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GOOD SCIENCE, BAD CLIMATE, BIG LIES

Climate, Class, and Ideology in the Capitalocene

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Introduction

You've been lied to. Whenever you read, view, and hear the conventional description of the climate crisis, it's something like this: "Human society causes climate change" (Intergovernmental Panel on Climate Change 2022). (From the IPCC's most recent report.) Climate change is anthropogenic. (Made by Humans.) The phrase is repeated. *Anthropogenic*. On an endless loop. *Anthropogenic*. By academics. By journalists. By the major environmentalist organizations. By the leading institutions of the transnational bourgeoisie, like the World Economic Forum. What sane person, upon examining the evidence, would say otherwise?

Very few, it turns out. In striking testimony to the power of bourgeois naturalism, the hegemonic view on the left holds that climate change is indeed the result of "human activity" (Angus 2016). There's a sort of naïve empiricism in such statements, which smuggle bourgeois humanism and naturalism into radical assessments of the climate crisis.

To be sure, the radical view condemns capitalism. But the interpretive architecture inverts – rather than transcends – the neo-Malthusian scheme. Rather than an abstract Humanity, with "too many people" driving the planet toward "overshoot," an abstract capitalism creates "anthropogenic rifts" that define the climate crisis (Ehrlich 1968; Catton 1980; Clark and Foster 2016; Foster 1994). In both instances, capitalism – when not disappeared entirely – manifests as a subset of a general category, Humanity. In a breathtaking instance of the "ideological unconscious," even many socialists accept Man and Nature as innocent descriptive categories (Althusser 1977). They are anything but. These are fetishes, ahistorical and asocial ideological constructs, "ruling ideas" invented

through capitalism's becoming a biogeological force – and refined ever since (Marx and Engels 2010; Patel and Moore 2017). Man and Nature – the upper-case is deliberate – drip with blood and dirt; far from merely cultural *expressions*, they have been crucial instruments of bourgeois ideology and the endless accumulation of capital from the very beginning.

The resulting model of historical change is one of *collision* between discrete essences: of Man and Nature. On this, the mainstream and ecosocialist Anthropocenists agree – even if the latter give *their* Limits-to-Growthism a shiny new coat of bright red paint (Chakrabarty 2021; Foster 2002b; Moore 2011; Bonneuil and Fressoz 2015). The collisionist divergence with historical materialism – defined by its emphasis on the active, interpenetrating dialectics of “historical man” and “historical nature” within specific socio-metabolic relational “ensembles” – is impossible to miss (Marx and Engels 2010). But this is precisely what's happened with the “Capitalism in the Anthropocene” discourse (Foster 2022; Saito 2022). This is no academic quibble. The questions of geohistorical method and proletarian strategy are dialectically joined (Lukács 1971). Externalist models of capitalist limits necessitate radically different political strategies than dialectical frameworks, for which the limits emerge through relations that unify the inside, the outside, and the in-between (Moore 2015).

The differences between collisionism and dialectics are philosophical, historical – and pregnant with tectonic political implications for climate justice politics. Here we distinguish the Popular Anthropocene from its strictly geological forms. The former is a discourse surrounding the origins, development, and contemporary features of the climate crisis; the latter is focused on stratigraphical signals. The distinction is, however, blurred by its scientific practitioners, who along with many ecosocialists wish to eat their cake and have it too (e.g. Crutzen 2002; see Moore 2017a). The Popular Anthropocene's collisionism reduces the climate crisis to a conflict between Man and Nature, and to externalist limits premised on substances (fossil capital, Stop Oil, ecological footprints, etc.). Layering capitalism upon this substantialism, ecosocialists have accomplished two things. They have affirmed the independence of capital accumulation from its socio-ecological conditions of reproduction, insisting that capitalism can survive “until the last tree is cut” (Foster 2002a; Moore 2017d). In so doing, they have embraced philosophical substantialism: the primacy of substances over relations, a key element of Cartesian – that is, *bourgeois* – materialism (Watts 2005; Harvey 1974; Moore 2017c).

This produces a curious situation. After centuries of class struggle *against* reactionary substance fetishisms – from eugenics to environmental determinism to blood and soil nationalism – and *against* “natural law” justifications of inequality, the dominant radical view of climate justice has embraced both (Chase 1977; Robertson 2012; McNally 1993; Moore 2021a). Moreover, as if to move from the frying pan into the fire, it has done so in exceedingly deceptive fashion, smuggling reactionary premises into radical-sounding interpretations,

and denouncing alternative readings of Marx's materialism as objective "enemies of socialism" (Foster 2016).

Anthropogenic phraseology serves double duty for much of the Green Left. It works descriptively, advancing a naive empiricism. To the degree that a philosophical anthropology is offered, readers are served up a philosophy of history that turns on a self-referential, even tautological, conception of human nature: "The struggle for freedom represents the *inner*-human need to be free in terms of self-activity and human development" (Foster 2022). For Marx, as we'll show, the struggle for freedom is not limited... limited to humans – "the creatures, too, must become free." Nor does it derive from an "*inner*-human need" (Marx and Engels 2010). In contrast, Marx underlines that the *relational essence* of "human need" is "outside itself" (Marx 1975b). That relational essence of human experience is grounded in "modes of life" that are *irreducible* to the interaction (collision) of acting units: human groups and ecosystem units. Rather, these must be grasped through an underlying labor-metabolic *relation* (Marx and Engels 2010). Thus: "labor created man" (Engels 1987). Through the metabolic labor process, historical man's conditions of possibility emerge, entwining a "physical life-process" and a "historical life-process" (Marx and Engels 2010). Modes of life and modes of production are constituted through social relations of environment-making within environments that are at once, and unevenly, producers and products of those social relations (Marx and Engels 2010; Moore 2015; Levins and Lewontin 1997). At the same time, given geographical conditions – Marx and Engels call them "natural bases" – *necessarily exceed* the narrow confines of a particular mode of production. For instance, volcanic and solar activity has heavily influenced the course of civilizational history, regardless of mode of production (Brooke 2014). This dialectical approach counteracts one-sided determinations – social reductionism and environmental determinism – through geohistorical reconstruction. In sum, to use a fashionable expression, the *human* "struggle for freedom" is a multi-species affair – situated in modes of production that co-produce environments, even as they are subjected to biospheric and cosmological events of unimaginable proportions. The philosophical recognition of this problem is frequently alienated from geohistorical method; the Capitalocene addresses this disconnection (Moore 2017c). Far from denying these geographically external events in the pulse of civilization, the philosophy of internal relations allows for discerning how they influence the course of history (Ollman 1993).

Marx's critique of the bourgeois conception of anthropogenesis – between "man in general" and "historical man" – was fundamental to elaborating historical materialism (Marx and Engels 2010). Let's recall that Marx's militant observation – that "philosophers have only *interpreted* the world in various ways; the point is to *change* it" – directly builds upon his critique of Feuerbach's contemplative conception of the "essence of man" as "abstract[ed] from the historical process" (Marx 2010). For good reason, socialist projects always

insisted on a new politics of human nature: socialist construction depends on a radical break with bourgeois humanism and its folk concepts. One may generatively disagree over the contours – and balance sheets – of revolutionary projects to create a “new socialist man” – from Bogdanov to Che. But one can scarcely doubt that the socialist clarion call for collective solidarity and mass mobilization in the interests of revolutionary transition is a minor point.

And yet, in affirming bourgeois Man, this is exactly what ecosocialist Anthropocenism has done. Nor does the problem end there. Its fetishized view of the human essence serves as an explanatory gateway drug for manifold social and substance causations – everything from population to fossil fuels to racism and colonialism (e.g., Haraway 2016; Malm 2016). All are significant, abstracted from their connective geohistorical tissues – and therefore dialectical syntheses – the celebration of one or another flavor-of-the-month factor obfuscates capitalogenic processes in the making of the climate crisis. Such obfuscation through the celebration of causal pluralism is a pillar of the Western intelligentsia’s neoliberal realignment since the 1970s, crucial to manufacturing consent to bourgeois hegemony (Moore 2022b).

In relation to climate studies, the Anthropocene–Industrial Complex has been remarkably successful. Installing the fetish of bourgeois Man as its point of departure, the Anthropocene obscures and sublimates these capitalogenic forces. One cannot move from a bourgeois fetish to a dialectical conception. One *can*, however, easily move from the ideologized binary of Man and Nature toward a chaotic hodge-podge of concepts (Marx 1973). This is the hallmark of all Popular Anthropocenic tendencies. These include not only the mainstream and ecosocialist tendencies but also the “critical” Anthropocenes, of which the race-reductionist Plantationocene, with its substantialist defense of Latour’s Earthbound epistemology, has become fashionable (Latour 2014; Wolford 2021). Across this Cene Craze, causal pluralism and its cognates have won the day (Moore et al. 2022d; Chwałczyk 2020).

For socialists, this marks an unsettling return to the Second International’s “‘factorial’ approach.” In this movement, quasi-independent factors (today, ecology, economy, race, gender, etc.) are separated and “thereby emptied of any effective socio-historical content” (Colletti 1972). The result is more than a series of epistemic rifts that “divorce” accumulation from the web of life, exploitation from domination, ideology from scientific knowledge, oppression from class (Colletti 1972). These dualisms seriously affect socialist climate justice efforts to cohere political unity. Meaningful unity cannot be organized based on a smorgasbord of class orthodoxy, oppressed groups, and economic fetishes (e.g., growth/degrowth) – all abstracted from their geohistorical relations, patterns, and historical crises (e.g., Foster 2022; see Moore 2022a). Unity-in-difference is meaningless when severed from capitalist geohistory.

Why should all this be so *unsettling*? Let us recall that such intellectual fragmentation preceded European social democracy’s support for war in 1914. At a time of Green New Dealism, the return of inter-imperialist war, and other

looming specters of green austerity for the Global South, we ignore the historical relations of national chauvinism, imperial knowledges, and de-historicizing fragmentation at our peril.

And yet to focus narrowly on this moment would surrender to one-sided doomism (Moore 2024). The Cene Craze is more than an ideological barrier to dialectical interpretations of the climate crisis and capitalism in the web of life. It is also a vital opportunity for how we might build out an interpretation of capitalism as a world-ecology of power, profit, and life (Moore 2015; Patel and Moore 2017; Antonacci 2021). Only a dialectical materialist approach to socio-ecological totality is sufficient to grapple with – and interpenetrate – the combined and uneven relations between geohistorical assessments of capitalism’s drive toward the planetary inferno and the political questions they imply.

The Capitalocene: From Geopoetics to Geohistory

This is the strategic contribution of the Capitalocene thesis. We’ll focus on two of its elements: geopoetry and geohistory.

The Capitalocene is a species of argument called geopoetics: literally, *earth poetry* (Last 2017). It directly provokes the imperialist cosmology of Man and Nature, fundamental to Civilizing Projects from Columbus onward (Patel and Moore 2017; Moore 2022a). Critics call the Capitalocene an inelegant formulation. Perhaps. But Anthro-po-cene? Shakespeare it ain’t.

The Capitalocene is, first and foremost, a challenge to an ideology of Nature that operates through Good Science. New Left thinkers called this “scientization” to denote the ideological laundering of contentious political issues into techno-scientific prescriptions (Habermas 1987). Good Science was indeed a major institutional and ideological node of American postwar hegemony (Selcer 2018). But Scientism was hardly a Cold War invention. It crystallized during the great climate crisis of the seventeenth century – this was the Cartesian Revolution – and was reproduced and reinvented across a long Malthusian cycle that commenced at the turn of the eighteenth century (Moore 2021a). The Anthropocene is its latest expression.

The relations between science and scientism are deeply embedded in the world histories of capital and empire. As Marx underlines, science and industry work hand-in-glove to produce capitalism’s historical natures. To defend the Anthropocene (and its cognates) on narrowly scientific grounds, to pretend that it is somehow innocent of questions of capital, ideology and class power is to take capitalism’s structures of knowledge at face value. (Not least its claims to value neutrality.) When *marxisante* Anthropocenists make such arguments, they ignore Marx’s warnings about the class character of modern science, which “has invaded and transformed human life all the more practically through the medium of industry” (Marx 1975a).

Marx’s insight reaches well beyond science as a productive force and incorporates *scientism* in its effective sublimation of class struggle. Man and Nature

become scientific “folk concepts” whose common sensibility is so robust that they are effectively immunized from ideological critique on an analytical or policy sphere. “Environmental problems” are correspondingly *preconceptualized*, inducing an extraordinary Cartesian habitus premised on a structural misrecognition, at the level of everyday life, of capitalism’s manifold class antagonisms (Haila and Heininen 1995). These are transmogrified through the alchemy of the Cartesian Revolution: the class struggle is rendered an externalist collision between Man and Nature (Bourdieu and Wacquant 1992; Dundes 2007).

This means something crucial: analytical contestation will not suffice when it comes to Man and Nature. These are not ideas but *belief structures* (Moore 2022e). They operate through plastic but sinewy and durable webs of folk concepts, intellectual frameworks, and political assumptions. They are *de facto* religious dogmas, secularized by capitalism’s “rational mastery of the world,” sanctified by Civilizing Projects (Weber 1951). The Anthropocene and its cognates operate through an affective dimension that resists analytical and empirical critique. It is akin to the widely-reported phenomenon of climate denialism: under conditions of dualism (“black-and-white thinking”), there is a strong psycho-social tendency to deny uncomfortable facts that might require a very different way of reckoning the world (Shapiro 2023). The more that critique builds, the stronger the denialism. From this standpoint, the Capitalocene unfolds an aesthetic and affective mode of critique, alongside its philosophical and geohistorical claims. It understands that *unthinking* the Anthropocene can only occur by *feeling* its conceptual violence, practically joined to the long history of Civilizing Projects and class war in which it’s embedded. The unthinking must proceed simultaneously at the levels of folk concept, academic fashion, and ruling ideology.

The Capitalocene’s geopoetics unfolds through geohistory: *Earth poetry and earth history*, mediated through the metabolic labor process, are joined in this reconstruction. In and through these geopoetic and geocultural arguments, the Capitalocene grounds its interpretations in a definite geohistorical line of march. World-ecology understands geohistory’s point of departure as Marx and Engels put it in *The German Ideology*: human social relations are defined by their “twofold relation,” social and natural, and both determine and are determined by “natural bases” (e.g., climate), “anthropological nature” as socio-ecological ensemble, and their “subsequent modification” (Marx and Engels 2010; Marx 1975a). The geohistorical movement is clear: successive phases in the development of class society and capitalism must be interpreted through this totality of the “twofold relation.” Every era of class society, and capitalism, is a product and producer of the web of life.

The Capitalocene thesis refuses to indulge the idealist fantasy of theory for the sake of theory; the Capitalocene is geohistorical, or it is nothing. Eschewing neo-Smithianism, resource determinism, and Anglo-centric property formalism, the Capitalocene thesis identifies the origins of capitalism and capitalogenic environment-making in the labor/landscape revolutions between 1450 and 1750

(Moore 2003; 2017c; 2018). In these centuries, capitalism became a biogeological force, creating a modern Pangea of biological flows through the globalizing infrastructures of capital, empire, and class formation. In its slaving-induced genocides, this twofold relation of power and profit in the web of life added a critical increment of capitalogenic forcing to the “long, cold seventeenth century”: the coldest moment of the Little Ice Age, itself the coldest period of the past 8,000 years (Cameron et al. 2015; Ladurie and Daux 2008; Lewis and Maslin 2015). After 1450, the scale, scope, and speed of environmental change across the Atlantic world outstripped anything seen in the halcyon days of Europe’s High Middle Ages. The difference was often an order of magnitude – a tenfold difference, give or take. The *speed* of early modern transformation was distinctive, and it remains crucial to capitalogenic environment-making in the twenty-first century. Only capitalism’s ability to advance frontiers of Cheap Nature – expanding opportunities for the appropriation of the unpaid work of “women, nature, and colonies” – enabled it to outrun the exhaustion of the socio-ecological conditions necessary to resolve overaccumulation crises and enable capital’s expanded reproduction (Mies 1986; Moore 2018).

The Capitalocene’s geohistorical method bears directly on one’s political conception of today’s climate crisis. For world-ecology, the unfolding climate crisis can only ever be grasped adequately through a penetrating reconstruction of its origins in the rise of capitalism. For us, the Little Ice Age and the first capitalogenic contributions to climate crisis in the long, cold seventeenth century were *fundamental* to the rise of capitalism – a dramatic contrast to ecosocialist narratives (Moore 2021a). The development of planetary crisis tendencies therefore cannot be adequately explained through population and scarcity “abstract[ed] from the historical process” (Marx 2010). Rather, these operate only through the history of capitalism, whose mediations establish evolving “special laws” of population, capital, and other conditions necessary to world accumulation’s evolving technical, social, and cultural requirements (Marx 1977). To this end, the Capitalocene foregrounds not only the “original” transition debate – from feudalism to capitalism – but also the periodic ruptures within, and reinventions of, the capitalist world-ecology through its successive developmental phases: waves of industrialization and imperialism above all. Then, and only then, can the *unfolding* “transition debate” – over the contours of the climate crisis and the character of the possible civilizational transitions ahead – be meaningfully discussed in a way that draws on Marx and Engels’ understanding of “scientific socialism” and the communist horizon (Moore 2021b).

In sum, the Capitalocene is a family of *geohistorical propositions* whose theory develops through “empirically verifiable” world history: its geohistorical interpretations may well be partial, one-sided, or incorrect (Marx and Engels 2010). But any “theoretical” critique levied against it is idealist insofar as it remains theoreticist; a *materialist* critique must take seriously capitalism’s world-historical emergence, developmental patterns, and crisis

formation. World-ecology offers this. So far, the ecosocialist critique has not. It has remained silent on these questions, indulging in theoreticist theory, in the process revealing its bourgeois tendencies: the “flight from world history” (Moore 2022b).

Name the System! Anthropogenesis, Capitalogenesis, and “Historical Man”

World-ecology prioritizes the dialectical unification of world-historical processes and relations that are frequently dualized and fragmented, by scholars no less than political actors – even those on the left. Here geopoetics entwine with geohistorical reconstruction in the critique of ideology and knowledge. These are not merely expressions, but socially necessary cultural dynamics and productive forces. As we are seeing, the Capitalocene critique foregrounds the demystification of bourgeois fetishes: Humanity, Nature, Society, Economy, Race, and Gender above all. You’ll notice the uppercase. This denotes fetishes that rise to the level of *ruling abstractions*, hegemonic ideas that run across capitalism’s *longue durée* (Patel and Moore 2017). These practically guide and inform bourgeois projects that ideologically justify, and instrumentally enable, the endless accumulation of capital. By their nature, such fetishes are ahistorical and dehistoricizing (Bhaskar 1979). Bourgeois science is especially crucial in making sense of the history of capitalism – including the history of these fetishes. Every great capitalist era has relied on science as a force of production, power, and destruction, and – through the “double transference” – as an ideological force of justification and mystification (Foster and Clark 2008).

Among the most corrosive assumptions in climate discussions today is the idea that capitalism is a subset of “human activity.” Here’s NASA: “Human activity is the cause of increased greenhouse gas concentrations” (NASA 2023). Socialists use identical language (Angus 2016). This is not a matter of parsing words. Quite the opposite! The phrase’s ubiquity indicates an acceptance of Man/Nature thinking so deep, and so pervasive, that to underline its ideological roots invites ridicule. Such is the power of folk concepts under bourgeois hegemony. But it’s hardly a footnote to capitalism’s ecologies to implicate a bloody and violent history of symbolic and material dispossession sublimated in the language of Man and Nature. These are words formed through the emergence of a new mode of thought, taking shape as a key moment in worldwide primitive accumulation – no less, during the climate crisis of the long seventeenth century (Williams 1983; Parker 2013).

Man and Nature are consequentially far from innocent. They intellectually cleanse and reproduce the ideological violence inscribed in Christianizing, Civilizing, and Developmentalist Projects since 1492. This has not persuaded the ecosocialist left. On the dominant left view, the climate crisis results from “anthropogenic rifts” abstractly connected to a plurality of capitalist

processes – but without any sense of how capitalism’s *internal* contradictions develop Foster and Clark 2016. Indeed, it should come as little surprise that internal contradictions are minimized, given the vaguely Schumpeterian and market-centered definitions of capitalism on offer (Foster et al. 2010). On this view, capitalism “will continue until the last tree is cut” – an expression derived from the German Green Party and before that, Max Weber (Foster 2002a). Such externalist conceptions of capitalism are hallmarks of bourgeois thought, and a far cry from Marx’s emphasis on the metabolic labor process as a class struggle in the web of life.

The Capitalocene charts a radically different approach to anthropogenesis and capitalogenesis. As we’ve suggested, the ideological power of “man in general” and “nature in general” is essentially precognitive and plays out at the level of folk concepts. These are “unthought categories of thought” – they “delimit the thinkable and predetermine the thought” (Bourdieu and Wacquant 1992). The ideological unconscious is difficult to dislodge because ideologies are not mere beliefs; they are *belief structures*. They are “material forces” (Marx 1978). (The resulting appearances are not narrowly false, but enter into the historical “reality” of an entity or process.) In this instance, folk concepts reshape not merely peoples’ minds, but their *brains*, in ways broadly similar to the influence of advertising (Carr 2010). In the well-traveled expression of neuroplasticity studies: neurons that fire together, wire together. Centuries of bourgeois thought-policing in service to empire and the law of value have installed Man and Nature as innocent and rational descriptions – and rewired our brains accordingly.

But innocent, Man and Nature are not. They are twin pillars of bourgeois ideology, embedded in successive Civilizing Projects, reproducing legitimate forms of geocultural domination: racism, sexism, and Prometheanism Moore 2022g. Abstract naturalism animates each, advancing “abstractly material” ideologies on the basis of “abstractly material” science (Marx 1975a). This is Good Science: “natural law” as justification of capitalist inequality and bourgeois domination. The double transference in play, from ideology to “abstract material” science and back to ideology. The Man/Nature cosmology is revealed not merely as an ideological farce, but as an instrumental force to advance the forces of production.

For two centuries, Marxists have pushed back against this ideologization. As we’ve seen, historical materialism emerges in opposition to the passive materialism of “man in general” and abstract naturalism. Marx and Engels prioritized the mutual formation of “historical man” and “natural history,” mediated through modern class structure and its first order alienation. In this “*industry* is [the bearer of] the *actual*, historical relationship of nature, and therefore of natural science, to man” (Marx 1975a). Modes of production possess a “twofold character” – social and natural in their concrete historical forms. They are at once producers and products of webs of life that necessarily

exceed the limited capacities of even the greatest civilizations. Thus, Engels' famous geopoetics of the "revenge" of webs of life in revolt against the bourgeoisie's Promethean conquests (Engels 1987).

In these early formulations, a definite thesis emerges. First, undialectical concepts – "chaotic concepts" such as Man and Nature – do not yield dialectical reconstructions of human history (Marx 1973). Fetish in, fetish out. To the degree that they rise to the status of ruling abstractions – Man, Nature, and Civilization above all – society must attend not only to their one-sided character but to their class basis. Every ruling class must either directly or indirectly set in motion a stratum of "conceptive ideologists" (Marx and Engels 2010). Today, these comprise the intellectual cadres associated with the professional-managerial class, whose task is to produce "scientific" (value-neutral) categories of perception and interpretation (Moore 2021b, 2022c).

Second, capitalism is not a derivative specification of "man in general." Marx and Engels' point of departure is not "man in general" but "historical man." This does not entail the reduction of the human species to its social "ensembles" – long a contentious *problematique* for historical materialism (Geras 1983). It *does* recognize that the historical character of biologically modern humans over the past 300,000 years or so – Braudel called this the "time of the sages" – admits only broad observations about modern hominins, mostly involving language, culture, and consciousness within enormously plastic forms of sociality (Braudel 2009). Any *geohistorical* claim must proceed through the concrete specification of socio-ecological "ensembles": *historical man*, not "man in general."

For Marx, anthropogenesis signifies the geohistorical process of creating "historical man" through a metabolism, grasped as a contradictory unity of labor processes that flow through the nexus of the "soil and the worker" (Marx 1977). *Historical man* is therefore an "ensemble" of socio-ecological relations – including the given geographical conditions and their "subsequent course of modification" by specific modes of production. Thus, the geohistorical tension between given "natural bases" (e.g., mountain ranges) and "anthropological nature." *Historical man* is emphatically not the idealist Man of the Anthropocene. It is, rather, the active materialist expression of a specific mode of production. In the capitalist era, the ontological conflict is not between Man and Nature but a class struggle whose "first order" pivot is the metabolic labor process (Mészáros 1970) – one that comprises, as Marx and Engels underscore, the relations of production *and* the reproduction of "fresh life in procreation" (Marx and Engels 2010; Seccombe 1992).

Why 1492 Matters: Cheap Nature, the Capitalocene, and Industrial Revolutions

The Capitalocene thesis challenges the philosophical claim that Humanity is a geohistorical agent, rather than a specific fetish that took shape in and through

the global conquests following 1492. The “discovery” of the Americas found its ideological expression in the “discovery of mankind” (Abulafia 2009). It was an ideological invention of the greatest significance. Nature and Humanity emerged through the activation of new “means of mental production” (Marx and Engels 2010). From it issued a new, epoch-making ruling idea: Humanity. Through it, the vast majority of humankind – female, pigmented, Celtic and Slavic, and countless others – were banished to Nature: such domination was not “othering” but rather *overing*, the specifically bourgeois assertion of geo-cultural power in service of geo-profiteering.

In this conjuncture, Humanity was produced as an epoch-making fetish. For Wynter, this was a decisive moment of ideological “over-representation” (Wynter 2003). The imperial bourgeoisie imagined itself as the “best of all mankind” – to quote JFK’s Moon Speech – and made sure that everyone behaved accordingly. Everyone else was not, or not yet, Human; only grueling, often unpaid and frequently deadly work would bring Light to the Savages, for whom Christianizing, Civilizing, and Developmentalist Projects promised Salvation (Patel and Moore 2017). The Capitalocene argument’s first priority is, consequentially, to unsettle the assumptions (Man and Nature, but including further fragmentation and taxonomization) that obscure the deadly relation between capital and its political, cultural, and class conditions of possibility.

The ruling abstractions of Man and Nature have been central to world accumulation. Recognizing with Luxemburg the centrality of geographical expansion to the (always-temporary) resolution of overaccumulation crises, the Capitalocene thesis joins the three moments – endless accumulation, endless domination, and endless conquest – to highlight capitalism as a logic of Cheap Nature (Luxemburg 2003). The history of Cheap Nature is a proposition about how capitalism works. A strategy and logic – not a thing – the history of Cheap Nature reveals capitalism’s prioritization of the “endless” identification and thence extra-economic appropriation of the Four Cheaps: labor-power and unpaid work, food, energy, and raw materials. Every great wave of world accumulation has depended upon a critical mass of these Four Cheaps, without which the surplus capital problem intensifies, and devalorization of capital threatens.

We can trace the lineages of Cheap Nature – and its fetishes of Society and Nature – to early capitalist ideology: bourgeois naturalism and its Civilizing Projects. In the first great era of capitalogenic climate crisis (c. 1550–1700), the new empires proceeded to “fix” the crisis through new imperialist advances that consolidated new labor regimes, many centered on plantations, from Ireland to the West Indies. It marked the crystallization of the Civilizing Project and the violent redefinition of colonized peoples as “savage.” This combination generated what has been called the capitalogenic trinity: the climate class divide, climate apartheid, and climate patriarchy (Moore 2021a).

The Project's horrific genius was the redefinition of humankind's vast majority as part of Nature; such bourgeois naturalism quickly and terribly gave rise to globalizing patriarchy and successive world color lines. Why? In a word, to facilitate the creation of the Four Cheaps and thereby to advance the rate of profit, to counteract the overaccumulation tendency. Can that be reduced to the "immanent laws" of capitalism? *No*. And that's the point. The Civilizing Project and the invention specifically of Nature as a *ruling abstraction* became a world-historical lever of cost-reduction for capital. Nature, to paraphrase von Werlhof, became everything the new bourgeoisies did not want to pay for (Werlhof 1988). The world-ecological alternative does not argue that Society and Nature do not exist; *they emphatically do exist*. Man, Nature, Society, Civilization, are all ruling abstractions, pillars of bourgeois naturalism, and imperial projects over the *longue durée*.

The Capitalocene emerged through the climate–class crisis of feudalism in the long fourteenth century Moore 2003, 2021a. It was an epochal crisis characterized not merely by manifold biophysical problems but also by the world-historical defeat of feudalism's ruling strata by the era's semi-proletarian and peasant forces. The result, in successive moments of crisis (political, class, economic, and cultural), was a reorientation of late medieval Europe's dominant strata toward a new form of frontier-making that would immediately subordinate eastern Europe, Ireland, and the Americas to an audacious form of imperial rule, dominated by the logic of Cheap Nature.

This strategy of Cheapness fused the logic of capital (valorization) with a new, binarized geocultural logic: devaluation. Thus, the centrality of the Civilizing Project and its ruling abstractions. At its core was the securing of "socially-necessary" unpaid work via extra-economic means. This was accumulation by appropriation (Moore 2018). Those appropriations would – directly and indirectly – advance labor productivity within an exceedingly narrow sphere: the cash nexus. The new value-oriented technics – crystallizations of tools and ideas, power, and nature – allowed the prodigious appropriation of uncommodified work/energy, advancing labor productivity (as Marx observes, the appropriation of "natural fertility" functions like fixed capital) (Marx 1973). The great leap forward in the scale, scope, and speed of landscape and biological transformations in the three centuries after 1450 – stretching from Poland to Brazil, from the North Atlantic's cod fisheries to Southeast Asia's spice islands – may be understood in this light. From 1492, the imperialist bourgeoisies "discovered" not just new continents to exploit and appropriate, but an entirely novel socio-ecological logic of power, profit, and life: Cheap Nature.

Despite all the significant differences between the 1492 and 1830 theses, both prioritize the rise of capitalism. For Malm, it's an Anglo-centric story shaped by the geographies of class struggle, technical innovation, and the coal revolution (Malm 2016). For us, it's the epoch-making land/labor revolution after 1492, producing a capitalist world-ecology. Neither seeks to substitute

human for geological history. Both are staunch critics of economism, insisting on the centrality of political power in establishing and reproducing the necessary conditions of endless accumulation. The two differ, however, on the conception of capitalism as metabolic regime. For world-ecology, substances *become* resources through the “activation of potentialities slumbering within nature”; for Malm, the relations of capital move *around* coal, rather than activating and incorporating coal’s potentialities as significant moments of Marx’s circulating constant capital (Marx 1977).

This is no quibble. There are significant points of agreement and differences between the 1830 and 1492 Capitalocene theses: over capitalism, the class struggle, the generative possibilities of the *oikeios* as a multi-layered and creative pulse of life-making, the role of bourgeois ideology, and the power of the fetishes of Nature and Society. Simply put, for Malm, the class struggles in early nineteenth-century English mill towns propelled the bourgeoisie to reconcentrate industrial production, powered by steam engines, in major cities like Manchester. Thus “fossil capital” was born and became a weapon in the bourgeoisie’s class victory over an increasingly militant industrial proletariat (Malm 2016). For the 1492 thesis, Malm’s fossil capital argument is one crucial element in a longer story.

We disagree with Malm’s periodization not because the long nineteenth century was epiphenomenal. It wasn’t. The fossil capital thesis denies, however, the constitutive geohistorical relations – from the Baltic to Barbados – that prefigured and accompanied large-scale industry before and after 1800. These are front-and-center for the 1492 argument: the connective tissues between the plantation complex, its trans-Atlantic class dynamics, and its contributions to capital formation in industrializing Britain (Genovese 1979; Blackburn 1997; Rediker and Linebaugh 2000; Williams 2022). The world-ecology position does not deny the significance of the productive forces. But we understand these differently, painfully aware of a longer history in which the “idea of mechanical progress... [presents itself] not merely as a necessary development but as an end in itself, almost as a kind of religion” (Orwell 1937). (As Orwell underlines, such a religious view hobbled socialist strategy no less than it enhanced bourgeois power.) From this perspective, we view the productive forces as configurations of capital, class, and technique – Mumford’s *technics* – and situates these within the imperialist dynamics of accumulation (Mumford 1934; Moore 2018). The productive forces are, in this conception, technological movements that comprise “software” alongside “hardware” – cartographic and calculative technologies alongside machinery (Moore 2023).

Simply: coal and steam were nothing without cheap cotton, and cheap cotton was nothing without the cotton gin, the second slavery, and the dispossession of indigenous peoples alongside the imperialist de-industrialization of India and Ireland. How the *technics* of coal mining, textile manufacture, and the cotton gin fit together is worth integrating into the assessment of the climate crisis. We have mentioned, climate apartheid as a creation of the sugar

plantation system in the long seventeenth century. At the turn of the eighteenth century – in another climate downturn (the Dalton minimum) – the world color line was again reinvented through a new mass commodity with a new repertoire of agro-industrialization.

The geographical locus of industrialization was never England as such. It depended on imperial deindustrialization and agro-industrialization from India to Ireland to Mississippi. This world-historical dynamic rendered the cotton gin a strategic technical node in the era's modest – but significant – industrialization. Marx thought as much when he reckoned that only the dramatic cheapening of cotton made large-scale industry possible (Marx 1971).

Anthropocene and fossil capital are not problematic because they assert turning points: of the early nineteenth century or the mid-twentieth century. They are problematic because they preconceptualize the problem into potted histories. These stylized narratives masquerade as history; in reality, they are ideological claims dressed up as history. “Great Acceleration” narratives cleave world accumulation, inter-imperialist rivalry, and worldwide class struggles (from above and below) in favor of a world-historical approach that scales out from the Anthropocene's aggregated “trajectories” (McNeill and Engelke 2016). Fossil capital, for its part, scales out and up from regional class struggles and technical developments in the early nineteenth century. In both instances, these potted histories implicate crucial moments of socio-ecological crisis formation while unnecessarily reducing the narrative to one moment of a richer world-historical process. Such one-sided histories derive from a series of more or less conscious reductionisms that stem from methodological nationalism fused with substance fetishism (fossil capital), or an abstracted methodological economism fused with neo-Smithian market fetishism (the great acceleration).

Such potted histories are pivotal to the formation of social theory, economic history, and Green Thought: all locate “the” Industrial Revolution as their lodestar. This is the Industrialization Moore 2003. That so many ecosocialists accept the transition of the long nineteenth century as *the* origin of capitalism cannot be explained by some rigorous ecosocialist investigation of – and debate over – the world-historical origins of today's epochal crisis. The centrality of historical debate over the origins of capitalism and the tasks of the socialist movement (such as it is) has been buried by Anthropocenists and ecosocialists alike.

Good Science, Big Lies: Capitalocene Vistas, Socialist Possibilities

The Popular Anthropocene is only the most recent slogan of Imperial Environmentalism. Indeed, the Popular Anthropocene recapitulates practically everything about its predecessor: Spaceship Earth. Both Environmentalist super-concepts aimed to contain a dangerous possibility: radicals might join

their critique of work and power with a program for a broadly defined environmental justice. This is why the Capitalocene is a dangerous idea (Moore 2022a).

Dangerous ideas have a way of escaping from the rulers' prisonhouses in times of crisis. Even Greta Thunberg, until now a well-behaved and rather conventional Environmentalist, now flirts with anti-capitalist critique – one that resonates with a significant generational shift across the rich countries, against capitalism and for socialism (Thunberg 2022). No matter that both the critique of capitalism and openness to socialism are ill-defined and flimsy. One would expect nothing less after a half-century of worldwide class war by the rich against the world's working class and peasant majority; the overthrow of state socialisms; and three decades of American unipolar regime change and counter-insurgency politics across the Global South. And one would expect nothing less after a half-century of the Environmentalism of the Rich – since the first Earth Day (1970) a pillar of neoliberalism, with its hyper-individualized market-oriented virtue signaling and well-documented hostility toward the working class. The long arc of this neoliberal Environmentalism – marketed through its super-concepts of Spaceship Earth and the Anthropocene – is coming to an end (Moore 2022a).

We are therefore at a juncture, a new transitional moment, greater than any since the first agricultural revolution in the early millennia of the Holocene. Will the transition be “decadent,” with the One Percent re-engineering planetary life in service to a new, new, hierarchical and exploitative, but non-capitalist, civilization? Or will it be revolutionary, one in which the associated producers and reproducers seize the means of mental and material production, and reinvent these on the road to planetary socialism (Amin 2018)? The answer is of course unknowable. But the revolutionary path will remain utopian so long as we continue to indulge the ahistorical and bourgeois modes of thinking – resting on Man, Nature, and Civilization – that enabled the climate crisis. Without a return to world history – to be sure a necessary but insufficient movement – struggles for planetary justice will remain fragmented and divided, existing solutions stained by bourgeois and professional virtue signaling and managerialism. It is to these dangers that the Capitalocene thesis speaks.

For centuries, the bourgeoisie's “conceptive ideologists” have delivered a clear message to the dangerous classes (Marx and Engels 2010): “Listen to the science.” It is a central theme in a post-1968 environmentalism defined by such scientism. Even earlier, the science/scientism nexus was paramount. One cannot tell the story of postwar capitalism without addressing the centrality of Good Science in the interwoven history of world power, world accumulation, and world nature. The scientific development of “natural law” has, emphatically since 1945, converted the *political* problems of monopoly capitalism into techno-scientific “issues.” Not just biological and geophysical problems but also “social” problems were to be “managed” by enlightened technocrats and scientists.

Listen to the science. A world of difference turns on a single three-letter article: *the*. Listen to *scientists*? Of course! Listen to *the science*? That's another matter entirely. Big Science is not only a force of production, an enabling condition of prodigious extraction and exploitation. It's also Good Science, the "fraternal code of the world's accumulators of capital. It [justified]... both their own activities and the differential rewards from which they benefited" (Wallerstein 1983). Every superpower, and every great phase of capitalism, depended on one or other version of this Civilizing Project, fusing Big Science as force of production and legitimating code. Man and Nature must be managed scientifically and rationally by scientific and rational institutions: states, markets, and firms.

It underscores the Big Lie, repeated since the birth of capitalism. It says: the problems created by *capitalism* are not capitalism's fault; they are the fault of human nature, as if modern genocide and ecocide is simply a matter of humans being human, like zebras will be zebras, or salamanders will be salamanders.

We have now come full circle. The Capitalocene depends on successive Civilizing Projects that seek to create new profit-making opportunities through Cheap Nature: a strategy of (economic) valorization and (geocultural) devaluation. Since 1492, Civilizing Projects have turned on a Nature that includes most humans. That *Nature* is a ruling abstraction at the core of manifold Christianizing, Civilizing, and Developmentalist Projects.

The immanent critique of capitalism as world-ecology must necessarily speak to the revolutionary possibilities. And they can be no more than possibilities at this conjuncture. To invoke the Capitalocene in the spirit of Marx and Engels is to implicate socialist internationalism and planetary justice. Such justice means the liberation of all life from the tyranny of capitalist work – or it is nothing. It is a vision for a biotarian socialism, for a *Proletarocene* (Salvage Collective 2021). It demands the emancipation of proletariat, femitariat, and biotariat – the interpenetrating relations of work and power that re/produce the work, paid and unpaid, human and extra-human, necessary for the endless accumulation of capital. In the climate crisis, a biotarian socialism grasps the web of life as a class struggle, such that an injury to one is an injury to all (to borrow a slogan of the American labor movement).

Intellectually, the Capitalocene thesis – and the world-ecology conversation in which it's embedded – invites a revolutionary reimagining of Man, Nature, and Civilization. To unthink the Anthropocene we must unthink the substantialism with us since the Cartesian Revolution, and how it has been fundamental to reactionary and imperial politics since the long, cold seventeenth century. In this reimagining – and unthinking – we can embrace and unfold an ethic of synthesis that strives to conceptualize and clarify the rich totality of many determinations that characterize and make modernity as a capitalist world-ecology.

Such intellectual revolutions are not the be-all and end-all of movements for climate justice. Nor are they incidental. Marx's point about philosophy and changing the world was not about the insignificance of philosophy, but the centrality of an active – dare we say *proletarian*? – materialism. It recognizes, and speaks to, the unevenness of the conditions for planetary socialism. This is precisely why the dialectical imagination is more crucial than ever: the surficial fragmentation of planetary and everyday life into the silos of nation, race, gender, and sexuality – abstracted at every turn from the unifying threads of capital and class in the web of life – has and will continue to produce a politics of accommodation to late capitalism and its planetary managers. The flight from world history will prevent us from seeing – and targeting the weak links of – the capitalogenic trinity. The climate class divide, climate apartheid, and climate patriarchy are not the results of climate change today, but pivotal to a long history of capitalogenic environment-making.

This world-historical recognition is fundamental to forging a socialist vision premised on the internationalism of the direct re/producers and the liberation of planetary life: “*the creatures, too, must become free.*” Marx's condemnation of capitalism's degradation of the “soil and the worker” affirms its revolutionary possibilities. For Marx, the essence of proletarian revolution is found in the relations joining the inner and outer moments of work, life, and struggle under capitalism. The “social metabolism” is the terrain of class struggle in the Capitalocene. The bourgeoisie ignores this.

They believe their Big Lie. We don't have to.

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RADICAL POLITICAL ECONOMICS

Principles, Perspectives, and
Post-Capitalist Futures

EDITED BY MONA ALI AND
ANN E. DAVIS



RADICAL POLITICAL ECONOMICS

This collection of essays engages in the analysis of key concepts, concerns, and cutting-edge insights in radical political economy.

Offering a robust critique of capitalist institutions as well as of mainstream economics, radical political economics reveals the structures and dynamics of global capitalism. The attention to method, ideology, and institutions differentiates it from mainstream approaches to economics, which often obfuscate how capitalism actually works. While maintaining a central focus on capitalism, the analyses in this book encompass a variety of issues from racial discrimination, gender inequality, to economic development and imperialism. Capitalism is an economic system based on the exploitation of workers to generate surplus value (profit) which is then appropriated by the owners of capital. Under global capitalism, profit maximization precedes other social concerns such as protection of the environment. Political economy understands that social relations are shaped by class, race, geography, and gender. Capitalism skews social relations of production and reproduction. It perpetuates inequalities along classed, gendered, racialized, and geographic lines.

Radical political economy offers ideas and policies to change capitalism, in ways that are more beneficial for people and the planet. Incorporating insights from a range of disciplines including history, philosophy, political science, anthropology, sociology, and law, the wide range of topics, diverse set of scholars, and consideration of future political-economy formations offers readers a deeper understanding of the contours of contemporary global capitalism and post-capitalist possibilities in the twenty-first century.

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