World-ecology: a global conversation#

Jason W.Moore*

Jason W. Moore replies to Gennaro Avallone's questions and succeeds in simultaneously providing an introductory presentation of world-ecology's fundamental concepts and a critical discussion of some problematic issues recently emerged within the political ecology international debate. Amongst these latter are his relationship with the theorists of "metabolic rift" and the historical novelty represented by negative-value.

Keywords: world-ecology, abstract social nature, crisis, negative-value, Cartesian dualism, political state shift

You are developing a world-ecology approach to understand both modern history and the future of the extra-human and human natures. What do you think are the main features of such approach?

World-ecology is a collaboration, a conversation. This a global conversation - of scholars, of artists, of activists - about planetary justice. It draws seriously on Marx, but refuses the conceit that there is a "true Marx." There's no True Marx, only a historical Marx. The same is true for other great thinkers. I think one of the great risks of radical traditions is found in the tendency to convert ideas into beliefs, and beliefs into sacred objects. Then one defends the sacred object - "socialism in one country" or "the working class" instead of cultivating a revolutionary praxis.

For the world-ecology conversation, my hope is that it encourages and facilitates conversations and syntheses useful for planetary justice in the twenty-first century. I've always insisted that some of my formulations will be more useful than others. My approach has been to raise questions about the lacunae between radical interpretations of historical change - including the present as history. In *Capitalism in the Web of Life* (2015), I raised questions about the connections between relations of domination, exploitation, and environmental history. How can feminist, environmentalist, and Marxist critiques be reworked in a new synthesis? And what might a generative synthesis - generative, that is, of further investigation, narration, representation, research, *conversation* - look like?

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World-ecology is about sparking conversation, and this often leads in unexpected - even uncomfortable - directions! Too many radicals need to be "correct." The point of world-ecology is not to arrive at the correct line, and then to defend it. Our collaborative ambition is to open, sustain, and support conversations that generate emancipatory knowledge for planetary justice. That means, among other things, that we have given up the certainties of past knowledges. Those past knowledges are important and indispensable. At the same time, the modes of thought that have created today's planetary crisis will not lead us towards planetary justice. An emancipatory praxis must insist that no one has all the answers; and that compelling responses to planetary crisis are by nature collective.

World-ecology has therefore never been about my position on this or that historical or theoretical question. Far from it! My sense is that it's a conversation cohered by a commitment to understanding human history - including the history of the present - as co-produced with and within webs of life. There's a philosophy of history that views the historical geography of webs of life as ontological conditions. This encourages a historical method that asks how human organizations of power, production, and reproduction are not only producers of these webs of life, but also products of them. Basically, we ask: How are human relations configured with and within nature as a whole?

That's a horizontalist philosophy of humans in the web of life. It has practical implications. Perhaps most significantly, that philosophy challenges views of human liberation that treat the web of life as secondary. There's been a long history of socialist projects that have treated Nature as a productivist resource. There are a lot of dangers with this, one of them being that Nature is never limited to extra-human nature; it always includes human populations. You will notice that I have written Nature in the uppercase. And that idea - Nature - is always contrasted with Society, Civilization, or something to that effect. That's more than an idea. It's a practice. And it's praxis: of dominating humans, not just the soils and streams and fields and forests. In other words, Nature is - and was from 1492 - a class project, an imperial project that fused the production of "surplus value" and the exercise of "surplus power".

World-ecology therefore takes the history of ideology and cultural domination very seriously. I do not think this history is separate from capitalism's devastations of the web of life; nor do I think we can make sense of race, gender, and sexuality abstracted from the world-historical fetishes of Nature and Civilization. Fundamental to world-ecology is the claim that modern modes of thought and culture, power and accumulation constitute an evolving totality. In my view, the emergence of capitalism can only be adequately

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understood in these terms. I think the role of class struggles and economic change is well understood, so let me simply focus on capitalism's emergent *geoculture*. Capitalism's geoculture, geopolitical economy, and systemic class antagonism are all moments of this evolving whole, each moment implying specific relations with webs of life. This geoculture was premised on two reinforcing logics. One is the logic of the binary code, and its earliest expression was the ontological claim of Civilization versus Nature. The other was the logic of instrumentalism, necessary if (some) humans wished to transform most humans and the rest of nature into profit-making opportunities. From the beginning of capitalism, "dominate and profit" was dialectically joined to "define and rule" (Mamdani, 2012).

Capitalism's geoculture reaches far beyond the binary of Civilization and Nature. After 1492, its animating logic rapidly entangled with binaries of gender, race, and sexuality, and quickly enmeshed in strategies of imperial rule and capital accumulation. When I say that capitalism works through a binary code, I am highlighting a specifically capitalist *praxis*. That is, capitalism's praxis is a unity of thought and action that develops historically by rewarding practices that enable - and punishing practices that obstruct - the endless accumulation of capital. This praxis is a geocultural factory of fetishization; it fragments reality, issuing segments of binary code, then using these fragments to dominate, appropriate, and exploit.

Civilization and Nature - again in the uppercase - are *real abstractions*; their power resides in the degree to which the One Percent acts as if they are real, and the degree to which the 99 Percent accepts their reality. The real abstractions Civilization/Nature may be understood as a world-historical expression of alienation under capitalism. But it is not the only form of alienation. As soon as we look at the history of this geoculture, we see that the boundary between Civilization and Nature is intimately connected the world color and gender lines. The racialization and gendering of work relations, ongoing from 1492, has flowed through - and in turn reinforced - the real abstractions of Civilization and Savagery. Languages of civility and savagerv have always formed a kind of discursive "raw material" for racist, sexist, and homophobic discourses and practices. As Silvia Federici (2004) points out, women became the "savages of Europe" in early capitalism, their life-activity redefined as non-work. Women were "naturally" fit to be mothers and caretakers, work that needn't be compensated as work. Everywhere in the Atlantic world, non-Europeans - Africans, indigenous peoples, Slaves, the Irish - were redefined as savages. They were assigned to Nature, not Civilization - the better their lives and work could be cheapened.

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Moore

The world-ecology approach is linked to both world-system analysis and the theory of metabolic rift. What do you think are the main similarities and differences between world-ecology and these other approaches?

These are two traditions that have helped my thinking; but they are not the only ones, and not even at every turn the most important.

World-systems analysis is crucial for two big reasons. One is that Wallerstein gave us a way to write world history from the standpoint of the philosophy of internal relations. Hardly anyone reads Wallerstein's masterpiece, *The Modern World-System I* (1974) - and when they do read it, they often stop after two chapters. That's why folks say it's all about production for the world market. If you do read it, you see that's not at all the case, although the formation of the world market is important (wasn't it for Marx, too?).

Wallerstein's approach is fundamentally at odds with the model-building efforts of social scientists. Indeed, Wallerstein offers no "model of capitalism," but rather just a few basic premises - above all, that we see an epochal shift in the long sixteenth century that generates an interdependent, trans-Altantic division of labor. It's a connective world history. In *The Modern World-System I*, we encounter stories about climate change, class struggle and class structure, state formation, empire-building, the transformations of soils, diets, and forests, and yes, the formation of a modern world market. It's a situated world history; one possible world history among many. And finally, as I've just suggested, it's a world history that takes seriously geography and the web of life.

World-systems analysis is generative for another reason. Wallerstein calls it world-systems *analysis* because it's offered as a mode of analysis - and especially, an "unthinking" of nineteenth-century social science. Central to world-systems analysis has been the study of modernity's "structures of knowledge". That research that links epistemological critique with institutional structures, such as how our universities and disciplines are organized. In this light, world-systems analysis was always a *critique* of the disciplines, and a critique of interdisciplinarity. It was a critique especially of one of the governing principles of social science, the tripartite division of knowledge into the socio-cultural, the political, and the economic.

Wallerstein, and before him Fernand Braudel, was always aware that this critique unfolded against the backdrop of what C.P. Snow (1959) famously called the "Two Cultures" of the human and biophysical sciences. World-ecology takes this enduring structure of knowledge - the Two Cultures - as one of its central challenges. I have argued that for those of us in the universities, we must be "in" but not "of" the academic system; we must refuse to be gatekeepers for the disciplines, which are part of the problem. By refusing

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to see "nature" as an add-on to "social change," world-ecology opens space for new forms of knowledge that privilege the differentiated unity of humans in the web of life - understood from multiple vantage points, and understood in their emergent (non-linear) forms.

Of course there are many intellectual currents that are wrestling with the Two Cultures problem. I would highlight the ground-breaking work of Rebecca Lave and her colleagues around "critical physical geography," as well as an extraordinary tradition of dialectical science associated with Robert M. Young, the late Richard Levins, Richard Lewontin, and more recently, Rob Wallace. Donna Haraway, Carolyn Merchant, and others brilliant pioneers in feminist science and environmental studies have challenged the Two Cultures from a different, but equally significant, perspective. World-ecology learns from all these movements.

What world-ecology foregrounds in a distinctive way is the world-historical character of these relations of humans in the web of life. One should not "add" nature to class, or colonialism, or patriarchy. Rather, each of these big picture processes are co-produced in and through the web of life. This allows us to show how capitalism is at once a producer *and* a product of the web of life.

Capitalism in the Web of Life was inspired, in part, by an effort to synthesize two classic arguments that appeared at the turn of the last century. One was John Bellamy Foster's Marx's Ecology (2000). The other was Paul Burkett's Marx and Nature (1999). Foster's book opened new possibilities for rethinking the historical geography of capitalism as metabolic relation - one that was a producer and product of class, capital, and empire. In Marx's Ecology. Foster offers a powerful conceptualization of capitalism's metabolic contradictions, grounded in the alienation of labor and the town-country division of labor. This opens space for one of world-ecology's central concerns: synthesizing the socio-spatial relations of capitalism with its metabolic contradictions. Burkett's contribution was to render impossible any attempt to think through Marx's "law of value" abstracted from its biophysical dimensions. Neither of these texts was much concerned with capitalism's world history. That's not a shortcoming for either text. World history wasn't necessary for their respective arguments. The key intention of Capitalism in the Web of Life was, then, twofold. First, I wanted to ground the law of value in a metabolic contradiction - something Marx was always doing, constantly referring to human work as a "natural force". Secondly, I hoped to show how this antagonism played out across the historical geography of capitalism since 1492. In this approach, metabolism included flows of bodies, power, and commodities.

I find it somewhat painful to discuss Foster's response to these arguments. On the one hand, as I've written many times, the metabolic rift approach was

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ground-breaking. It remains a relevant analytic for critical research. I have some disagreements with rift analyses, to be sure; but these are matters of comradely disagreement. On the other hand, John Bellamy Foster has responded to my critiques in a very different way. It's scorched-earth attack. For Bellamy Foster, disagreeing with Foster means rejecting Marx and abandoning materialism. One the saddest things about Foster's response has been his total lack of interest in dialogue. Foster has consistently refused invitations to debate these questions, going back to 2008. In the fall of 2015, about nine months before he denounced me as a friend of the climate deniers. I emailed him and basically said this: It's clear that there are meaningful differences between our positions, and there's a danger that there could arise counter-productive nondebates, the kind of non-debate where Marxists talk past each other and call each other all sorts of nasty names. I said: Let's organize a dialogue where we can flesh out the differences, but also elaborate a shared commitment to socialism and planetary justice. So far, Foster has chosen invective over a toughminded debate. He's declined every single invitation.

Now, my approach has been very different. I have praised Foster and metabolic rift approaches many times. Foster doesn't even pretend that worldecology in any form has anything useful to say (so when I say that Foster is a dualist, I think there's some evidence for that in his intellectual and political mode. For Foster, "You are either with me or against me!"). My position is that the metabolic rift school is insufficiently dialectical, geographical, and historical. These are serious differences. But there is also a shared commitment to core socialist principles of justice and equality and sustainability. Foster's position is that I'm an enemy of socialism. That's an intellectual mode that derives fundamental political differences from our analytical differences. That's a tendency with an unsavory history in twentieth-century socialist projects. It seems to me that we can differ on questions of Marx, political economy, and environmental history - and yet still agree on socialist politics.

In the world-ecology approach the concept of abstract social nature is fundamental. Can you elaborate on its meaning? Moreover, this concept is linked to the all-comprehensive issue of value. In your analysis you highlight one of the dark side of value: negative-value. Can you unpack for us its character of historical novelty?

There are really three questions here, in turn about abstract social nature, the law of value, and something I've called "negative-value."

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Abstract social nature is a heuristic. Its essential contribution is twofold. One makes a fundamental point about what Engels called "free gifts of nature." Here I'm not picking on Engels, but I want to underline that nature is never free nor gifted. This is my point when I say in talks that "1492 never ended." Most of the work of nature is unpaid, stolen, and paid in blood and fire. The process of taking elements of nature and feeding these into the vortex of world accumulation has never been simple and has always required the application of enormous violence and terror.

When you say abstract social nature is fundamental to world-ecology, I think there's truth to that. But it's not a "fundamental" category somehow separate from Marx's conception of value. It's a conception rooted in a historical and geographical exploration of how "value" works in historical capitalism. Otherwise, it's a metaphysic. Typically, the question of value has been reduced to technology, the immediate process of production, and the cash nexus. Those are important. But socially necessary labor time is also determined in and through relations of domination. The condition that some work is counted - work in the money economy - is that most work is not. A conception of surplus value in capitalism that does not incorporate the struggles over surplus power and the work of webs of life is unlikely to be a compelling guide to analysis, or to political practice.

We already know this about Cheap Work and human populations under colonial rule. Capital does not confront the human populations in the colonies as "ready to work." They must be forced to work for capital. But capital has neither the capacity nor the interest to do this; it's too expensive. Enter the modern state, or something close to it. Part of what states do is apply force. Another part of what states and empires do is to map and survey territories of potential profit. This was fundamental to turning the web of life into a profit-making machine. One of the first things every great European empire did was to establish mapping and map-making offices and botanical gardens. The web of life is not a storehouse of pre-existing use-values ready to be used by capital. Use-values must be produced. In agriculture, for instance, use-values involve extraordinary amounts of human and extra-human work. Nature, in other words, is not automatically legible to capital. It takes work to make elements of the web of life useful to capital. States must co-produce units of nature that are legible to capital: hence, abstract social nature. The bourgeois property regimes highlighted by political Marxists are one instance of this process: "land" could not be put to work for capital without a modern state that could impose bourgeois property law, which itself is only thinkable through surveying, the abstraction of living parcels of land into abstract units of property. But everything I've just said about surveying and

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bourgeois property can be said about modern map-making and global territory. It is impossible to exaggerate the significance of modern cartography to the rise of capitalism - or for that matter, the significance of planetary surveillance and mapping systems organized by the American Empire after World War II. The modern map - think of the Mercator projection from 1569 - was an epochal invention whose significance equals, or even exceeds, the steam engine.

I won't go into all the details here, but modern mapping speaks to a second contribution of abstract social nature. This highlights the historical specificity of capitalism's relationships between mental and manual labor, between the thinking and the doing, in world-historical term. Modern mapping and mathematics contributed to an emergent capitalism in the long sixteenth century by allowing a world-historical separation of mental and manual labor. There is a straight line from these sixteenth-century developments to the proliferation of financialized "weapons of math destruction" (O'Neil, 2016) and the ring of satellites around the Earth committed to mapping and remapping every nook and cranny of planetary space. What's crucial in this discussion is that such technical systems cannot be reduced to their "material" content: rather they express the antagonism of thought and practice in historical capitalism. So when I speak of something called "Cartesian dualism," I'm saving that Descartes gave philosophical expression to this worldhistorical antagonism, which had been developing for nearly two centuries by the seventeenth century.

Now for the "law of value." If we accept that "socially necessary labor time" determines the value of commodities, then we must expand our social and geographical horizons in order to understand what determines socially necessary labor-time. Now, it's clear that technical and labor relations at the point of production - on the fields, in the offices, on the shop-floors - are important to determining necessary labor time. It's also very clear that value relations extend well beyond the immediate point of production. So I accepted the feminist insight that necessary labor-time is determined by unpaid work. For feminists, this was overwhelmingly the work of social reproduction in the home. I also accepted the insights of critical agrarian studies scholars on semi-proletarianization, and cheap labor reserves. Basically, if households can reproduce through access to non-wage or non-cash income, as when a peasant family retains access to arable land while sending some members into wage work, then the minimum wage-threshold is correspondingly reduced (let's remember this is also largely a case of women's unpaid work). Finally, I saw the necessary labor-time has also been shaped by the work of extra-human natures. This is Marx's point when he talks about waterfalls and

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surplus profit, or soil fertility "acting" like fixed capital. This is fundamental to the long history of capitalist agriculture, rooted in the early modern slave/sugar plantation complex. Each new phase of the sugar plantation complex depended on extraordinary frontier movements to take advantage of soil fertility, uncapitalized forests, and so forth. Taking value as methodological premise allowed me, then, to flesh out the vital connections between monetized work, social reproduction, and the web of life.

There's another key point to the discussion of value. Capitalism's "law of value" must be grasped in two dimensions. One is the moment of capital accumulation. The other is the law of value as ethico-political project. The two are fundamental to each other. This second moment is about how capitalism values - and de-values - life and work. This means that we have to treat as foundational, for instance, the racialization and gendering of work in the rise of capitalism (and ever since!). The geocultures of domination - of capitalist white supremacy and patriarchy - emerged in their modern, dualistic, form in the long sixteenth century. It's not just that the modern gendering of work - such that women were redefined as non-workers - and modern racism "accompany" the era of primitive accumulation; rather, they constitute primitive accumulation and the formation of systemic value-relations of paid and unpaid work. The real abstractions of Civilization, Nature, Race, Gender, and Sexuality take shape not only as projects of domination, of "surplus power," but also as projects of Cheap Nature and surplus value. This means, for instance, that modern racism, sexism, and colonialism de-value the work of the vast majority of humans, to better reduce the necessary labor-time embodied in each proletarian. Treating female labor as "women's work" is tantamount to slashing wages for the world's proletariat, and boosting profits for the One Percent. Is that not also the world history of the industrialization of the Global South since the 1970s, with the "disposable third world woman worker" at its core (Wright, 2006)?

Now for negative-value: it is an idea which emerged out of this worldecological reading of the law of value. Negative-value is an attempt to name and narrate contradictions of a new sort, emerging in late capitalism. Negative-value spoke to an emergent set of limits - especially climate change that could not be addressed through the old crisis-fixing strategies. Some critics claimed that I ignored the biosphere in my book and reduced everything to price, but in fact the whole book builds towards the opposite argument, that climate change entwines with other contradictions to create the conditions of epochal crisis. Negative-value then, is not about subtraction (as on a ledger), but about negation.

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Negative-value, then, can be understood as a barrier to capital accumulation that cannot be fixed on the "business as usual" model of the past five centuries. The end of the Holocene, ushered in by capital's radical carbonization of the atmospheric commons, is a paradigmatic example (but not the only one). The technical means for an immediate transition to renewable energy exists - as the brilliant Andreas Malm (2018) and others have shown. And yet such a transition is nowhere on the horizon. Why? Because the fivecentury model of capitalism is ruthlessly anarchic and competitive. It is also premised on a mode of thought that fragments first, and connects later. Such fragmentation doesn't allow for "enlightened" capitalism to fix the climate crisis, because the climate crisis is a crisis of the whole that cannot be "fixed" through partial measures. This is Elmar Altvater's insightful contribution on the relation between geoengineering and climate change. We are dealing with a holistic crisis that - if one wishes a sustainable and just transition requires holistic politics. And that is precisely what we are beginning to see, in a family of movements that connect labor, indigenous, climate, and food justice - far from an exhaustive list! (I am astounded by critics who insist without even a shred of evidence - that world-ecology flattens these differences). These movements and claims are part of a new ontological politics that sees life and justice, power and production, as fundamentally connected in and through their differences. One doesn't need to be romantic about this. Of course there are many problems with such movements. But the tendency to connect claims of social and economic justice, democratization, and planetary sustainability is hugely significant. Such movements are themselves a form of negative-value.

Finally, in some articles you have written about the final crisis of the capitalist world-ecology. Can you articulate your hypothesis about the transition to a post-capitalist world-ecology?

Capitalism is no more eternal than any other civilization. Crises - understood as fundamental turning points in a civilization's mode of thought, power, and re/production - are inevitable. But that doesn't tell us much about when and where the crisis will unfold, and about the politics of civilizational crisis. My thinking has flowed through three broad questions. First, when and where do we see previous systemic crises within capitalism, and between modes of production (e.g. feudalism to capitalism)? Second, how were capitalism's previous crises resolved? And third, how did these crises unfold through the web of life?

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I'll begin with an observation: the end of the Holocene's long era of relatively favorable climate renders the present civilizational crisis distinctive. Today's climate shift overshadows previous moments of climate change in the Holocene. It's part of what earth system scientists call a *state shift* - an abrupt, irreversible, and fundamental shift in the conditions of the web of life.

One of the insights I've gleaned from reading the climate science over the past two decades is that climate change is non-linear, and the models for making sense of that non-linearity are constantly being revised in major ways. I'm not sure that radicals have been as willing to revise their models of the non-linear changes unfolding right before our eyes - negative-value is one example of such non-linearity. This means that the lessons of climate change and civilizational crisis in the Holocene cannot be projected simply into the future. But neither can they be ignored.

To come to terms with the state shift in the biosphere requires a state shift in how we think and act with other humans in the web of life. It demands an intellectual state shift - and of course, a *political* state shift. To do that, we need to let go of some sacred objects, above all Nature (ecologies without humans) and Society (humans without ecologies). These categories are not merely epistemic, but practical, real instruments of domination: they are real abstractions complicit in capitalism's successive waves of ecocide and genocide.

This Human/Nature binary encourages peoples to overestimate capitalism's resilience. Even many radicals make capitalism into a social force outside the web of life. Capitalism as a result becomes a supernatural power able to withstand rapid climate change. And if some capitalists will cash in on disaster and dispossession, there's little doubt that climate change is bad for the system as a whole. Climate change marks an implosion of the Cheap Nature model that has governed modern life and power and accumulation and rationality for five centuries. Not least, but certainly not only, climate change promises a dramatic, abrupt, and irreversible reversal.

I use the word reversal here, but it's really considerably more non-linear. It's not the frontiers of Cheap Nature are now closing, which is true enough. Rather, it's that capitalism's whole strategy of power and production has relied on the web of life delivering Cheap Nature, and that strategy is now inverting itself. The web of life - this includes human activities of every kind, and the widest range of justice movements - is moving from a massive enabler of capital accumulation to a fundamental barrier. That transition, from frontier to limit, is the shift from surplus value to negative-value. That limit, let me emphasize, is found in the connective tissues between capitalism and the web of life as a whole. Far from collapsing the biospheric moment into

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capitalism's contradictions, such a view presents planetary state shift as an epochal moment in the crisis of capitalism.

For the past 4,000 years or so, climate change and civilizational crisis have gone together. We can see this in the crisis of the Mediterranean's Bronze Age civilizations around 1200 B.C.E. The end of the Roman Climate Optimum - sometime in the second century - was followed by Rome's third century crisis and the final great wave of "barbarian" invasions in the fourth and fifth centuries, culminating in the collapse of the Western Empire. It bears noting that the fourth-century barbarian invasions began in the midst of one of Eurasia's worst droughts in the past 2,000 years. The crisis of feudalism was tightly bound to the onset of the Little Ice Age in the fourteenth century. And arguably capitalism's greatest crisis (so far) - the "general crisis" of the seventeenth century - unfolded during the most unfavorable stretch of the Little Ice Age (c. 1550-1700).

Capitalism's capacity to develop through the severe climate of the long. cold seventeenth century - intensified by the New World genocides and the Orbis Spike (Maslin and Lewis, 2015) - is instructive. In contrast to the climate-fueled crises of the long fourth and fourteenth centuries - marked by the "fall of Rome" and the feudal crisis - there was no systemwide reversal of commodification, and although some empires fared better than others, there was no great collapse of imperial power. What transpired was what I've called a "climate forcing-climate fixing" dynamic. European systems of power and production thoroughly entrenched themselves across the tropical world, especially in the Atlantic world's four-headed beast: the sugar-silvershipping-slaving complex. To that we may add that capitalism's fossil fuel revolution began in this period as well, with the Dutch and English extractive booms in peat and coal. In other words, capitalism's response to the climate crisis of the seventeenth century was to extend its reach into new frontiers: both horizontal, as with sugar and silver and their regional networks, and subterranean, as with coal mining. No such frontiers exist today.

What comes next is impossible to predict. There are lessons we can draw from radical politics over the past century or so. One of darker lessons we can draw concerns the willingness of imperialist forces to destroy the productive forces. Clearly, capitalogenic climate change brings with it awesome destructive power. Up to a point, as Naomi Klein (2007) shows, "shock doctrine" reconstructions will occur. But at some point, I think sooner rather than later, these will cease to be profitable on a large scale. Are we not already seeing this in places like Haiti and elsewhere in the Global South, where climate disasters bring only misery without much opportunity for large-scale accumulation? This raises the question of climate reconstructions in an era

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when capital no longer wishes to rebuild - intersecting with questions of how to resist an increasingly predatory, financialized capitalism, as Saskia Sassen (2014) shows.

There are lots of thorny questions involving climate reconstruction and climate justice. Such reconstructions must strike a balance between "horizontalism" (a deepening of participatory democracy) and "verticalism" (state planning). We'll need the best of the anarchist and socialist traditions, and we'll need to be willing to move beyond both in the coming century. We'll also need to shed the idea and practice of using Nature as a productive force, and to embrace a multi-species conception of planetary justice. Socialism - or whatever we end up calling a more democratic, egalitarian, and sustainable world - will be socialism for all life, or it will be nothing.

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