

Antiphysis/Antipraxis: Universal Exhaustion and the Tragedy of Materiality¹

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“If the question of the relation of nature and history is to be seriously posed, then it only offers any chance of solution if it is possible *to comprehend historical being in its most extreme historical determinacy, where it is most historical, as natural being, or if it were possible to comprehend nature as an historical being where it seems to rest most deeply in itself as nature.*”

- Theodor W. Adorno, ‘The Idea of Natural History’ (1932)

Evoking the work of the French psychologist Alfred Binet on school children, Anson Rabinbach, in *The Human Motor* (1990), his masterful history of the energy-labour nexus, notes that “the critical distinction between fatigue and exhaustion was between the normal and the pathological, between the adequate ‘speed of reparation,’ which rest provided, and the lack of reparation in exhaustion.” Exhaustion sets in when the “legitimate boundaries of fatigue” were transgressed. Or, in the cognate definition in Albert Deschamps’s 1908 *Les Maladies de l’énergie*, exhaustion is “an accumulation of fatigues which were only incompletely restored.”² It is thus possible to propose a preliminary distinction between fatigue and exhaustion by locating fatigue on the side of *production* and exhaustion on that of *reproduction*. Exhaustion occurs, therefore, when a limit or threshold has been crossed such that the reproduction of a certain bodily or relational state is no longer possible.

Though I will not abandon the horizon of individual or subjective exhaustion entirely, in what follows I am concerned with thinking this “energetic” impasse of reproducibility in a more systemic vein, approaching the theme of exhaustion as a prism through which to connect contemporary debates on the consequences of climate change to theorizations of the

multiple crises of social reproduction. I will approach exhaustion as a kind of limit-concept that allows the exploration of the zones of indiscernibility between the philosophy of history and the philosophy of nature, an indiscernibility whose proper name might be materialism. The theoretical context for this inquiry is twofold. First, I want to address some pioneering recent work that endeavors to produce a historical materialist critique of the ambient discourse on the “Anthropocene,” in particular the work of Andreas Malm (*Fossil Capital* 2016) and Jason W. Moore (*Capitalism in the Web of Life* 2015). By homing in on the leitmotiv of exhaustion — and particularly Moore’s distinction between its relative and absolute modalities — I want to explore how what Malm calls “theory in a warming world”³ strives to articulate the question of the relationship between the limits to capital and the limits to nature. Second, as will hopefully become clear in my concluding considerations on Jean-Paul Sartre’s *Critique of Dialectical Reason* (1960), I want to place the question of exhaustion, and more specifically of the agency “behind” exhaustion, in the framework of an on-going project to rethink *tragedy* as a political form.⁴ In particular, Sartre’s concept of “matter as inverted praxis,” exemplified by his dialectical vignette on peasant labour and deforestation in China, will allow me to sketch the idea of a *tragedy of materiality*, which I hope can cut across the agential and ontological debates raised by the geological baptism of the Anthropocene, not least the debate about *who* this Anthropos might be, and to what extent its actions require either a *dualist* or a *holist* take on the relationship between human Society and Nature (my tentative answer will be: neither).

It is my contention that the problem of “natural history” is at the heart of any reconstruction of a truly dialectical critical theory capable of testing its cognitive powers against a catastrophic present. The nature, which is also to say the necessity, in history has long been the locus of tragedy, but the figure of tragic agency needs to be thoroughly revised in light of what recent theoretical concern with anthropogenic climate change foregrounds but fails to illuminate — the immanence of social praxis to material nature. By way of a historical corrective to the self-congratulatory notes sounded by talk of the Anthropocene — whose claims for novelty are often hard to detach from the conceptual boosterism that infects the critique of capitalism with the spirit of its target — I begin with a short and admittedly impressionistic history of exhaustion. Nineteenth-century concerns with the irrevocable depletion of nature, rich in material lessons, were also accompanied by speculative, cosmopolitical efforts, wherein humanity was thought in terms both of its ends and its end. Attention to the contrasts and overlaps between exhaustion, degradation, and entropy as natural-historical ideologies, may perhaps serve as an antidote to the rush to establish the

Anthropocene as the keyword of our present. It can also provide us with a more nuanced sense of the context of emergence of the historical materialist theory of the relations between political economy and nature – namely in Marx’s wrestling with debates on soil exhaustion – especially when that theory, creatively revised, is providing the richest counter to what may be the ultimate twist in the ideological work of naturalization: naturalizing humanity’s transformation of nature. The paper then moves to a consideration of Moore’s contribution to the thinking of the exhaustion of historical natures, foregrounding the interaction of logics of appropriation and exploitation, and thence to an exploration of how the very structure of the exploitation of labour-power gives capitalist exhaustion its shape as the accelerating wastage of material natures. Notwithstanding the wealth of theoretical articulation and insight produced by the debates under review, I contend that they reach an impasse of sorts when they are translated into the metaphysical discourse of dualism or monism. Whence the perhaps unfashionable, concluding suggestion that we turn to Sartre’s dialectical excavation of the tragic structure that haunts relations between praxis and matter as a possible model for incorporating a theory of action into our arguments about exhaustion.

Exhaustion, Degradation, Entropology

The expression “universal” or “general exhaustion” (*die allgemeine Erschöpfung* in German) is taken from a famously “prophetic”⁵ text of Friedrich Engels from 1887 which anticipated, with grim lucidity, the unraveling of World War One three decades thence:

Eight to ten millions of soldiers will massacre one another and in doing so devour the whole of Europe until they have stripped it barer than any swarm of locusts has ever done. The devastations of the Thirty Years’ War compressed into three or four years, and spread over the whole Continent; famine, pestilence, general demoralisation both of the armies and of the mass of the people produced by acute distress ... absolute impossibility of foreseeing how it will all end and who will come out of the struggle as victor; only one result is absolutely certain: general exhaustion and the establishment of the conditions for the ultimate victory of the working class.⁶

Prospected from within the ambit of Marxism’s overall political epistemology of crisis, this *exhaustion* is figured as a prelude to proletarian victory, in which the horrific autophagic agony of bourgeois civilization shades into the birth-pangs of socialist society. Spent, no longer able to reproduce itself, capitalism is exhausted in the sense of *irreparable*.

Exhaustion is a revolutionary precursor. It is striking how much this model repeats another text on war and humanity’s emancipation, from a hundred years before, namely Immanuel

Kant's 1784 "Idea of Universal History on a Cosmopolitical Plan," which I quote here in Thomas De Quincey's translation:

Nature accordingly avails herself of the spirit of enmity in Man, as existing even in the great national corporations of that animal, for the purpose of attaining through the inevitable antagonism of this spirit a state of rest and security: i.e. by wars, by the immoderate exhaustion of incessant preparations for war, and by the pressure of evil consequences ... she drives nations to all sorts of experiments and expedients; and finally, after infinite devastations, ruin, and universal exhaustion of energy, to one which reason should have suggested without the cost of so sad an experience, — viz. to quit the barbarous condition of lawless power, and to enter into a federal league of nations.⁷

Collective will is born from an antagonism (unsociable sociability, class struggle, world war, and civil war) that requires the *exhaustion* of the energies fixed in the prior dispensation of powers, the crossing of a threshold of reproducibility. It is a concept in a philosophy of history (and in Kant's case of nature and natural purpose) — as signaled by its "inevitability." For Kant, nature's cosmopolitical plan is "the *inevitable* resource and mode of escape under that pressure of evil which nations reciprocally inflict." For Engels addressing the masters of war, this entails that "at the end of the tragedy [they] will be ruined and the victory of the proletariat will either have already been achieved or else *inevitable*."⁸

Yet Engels was also the thinker of another inevitability, another exhaustion: the exhaustion of (human) history in and by nature. Responding to widespread, contentious debates on the laws of thermodynamics and the thesis of a heat-death of the universe (a theme revived in more recent times by Jean-François Lyotard in *The Inhuman* and Ray Brassier in *Nihil Unbound*), Engels, while strenuously rejecting the idea of a *universal* heat-death — which he regarded as saturated with crypto-theological eschatologies of exhaustion — contemplated the... inevitable demise of humanity.⁹ He did so in a lyrical passage that the Italian Marxist philologist and philosopher Sebastiano Timpanaro, advancing a pessimist and naturalist materialism equal parts Marx and Giacomo Leopardi, praised for showing that socialism need not require delusions of species immortality.¹⁰ In the Introduction to his *Dialectics of Nature*, Engels writes:

Millions of years may elapse, hundreds of thousands of generations be born and die, but inexorably the time will come when the declining warmth of the sun will no longer suffice to melt the ice thrusting itself forward from the poles; when the human race, crowding more and more about the equator, will finally no longer find even

there enough heat for life; when gradually even the last trace of organic life will vanish; and the earth, an extinct frozen globe like the moon, will circle in deepest darkness and in an ever narrower orbit about the equally extinct sun, and at last fall into it.¹¹

Engels also acknowledged his precursors, writing in *Anti-Dühring*: “As Kant introduced into natural science the ultimate destruction of the earth, so Fourier introduced into historical thought the ultimate extinction of humanity.”¹² It is to Charles Fourier that the historians of science Christophe Bonneuil and Jean-Baptiste Fressoz, in their *The Shock of the Anthropocene*, have recently turned to show how — contrary to the weird self-congratulatory tendencies of contemporary commentators — nineteenth-century thought did not just entertain apocalyptic visions particular to the its industrial, imperial and financialized regimes of accumulation, but was strikingly cognizant of anthropogenic climate and environmental change.¹³ Ironically, from our present vantage, Fourier’s concern was the *cooling* of the climate, a “malady of the earth” that he regarded as a product of social immobility and stagnation, of the delay of a transition to socialism. The material suffering of the planet was of a piece with human suffering, and, as he observed in his unpublished 1822 manuscript *De la détérioration matérielle de la planète*, “the prolongation of the social limbo causes a rapid progress in climactic vices,” leading to forms of material and social exhaustion that bourgeois society is congenitally incapable of preventing.¹⁴

The preoccupation with social and material exhaustion, anthropogenic and otherwise, traverses the Victorian era, surfacing, for instance, in the anarchist geographer Piotr Kropotkin’s work on the climactic sources of Eurasian desiccation (recently recovered by Mike Davis),¹⁵ in Gabriel Tarde’s science-fiction of “solar anaemia”,¹⁶ in Antoine Augustin Cournot’s warning to Léon Walras that the *laissez-faire* “curves of intensive and extensive utility” would lead to devastating deforestation and racial domination, or in Ruskin’s delirious speculations on “The Storm-Cloud of the Nineteenth Century,” wherein wind “figures the degradation of all existing structures.”¹⁷ “Ruskin,” Thomas Richards tell us, “closes his lecture by meditating on that sunless entropic end: ‘the Empire of England, on which formerly the sun never set, has become one on which he never rises.’ Here the heat-death of the universe has become the heat-death of the Empire.”¹⁸ This recalls George Caffentzis’s observation about capitalist apocalypticism: “Whenever the ongoing model of exploitation becomes untenable, capital has intimations of mortality *qua* the world’s end”.¹⁹

A striking index of the resilience of these overlapping nineteenth-century discourses of exhaustion and degradation can be found in the work of Claude Lévi-Strauss. As Patrick

Wilcken recounts in his recent biography, Lévi-Strauss, having been invited by UNESCO in 1971 to reprise the critique of racial thought articulated in the 1952 *Race and History*, caused notable embarrassment to his hosts by evoking the warnings about cultural and racial dedifferentiation infamously voiced by Count Gobineau in that seminal tract of racist theory, *An Essay on the Inequality of Human Races*.²⁰ What is symptomatic in Lévi-Strauss' anthropological plea for the defense of cultural diversity is the extent to which it bears witness to the lamination in his thought of two nineteenth-century discourses of exhaustion, that of (cultural, racial and biological) *degradation* — deployed both to bolster the efforts of criminological science²¹ and to justify the genocidal tendencies of settler colonialism²² — and the thermodynamic discourses of *entropy*. In the concluding pages of his melancholy masterpiece *Tristes Tropiques*, Lévi-Strauss, echoing the figure of species annihilation already rehearsed by Engels in the *Dialectics of Nature*, to reflect upon the task of the anthropologist, doubling the exhaustion of the very cultures he studies with the exhaustion of the human race as such. The latter, far from a conserver of cultural and historical diversity, is depicted in all its tragic-ironic ambivalence: protection turns into destruction, the fixing of difference accelerates dedifferentiation.²³ Lévi-Strauss anticipates the invocation of inertia of his great opponent, Sartre, while trying to transcode entropy into a discourse about culture:

[Man's] role is itself a machine, brought perhaps to a greater point of perfection than any other, whose activity hastens the disintegration of an initial order and precipitates a powerfully organized Matter towards a condition of inertia which grows ever greater and will one day prove definitive. From the day when he first learned how to breathe and how to keep himself alive, through the discovery of fire and right up to the invention of the atomic and thermonuclear devices of the present day, Man has never save only when he reproduces himself done other than cheerfully dismantle million upon million of structures and reduce their elements to a state in which they can no longer be reintegrated. No doubt he has built cities and brought the soil to fruition; but if we examine these activities closely we shall find that they also are inertia-producing machines, whose scale and speed of action are infinitely greater than the amount of organization implied in them. ... Taken as a whole, therefore, civilization can be described as a prodigiously complicated mechanism: tempting as it would be to regard it as our universe's best hope of survival, its true function is to produce what physicists call entropy: inertia, that is to say.

Whence Lévi-Strauss's punning proposal to rechristen anthropology as *entropology*, the "discipline that devotes itself to the study of this process of disintegration in its most highly

evolved forms.”²⁴ The cosmic-cultural pessimism of the final pages of *Tristes Tropiques*, leavened or even redeemed by an aestheticized figure of “grace,”²⁵ is modulated somewhat in Lévi-Strauss’s later speculations on how “just” societies could be considered in terms of entropy-transfers, from society to culture; riffing on a Saint-Simonian dictum, he proposes that:

A society is at once a machine and the work done by that machine. As a steam engine, it produces entropy, but if we look upon it as a mechanism, it produces order. This dual aspect — order and disorder — corresponds, in the language of anthropology, to two ways of looking at any civilisation: there is, on the one hand, culture, and on the other, society. By culture, we mean the relationships that the members of a given civilisation have with the external world, and by society, we mean more especially the relations men have with each other. Culture produces organisation: ploughing the land, building houses, manufacturing objects, etc. ... society ... produces entropy, or disorder. “Government of men” corresponds to society and increasing entropy; “administration of things” corresponds to culture and the creation of an increasingly varied and complex order.²⁶

Lévi-Strauss “entropological” musings on the exhaustion of cultural difference, and his tentative speculations on social justice as an energetic balancing-act, can be approached both as a speculative synthesis of many of the aforementioned strands of nineteenth-century thought (thus providing a somewhat different genealogy to structuralist anti-humanism than we are accustomed to) and as an important contrast to what we could, by way of approximation, term a dialectical tradition in the thinking of exhaustion, which I would like to explore in what follows, beginning with Marx’s deployment of the language of exhaustion, through recent Marxist critiques of the dominant discourses of the Anthropocene, and concluding with the (tragic) place of material exhaustion in the account of historical praxis in the *Critique of Dialectical Reason* — the very target of Lévi-Strauss’s *The Savage Mind*.

The Historical Nature of Exhaustion and the Exhaustion of Historical Natures

The most complex *social* figure of exhaustion emerging from the multifarious debates of the nineteenth century — with their abrupt shifts in register, from the energetic to the racial, the biological to the climactic, and so on — was arguably the one drawn by Marx from the soil exhaustion debates. Unlike the negative philosophies of history that could be distilled from ideologies of degeneration and entropy, Marx’s metabolic thinking sought to reckon with the deeply destructive impact of bourgeois society’s exploitation of human, animal and material

natures while having no truck with speculative philosophies of histories anchored in various strains of civilizational pessimism, with all their dubious variations on the theme of the decline of the West. As proponents of the “metabolic rift” interpretation of ecological Marxism have argued, it was in his readings of the work of scientists like Justus von Leibig on soil chemistry or Carl Fraas on agrarian crises, readings filling copious notebooks during the composition of *Capital*, that Marx developed a conception of the immanent relations between capitalist accumulation and natural exhaustion. In this conceptualization of socio-ecological exhaustion, Marx developed the insight of nature as an internal limit to (the reproduction of) capital and capital as an internal limit to (the reproduction of) nature.

In the first volume of *Capital*, Marx would write of how the capitalist mode of production

collects the population together in great centres, and causes the urban population to achieve an ever-greater preponderance. ... [It] disturbs the metabolic interaction between man and the earth, i.e., it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. Thus it destroys at the same time the physical health of the urban worker, and the intellectual life of the rural worker.²⁷

This insight was joined by related ones, namely that the *time required for the reproduction of nature is generally too long for capital, and indeed is in contradiction with its turnover times*; that capital accumulation requires an *accelerating exhaustion of nature*; and that, most significantly, such exhaustion can only be prevented by the social planning of this metabolism (Marx remarked upon the way in which contemporary accounts of environmental exhaustion, be it through deforestation, desiccation or soil exhaustion were haunted by an “unconscious socialist tendency”).²⁸

The analogy and dialectic between the exhaustion of natural “resources” and the exhaustion — beyond fatigue, beyond reproduction — of the bodies of laborers is a critical juncture in *Das Kapital* itself. As Marx writes:

Capital asks no questions about the length of life of labour-power. What interests it is purely and simply the maximum of labour-power that can be set in motion in a working day. It attains this objective by shortening the life of labour-power, *in the same way* as a greedy farmer snatches more produce from the soil by robbing it of its fertility.²⁹

Labour may be conceived by Marx as a paradoxical “extinguishing fire,” the productive consumption of fixed capital and raw materials, but it also a self-extinguishing which is at work under the accelerative imperatives of capital — an extinguishing or degradation of the actual, physiological bearers of concrete living labors, which goes hand in hand with the extinguishing or degradation of nature.³⁰ In this parallel, between the worker and the soil (or nature), as the sole ultimate sources of social wealth, Marx alerts us to the possibility, immanent to the imperatives of capital, of *an expanding crisis of reproduction*, in which the living sources of value come to be exhausted — a process which, as the entire chapter on the working day demonstrates, with its meticulous attention to the degradation of laboring bodies, diets, reproductive systems, etc. is profoundly affected by class struggles, which are always (and I am tempted to argue above all) struggles over reproduction.

While the theme and notion of exhaustion pervades the writing of Marx and Engels, circulating between the enervation of proletarian bodies, the depletion of natural processes and the degradations of bourgeois civilization, and resonating with a vast array of contemporaneous literatures of exhaustion, it is not as such the object of sustained, direct theoretical treatment.

By way of rectification, I want to turn here to Jason W. Moore’s *Capitalism in the Web of Life*, which includes an illuminating discussion of the distinction between relative and absolute exhaustion.³¹ Some basic coordinates to Moore’s complex and ambitious theoretical work are in order. *Capitalism in the Web of Life* is a critical intervention into the ecological Marxist debate, combining the historical methodology of world-systems theory and an ontological claim about the “double internality” of nature and capitalism in an insistent polemic against any dualism of nature and society (of which he also accuses “metabolic rift” ecological Marxism). It is not surprising then, in arguing against what he sees as the Cartesian prejudice of a Green Thought that would treat nature as an independent limit to social manipulation, that he himself would turn to the question of exhaustion. For Moore, capitalist accumulation, ever since its 15th century inception, has relied on a combination of exploitation (of paid labour in the immediate process of production) and appropriation (the dispossession and “free” use of unpaid work/energy, what Maria Mies had called, in *Patriarchy and Accumulation on a World Scale*, the capitalist basis, and invisible iceberg, of “women, nature and colonies”).³² Capitalism’s increases in productivity and its constant struggles against the falling rate of profit have depended on successive assaults on commodity frontiers (from the silver mines of Potosí to the forests of Norway, from the coal fields of nineteenth-century England to contemporary oceans and aquifers). According to

Moore, “capitalism must commodify life/work but depends upon the ‘free ride’ of uncommodified life/work to do so. Hence the centrality of the frontier.”³³ Building on Rosa Luxemburg and David Harvey’s theories of imperialism, while supplementing them with an account of capitalism as the co-production of “historical natures,” Moore argues that without these “free gifts,” which is to say these violent thefts, the production of surplus value would have never gotten off the ground. This is why “the problem of exhaustion”, according to Moore, “is a problem of how capital puts nature to work.”³⁴

The violent abstraction and appropriation, which is also to say the co-production of “Nature,” is thus key to capitalism as a “world-ecology” in its own right. This is what Moore terms

capital’s *correspondence project*, through which capital seeks to remake reality in its own image, and according to its own rhythms. Agricultural landscapes become exhausted because capital must extract unpaid work faster than agro-ecological relations can reproduce themselves. Working classes become exhausted because capital must extract surplus labour as fast as possible. Particular capitalists might gain in the process, but over time, *capital as a whole suffers*, because the system-wide capitalization of reproduction costs proceeds apace. The share of unpaid work declines. The ecological surplus falls.³⁵

Capital is what Moore calls a praxis of external nature, combining “productivity and plunder.”³⁶ Surplus-value generated from the exploitation of abstract labour within the circuit of capital thus depends on the appropriation of unpaid/work energy in a value-relation with what is (relatively) outside that circuit. With time, however, each arrangement of this exploitation/appropriation dialectic is undone, as capital is forced to internalize (“capitalise,” in Moore’s vocabulary) the appropriated natures — say, to plant “sustainable” forests rather than to deforest at will. For the sake of historical and systemic understanding (as well as of political praxis) what is critical here is not primarily the finitude of resources that may be “wiped out,” but the collapse of a particular relation of exploitation and appropriation, which can be, to use Moore’s terminology, “maxed out.” As he writes:

It is not an *absolute* exhaustion of an abstract and historical nature that “causes” ... crises of profitability. Rather, it is the exhaustion of specific complexes of socio-ecological relations that induce transitions from one systemic cycle to the next. Put simply, there is simultaneous exhaustion of the organizational structures and of the historical nature specific to the old accumulation regime.³⁷

A “maxed out” historical nature “no longer delivers a rising stream of work/energy into — or in support of — the circuit of capital”.³⁸ Relational, rather than absolute exhaustion, then, is not just relative to particular structures and conjunctures of work-energy, it is an *exhaustion of relations*.³⁹ The basic (value-)relation that comes to be exhausted is the one that leads to a falling rate of profit through the increase in the ratio of constant to variable capital (what Marx terms the organic composition of capital) within the valorization process. Successive capitalist strategies to produce, appropriate (and exhaust) “Cheap Nature,” also understood as the “ecological surplus” — composed of what Moore calls the “Four Cheaps” (food, energy, raw materials, human living labour) — are all aimed at depressing the cost of circulating capital. But the returns are inevitably diminishing. As Moore notes: “These broadly entropic transitions highlight the self-consuming character of the capital relation, which tends to burn through its necessary biophysical conditions (included workers) and in so doing to jack up the organic composition of capital.”⁴⁰ The double process of exploitation and appropriation must take place simultaneously “because life-activity within the circuit of capital is subject to relentless exhaustion” — as re-reading Marx’s chapter on the working day, or attending to the ethnography of factories on neoliberalism’s contemporary frontiers readily attests.⁴¹

We are returned here, on a grand systemic and environmental scale, the scale of world-ecology, to the initial domain of the fatigue/exhaustion distinction in the nineteenth century, that of human labour (paid and unpaid, visible and invisible) and its conditions: “The dialectic of capitalization and appropriation turns, fundamentally, on the relations through which humans are re/produced.”⁴² Now, though Moore argues that limits are co-produced by nature and capital, or rather by capitalism in the web of life, he is also arguing in the final analysis that relative exhaustion (of Cheap Nature) is palpably turning into a kind of absolute exhaustion — not just in the sense of the total exhaustion of certain natures, but as the exhaustion of the crucial strategy of accumulation itself, the dialectic of exploitation and appropriation, with the latter always needing to be “larger” and “faster” than the former to pre-empt crises of profitability. “Relative to capital as a whole, the opportunities for appropriation have never been fewer, while the demand for such appropriations has never been greater.”⁴³ The historical-material relation of exhaustion, the relative turning into the absolute (or as absolute as we could hope, or fear), in the “end of cheap nature,” resurrects after its own fashion the “pessoptimistic” philosophy of history we encountered at the beginning with Kant and Engels, exhaustion and antagonism as a prelude to a revolution that can only be planetary.

The Baleful Dialectic of Exhaustion and Acceleration

To the extent that “[e]very act of exploitation implies an even greater act of appropriation,” the capitalist world-ecology is defined at its core by a (negative) dialectic of exhaustion and acceleration.⁴⁴ Marx had already glimpsed this dynamic, a speculative (and financialized) logic, in his *Theories of Surplus Value*, again putting matters in terms of the twin degradation of human bodies and natural systems:

Anticipation of the future — real anticipation — occurs in the production of wealth in relation to the worker and to the land. The future can indeed be anticipated and ruined in both cases by premature overexertion and exhaustion, and by the disturbance of the balance between expenditure and income. In capitalist production this happens to both the worker and the land ... What is shortened here exists as power and the life span of this power is shortened as a result of accelerated expenditure.⁴⁵

That acceleration is an intrinsic trait of the social form of capitalism is a lesson easily garnered from much of Marx’s work, but what is its specifically ecological dimension? In his *Time, Labor and Social Domination*, Moishe Postone has tried to specify it by remarking upon capital’s tendency “to generate a constant acceleration in the growth of productivity.” But these increases in productivity only increase surplus value indirectly. Thus, “the ever-increasing levels of productivity generated by capital accumulation entail directly corresponding increases in the masses of products produced and of raw materials consumed in production” but these do not necessarily give rise to increases in surplus value — as we can see today when (a point also stressed by Moore), the accelerating consumption of natural resources gives diminishing returns in profit terms (requiring precarious supplementation by financial instruments). Following Marx’s remarks on the metabolic rift that capital wreaks on soil fertility, a paradigm of capitalist exhaustion as such, Postone remarks upon the “accelerating destruction of the natural environment” as an intrinsic feature of capitalist accumulation. Rightly, Postone indicates Marx’s transcendence of critiques of capitalism from a productivist stance (where it is a fetter to productive forces requiring liberation) or ones that center on the domination of nature:

The relation of humans and nature mediated by labor becomes a one-way process of consumption, rather than a cyclical interaction. It acquires the form of an accelerating transformation of qualitatively particular raw materials into “matter,” into qualitatively homogeneous bearers of objectified time. The problem with capital accumulation, then, is not only that it is unbalanced and crisis-ridden, but also that its

underlying form of growth is marked by runaway productivity that neither is controlled by the producers nor functions directly to their benefit.⁴⁶

In his landmark book *Fossil Capital*, Andreas Malm has further specified this accelerating exhaustion of nature, exploring the consequences of capital's structural indifference to natural boundaries (as opposed to intra-capitalist limits), its qualitative neglect and quantitative over-taxing of nature – a process that takes the form of a spiral, in which the “more biophysical resources [the capitalist] has withdrawn for profit-making, *the more he is able to withdraw in the following round.*”⁴⁷ Referencing the work of his collaborator, the ecologist Alf Hornborg, Malm details how profit-driven accumulation determines the capacity to draw on increasingly greater quanta of energy and materials, showing how monetary accumulation determines an acceleration in the claims upon and dissipation of “other people's resources.” The social relations within which capital accumulation and resource use are embedded, and in which human, animal and material natures exist only relative to the measures and expediencies of accumulation, mean that dissipation is not castigated or checked, but positively rewarded. The more the capitalist successfully exploits and wastes, the more he will be able to continue to do so — capitalist growth has ecological crisis wired into its DNA.⁴⁸ This image of the spiral of accumulation and dissipation resonates with the one drawn by John Bellamy Foster and Brett Clark from William Stanley Jevons's *The Coal Question*, a key text in the nineteenth-century preoccupation with exhaustion. According to the “Jevons paradox,” far from diminishing resource usage, a more efficient and “economic” employment of matter and energy (in this instance, coal) serves to increase it. As Jevons noted: “If the quantity of coal used in a blast-furnace, for instance, be diminished in comparison with the yield, the profits of the trade will increase, new capital will be attracted, the price of pig-iron will fall, but the demand for it increase; and eventually the greater number of furnaces will more than make up for the diminished consumption of each.”⁴⁹ (As Bellamy Foster and Clark observe, by contrast with Marx and Engels the great marginalist economist did not turn this observation into a critique of capitalist model of growth and resource-use, but rather into its tragic-heroic assumption; having posed the alternative [for the British Empire] as one of between the doomed pursuit of glory in the present and “longer continued mediocrity,” Jevons opted for the former.⁵⁰)

Notwithstanding their decisive methodological and theoretical disagreements, both Malm and Moore have raised the problem of the ideologies of species agency that govern the recent infatuation with the discourse of the Anthropocene, which both have rechristened the Capitalocene.⁵¹ The problem of exhaustion is for both an occasion to revisit the question of

agency — Moore opting for a broadly “monist” take on the “co-production” of historical natures by capitalism through the “web of life,” Malm a “dualist” vision in which the impact of capital *on* nature is to be understood through the internal class antagonism sundering any putative “humanity” (as he pointedly writes “no other species can have its metabolism organized through such sharp internal divisions”⁵²). By way of a philosophical coda, whose aim is to open a way of thinking exhaustion — the limits to capital and the limits of nature — in a manner diagonal to this dualist-monist divide, hopefully applying further dialectical torque to a debate already rich with insights about the contradictions and negativity attendant to the nature in and of social relations, I want to touch on Jean-Paul Sartre’s idea of “matter as inverted praxis,” as advanced in the first volume of his *Critique of Dialectical Reason*.

Deforestation and Tragic Form

Relying on René Grousset’s 1942 *Histoire de la Chine*, Sartre depicts the scene of peasant deforestation as a paradigmatic instance of how “serial” human action is unified, as a “counter-finality,” by matter, giving rise to a situation in which man becomes his own Other, his own enemy. It is in terms of this figure of *oneself as an enemy*, so critical to Hegel’s account of the tragic, that I propose to interpret Sartre’s *Critique* as, among other things, a *tragedy of materiality*. This is the very counter-finality of which Engels had spoken in *The Dialectics of Nature*, intimating the possibility of a “revenge of nature” against our daydreams of mastery: “Every victory, it is true, in the first place brings about the results we expected, but in the second and third places it has quite different, unforeseen effects which only too often cancel the first”⁵³. Sartre begins from the position of what Moore would term “Cartesian dualism,” though as the *Critique* advances, he twists it beyond all recognition.

Praxis, he writes, is “primarily an instrumentalization of material reality” giving the things it envelops a “pseudo-organic unity”, one borrowed from the unity of the individual as a practical organism.⁵⁴ But matter’s unity (and in a sense its agency) endures through *inertia*. In working upon matter, individually and serially, directly and indirectly, humankind produces a *practico-inert* reality, the world as a kind of “petrified backlash” of our own activity. Reified material objects reflect our praxis, but in its passivity. In an acerbic variation on the idea of the alienation of human capacities in the product of labour, Sartre writes of how “practice absorbed by its “material” becomes a material caricature of the human.”⁵⁵ In materializing itself, mediating itself through the inertias of matters, human action “enters into relation with the entire Universe,” such that “infinitely many unforeseeable relations are established, through the mediation of social practice, between the matter which absorbs

praxis and other materialised significations.”⁵⁶ What the example of the *praxis* of peasant deforestation and the subsequent “tragedy” of flooding instantiate a broader truth about the ontology of human action, namely that the “[i]nert *praxis* which imbibes matter transforms natural, meaningless forces into quasi-human practices, that is to say, into passivized actions.”⁵⁷ I’d like to propose that such a concept, of “passivized action,” can go some way to cutting across or rearticulating the antinomies of agency in the Anthropocene (or Capitalocene), including as it does within it a kind of phenomenology of the genesis of our ideologies of action.

In Sartre’s example, the Chinese peasants’ historic conquest of the soil could not foresee the lack that would turn against them, the absence of trees. Deforestation, as a passivized practice whose explicit finality was not the removal of trees but the plenitude of harvests, took place in the wilds, in the “frontiers” (to return to that theme from Moore) that at the time represented the “historical limits of society”. The removal of obstacles was transmuted or inverted into the lack of protection, turning the human activity of deforestation into the production of a virtually unified enemy of the peasant, an enemy who, embodied in nature as his inverted *praxis*, is ultimately “himself.” Sartre’s summation could, with some tweaking (mainly in terms of the potential for foresight) be adapted to the so-called Anthropocene:

Thus, the whole history of the terrible Chinese floods appears as an intentionally constructed mechanism. If some enemy of mankind had wanted to persecute the peasants of the Great Plain, he would have ordered mercenary troops to deforest the mountains systematically. The positive system of agriculture was transformed into an infernal machine. But the enemy who introduced the loess, the river, the gravity, the whole of hydrodynamics, into this destructive apparatus was the peasant himself. Yet, taken in the moment of its living development, his action does not include this rebound, either intentionally or in reality.⁵⁸

All counter-finality, of which the flooding haunting traditional Chinese agriculture is but an example, is adumbrated for Sartre by “a kind of *disposition* of matter.” In counter-finality, human action becomes a strange, reified destiny, serially produced, and collectively experienced. In counter-finality,

human *praxis* has to become a fatality and to be absorbed by inertia, taking on both the strictness of physical causation and the obstinate precision of human labour. Destruction by Nature is imprecise: it leaves little islands, even whole archipelagos. Human destruction is systematic: a particular farmer proceeds on the basis of an

approach to a limit which conditions his praxis — quite simply, the idea that every tree growing in his field should be destroyed.⁵⁹

Thus humanity is unified in its own alienated antagonism against itself: “deforestation as the action of Others becomes everyone's action as Other in matter. ... Others are fused, as Others, in the passive synthesis of a false unity; and, conversely, the Oneness stamped on matter reveals itself as Other than Oneness. The peasant becomes his own material fatality; he produces the floods which destroy him.”⁶⁰ Counter-finality creates a unity-in-potential-catastrophe which the previous uncoordinated actions of groups could never manifest, though it also launches fierce and unprecedented antagonisms. As Sartre remarks, Chinese deforestation “creates universal solidarity in the face of a single danger. But at the same time it aggravates antagonisms, because it represents a social future both for the peasants and for the land-owners. This future is both absurd, in that it comes to man from the non-human, and rational, in that it merely accentuates the essential features of the society.”⁶¹

In exhaustion and catastrophe, the historical limits of human action become the very sources of political, or even species, unity, a unity of necessity beset by antagonisms — which Sartre encapsulates in the notion of *anti-physis*:

This ... relation of man to the non-human — where Nature becomes the negation of man precisely to the extent that man is made *anti-physis* and that the actions in exteriority of the atomised masses are united by the communal character of their results — does not as yet integrate materiality with the social, but makes mere Nature, as a brutal, exterior limitation of society, into the unity of men. What has happened is that, through the mediation of matter, men have realised and perfected a joint undertaking because of their radical separation. Nature, as an exterior constraint on society, at least in this particular form, constrains society as an interiority based on the objectification in exteriority of that society. ... Nature, though transcended, reappears within society, as the totalising relation of all materiality to itself and of all workers to one another.⁶²

This relation of inverted praxis goes beyond the holism of “double internality” posited by Moore, to reveal a process in which “we” become our own enemy in the shape of a nature that bears the imprint of our praxis (in ways specific to its material disposition). Nature’s externality, albeit painfully real (in the form here of recurrent flooding) is also an inner relation of society. Nature, seemingly transcended through mankind’s work on matter, “transforms human praxis into *antipraxis*, that is to say, into a praxis without an author, transcending the given towards rigid ends, whose hidden meaning is counter-finality.”⁶³

Nature is a historical limit of society, and of capital, only to the extent that society has externalized itself in it. It is in this, dialectical, sense, that we can begin thinking the relation between the limits of capital and the limits of nature in a manner neither endogenous nor exogenous, dualist nor holistic; in other words, that we can begin to think the Anthropocene, or rather the Capitalocene, as a geological and historical figure of alienated agency “where Nature,” as Sartre writes, “becomes the negation of man precisely to the extent that man is made *anti-physis*,” anti-nature.

Notes

¹ This paper was first delivered at the Pembroke Center at Brown University on 22 March 2016, as “Universal Exhaustion: War, Ecology, and Counter-Finality,” in the context of a seminar series on the theme of *fatigue* organized by Joan Copjec. I am very grateful to Prof Copjec and the Center for the invitation and hospitality. Many thanks also to the editors of this volume for their astute comments and suggestions.

² Anson Rabinbach, *The Human Motor: Energy, Fatigue and the Origins of Modernity*, Berkeley: University of California, 1992, 152 and 163.

³ Andreas Malm, “Tracking the progress of this storm: On the dialectics of society and nature in a warming world,” unpublished manuscript. Many thanks to Andreas for sharing this extremely important intervention with me.

⁴ For some iterations of this project, see my “Politics in a Tragic Key,” *Radical Philosophy* 180, July-August 2013: 25–34; “Taming the Furies: Badiou and Hegel on The Eumenides,” in Badiou and Hegel: Infinity, Dialectics, Subjectivity, ed. Antonio Calcagno and Jim Vernon, Lanham: Rowman & Littlefield/Lexington Books, 2015; “Transition et tragédie,” *Période*, 10 April 2014, available at: <http://revueperiode.net/transition-et-tragédie/>.

⁵ See V.I. Lenin, ‘Prophetic Words’, *Pravda*, 2 July 1918, in *Collected Works*, vol. 27, Moscow: Progress Publishers, 1972, 494–499, available at: <https://www.marxists.org/archive/lenin/works/1918/jun/29b.htm>

⁶ Friedrich Engels, “Introduction [To Sigismund Borkheim’s Pamphlet, *In Memory of the German Blood-and-Thunder Patriots*, 1806–1807],” in Marx and Engels, *Collected Works*, vol. 26, London: Lawrence & Wishart, 1990, 451.

⁷ Translation from *The Collected Writings of Thomas de Quincey*, Vol. 9 (1890), pp. 428–444. De Quincey filters Kant through a thermodynamic vocabulary, as we can see by comparing his translation to the more accurate (if less evocative) translation by Nisbet, which renders the phrase *und selbst durchgängiger innerer Erschöpfung ihrer Kräfte* as “and even complete exhaustion of their powers.” See Immanuel Kant, *Political Writings*, 2nd ed, ed. Hans Reiss, trans. H.S. Nisbet, Cambridge: Cambridge University Press, 1991, 47.

⁸ Engels, “Introduction,” 451; my emphasis.

⁹ For a thorough refutation of the widespread notion that Engels denied the second law of thermodynamics and an illuminating review of the nineteenth-century debates on the heat death of the universe, see John Bellamy Foster and Richard Burkett, *Marx and the Earth: An Anti-Critique*, Leiden: Brill, 2016, 170–197.

¹⁰ If not of intelligence, which Engels deemed an... inevitable by-product of the combinatorial powers of matter. Here anthropological or species pessimism is combined with cosmological and cognitive optimism, of the kind manifested by the Russian scientist Lavrov, as cited by Engels, in this wonderful phrase: “Then the remains of the dead world become material for hastening the process of formation of the new world.” Quoted in *Marx and the Earth*, 182.

¹¹ Cited in Sebastiano Timpanaro, *On Materialism*, London: New Left Books, 1975, 98–99. Consider also this remark by Bukharin, from *Philosophical Arabesques*: “Engels ... considered inevitable both the decline of humanity and its extinction, together with the ending of life on the earth as a planet. In other words, human history cannot be divorced in

any way from the history of the earth as the base, *locus standi* and source of nourishment of society.” Quoted in *Marx and the Earth*, 197.

¹² Cited in Timpanaro, *On Materialism*, p. 98.

¹³ On the articulation between historical configurations of capital and variants of apocalypticism — as well as on the intimate nexus between the exploitation of labour and ideologies of energy, see George Caffentzis, “The Work/Energy Crisis and the Apocalypse” (1980), in *In Letters of Blood and Fire: Work, Machines, and the Crisis of Capitalism*, Oakland: PM Press, 2013, 11–57.

¹⁴ René Scherer, *L'Écosophie de Charles Fourier*, Paris: Anthropos, 2001; Christophe Bonneuil and Jean-Baptiste Fressoz, *The Shock of the Anthropocene: The Earth, History and Us*, London: Verso, 2016; Jean-Baptiste Fressoz and Fabien Locher, ‘The Fragile Climate of Modernity: A Short History of Environmental Reflexivity’, *Books & Ideas*, 31 March 2014, <http://www.booksandideas.net/The-Fragile-Climate-of-Modernity.html>

¹⁵ Mike Davis, ‘The Coming Desert: Kropotkin, Mars and the Pulse of Asia’, *New Left Review* 97, Jan–Feb 2016, 23–43.

¹⁶ See Tarde’s 1896 novel *Fragment d’histoire future* (translated into English, with a preface by H.G. Wells, as *Underground Man*), and the brief discussion in my ‘Powers of Pacification: State and Empire in Gabriel Tarde’, *Economy & Society* 36.4 (2007), 597–613.

¹⁷ On Cournot, resource exhaustion and deforestation, see Perry Anderson, ‘The Ends of History’, in *A Zone of Engagement*, London: Verso, 1992, pp. 304–308.

¹⁸ Thomas Richards, *The Imperial Archive: Knowledge and the Fantasy of Empire*, London: Verso, 1993, 86–87. For a late imperial *détournement* of this image of exhaustion, consider the following, from E.M. Forster’s 1952 essay ‘Art for Art’s Sake’ in *Two Cheers for Democracy*: “How can man get into harmony with his surroundings when he is constantly altering them? The future of our race is, in this direction, more unpleasant than we care to admit, and it has sometimes seemed to me that its best chance lies through apathy, uninventiveness, and inertia. Universal exhaustion might promote that Change of Heart which is at present so briskly recommended from a thousand pulpits. Universal exhaustion would certainly be a new experience. The human race has never undergone it, and is still too perky to admit that it may be coming and might result in a sprouting of new growth through the decay.”

¹⁹ Caffentzis, “The Work/Energy Crisis and the Apocalypse,” 14. Caffentzis’s comment on the link between capital and entropy is also worth reproducing here: “The Second Law announces the apocalypse characteristic of a productivity-craving capital: heat death. Each cycle of work increases the unavailability of energy for work.... ‘The world is living on its capital’ and all around is the whisper of its impending silence” (14).

²⁰ Patrick Wilcken, *Claude Lévi-Strauss: The Poet in the Laboratory*, London: Bloomsbury, 2010, 306–307, 355.

²¹ See Daniel Pick, *Faces of Degeneration: A European Disorder, c. 1848–c.1918*, Cambridge: Cambridge University Press, 1989.

²² In Charles Darwin’s chilling observation: “Wherever the European has trod, death seems to pursue the aboriginal.” Quoted in Brewton Berry, ‘The Myth of the Vanishing Indian’, *Phylon* 21 (1) 1960: 51–57, here p. 53.

²³ For a nuanced and sympathetic account of Lévi-Strauss's entropological plea for cultural diversity, and his pessimistic analysis of Western modernity and humanism, see Emmanuel Terray, 'Claude Lévi-Strauss's World-View', *L'Homme* 193 (2010): i–xix.

²⁴ Claude Lévi-Strauss, *Tristes Tropiques*, translated by John Russell, New York: Criterion, 1955, 397–398.

²⁵ “Even if the rainbow of human cultures should go down for ever into the abyss which we are so insanely creating, there will still remain open to us provided we are alive and the world is in existence a precarious arch that points towards the inaccessible.”

²⁶ *Conversations with Claude Lévi-Strauss*, ed. Georges Charbonnier, trans. John and Doreen Weightman, London: Cape, 1969, 42.

²⁷ Quoted in Kohei Saito, “Marx’s Ecological Notebooks,” *Monthly Review* 67.9 (Feb. 2016): 26. The metabolic rift thesis extrapolates from Leibig’s work on the way “in which soil nutrients are removed from the soil in the form of food and fibre and exported hundreds, sometimes thousands, of miles to the towns, where the nutrients end up as pollution, failing to return to the soil.” See *Marx and the Earth*, 25.

²⁸ Letter to Engels, 25 March 1868, quoted in Saito, “Marx’s Ecological Notebooks,” 35.

²⁹ Karl Marx, *Capital*, vol. 1, London: Penguin, 1976, 376; emphasis added.

³⁰ Fredric Jameson directs our attention to the relationship between the extinguishing fire of labor and the consumption and resurrection of the value embodied in fixed capital in his *Representing Capital: A Commentary on Volume 1*, London: Verso, 2011, p. 97–98: “labor already underway, specific and completing itself, becomes a veritable fire, which not only ‘extinguishes’ the previous characteristics of the raw materials (including that labor power itself), but also prepares the climax of the figure as such: for as paradoxical as it may seem for fire to extinguish (rather than to be itself extinguished), it does one thing whose name and verb unite the literal and the figurative (so to speak): it *consumes*. The consumption of its ingredients by the fire of labor is also the consumption by the capitalist labor process of its own capital (constant as well as variable); and now illustrates the paradox rehearsed over and over again elsewhere (particularly in the *Grundrisse*), that production is a consumption (just as from another standpoint consumption is a production).” See my commentary on these passages in “The World is Already Without Us,” *Social Text* 127, 34 (2) (2016): 107–122.

³¹ It is not capital or nature that is exhausted but “regionally specific relations of capitalization and appropriation.” Jason W. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (London: Verso, 2015) 123; “exhaustion is not a substantial property. It is a *relational* property of the specifically capitalist *oikeios*” (p. 124); “*Exhaustion* happens when particular natures — crystallised in specific re/production complexes — can no longer deliver more and more work/energy.”

³² “The imperative faced by capital to expand the zone of unpaid work faster than the capitalization of the *oikeios* is the historical basis through which capitalist power lumped together the epoch-making appropriation of ‘women, nature, and colonies.’” Without women, nature, and colonies — a stylized list, to be sure — accumulation falters” (*Capitalism in the Web of Life*, p. 240). Mies writes in *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour* (London: Zed Books, 1986) about “the contradictory process ... by which, in the course of the last four or five centuries women, nature and colonies were externalized, declared to be outside civilized society, pushed down and thus made invisible as the under-water part of an iceberg is invisible, yet constitute the base of the whole” (77).

³³ *Capitalism in the Web of Life*, 192.

³⁴ *Capitalism in the Web of Life*, 120.

³⁵ *Capitalism in the Web of Life*, 235.

³⁶ *Capitalism in the Web of Life*, 156.

³⁷ *Capitalism in the Web of Life*, 162.

³⁸ *Capitalism in the Web of Life*, 225.

³⁹ “The normal course of capital accumulation tends to exhaust the establishing relations of re/production that inaugurate a great wave of accumulation” (118).

⁴⁰ *Capitalism in the Web of Life*, 174. The term organic composition, referring to the ratio of constant to variable capital, is (ironically) borrowed from the writings of Leibig on soil fertility.

⁴¹ *Capitalism in the Web of Life*, 193.

⁴² *Capitalism in the Web of Life*, 221.

⁴³ *Capitalism in the Web of Life*, 165.

⁴⁴ *Capitalism in the Web of Life*, 214.

⁴⁵ Quoted in *Marx and the Earth*, 149.

⁴⁶ Moishe Postone, *Time, Labor and Social Domination: A Re-interpretation of Marx’s Critical Theory*, Cambridge: Cambridge University Press, 1993, pp. 311–313.

⁴⁷ It could be argued that Moore’s historical-philosophical and socio-ontological optimism lies in thinking that there is a tendential convergence between the limits to nature and the limits to capital, once we reconceive capitalism, via “double internality,” as operating *in the web of life*.

For an extreme — but not for that exceptional — example of this consider the words of the neo-classical political economist Robert Solow: “If it is very easy to substitute other factors for natural resources, then there is in principle no ‘problem.’ The world can, in effect, get along without natural resources, so exhaustion is just an event, not a catastrophe” (quoted in *Marx and the Earth*, 232–233n31).

⁴⁸ Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, London: Verso, 2016, 284.

⁴⁹ Quoted in Brett Clark and John Bellamy Foster ‘William Stanley Jevons and *The Coal Question*’, *Organization & Environment* 14 (1) (2001): 93–98, here 95.

⁵⁰ *Ibid.*, 97.

⁵¹ Moore acknowledges Malm’s initial coinage in his Introduction to *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism*, ed. Jason W. Moore, Oakland: PM Press, 2016, 5.

⁵² *Fossil Capital*, 280.

⁵³ Cited in John Bellamy Foster, Brett Clark, and Richard York, *The Ecological Rift: Capitalism’s War on the Earth*, New York: Monthly Review, 2010, 241.

⁵⁴ Jean-Paul Sartre, *Critique of Dialectical Reason, vol. 1*, trans. Alan Sheridan-Smith, edited by Jonathan Rée, foreword by Fredric Jameson, London: Verso, 2004, 161.

⁵⁵ *Ibid.*

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ *Critique of Dialectical Reason*, 162.

⁵⁹ *Critique of Dialectical Reason*, 163.

⁶⁰ Ibid.

⁶¹ *Critique of Dialectical Reason*, 164.

⁶² *Critique of Dialectical Reason*, 165. For a criticism of Sartre's inability to fully assume the negativity in nature and the historicity of matter beyond human subjectivity, see Richard James Blackburn, *The Vampire of Reason: An Essay in the Philosophy of History*, London: Verso, 1990, pp. 16-18. For Blackburn, *Homo sapiens* "is persistently assailed by vampirish objects and agencies whose collective negativity can be designated as the predatory enemy of rationality, the vampire of reason" (22).

⁶³ *Critique of Dialectical Reason*, 166.