecology. Critics of the world-ecology conversation don’t want to touch this issue of real abstraction—and in so doing they erase the constitutive connections between capitalism, environmental history, and the racialized, colonial, and gendered moments of class power, especially but not only the ways in which unpaid work is mobilized and contested. For me, it’s crucial to confront the bourgeois and imperial conceptions of Nature and Civilizing Projects (called Development since the 1940s) as reifications that shape our everyday lives, mass politics, and ongoing imperialist adventures.

**PE:** You are known for examining the *longue durée* of climate change and in more recent work you’ve started to think about the different kinds of crises that capitalism has faced related to climate change in its own *longue durée*. So this raises the question of how far back do we want to look for histories of humans and the climate? Does your own thinking stop in the 1400s? Are you interested in going back further to early agrarian civilizations? Do we want to go even further back and think paleo-anthropologically about the way hunter-gatherers dealt with climate change? How do such expanded historical scales help us living under late capitalism?

**JWM:** There's nearly an infinite number of situated stories that we could tell. I could imagine a story that does maybe a radical version of the book *Sapiens* and puts climate, power, and re/production at the center. I've always identified with Marx, who was endlessly curious about human and planetary life. Who knows? Maybe you'll learn something that changes how you think about the world. For me, world-ecology licenses that curiosity, that Marxist spirit of overturning old orthodoxies, even Marxist ones!

One of the crucial lessons I've drawn from my research on climate history is that moments of significant climate change in the late Holocene—say, since the end of the Roman Climate Optimum in the second century—are moments of social and political destabilization. Moments of dramatic climate change are moments of political possibility.

That's not a call for climate determinism. It's an observation that favors incorporating climate history as one among several crucial *determinations*. The collapse of Western Rome occurred in the midst of exceptionally severe Eurasian droughts that pushed steppe peoples into what's now Europe; those fourth-century droughts were quickly reinforced by the onset of the Dark Ages Cold Period (c. 400–750). Needless to say, the class and production systems that emerged during the Roman Climate Optimum did not survive. What needs to be underlined is that, even under the relatively unfavorable climate conditions of the Dark Ages Cold Period, the resurgence of relatively egalitarian peasantries across western and central Europe allowed for a golden age of peasant life, once liberated from Roman exploitation.

This suggests that the dominant frame for climate history—Man and Nature—should be replaced. We are instead dealing with, to use a shorthand, climate and class. I've written quite a bit about how the crisis of feudalism was a crisis that combined climate change, agro-ecological exhaustion, and class struggle—indeed the feudal order is essentially defeated by urban and agrarian revolts and resistance across the fourteenth and fifteenth centuries. It's this historic defeat of feudalism's ruling classes, combined with Ottoman power in the Mediterranean, that underpins the peculiarly globalizing and commodifying push of European empires and capitalists.

That global expansion contributes to capitalism's *first* climate crisis, registered in the historiography as the “general crisis” of the seventeenth century. The genocidal thrust of capitalist expansion—resulting in a 95 percent reduction of New World populations—led to reforestation and thence a drawdown of atmospheric CO<sub>2</sub> concentrations. This is [Simon L.] Lewis

and [Mark] Maslin's Orbis Spike, whose nadir is 1610. What is important to recognize is that the whole period between the 1550s and the early eighteenth century is a long, cold seventeenth century (after [Emmanuel Le Roy] Ladurie). The Orbis Spike didn't cause this long, cold seventeenth century—volcanism and a solar minimum were more important—but if we're looking for a Year Zero of capitalogenic climate change, it's 1610. And once we locate the origins of capitalogenic climate change in 1610, we end with a very different history of planetary crisis—and a very different politics. It was, like the long fourth century that culminates in the “fall” of Western Rome, and the long fourteenth century that culminates in the crisis of feudalism, a moment of climate change and political instability. It's in this era that we see the consolidation of the two great organizational models of capitalist production: the plantation and the mine. It's in this era that the world color line crystallizes. It's in this era that European empires truly learn how to organize *global* power. All of these—and one could go further—were responses to capitalism's first great climate crisis: they were climate fixes, not because they addressed the underlying dynamics but because they established the decisive way of fixing crises: find frontiers of potentially cheap food, labor, energy, and raw materials. Those frontiers no longer exist.

**PE:** This is just a vulgar Marxist recapitulation, but it seems that you might be saying something like, as the conditions for the reproduction of labor power, in the form of cheap food, become more difficult to sustain, the class contradictions intensify, because people can't both feed themselves and do the work that they're told to do by their bosses.

**JWM:** Hypothetically, yes—but not in terms of absolute deprivation. Rather, as *relative* exhaustion. One of my inspirations in *Web of Life* was Marx's wonderful chapter in *Capital* on the working day. One of the fundamental contributions of socialist-feminists is to show that Marx didn't adequately grasp the centrality of feminized *reproductive* labor—unpaid work—in this discussion, and indeed in the whole scheme of *Capital*. I had been completely convinced by this line of thought for a long time. But I also felt that its radical implications had not been elaborated. For brevity, we have to trade in sound bites. I would simplify by invoking the groundbreaking work on the “second shift” and the “disposable Third World woman worker” as pillars of neoliberalism's Cheap Nature strategy.<sup>7</sup>

The essential condition for renewed capital accumulation—reinvented across successive waves of capitalism since 1492—has been a gendered, transnational class structure of Man/Woman organized on a colonial and Cartesian basis: Men (white, male, bourgeois) were civilized whilst women were “savages” to be kept at home doing unpaid work; and Men (thinking things) were necessarily in a superior position to women (extended things) who were, along with peoples of color, expelled from Civilization and moved into the realm of Nature.

The funny thing about Marxists sometimes derided as “breakdown theorists,” like Rosa Luxemburg and Henryk Grossman, is that they were both, and Luxemburg especially, committed militants. I underline the point because so many on the Left want to replay an old (and sterile) debate between structure and agency. The terms themselves are undialectical and ahistorical; they are at best rough and ready descriptions. But Luxemburg and Grossman were following Marx, who conceptualized capitalism’s contradictions in terms of tendencies and counter-tendencies, and the law of value as a class struggle—from below, but also from above. The move to create new conditions of capital accumulation—restoring the rate of profit, resolving the surplus capital problem—has been *the* world-historical pivot of class struggle in the modern world. That’s a struggle with two moments foregrounded in *Web of Life*: the struggle over the conditions of reproduction, and the struggle over the relations and forms of exploitation. The struggle over the conditions of reproduction can never be reduced to community-level struggles; such struggles are also struggles over self-determination and resistance to the imperialist appropriation of the Four Cheaps (labor, food, energy, and raw materials).

There’s always a tendency to dismiss attention to what Marx was doing in *Capital*, which is a breakdown theory model. Yes, at the end, the expropriators are expropriated, but what is the whole model? The general law of capitalist accumulation, and therefore the system ultimately, is vulnerable to the expropriators being expropriated. I think in some ways I would wear “breakdown theorist” as a badge of honor. If you understand capitalism dialectically, if you understand Marx, the categories of capital—variable and constant capital, and bourgeois and proletarian—are two moments of the same process. There’s no breakdown without class struggle.



**PE:** Climate change discourse is typically framed as recognition versus denialism: people who accept the truth versus people who refuse to see it (also action versus inaction). As we know, the past 50 years have seen militant organization on behalf of the ruling class not just to deny climate change, but just as often to profit from recognizing and preparing for it (think: disaster capitalism). Whether via security and surveillance or resource war-making or patenting of climate change-resistant crops, embracing climate change is as big a business as denying it. So, the question is what are the risks of continuing to frame the climate conversation around belief/non-belief and action/inaction? And what does Left environmental organizing look like if it organizes around not simply taking action but taking action specifically in ways consistent with Left principles of environmental justice? What does Marxism offer, if anything, to this project both in terms of analysis and in terms of praxis and Marxism's legacy of praxis?

**JWM:** Historical materialism at its best takes planetary life as its object. It doesn't give us answers to everything. The critics have accused me of a flat monism—which is just a lazy critique (I reject flat ontologies explicitly in the opening pages of *Web of Life*), but also instructive. The only holism they can imagine is a fragmented holism that happens to mirror bourgeois categories. It's a web of life denialism that treats relations between humans as somehow independent of webs of life, of the concrete geographies of life, power, and re/production. Historical materialism proceeds from the ontological primacy of the relation of humans with and within the rest of nature, which is to say, paraphrasing Marx, the relation of nature to itself. In rejecting a flat ontology, we embrace a diversity in unity, a unity in diversity, but also understand the definite historical conditions of life and power. In my view, a radical strategy of planetary justice proceeds through that connective critique of capitalism, such that we can make clear—and organize around—the conditions of capitalogenic climate change. In world-ecological perspective, as we've seen, the history of climate crisis, modern imperialism, the world color line, and globalizing patriarchy open vistas through which to see today's crisis politics in ways that reveal the constitutive lines between global domination and empire, and the endless accumulation of capital. In many ways, the movements are ahead of the scholars on these questions. Black Lives Matter has come out very clearly around questions of climate justice and its connection with racism.

But everything doesn't have to become climate. The climate insurgency, as Jeremy Brecher reminds us, can be about more than just climate-specific action and must necessarily extend to questions like the democratization of housing and public transportation. In short, climate isn't everything, but climate is *in* everything.

**PE:** But also, on the Left, do we sometimes put too much stock in a kind of liberal politics of awareness?

**JWM:** I wonder if some of the apocalypticism on the Left comes out of that—that if we just shout loud enough that climate change means that everything changes... *then* people will wake up? Sometimes we need shouting and evangelizing, and sometimes we need different approaches. It's a great question. I don't know if I have a perfect answer. We know that more facts don't often change beliefs. In terms of big "E" Environmentalism, I'm struck by how little has changed since 1968. Take a look at Paul Ehrlich's *The Population Bomb*—the classic text of post-1968 neo-Malthusianism—and compare it with the popular Anthropocene discourse. The empirics are different (sort of), but the end times evangelism of 2019 is little different from what it was in 1968. Basically: the world is ending because of "environmental" problems, which are caused by humanity. It's the same slippage, now and then, between *Anthropos* as descriptive category and *anthropogenic* as explanation. This slippage feeds into the refusal to name the system—it's practically a thoughtcrime to insist that the climate crisis is capitalogenic rather than anthropogenic.

What's the alternative to an end times politics? My call would be for us all to ask in our politics and in our intellectual lives: How does climate change shift how we're thinking about a specific topic? This is at the core of the world-ecology conversation. Not how do we "add on" climate to capitalism, but how does our conceptualization of capitalism change once we incorporate the messy and uneven dynamics of climate and other elements of the web of life? But not just capitalism—which is usually understood as an "economic" system, an understanding that is itself a product of bourgeois ideology—but *all* human relations?

That's a question I began to wrestle with twenty-five years ago in the history of sugar plantations, slavery, and environmental change. Historians had long observed that sugar monocultures devastated soils and

landscapes—obvious, right? Is this just another sad story of environmental degradation? Charting the environmental consequences of modernity can be useful, but if we leave it there, it's a bit like shooting fish in a barrel. Like we need a historian to tell us that capitalism does terrible things to soils and trees and fish, right? For a decade, I wrestled with something I came to call Green Arithmetic: adding up economic processes and environmental changes. What emerged from that wrestling match was something more than a sad story of capitalism's metabolic rift—it was a story of how racialized labor, class formation, and empires co-produced, in and through webs of life, a ferocious logic of environment-making premised on creating occupied territories in service to endless accumulation. This led me to see how questions of imperial power were central to structuring the essential conditions of re/production of commodity frontiers, a perspective that allowed me to see varied “civilizing missions” as crystallizations of race, class, and empire—all co-productive moments in constituting a regime of Cheap Nature and its ongoing cycles of appropriation, genocide, and ecocide.

This move was necessary in order to unify capitalism's varied historical geographies of oppression *and* exploitation in an emancipatory politics of the web of life. At one level, that's a practical project. At another, it demands that we develop our politics through an immanent critique of how “actually existing” capitalism has reproduced itself. Once we start taking that history seriously, we can see how oppression and exploitation are entwined at every turn, that every great wave of capitalist expansion depends not just on frontiers in a geographical sense, but on new gendered and racialized configurations of surplus profit.

Otherwise we end up with calls to dissolve, or sidestep, the accumulation and class dynamics of European imperialism into the ether of “settler colonialism” and more recently “the plantationocene.” Rejecting economic formulations of class formation and class struggle is no excuse to bypass the class struggle reality of historical capitalism—which is fundamentally a struggle lived in and through racialized and gendered work, itself framed by the ruling abstractions Civilization and Nature. To invoke (rightly) imperialism and colonial demography is to invoke the formation and reproduction of imperial regimes of Cheap Nature that cheapen in our double register: in price, and to cheapen in an ethico-political sense of devaluation. These are two sides of the same coin. It involves a radical rethinking that puts—just to illustrate by way of

familiar names—a synthesis of [Frantz] Fanon, Luxemburg, and [Immanuel] Wallerstein at the center, a synthesis that puts the political constitution and reproduction of the capitalist world-ecology at the core of the conversation.

**PE:** There's also a state of exception problem associated with climate change. The Pentagon views climate change as a national defense issue. Ethno-nationalists already use climate change to justify the militarization of the U.S.-Mexico border. Just saying "climate change is here" does not dictate either the analysis or the prescriptions. And what are the alternatives to the kind of apocalyptic, evangelical approach?

**JWM:** The state of exception problem becomes, as you suggest, a new normal. Clearly, this is one of the dangers of the Left's climate catastrophist argument. When I say climate catastrophist, I don't mean that climate change isn't a catastrophe—it is, it has been, and it will continue to be for humans and the rest of planetary life. But to ring that bell also feeds into a kind of state of exception or emergency politics that is remarkably conducive to authoritarian rule. If you combine catastrophism with mainstream Environmentalism's anti-immigration legacy with the ethno-nationalist authoritarianism of Trump, Modi, Bolsonaro—that's a toxic cocktail. To what degree such an authoritarian politics could pursue decarbonization is an open question. Such politics anticipate a non-capitalist future of politically enforced accumulation that allows for markets, wage-labor, etc., but isn't driven by the logic of endless accumulation. It would be what Samir Amin called a tributary mode of production. Some days I think we are already halfway there.

More optimistically, let's remember that climate changes in the Holocene have been bad for ruling classes. And that capitalism's underlying sources of resilience are now gone. The whole logic of endless accumulation was underwritten by very finite Cheap Natures that are now inadequate to offset the surplus capital problem—hence runaway financialization. On the other hand, the end of the Holocene *is* a distinctive moment—the end of some 12,000 years of climate stability. Climate instability in the Holocene was always paired with political instability and social unrest—and capitalism's first great climate crisis, in the long, cold seventeenth century, was characterized by unrelenting war. Layer on top of that history a recognition that the strategic priority of imperialist forces in the twentieth century has been to

lay waste to anti-imperialist projects of any kind—“we had to destroy the village in order to save it.” That’s a volatile situation to say the least.

You rightly ask, What’s the alternative framing of the problem? Let me answer briefly in two steps. First, the climate crisis is *not* a product of the Anthropocene—of “man” becoming a “geological force.” *Humanity* is a geocultural construct—a governing abstraction—of modern power and accumulation; it’s a close relation to Civilization and Society. Let me emphasize that humanity is not an agent. The climate crisis is the outcome of what I’ve called the Capitalocene and its concrete institutions and relations: empires, states, planters, extractivists, industrialists, financiers, and financial systems. The Capitalocene is a provocation to the mainstream environmentalist fantasy that “we have met the enemy and he is us.” But it’s a provocation with real conceptual and historical teeth. It says that capitalism is a world-ecology of power, capital, and webs of life, and so refuses the notion that capitalism is *only* an “economic system.” That refusal is pivotal: it is the critique of economism. Because for the world-ecology conversation, capitalism is a system that fuses and synthesizes relations of domination and exploitation, organized to sustain a system of endless accumulation. It is not only endlessly oppressive, exploitative, and extractive—but also endlessly toxifying. What does this add to the framing of the climate crisis? I think it helps us unify dialectically four messy and uneven movements: skyrocketing greenhouse gas emissions and concentrations; a worsening climate class divide in which a handful of billionaires own more wealth than the bottom 3.6 billion of humans; a climate apartheid that reinforces the world color line forged during the seventeenth-century crisis, with devastating impacts on peoples of color worldwide and fueling ethno-nationalism and border militarization; and a climate patriarchy, here again reinforcing the modern gender order born in the in the long seventeenth century.

This framing leads me to a conception of planetary justice that sees the climate crisis as a world class struggle. That may sound terribly old-fashioned, so let me explain. First, the climate crisis is a crisis over the terms of planetary life in a planetary civilization dominated by capital. Whether or not we want to posit a transnational capitalist class, it’s clear that we live in capitalism, it’s a global system, and it’s a class system. That world class struggle, as I’ve suggested, can’t be reduced to economics. It’s irreducibly shaped by the struggles over racialized, gendered, and

colonized work at the end of the Holocene. It's also fundamentally shaped by capital's struggle to appropriate as much Cheap Nature as possible—not just from forests and mines and fields, but also from humans, most of which are treated as “Big ‘N’ Nature,” the better they can be cheapened in our double sense of price and devalued life and work.

In this light, I find rather useful the classic socialist formulation that capitalism empowers a working class that can transcend the violence and exploitation of capitalist civilization. But the geography and socio-ecological configurations of the re/producing strata change in successive eras of capitalist development. The workerism of some eco-Marxists has the unfortunate consequence of ignoring a lot of workers in the late Capitalocene. Like when the story of fossil capital is cleansed of its constitutive relations to indigenous expulsions and the Second Slavery. This begs the question: Who and where is the working class? It's one of the central questions I explored in *Capitalism in the Web of Life*. Some of the working class today looks very much like the working classes of previous centuries, in industry, extraction, distribution, and transportation. But most proletarianization, even today, is semi-proletarianization and embedded in the widest range of subsistence and non-wage forms of reproductive work.

What I pointed out in *Web of Life* is that for every act of exploitation of the waged worker, there is a more expansive web of appropriating the unpaid work of “women, nature, and colonies.” Capitalist exploitation of work does not stop at the factory gate or office door. It depends on the unpaid worker—often female, who is herself often a proletarian—to ensure the daily and inter-generational reproduction of the proletariat. For every *proletariat* there is a *femitarat* that shoulders the burdens of exploitation and domination in paid work and unpaid work simultaneously. Need I add that the condition of the femitarat is dramatically undermined by the climate crisis? (Hence: climate patriarchy). But let's not stop there. For every wage worker, and for every unpaid human worker, there is also the work of nature as a whole: the work of the *biotariat*. That's a term coined by Stephen Collis. The biotariat includes all the things we think of when we hear “ecosystem services” but also includes many humans, who are devalued and disparaged on the grounds of poverty, race, nationality, gender, sexuality, and so forth. A politics of planetary justice must, then, bring together modernity's three great working classes: the proletariat, the femitarat, the biotariat. (Nor should that be exhaustive.)

Only when we stop drawing lines around so-called “privileged” revolutionary agents, and understand the imperative of connecting emancipatory struggles around work of every kind—reproductive and productive, human and extra-human—can we undo and unthink the Left’s allegiance to bourgeois categories, decolonize our imaginations, and transcend capitalism’s webs of life in favor of something more just, democratic, and sustainable.

## NOTES

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- 1 Karl Marx and Friedrich Engels, *The Communist Manifesto* (London: Pluto, 1996).
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- 3 Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2014).
- 4 David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Oxford: Blackwell, 1989).
- 5 Silvia Federici, *Revolution at Point Zero: Housework, Reproduction, and Feminist Struggle* (Oakland: PM Press, 2012); Silvia Federici, *Wages against Housework* (London: Power of Women Collective, 1975).
- 6 See Ynestra King, "Engendering a Peaceful Planet: Ecology, Economy, and Ecofeminism in Contemporary Context," *Women's Studies Quarterly* 23, no. 3/4 (1995): 15-21.
- 7 Arlie Hochschild, *The Second Shift: Working Parents and the Revolution at Home* (New York: Viking Penguin, 1989); Melissa Wright, *Disposable Women and Other Myths of Global Capitalism* (New York and London: Routledge, 2006).