The Tragedy of the Worker

The Salvage Collective

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of the Worker
Towards the Proletarocene
The Salvage
Collective

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Dedication

To Neil Davidson

Introduction

Workers of the world unite, you have nothing to lose but your chains. You have a world to win.

What if the world is already lost?

This is the question that vexed us as we set out to write The Tragedy of the Worker. From the vantage point of the present, the history of capitalist development is, as Marx expected, the history of the development of a global working class, the proletarianisation of the majority of the world's population. But the very same process of that development has brought us to the precipice of climate disaster. Our position, to recall Trotsky's rationalisation of War Communism in 1920, is in the highest degree tragic.

It is now clear that we will pass what scientists have long warned will be a tipping point of global warming, accelerating the already catastrophic consequences of capitalist emissions. How do we imagine emancipation on an at best partially habitable planet? Where once communists imagined seizing the means of production, taking the unprecedented capacities of capitalist infrastructures and using them to build a world of plenty, what must we imagine after the apocalypse has befallen us? What does it mean that as capitalism has become truly global, the gravediggers it has created dig not only capitalism's grave, but also that of much organic life on earth?

Our answers to these questions remain rooted in the politics of revolutionary communism. Our stance is not based on the fantasy of a homeostatic nature that must be defended but on the critique of the capitalist metabolism – the Stoffwechsel- that must be overthrown. Earth scientists are accustomed to speak in terms of 'cycles' by which substances circulate in different forms: the water cycle, the rock cycle, the nitrogen cycle, the glacial-interglacial cycle, the carbon cycle, and others. One way of registering the catastrophe of climate change is to see these cycles – most of all, but not solely, the carbon cycle – as disordered, under- or over-accumulating. But this is to ignore the more fundamental circuit of which these now form epicycles, like Ptolemy's sub-orbits of the heavenly bodies: the circuit of capital accumulation, M-C-M⊠.

This circuit accumulates profit and produces death. Neither is accidental. It is for this reason that the debates that capitalist ruling classes permit among themselves on 'adaptation' versus 'mitigation' take place on false premises. What is to be mitigated is the impact of climate change on accumulation, rendered through the ideology of 'growth' as something that benefits everyone. What we are to adapt to are the parameters of accumulation, sacrificing just enough islands, eco-systems, indigenous – and non-indigenous – cultures to maintain its imperatives for a period of time until

new thresholds must be crossed, and new life sacrificed to the pagan idol of capital. Already, capitalist petro-modernity builds a certain quantum of acceptable death into its predicates: at the very least, the 8.7 million killed by fossil fuels each year according to Harvard University are considered a price worth paying for the stupendous advantages of fossil capital. And the sky can only keep going up, as deforestation, polar melt, ocean acidification, soil de-fertilisation and more intense wildfires and storms tear the web of life into patches. If the necropolitical calculus of the Covid-19 pandemic appears crass, just wait until its premises are applied to climate catastrophe.

Revolution is mitigation and adaptation. To the extent that a habitable zone is to be preserved on earth, our ways of making, thinking, eating, moving, and living are going to have to change. In other words, a new 'mode of production'. This too will be an adaptation.

But are there not signs, as the revanchist climate denialism of Donald Trump leaves (perhaps temporarily) the political stage, of hope in the system correcting itself? With Biden's election as president, the Paris Accords are restored. A series of executive orders increasing the use of wind power, limiting oil and gas exploration and drilling, and halting the construction of the Keystone XL pipeline. This is at least evidence that ecosocial movements have made some impact, however limited, on the coordinates of capitalist realism in the Democratic Party. The struggle for survival achieves some traction with the more far-sighted elements of capital. However, even if Biden's approach didn't bring its own implicatory denialism concerning the depth and scope of social transformation required to achieve habitability, and even if the Paris Accords did not in their own terms permit catastrophic warming of an estimated 3.4 degrees above pre-industrial levels, the forces of denialism remain globally strong. And climate disaster intensifies climate denialism. In Oregon, wildfires are blamed on 'Antifa' activists, not the arsonists behind Amazon deforestation. In Texas, the snowstorms and power outages are blamed on environmentalism and the 'Green New Deal', which has nowhere been implemented. However occultedly death-driven, denialism harnesses the material-symbolic aspirations of hundreds of millions of people, which include not just 'prosperity', national development, social uplift and individual autonomy, but also social distinction. Denialism, by describing climate science as a Chinese or Third World scam to redistribute the world's wealth, promises that those who have been at the top of the world system and are downwardly mobile, or have been climbing the developmental leader and are precariously situated, will not be hurled into the same social situation as the mass of humanity.

The left has its own accounts to keep. The Stalinist reversion of the workers' Red October submerged an incipient ecological Bolshevism, which might have weaned historical materialism from its productivist predicates, just as it did any form of proletarian democracy. The conception of socialism as a new and better form of growth remains with us, the collapse of 1991 notwithstanding. In the debate between ecomodernist socialists and their opponents, we insist that the former are not Promethean enough. The fundamental premise of historical materialism is that being determines

consciousness. Who are we, the wounded victim-comrades of too-late-capitalism, to legislate for those who (we hope) will come after? So great is the change demanded to preserve a habitable biosphere that, if we make it, our inheritors on the other side will read such texts and wonder, as we do of Bronze Age epics; were these people even human?

Is human the right word for us now? The coinage of the 'Anthropocene' implies a common 'Anthropos' to whom common responsibility and common guilt can be ascribed. With good reason, the colonised, excluded and oppressed object that they were not the ones who broke the climate and so should not be expected to pay the consequences. In this lies the kernel of truth in fixations on indigenous cosmologies as sources of resilience, a form of world-historical mindfulness training, with which to face the disaster. But capitalogenic climate breakdown is a real abstraction, not an ethical choice or epistemological preference. The value-form world has already been made – counting not least among its authors the genuinely Promethean efforts of national bourgeoisies of colour – and there are no others left. The only way is through, not out.

The origins of this volume lie in the seventh issue of Salvage in 2019, wherein the Salvage Collective printed the first version of what follows, outlining our approach to the historical, political and ecological issues around climate change and the ongoing eco-political catastrophe of the Capitalocene. We later released the essay 'The Tragedy of the Worker' as an audiobook, produced and soundtracked by Duncan Thomas and read by the editors, available to subscribers via our website.

What follows is an extended and up-to-date version of that essay.

1. M-C-M☒ and the Death Cult

'How should we dream of this place without us?—
The sun mere fire, the leaves untroubled about us,
A stone look on the stone's face?'
—Richard Wilbur, 'Advice to a Prophet'

Life exists in Vernadskian space. A globe, twenty-five kilometres deep, from the oceanic abyss to the outer limit of the troposphere. A biosphere, to the destruction of which, humanity is witness, and of which, perpetrator.

This biosphere is a contingent product of an improbable and rare chemical interaction, in conditions amounting to a cosmic fluke, in no way inferable from the original state of the planet in the Hadean Eon. Somehow, whether by the work of 'black smokers' in the oceanic depths, or by an Oparin-style solar and lightning-induced catalysis of protobiotic compounds, or via some other gradient of chemicals, heat and density, geochemistry became biochemistry. Emergence. Inorganic chemical processes began to self-replicate, gathering energy and atoms from their environment, and adapting to environmental pressures. Once formed, the first life forms depended, as Vernadsky put it, on 'radiations that pour upon the earth', causing 'the matter of the biosphere' to collect and redistribute solar energy, converting into 'free energy capable of doing work on Earth'.

For two billion years of life, earth was inhabited solely by single-celled organisms, bacteria and archaea. Sophisticated swimming creatures, they were able to swim, metabolise sugars, avoid toxins, and produce nitrous oxides. (By comparison, our most advanced robotics have struggled to match this level of intelligent, adaptive behaviour, and may even now only be reaching, as Rodney Brooks puts it, the phase of 'Cambrian intelligence'.) They were distinctly symbiotic, routinely sharing genetic material, effectively accessing a single gene pool.

This is the 'microcosmos' from which, as Lynn Margulis argues, all life has evolved, in which all life exists. The cell, of which the bacterium is the original template, is the engine, the mechanism by which energy is converted into life. The 'web of life' is microbial, because the microbe is the primordial engine for the transformation of energy.

More complex animals exhibit similarly symbiotic propensities as did their archaic forebears: termites host tiny organisms in their digestive tracts, coral feed with the assistance of tiny plant cells living in their flesh, humans are colonised by microbiota. The mitochondria of modern cells have their own DNA, reflecting the cell's origins in a process of bacterial symbiogenesis. Margulis goes so far as to speculate that the ances-

tors of brain cells were spirochetes, fastmoving killer bacteria consumed and absorbed in a defensive move by slower archaea. Humanity, she says, is thus 'a symbiotically evolving, globally interconnected, technologically enhanced, microbially based system'.

Capitalism subsumes these life-processes, these flows of energy, these microbial dependencies, within its own molecular flow. It subordinates them to the homogenising frame of value-production: M-C-M⊠. A regime of creative-destructive accumulation that is as inexhaustible as biospheric resources are finite.

'Since their inception the bourgeois class has been waiting for the flood.'
—Theodor Adorno, Minima Moralia

Capitalism, like certain bacteria, like the death-drive, is immortal. It has its limits and crises but, perversely, seems to thrive on these. Unlike the multi-species life-systems powering it, the only terminal limit to capital's perpetual augmentation is, if driven towards from within, external: either revolution or human extinction; communism, or the common ruin of the contending classes.

Long ago, both Max Weber and Walter Benjamin saw an occulted religious foundation in capitalist civilisation. As Michael Löwy points out, Benjamin, by defining capitalism as a cultic religion, went much farther than Weber in identifying a Puritan/Capitalist guilt-driven imperative to accumulate. 'The duration of the cult', for Benjamin, 'is permanent'. There are 'no days which are not holidays', and 'nothing has meaning that is not immediately related to the cult'.

In what sense is capitalism a cult? What are its rituals, its fetishes? Those of investment, speculating, buying and selling. It has no dogma other than those 'real abstractions', as Alfred Sohn-Rethel put it, entailed by its rituals. In Sohn-Rethel's words, the act of commodityexchange is the key exemplar of a social action governed by an abstraction of which the participants have no consciousness. The buyer may be concerned only with the sensuous particularities of the commodity, the needs it fills, but behaves, structurally, in the moment of exchange as though what matters is the quantity of exchange-value embedded in it. Ritual action determines dogma; social being, that is, determines consciousness.

Capitalist theology, however, instates not dogma but unyielding imperatives governing action. 'Accumulate, accumulate! That is Moses and the prophets!', Marx sarcastically withered in Capital. Accumulation is, for capital, an imperative, not an option. To exist as a unit of capital in conditions of universal competition is to accumulate or die. As long, therefore, as there is labour-power to exploit and, in Jason W Moore's term, 'cheap nature' to appropriate, capital will augment itself. This very bifurcation of life into the exploitable and the appropriable, which Moore identifies as the foundation of a 'Cartesian dualism' unsustainably counterposing 'Nature' to 'Society', is not dogma but programme. It is related to a distinctive move of capitalist theology, currently given right-Evangelical sanction by Calvin Beisner and the Cornwall Declaration, to disavow in practice the existence of inherent physical limits. It posits, in its

action, the earth as limitless cornucopia over which humans have dominion, and from which limitless accumulation must be extracted.

This disavowal, this 'real abstraction', is the social basis of capitalist implicatory denial: the seemingly evidence-proof conviction of capitalist states that capitalogenic climate change can be remedied by means, and according to systems, that guarantee its perpetuation. The capitalocentric purview is commonly, but mistakenly, identified with the anthropocentrism of ancient and medieval monotheisms. Here, however, it is clearly not the Anthropos that stands at the centre, as though appointed by God to steward the garden of earth. At the centre is the ritual: that unconditional imperative to accumulate. And insofar as this imperative drives 'adorers', as Benjamin put it, to the horizon of human extinction, capitalism can – must – be described as a death cult.

Fossil capital is but one modality of the death cult, albeit a paragon. The 'externalities' of capital – climate chaos, biosphere destruction, resource depletion, topsoil erosion, ocean acidification, mass extinction, the accumulation of chemical, heavy metal, biological and nuclear wastes – extend far beyond the specific catastrophe of a carbonised atmosphere. Capitalism is a comprehensive system of work-energetics. The food industry, which powers waged labour, and is key to the shifting value of labour-power itself, is as central to the deterioration of the biosphere as is fossil-fuelled transit. Nonetheless, the continuing decision for fossil fuels as a solution to the energy demands of capitalist production, for all the growing denial of climate-change denial among the antivulgarian ruling class, for all their concerned mouth music, is an exemplary case of the capitalist imperative of competitive accumulation at work.

As Andreas Malm has fiercely and beautifully argued, capitalism did not settle for fossil fuels as a solution to energy scarcity. The common assumption that fossil energy is an intrinsically valuable energy resource worth competing over, and fighting wars for is, as geographer Matthew Huber argues, an example of fetishism. At the onset of steam power, water was abundant, and, even with its fixed costs, cheaper to use than coal. The hydraulic mammoths powered by water wheels required far less human labour to convert to energy, and were more energy-efficient. Even today, only a third of the energy in coal is actually converted in the industrial processes dedicated thereto: the only thing that is efficiently produced is carbon dioxide. On such basis, the striving for competitive advantage by capitalists seeking maximum market control 'should' have favoured renewable energy.

Capital, however, preferred the spatio-temporal profile of stocks due to the internal politics of competitive accumulation. Water use necessitated communal administration, with its perilously collectivist implications. Coal, and later oil, could be transported to urban centres, where workers were acculturated to the work-time of capitalist industry, and hoarded by individual enterprises. This allowed individual units of capital to compete more effectively with one another, secured the political authority of capital and incorporated workers into atomised systems of reproduction, from transport to heating.

Thus, locked in by the short-termist imperatives of competitive accumulation, fossil capital assumed a politically privileged position within an emerging world capitalist ecology. It monopolised the supply of energy for dead labour, albeit in a highly inefficient way.

This is the tragedy of the worker. That, as avatar of a class in itself, she was put to work for the accumulation of capital, from capitalism's youth, amid means of production not of her choosing, and with a telos of ecological catastrophe. That thus, even should the proletariat become a class for itself, and even if it does so at a point of history where the full horror of the methods of fossil capitalism is becoming clear, it would – will – inherit productive forces inextricable from mass, trans-species death. This does not preclude systemic, planet-wide transformation. Particularly given the inevitably uneven global growth of class consciousness and resistance, however, and the concomitant embattledness of any reformist, let alone revolutionary, power on the global stage, it does ensure that it faces extraordinary barriers. As will become clear.

As of 2015, estimates suggested that humanity produced a total of 15.5 trillion watts of energy each year, of which a considerable 29 per cent was not used. At an average of 2,000 watts per person (rising to 10,000 watts in the core capitalist economies), the majority was used for industry, commerce and transit, with only 22 per cent for household consumption. Some 90 per cent of this output was powered by fossil fuels: oil, coal, gas. This monopoly, enabling superprofits as monopolies do, ensured that fossil capital would always realise profit margins far higher than the industrial average. It has, in Malm's term, become worth a 'planet of value'. Each fossil fuel plant represents decades of investment awaiting realisation.

To avert planetary disaster is to inflict an earth-sized blow on capitalist industry. It is to choose between burning a planet of value, and burning the planet itself. But the death cult is so strong, so pervasive, that, against all resistance, the choice has already been made.

2. Adaptations

'I look out on the earth ... lo, all is chaos;
I look at heaven ... its light is gone;
I look out on the mountains ... they are trembling;
And all the hills are swaying!'
—Jeremiah 4: 23-26

Apocalypse has begun. The button has been pushed. Humanity is already committed to irreversible climate change. In May of 2020, levels of CO2 in the atmosphere hit 417 parts per million, the highest ever recorded – and the first breach of 400 ppm since the Pliocene. Climate activists are, in Richard Wilbur's phrase, 'mad-eyed from stating the obvious'. To understand the scale of what faces us, and the way it ramifies into every corner of our lives, is to marvel that we aren't having emergency meetings in every city, town and village every week.

We are, increasingly, out of time. In the capitalist untimelich, the time of the living and the time of the dead, human history and the history of inorganic sediments, collide. 'Millions of years of concentrated solar energy', as Huber calls it, have been released in an historical blink of an eye, only to rebound just as fast: the Deep Time equivalent of an asteroid strike. The cyclical time of seasons turns freakish, leaving us uneasily sweating in the clammy mid-winter. Spring comes too early, hurricane-force winds and flash floods break the October calm, polar ice melts while temperate zones are plunged into polar winter. The Arctic burns, boreal forests turned to charred sticks. The Greenland ice sheet melts even in winter. Antarctic sea ice has suddenly and drastically contracted in recent years. The polar vortex wanders, perturbed, and the mid-West freezes. In a parody of Revelations, Mediterranean storms rain fish on the island of Malta. Stochastic weather events accumulate. Birds fall dead from the sky. The progression of geological deep time, with its periods, eras and epochs speeds up so rapidly that it precipitates a crisis in the temporal order itself: spinning so fast, we may as well be standing still. The progressive time of human civilisation, reduced to the endless accumulation of stuff, collapses into nonsense. The cycle of ice ages, a necessary condition for human evolution, melts away for eternity. With awareness of which comes a wave of eco-anxiety, for which we grope for names – Glenn Albrecht's 'solastalgia', Ashlee Cunsolo and Neville Ellis's 'ecological grief', Renee Lertzmann's 'environmental melancholia'. Even at the end of 2018, 70 per cent of Americans describing themselves as 'worried' about climate change, and it has been a long two years for that fear to wax.

The sixth mass extinction, signalled by what one study calls 'biological annihilation', is underway. The oceans, which produce roughly half of the oxygen we breathe, are acidifying, and are swept by heatwaves, says a recent study, 'like wildfire'. Coral reefs, home to a quarter of marine life, are bleaching. Insect biomass collapses, with 40 per cent of all species undergoing drastic decline. The bees, that once we believed were saved, are disappearing eight times faster than are mammals, birds or reptiles. Without their pollination work, 70 per cent of the crops that feed 90 per cent of the planet will fail.

The question of human survival is inextricable from that of what sort of humans we should be. By 2070, MIT research says, the new norm for 'many billions' of people will be impossibly high temperatures that will kill less fit people and make outdoor work impossible. Half a billion will experience temperatures that would 'kill even healthy people in the shade within six hours'. The Arctic, that 'sluggish and congealed sea' discovered by Pytheas, a breathing 'mixture like sea-lung', will be gone, on conservative estimates by 2040. In 2019, the usually snow-bowed woodlands circling this uncanny sea-continent burned more fiercely than ever. Precise metrics of the scale of what will unfold are to be determined, not least by class struggle, but there is no longer, if there ever was, a choice between adaptation and mitigation.

So adapt. But to what? Those species now going extinct were once well adapted. The widely accepted geo-logism, 'Anthropocene', is in one sense an obvious political evasion, diluting as it does the necessary focus on capital accumulation itself. Yet, of course, capitalism is something that the human species, and no other, does. And while there are unthinkably vast disparities in power and responsibility in the production of petro-modernity, the latter has had a proven – if, crucially, hardly irrevocable – popular base: the vatic rage of activists notwithstanding, no politician has been crucified for promising fuel tax cuts.

This fact can easily be weaponised by the right. Of the recent protests of the gilets jaunes in France against declining wages and rising inequality and sparked by a rise in diesel tax later reversed by Macron faced by the scale of the protests, Trump tweeted that '[p]eople do not want to pay large sums of money ... in order to maybe protect the environment'.

In fact, however, and allowing that the movement is hardly monolithic, the French uprising was characterised by a remarkable refusal to refuse to engage with questions of ecology, particularly compared, say, to the fuel-price protests in the UK in 2000 and 2005. Far from being characterised by ecological indifference, what characterised much of the French protest was disagreement between those for whom talk of ecology comes too soon, and those for whom such talk is inextricable from social – class – justice. One example of the former is visible in the claim of the prominent activist Jerôme Rodriguez that '[e]ventually, when we obtain the first things, ecology will have its place'; of the latter, the words of another, François Boulot, that '[t]he social and ecological emergencies are inseparable', that '[w]e will not be able to operate the ecological transition without an equitable wealth redistribution'.

Rodriguez's rationale for his position, that 'nowadays, people aren't concentrated on this', is not supported by the superlative gilets jaunes slogans, 'End of the month, end of the world: same perpetrators, same fight', and 'More ice sheets, fewer bankers'. This refusal to compartmentalise is energising evidence of the new politicisation of the moment.

Still, that not everyone opposed to the fuel tax rise has been so assiduous in drawing the connections is in part because the dispersed, privatised accommodation and individualised transportation of modern life offer individualised, immediate-term and distinctively capitalist answer to specifically human strivings.

The concept of the Anthropocene is a tacit acknowledgment that the alienated labour of humanity has itself become a selective evolutionary pressure. It has already forced rapid adaptation in some species, where it has not resulted in extinction, as Bernard Kettlewell's experiments with peppered moths show. The besooting of tree bark in industrial areas became a powerful selective force, favouring darker moths, harder for birds to see and pick off. Now such pressures are coming for us, as powerful as the asteroid strike behind the Cretaceous-Paleogene mass extinction.

We are compelled to adapt to ourselves.

From this point of view, there is no difference between adaptation and mitigation. To close the fossil fuel plants, to destroy a planet of value, or even, dare we hope, the value-form itself: are these not adaptations?

Of course, this is not what is generally meant by adaptation. Implicit is a Green Zone-style survivalism of the rich; explicitly touted are permanent adaptations of capitalism to the consequences of capitalism. The ideology of 'adaptation' has become the ideology of capitalism's triumph over all life.

3. Dead Zones

'Nature is man's inorganic body. Nature is his body, with which he must remain in continuous interchange if he is not to die.'

—Karl Marx, 'Estranged Labour'

Extinction is everyday. It is what there is to eat, wrapped in clingfilm and sold from refrigerated shelves. We have lost half of all the mammals, birds, reptiles and fish on the planet over the last forty years.

This is neither random, nor naturally determined, but the creative-destructive act of humanity in its capitalist phase. It is our capitalist Stoffwechsel. As Kenneth Fish puts it in Living Factories, capitalism produces industrial systems that 'come themselves to approximate a force of nature infused with human purpose'. A massive metabolic entity, chewing up and spitting out at unprecedented rates: the agribusiness complex.

The Triassic-Permian 'great dying' was a megaphase change taking place through pulses lasting for tens of thousands of years, separated by interludes of hundreds of thousands of years, if not millions. The current mass extinction event is a megaphase change taking place in microphase time.

Mass extinction is punctuated by the production of what the environmentalist Jonathan Lymbery calls 'dead zones': the conversion of wild ecosystems into dead monocultures. In Sumatra, these dead zones are made by burning rainforest and, amid the stench of death, planting palm crop. The palm oil is used in foods and household items, while the nut is used in animal feed. It is secured with barbed wire, and treated with poison, to prevent the crop from being eaten. Surviving animal life, and surrounding human communities, are pushed to the edges, to the brink of extinction. Agricultural workers are abused, underpaid, even enslaved. This is an example of what Moore would call 'cheap food', where the 'value composition' of the goods, the amount of waged labour necessary to produce each item is 'below the systemwide average for all commodities'. In this case, a 'cheap nature' is produced by a distinctly capitalist form of territorialisation, wherein forestry is converted through deforestation into palm monoculture, while 'cheap labour' is secured partly through the dispossession of neighbouring human communities. More calories with less socially-necessary labour-time is cheap food.

Cheap is not, of course, the same thing as efficient. Food production is, alongside fuel, a fulcrum of the capitalist organisation of work-energetics. It is one that, as with fossil fuels, wastes an incredible amount of the energy it extracts. According to the FAO (Food and Agriculture Organization of the United Nations), 30 per cent of cereals grown for human and animal consumption are wasted, along with almost half

of all root crops, fruits and vegetables. To conclude from this grotesque squander that a 'more efficient' capitalism would 'solve the problem' of 'the environment' would be to fail to understand waste, capitalism and ecology: that the first is intrinsic to the second; that the second, whatever the degree to which it is inflected by the first, is inimical to the third.

Capitalism also directly undermines its own productivity, precisely through its industrially-produced biospheric destruction. According to the UN, for example, there are at most sixty harvests remaining before the world's soils are too exhausted to feed the planet. This edaphic impoverishment is a product, not a byproduct. It is the predictable, and long-predicted, consequence of intensive agriculture, over-grazing and the destruction of natural features (such as trees) that prevent erosion. Likewise, the death-drop of insect biomass, the decline of pollinating bees, are hastened by the extensive use of pesticides and fertilisers. Capitalist food production can only evade the problem – a problem, in its terms, of accumulation – either by establishing new 'cheap natures' through such means as deforestation, or by extracting rent from competitor producers through such means as intellectual property rights. For instance, since 1994's notorious TRIPS agreement (Trade-Related Aspects of Intellectual Property Rights), through the rules of UPOV (Union for the Protection of New Plant Varieties), particularly the notorious UPOV 1991, and in the face of local fightbacks from Guatemala to Ghana, the World Trade Organisation has enforced property agreements outlawing the saving of seeds from one season to the next, thus sharply raising costs for farmers producing 70 per cent of the global food supply.

In response to environmentalist opposition, capitalism has a number of moves available to it. One, faced with direct class opposition, is outright repression, as in Brazil where agribusiness has formed an alliance with Jair Bolsonaro, to crush land rights activists as 'terrorists', the better to extend its dead zones. The skies of Sao Paulo have blackened this summer, the rainwater dark with soot as, amid a wave of rancher arson and a scale of racist violence against indigenous communities not seen since the dictatorship, the Amazon rainforest burned at record speed. This existential threat to life on earth was visible from outer space. Another, faced with consumerist pressure, is some variant or other of that chimerical 'green capitalism'. As Jesse Goldstein has documented, this has opened a profitable niche of capital accumulation, with minor energy-saving and 'clean' technologies being sold as world-saving innovations. It is also inseparable from capitalist imperialism.

In one respect, the struggles over the Arctic are unusual. The pivot of imperialism today is not direct political control of territory. It is, rather, a global, liberal property-rights regime, policed by everyone from the US Trade Representative to the European Commission, backed by the power of the US Treasury, the Federal Reserve and Wall Street, supported by capitalist classes from Paris to Beijing and secured by violence 'in the last instance'. Thus it falls to these institutions to elaborate a 'green capitalist' response to ecological crisis. As ever, the solution is predicated on 'sustainability'. In relation to the palm industry, the Roundtable on Sustainable Palm Oil (RSPO) exists

to certify certain producers as sustainable. The RSPO is notorious with Greenpeace and Amnesty International for certifying companies engaged in deforestation, labour abuses and even slavery as 'sustainable'. Nonetheless, its certifying processes proved useful for the European Commission when it was challenged to find a 'politically feasible' solution to the palm oil crisis.

Even were the palm oil industry to be crushed in one legal blow, however, substantially the most likely result would be that capitalism would shift to another monoculture: rapeseed or soybean. When one dead zone ceases to be productive, or politically feasible, capital permanently searches out others. The problem remains the death cult of capital accumulation, and its specific Stoffwechsel.

4. Green Capitalism and the Paris Accords

'The basis of optimism is sheer terror.'
—Oscar Wilde

We live in Bad Hope. Capitalism produces mauvais-espérer, cognate of mauvais-foi, as rapidly as it does carbon emissions.

More pervasive now than its literalist denialist cousin, and growing, is the implicatory denial of the 'adults in the room'; the 'green capitalism' that vocally 'believes in' anthropogenic climate change. What it shares with its cousin is a grundnorm: that scientific knowledge must never threaten accumulation. Capitalism can very easily accommodate denial and denial-denial. As with so many issues, it is effortlessly virtuoso in instrumentalising apparent opposites.

The fact of 'Anthropocene' is no shock to capitalism. As Christophe Bonneuil and Jean-Baptiste Fressoz argue in The Shock of the Anthropocene, the danger posed by capital accumulation to the web of life has always been either partly known or knowable. There was no desire, on the part of capitalists or the managers of capitalist states, to investigate further until the future of the system itself was threatened. Until that point, the 'hockey stick' charts that now grace environmental literature were the basis for capitalist triumphalism. From approximately 1950, Ian Angus shows in Facing the Anthropocene, there is a sharp rise in atmospheric carbon dioxide and methane, surface temperature, marine fish capture, biosphere degradation, and ocean acidification. Deforestation begins to soar earlier, around 1900. Martin Gorke's study of mass extinction shows a similar hockey-stick curve, with an enormous spike in extinctions taking off after 1900. This was for a long time a success story: more industry, easier transportation, large urban populations, more domesticated land, more food on the plate, growing population.

The 'awakening' of recent decades has been marked by a series of false starts. In 1972, two years after the first 'Earth Day', the OECD proposed a green economy. Polluters would be expected to pay for their contamination of the environment. In 1987, the Brundtland Commission exhorted governments to embrace 'sustainable development'. The following year, the Intergovernmental Panel on Climate Change was launched. In 1992, the Rio Earth Summit signalled the apparent beginnings of a global framework for climate mitigation. Five years later, the Kyoto Protocol agreed binding targets for the reduction of carbon emissions by participating states (the United States remaining stubbornly aloof), which came into effect in 2005. A decade later, countries across the

world signed up to new emissions targets at the UN Framework Convention on Climate Change, in Paris. The agreement reprised the instruments of Kyoto, such as carbon trading and 'sustainable development' targets, but this time with US participation. At each step, a new beginning has been loudly pronounced.

And yet, with all this noisy global effort, it isn't even plausible to say that apocalypse has been deferred. The majority of carbon emissions in the entire history of humanity, as David Wallace-Wells starkly reports, have been produced since the Earth Summit in 1992. A quarter of all emissions happened in the twelve years after Barack Obama and Joe Biden were inaugurated president and vice-president of the United States in January 2009. The reason: every supposed effort at mitigation has been designed almost as if it were intended to fail.

Liberal bien-pensants used to bewail the refusal of the US, especially under George W Bush, to participate in Kyoto. But for all this theatre, Kyoto was always-already a failure on its own grounds. Even where Kyoto participants achieved some nominal reductions, these took place for reasons that either had little to do with Kyoto, or that revealed Kyoto's hollowness. The cuts were largest in Ukraine, Lithuania and Latvia, largely as a result of the demolition of national industries by structural adjustment. The United Kingdom achieved cuts largely by dint of the one-off, unrepeatable feat of demolishing the coal industry, a feat undertaken largely to break organised labour. And many countries like Italy achieved nominal reductions simply by trading emissions with poorer countries.

The Kyoto Protocol endorsed the market approach. Rationing emissions by price enabled some capitalist states or industrial sectors to purchase more fossil-driven growth from those whose emissions were suppressed by low growth anyway. And it was purchased cheaply (and subject to collapsing prices, particularly after 2008), with deliberate oversupply making European carbon credits cheaper than 'junk bonds', as the Economist put it, by 2013. Elsewhere, for example in Canada, Australia and New Zealand, carbon emissions increased dramatically.

The panacea of 'carbon trading' is a particularly cultic iteration of neoclassical economics, groping for the invisible hand for more than mere survival. 'Putting a price on carbon is the only prudent answer', then-Prime Minister of Australia Julia Gillard wrote almost a decade ago, 'because it unlocks one of the most powerful forces on earth – the genius of the free market. By resetting price signals, we will open the door to a new era of investment and innovation'. The truth is that such commodification is, was always, and has always been known to be by those with eyes to see, worse than nothing.

It has certainly made money for some: 'infested by corruption and non-transparency', in Steffen Böhm's words, carbon markets have created 'a lot of income for consultants, carbon brokers and project'. Grift aside, the system in its very essence bolsters big polluters. Daniel Tanuro and others have shown how '[c]arbon trading is a source of windfall profits for polluting sectors', that those profits 'generated by the quota system strengthen big carbon emitters that have a strategic

interest in slowing or delaying climate change mitigation and in continuing to burn fossil fuels as long as possible'.

The faithful blame the failures of capitalism on inadequate capitalism: in 2012, the think tank Open Europe described the EU Greenhouse Gas Emissions Trading Scheme as 'botched central planning rather than a real market'. But that this market is real is precisely the problem. 'Part of the failures of carbon trading can be put down to neoclassical economic orthodoxy', as Rebecca Pearse puts it. Focusing on an Australian domestic scheme, but with more general pertinence, she describes how

[c]arbon price signals are understood as a means to correct market failure. The excess greenhouse gases in the global atmosphere are understood as aberrant and unintended externalities of otherwise efficient markets. There is a tendency towards heroic expectations about the effects of carbon price signals in our broken electricity markets and false assumptions about the equivalence of different parts of the carbon cycle. This understanding of climate change is ahistorical and asocial: it creates all sorts of problems and blind spots in climate change practice ... Perhaps most importantly, the carbon market project rests on the assumption states are able and willing to institute carbon trading rules that deliver environmental goals, as well as acceptable and profitable outcomes for all relevant fractions of capital and citizens.

Of course it is always and only profit that will be prioritised. The ecological 'assumptions' of such strategies are predicated on that disavowed understanding. Disavowal, rather than any simple misapprehension to be addressed by ever more urgent explanations and appeals to capitalists' intelligence, as per much liberal green strategy. For Pearse, marketised climate policy is precisely a 'displacement strategy ... aimed at deflecting or deferring the climate crisis spatially ... materially ... and politically' – and, we can add, temporally. But time is up.

Kyoto was an example of ideological reification on a grand scale. The interconnected global processes through which the web of life is converted into value, and atmospheric carbon, have been represented as localisable objects for exchange in a lucrative global market. In 2008, as industry consultant Point Carbon estimated the global value of carbon markets to be worth $117bn, the New York Times looked forward to it being the biggest market in the world. The research economists New Carbon Finance estimated that the industry could be be worth $1 trillion in the US alone by 2020. Sadly for the 'green' investors, this was too optimistic, based on a drastic upscaling of cap-and-trade schemes within the US that never occurred. Ninety per cent of all carbon market value still derives from the European Emissions Trading Scheme. But consider that the largest single increase in carbon emissions from any country during the Kyoto period was from China, which as a 'developing' economy was exempted from the treaty. Most of the goods it produced, however, were for export: services-driven economies had simply outsourced much of their industrial base. Under the guise of a spurious geopolitical egalitarianism, hand-in-glove with a thin market utopianism, Kyoto enabled capitalism's frantic, carbon-fuelled growth. The same applies to the

meat industry, which accounts for 15 per cent of global emissions. Much of the meat consumed in Europe, for example, is imported from Africa, the Americas and Asia.

Even the recent Paris Accords, feted as the last best hope for the planet before Trump's sabotage, were committed by their own estimates to warming of between 1.5 and 2 degrees above pre-industrial temperatures. This is a plan not to avert, but for, disaster. The IPCC's Fourth Assessment Report suggested that 20–30 per cent of animal and plant species may go extinct if global average temperatures exceed 1.5 degrees above pre-industrial levels. A cataclysm at countless levels – including for the food chain. A rise of two degrees would severely raise the likelihood of 60 per cent of the populated surface of the earth being flooded.

The Paris objectives, relying on voluntary emissions targets thanks to a last-minute intervention by Obama, will not be met. They are supposed to be achieved by a combination of the failed carbon trading model and the use of 'energy efficiency'. The latter, something of a shibboleth for policy-makers since the 1990s, rests on the disproved assumption that the economical use of fuel reduces its consumption. Energy efficiency has become a benchmark of environmental regulation, and there has, indeed, been a sharp increase in the efficiency of electrical goods. And yet, of course, as the Jevons paradox predicts, this merely resulted in more consumption, efficiency sustaining the illusion of 'plenty'. Numerous studies looking at the measures incorporated in the Paris Accords expect them to lock in decades of emissions leading to global temperatures rising by an average estimate 3.7 degrees by 2100. Hence these accords being welcomed by Exxon and major coal firms. Hence BP's confidence, in lobbying the Trump administration for Arctic drilling rights, that they would be fully in accord with the Paris objectives.

No wonder that the IPCC currently expects 1.5 degrees of warming by 2030, with 3-4 degrees by 2100. Such warming would produce sufficient flooding, desertification and heat as to make large populated areas uninhabitable. And there are good reasons to assume these estimates are conservative. The IPCC has consistently underestimated the real pace of climate change. Its estimates of emissions, temperature increases, the melting of the Arctic, the disintegration of ice-sheets, tundra thaw, rising sea levels and ocean acidification have all been staggeringly outpaced by reality. The first three IPCC reports didn't even mention ocean acidification as a problem, while its earliest reports anticipated no significant changes to Greenland and Antarctic ice sheets. The IPCC has historically had little to say about permafrost melt, one of the tipping points of climate breakdown. Its first mention of the problem was in a 2018 report, which didn't model emissions from abrupt thaw. Two years later, it was reported that permafrost in the Canadian Arctic was thawing seventy years earlier than predicted, while the Greenland ice shelf began to fragment and the Milne ice shelf, itself a breakaway from Canada's Ellesmere ice shelf, fragmented and collapsed. Until relatively recently, the IPCC has consistently held that the Arctic ice is safe until beyond 2050, a clearly untenable position, with June 2020 seeing Siberian temperatures reaching 38°C, the

highest ever recorded in the Arctic circle, and land temperatures in the region hitting 45°C, speeding up the thawing of the permafrost

One reason for the IPCC's disastrous conservatism is its preference for linear models of change, which fail to take adequate account of feedback mechanisms and tipping points. By now, for example, it is well known that the loss of polar ice reduces the 'albedo effect', wherein solar radiation is reflected back into outer space, thereby warming the waters and melting more ice. The heating of the oceans is likely to kill much of the marine life that acts as a carbon sink, thereby increasing the amount of carbon in the atmosphere and heating the oceans further still.

The extended reproduction of capitalism, in its allegedly 'green' phase, is the extended reproduction of apocalypse.

The language of 'sustainable development', Gareth Dale points out, has become the language of sustained capitalist growth. It has become the language of implicatory denial. Capitalist states proclaiming the objective of 'zero net emissions', while their means entail the massive expansion of emissions. 'Green' economies expanding airports and extending motorways. The unsinkable rubber duck of 'green capitalism'.

What now, in these early post-Trump days? Wither denial-denial and its discontents? How post-Trump, indeed, is this world?

The approach of neoliberal capital, and of global governance, to climate management has always been structured around an irresoluble contradiction. Insofar as capitalist states are capable of taking a longer, executive view with regard to the reproduction of capital, the decarbonisation of capitalism's energetic infrastructure is vital. Arguing for a Biden presidency in the Financial Times, Martin Wolf points to the IMF's 'surprisingly' affordable estimate that a move towards zero net emissions by 2050 – pretend for a minute that is not too slow – would only lower global output by 1 per cent relative to an unchanged economy, to insist that '[g]iven these estimates of the modest short-term cost of mitigation against the far greater long-term costs of failure to do so, the argument for action is overwhelming.' Even bracketing mass misery and death, then, in capitalism's own sociopathic terms, the argument is settled. Moreover, and importantly, to the extent that it injects investment into an under-invested system, such decarbonisation represents potential commercial opportunities. Insofar as climate management has been financialised, it opens new opportunities for profit.

For Wolf, '[t]he only realistic hope is technocratic problem-solving and co-operative policies', which 'must be guided by moral purpose, but not infused by fantasies of revolutionary transformations'. This is the bad-utopianism of 'realism', of the exasperated adults in the room. As if with an outbreak of sheer reasonableness, the systemic constraints on 'co-operative policies' can be overcome, as if they do not bespeak structural realities. Insofar as large monopoly capital is structurally invested in fossil energy, insofar as US imperialism has been bent around the imperative of securing the global flows of oil and gas, insofar as both US state factions have a historical alliance with fossil corporations as a form of concentrated political power in themselves – though such corporations have historically enjoyed an unusually strong love-in and allegiance

with and from the Republican Party – and insofar as traditional modes of hegemony have rested on petromodernity's nexus of 'prosperity' and automobility as 'freedom', Washington has always represented an enormous impediment to projects for survival. The systemic sustainability of capitalism depends on measures that would severely restrict particular – but structurally salient and powerful – forms of accumulation. The impact on the capitalist world-system by the prompt suppression of fossil capital, and the loss of its value, could only be managed by a scale of interventionism that, though outscaled by emergency pandemic management, would be far more permanent.

As the new president, Biden's priorities on climate illustrate this contradiction. An opponent of the Green New Deal, he has nonetheless proposed $2 trillion of infrastructure spending to transition the US grid to net-zero-carbon electricity by 2050. Well-founded scepticism should not stand in the way of allowing that, thus far, Biden's pronouncements on climate have surprised liberals, ecological NGOs and even many on the left in their scope. Such proposals, though inadequate to prevent disastrous warming, are certainly better than historic centrism has mustered. Biden will re-join the Paris Accords, revoke some of Trump's executive orders and re-fund climate research. He has paused oil and gas drilling on federal land, set an aim to double offshore windfarm energy by 2030, set a goal of conserving 30 per cent at least of lands and oceans by 2030, and looks set to return to Obama-era regulations on vehicles, power plants and methane leaks from oil and gas wells overturned by Trump. Such measures are likely to make a non-negligible difference. Biden's early climate appointments have been relatively conciliatory, insofar as he did not appoint fracking fan Ernest Moniz to the Department of Energy, as he considered, and former DuPont strategist Michael McCabe did not get to head the Environmental Protection Agency. Rather, he appointed two figures, former Michigan governor Jennifer Granholm and North Carolina environmental regulator Michael Regan, commensurate with a cautious reformism. Likewise, to the Interior Department, overseeing federal lands and development, he appointed congresswoman Deb Haaland, the first such indigenous appointment, and a supporter of the Green New Deal. The effect of all this is that Biden accepts, and intends to act on, 'the science'.

All this is powerful testament to the unstinting efforts of activists over many years. It is not, of course, reason to believe the battle is even close to won. All evidence suggests, for example, that the Paris Accords themselves, and policies anchored in their predicates, even if they are not breached, will still lead to untenable levels of warming. Biden's surprising appointments hardly put paid to all concerns – Granholm has links to energy companies, while Biden's climate liaison, congressman Cedric Richmond, is an ally of fossil corporations. His order to eliminate fossil fuel subsidies does so 'to the extent consistent with applicable law', a hostage to litigatory fortune. The much-vaunted – and genuinely important – freezing of leases to extract oil and gas from federal land do not even account for a quarter of US oil production, and he has stopped short of banning fracking. This order conspicuously omitted restrictions on the politically contentious subject of coal – a last-minute volte-face, insiders told

Bloomberg, surely signalling more caution to come. Because, of course, all these stated aims are inevitably subject to Biden's likely strategy of negotiating away his more ambitious goals in pursuit of harmony with his own party's recalcitrant carbon right, such as Joe Manchin, and indeed of chimerical 'bipartisanship' – which means giving the ruthlessly effective Mitch McConnell as much fiscal restraint as he can take.

There are some signs of exhaustion within the Democratic Party with regards to such a strategy, Chuck Schumer, the majority leader, calling on Biden to declare a 'national emergency' to allow for action under emergency powers. But such signalling itself, of course, can be part of 'bipartisanship', the hint of a stick before a carrot, and with regards to the climate crisis in particular there are strong reasons to doubt the tenacity of such a trenchant attitude. Biden himself is sending mixed signals on the matter. Given that the Democrats' paper-thin and disunited majority in the Senate precludes passing radical measures even by 'reconciliation', bypassing Republican filibuster, the pressures on Biden to revert to his long-preferred bipartisan methods will be strong.

And of course, Biden's is a cabinet overwhelmingly dominated by Wall Street and corporate America, meaning that such climate mitigation as Biden does get past an overtly denialist and obstructionist GOP, will be whatever is congruent with the pressure coming from capital.

Pace ultraleft conviction, underestimating as it does the protean adaptability of capitalism, this is not to say climate reformism is impossible. Particularly given the shifts in mass consciousness, the Biden administration's move away from Obama-era deficit-anxiety towards the permissibility of larger-scale stimulus, the variety of ecoclimatic strategies among big capital, and the need for management even in capitalism's terms, this is not the case. There is, then, a danger to the leftist sublation of self-aggrandisement and brittleness according to which no real change can occur under capitalism. As Paul Heideman puts it, 'leftists who predict that Biden will completely fail to deliver are likely to be caught flat-footed by any expansions of the welfare state' – and/or, we might add, of meaningful climate policy. However, as he goes on, 'it is imperative to recognise that Biden's ambitions, such as they are, will remain firmly circumscribed by elite consensus politics'. Tellingly, the Financial Times, in its role as house organ of capital in general, is more cautious about Biden's measures than are many liberals and even leftists, warning that they have 'conspicuous omissions' and 'just a start'.

The point is not that nothing can change for the better under capitalism: it is that it is far from certain that there will be such change; that any change that comes is the historical triumph of generations of opposition to the system under which it is enacted, not its expression; and that any such change will be bitterly contested, hedged and constrained, and, being predicated on capital accumulation, in severe danger of rollback should another wing of capital gain the whip hand. Whatever breathing space amelioration might allow we will surely take and use. But the best hope for the world and humanity remains, overwhelmingly, rupture beyond capitalism itself. '[T]he onrush

of catastrophe does have a temporality of its own', Andreas Malm reminds us in his urgent How to Blow Up a Pipeline. 'It imposes tight constraints on those who want to fight.'

Even the very symbolism of potential change can be deployed against it. The enormous shift in mood music and symbolism of the Biden presidency is welcome, as far as it goes: but all symbols are polysemic. There is nothing intrinsically reactionary about Biden's call for an office of domestic climate policy, a national climate task force or even a civilian 'climate corps': but nor is there anything intrinsically radical about them. All depends on what, if anything, they do, and how. Should, for example, Biden's 'bipartisanship' lead to the dilution of more meaningful measures, such much-vaunted signifiers can easily float free of impactful action to be deployed as cover, as any number of historic Public Enquiries, Official Task Forces and Exploratory Committees can attest.

Global climate management has hitherto been the functional equivalent of 'biosecurity' as a response to pandemic threats, the latter self-consciously designed to accommodate the needs of agribusiness, while scapegoating small producers, hunters and the esoteric consumption habits of racialised portions of humanity for the threat of coronaviruses from avian flu to Covid-19. Biden himself has continued this trend too, forebodingly directing the CIA to produce a National Intelligence Estimate on climate security, and the secretary of defence to produce a climate risk analysis of the Pentagon's facilities. 'Biosecurity', since avian flu, has coercively reorganised food production through closed, 'secure' units run by large corporations. In so doing, while offering an inadequate solution to the growing risk of zoonotic spillover and pandemic, such 'biosecurity' also ensured that food production would be concentrated in precisely the sorts of environments that, as Rob Wallace documents, intensify virulence and create new opportunities for spillover.

In the same way, global climate management from the Earth Summit to the Paris Accords, has attempted to 'price' carbon emissions in ways that it was assumed would make capitalism safe for the environment. The eventual result on both counts, predictable and predicted, has been to put humanity through a series of stressful, life-endangering and life-losing crises, squandering the political will accumulated by environmentalist movements, and co-generating the ontological and historical conditions for the circulation of microbial fascisms.

The order that prevails, for now, in Washington, and among its allies both declining (the UK) and rising (Brazil, India, the Philippines), and even among its enemies (Russia, China), is the disorder, the catastrophic decomposition, of life. That order must be sabotaged.

5. The Labour Theory of Apocalypse

'What the bourgeoisie ... produces, above all, are its own grave-diggers.'
—Karl Marx and Friedrich Engels,
The Communist Manifesto

The tragedy of the worker is that, as long as she works for capitalism, she must be her own grave-digger. Capital never extracts energy from the earth, but it makes a taxing withdrawal from the worker's body.

If the entire problem facing humanity was how to source a fixed quantity of energy without destroying the planet, the problem might have been solved by now. For example, solar energy could in principle meet our needs many times over. Yet energy as such, like value, is an abstraction. No physicist is able to say what it is. It is not, as Vaclav Smil writes, a 'single, easily-identifiable entity'. Calories, biomass, electromagnetism, light-waves, heat and motion all have the property of being energy, and for human societies it matters greatly what sort of energy is available, electricity not being edible. The sun, indeed, is already our main source of energy. As Vernadsky put it, 'the biosphere is at least as much a creation of the sun as a result of terrestrial processes'. What we consume as caloric energy has been captured by photosynthesis. That depends on life-processes whose degradation through overfishing, deforestation and intensive agriculture would not be remedied by technofix, even if capturing high-entropy solar radiation were simple and adaptable enough to power such crucial industries as aviation.

It is, to repeat, a signal error to think that the ideological secretions of fossil capital begin and end with the climate denialist industry, currently abandoned even by the majority of fossil capitalists. Rather, ideology is sedimented into its scientific knowledge. Capital must, of course, attend to physical realities, in a way that the Heritage Foundation need not. However, it tends to read these realities through its own screen of commodity production. Knowledge of energy as an abstract entity, subject to laws of conversion, conservation, and quantification is one such secretion. As Thomas Kuhn argued, it is no coincidence that the major contributions to energy science from Carnot, Kelvin, Helmholtz and Clausius, emerged just as industry was converting energy from wind, wood, water and coal. It was the steam engine that sparked interest, not so much in 'the nature of heat', Ilya Progigone and Isabelle Stengers point out, as in 'heat's possibilities for producing "mechanical energy" '. If thermodynamics, whose discovery was borne of this interest, treated energy as though it were indestructible and substi-

tutable, this was also exactly how fossil capital treated it. The industrial revolution was also the moment, as Anson Rabinbach has shown, when the Enlightenment-begot productivist view of human energy and its deployment was consolidated. Work became linked, not to 'Christian dignity', nor to medieval artisanship, but to flows of energy deemed to be limitless in principle: labour-power.

Capital's inexhaustible demand for exhaustible energy entails a distinctive form of what Dominic Boyer terms 'energopolitics'. Capital isn't hungry for energy in the way that a machine or a living body is. It grows on the value added to that energy by human labour. It doesn't just rip open stocks of purified carbon deposited by ancient life, with utter disregard for the 'externalities'. Its relationship to non-human energy is structured by its dependence on human energy, its extraction of fossil energy a byproduct of its extraction of caloric energy, purchased as labour-power and converted into economic value. The role of non-human energy in the production process might best be captured by Marx's term 'dead labour'. Dead labour is infrastructure, where an infrastructure is whatever allows new work to take place. It is the mixing of human caloric energy extracted from the labouring body, with fossil energy and resources to produce stockpiles, machinery, buildings, railways, the grid, all to intensify the work of living labour.

The labour theory of value is a theory of our apocalypse.

Energy by itself, though abundant in the natural world, does not produce economic value. An aggregate expansion in the use of energy both enables and, from the point of view of capital, requires an aggregate expansion of the labour force. From that point of view, whatever its impact on particular groups of workers, fears of automation destroying work tout court are misplaced as long as capitalism is around.

The capitalist 'work/energy regime', as George Caffentzis and Jason W Moore dub it, entails a relentless raid on human energy in a production process whose product is extinction. The only ultimate limits to this process are revolt, and/or physical exhaustion. Resistance to fossil capital is class self-defence. The tragedy of the worker is that the workers' movement has only episodically been able to embrace this understanding. The worker's hopes have been tied to the energetic foundations of capitalism and its apparent proffer of liberation from back-breaking labour.

Scant years ago, the hopes of much of the left were pinned to the stability of 'pink tide' regimes in Latin America, such as Venezuela, dependent on the resource base of extractivism. Crucial left debates about these regimes' strategies bracketed, immediate questions of political survival thereof and the amelioration of working-class conditions therein were urgent, and, in that context, the resources of the extractive industries irresistible, even for many quite clear-eyed about the ecological ramifications. This is the tragedy of the worker. It does not imply that no alternatives at all could have been developed: but it abjures moralism, and acknowledges the constraints of space for manoeuvre.

Such empathy ebbs in less embattled contexts. Even as the catastrophe strikes ever more visibly, parts of the labour movement are willing to put themselves in the offensive

vanguard of fossil capitalist expansion, as with the 'left' leadership of Unite the Union lobbying for the expansion of the aviation industry for the holy grail of 'jobs'. As if they should never challenge capital's priorities. As if, even absent liberation from the wage-form, if jobs must exist, only those granted by capital, performing what tasks for what ends it demands, can exist, and must be defended. As if no alternatives can be demanded.

This was far from inevitable. The shopworn cliché according to which environmental consciousness is incorrigibly bourgeois, a 'post-materialist' concern that eludes workers, is yet another secretion of fossil capital, a putatively left variant of the right-populism-versus-greenery deployed by Trump 'in support' of the gilets jaunes. Such claims originate in the publicity strategies of industries threatened by regulation, seeking to draw workers to their side. And they ignore, as they must, that it is workers in the first instance who bear the environmental costs of capitalist production – something that the German-American economist William Kapp noticed as early as 1950. Whatever else they have been, struggles over waste in Naples, toxic dumping in Love Canal, or the Bhopal disaster, have been class struggles waged by the poor.

The bourgeois myth does not even hold in the United States where the labour movement has been weak, the left even weaker, and the ideological power of petromodernity and its offer of capitalist freedom at its strongest. As Chad Montrie's labour histories suggest, modern ecological consciousness (as distinct from indigenous cosmovisions) initially sprang from the direct conflict between capital and labour, as agrarian workers were drawn into dirty towns and cities to work in factories that befouled the rivers and besmogged the air: the same 'filth and horrors' that Engels discerned in the living conditions of the English working class. From working-class sporting clubs to labour unions, conservationist pressure long preceded the cultural impact of Rachel Carson's breakthrough work, Silent Spring. In the Appalachians, it was workers – in often violent struggle with energy capitalists – who defended the natural environment. For example, it was members of the United Mine Workers who, in opposition to the corrupt business unionism of the bureaucracy, campaigned for a ban on destructive strip mining during the 1960s. In a hard-fought battle in Kentucky in 1967, it was mineworkers and residents organising a chapter of the Appalachian Group to Save the Land and People whose direct action, and threats of violence if the company persisted, forced the Governor to cancel Island Creek Coal's mining permit. The existence of clean-air and -water legislation owes itself to a coalition between oil, chemical, atomic, steel and farm workers' unions with environmental groups.

Still less does the bourgeois myth hold outside of the United States. In Italy, the modern environmental movement was born in class struggle against the industrial degradation of living conditions and occupational health. It found programmatic expression in the experience of 'working-class ecology' that arose in the Communist Party and the organisations of the radical left in the sixties and seventies. As Stefania Barca points out, left ecologists in this era such as Laura Conti and Giovanni Berlinguer not only made important theoretical contributions to a working-class ecology, which

respected the existence of physical limitations, but also helped build class alliances between unions and professionals that formed the basis for Italian labour environmentalism. For the Brazilian working-class movement, strongly influenced by the Italian experience, rural workers brought an added dimension of struggles against deforestation and for land rights. For the landless workers' movement, currently menaced by Bolsonaro, class livelihoods and environmental justice have never been self-evidently opposed.

The very power of the discourse that pits jobs against climate, is a contingent outcome of class struggle, above all of the successful neoliberal offensives against working-class self-organisation and the defensive narrowing of horizons it has produced. How many workers in rustbelts and mining communities would have voted for Donald Trump, for example, had the 'new economy' championed by centre-right Democrats as their main solution to climate change offered anything but joblessness, low-paid service work, de-unionisation, a savaged public sector and an opioid epidemic?

Yet these horizons are not only formed by the immediate context of weakness and failure. The spectre of a much larger defeat haunts the worker. Here, the left must register its own illusions, its own hubris, its own defeats.

6. October and the Promise of Red Plenty

'The Smoke of the Factory is Better than the Smoke of Incense.'
—Pioneer Slogan, Russia 1924

Fossil capitalism was seriously threatened only once in its history, before the worst damage had already been done. The October revolution took place amid the annihilatory clatter and hammer and thunder of World War I, a war whose shattering impact on flora and fauna is overshadowed by its incomparable bloodletting, with 40 million working-class men and women killed for imperialism. And yet, imperialism in its most violent mobilisation could not but produce an ecological death-storm. In the conquest of the Americas and Australasia, indigenous genocide was part of a cascading cataclysm of extinction, with ecosystems brought to ruin for the sake of domains for capitalist agriculture, hunting and settlement. These 'neo-Europes', as Alfred Crosby dubbed them, brought with them a 'world-altering avalanche' at gunpoint. So it would necessarily prove when colonial violence returned to the metropole.

Where the bodies fell, complex ecosystems were transformed by industrialised war into 'fields of sterility', the novelist Henri Barbusse wrote. 'Where there are no dead, the earth itself is corpselike'. In the trenches, pervaded with poisonous gases and studded with exploded and unexploded ordnances, the photo-journalist Michael St Maur Sheil found zones of death 'where every living thing was killed'. Far beyond the front, the war's demand for resources such as timber, coal and tin meant that deciduous forests were cut down, and the industrialisation of mining was accelerated not only in Europe but across its colonial empires. As in almost every twentieth century war, wild animals were an unremarked on casualty, and the European bison was exterminated in Russia by German hunting parties.

The revolution was not fought for the environment, but to raise almost 125 million people out of war, poverty and despotism: yet it ramified ecologically. 'Land, bread and peace' entailed an end to ecocidal war and, to the great relief of Russian conservationists, social ownership and rational management of the land and its energy and mineral resources. The Soviet government, attempting to overcome the irrationality of Tsarist traditions and prevent capitalist plunder, implemented strict limits on hunting, logging, and the exploitation of resources, and created dozens of protected natural reserves. These efforts, though imperilled by civil war and famine, were perpetuated well into the 1920s. The Soviet government was the first in the world, as historian Douglas Wiener points out, to set aside protected territories for the scientific study

of nature. This was also the era of scientific breakthroughs, from phytosociology (the study of plant communities) to trophic dynamics (the study of energy flows in food chains). Bolshevism not only strove to be rational and scientific in its husbandry of a devastated ecosystem, but also undertook what Weiner calls a 'singular experiment in scientific conservation'. It was even open, in some quarters, as Kunal Chattopadhyay has shown in 'The Rise and Fall of Environmentalism in the Early Soviet Union', to strains of early, more radical materialist ecological thought, such as that associated with Kozhevnikov, which broke from 'growth'-oriented and reductive utilitarianism. Kozhevnikov, for example, was behind early proposals for those zapovedniki, nature reserves, not to be used for harvest or hunting, but to guard against monocultures and to protect fragile species. Even during the civil war, in 1919, the agronomist Nikolai Podyapolski met Lenin to argue for a new zapovednik in Astrakhan. He recalls being as fearful 'as before an exam in high school' – but '[h]aving asked me some questions about the military and political situation in the ... region, Vladimir Ilich expressed his approval ... He stated that the cause of conservation was important not only for the Astrakhan krai, but for the whole republic'.

Yet ultimately, of course, one strand within Bolshevism, in circumstances very much not of its own choosing, proved decisive.

It is a form of crude anticommunism to claim, as Jairus Victor Grove does, that Marxism is 'committed to a project of homogenisation at the expense of human and nonhuman animal forms of life'. What is unarguably the case, however, is that the Marxist commitment to red plenty, a superabundance, a life beyond scarcity, was fused in the Bolshevik era, particularly in the context of unrelenting existential threat, to an urgent race towards industrialisation. 'Communism,' Lenin's famous speech in 1920 ran, 'is Soviet power plus the electrification of the whole country'. Hundreds of engineers and scientists, millions of workers, and the giant coal basins of Siberia and eastern Russia, were recruited to this end. Without a 'huge industrial machine' at its disposal, the besieged, famine-struck revolutionary state would not survive. The situation was, as Trotsky lamented in the same year, 'in the highest degree tragic'.

Transport, industry and food production had been driven to the point of collapse by imperialist war and civil war. Disastrous harvests, famine, typhus, cholera and dysentery, all bespoke a generalised ecological collapse. The demographic basis for Soviet power, let alone the political basis, had been shredded. Russia, so far from realising socialism, was, in Trotsky's description, 'a blockaded fortress with a disorganised economy and exhausted resources'. Socialism, for the Bolsheviks, had to be at least as productive as capitalism in order to survive – yet the Russian economy would not recover to pre-war levels until 1930. Hence the calls, in the midnight of civil war, to militarise the labour force. Hence the heroically productivist exhortations, the invocation of a distinctly socialist form of labour productivity, in language that pre-empted haute Stakhanovism.

The stabilisation of the Bolshevik regime was purchased at the cost, ultimately, of destroying what remained of Soviet democracy, and increasing the power of party

managers and the state apparatus over the Russian working class. Moreover, in the panic years of War Communism, Bolsheviks had seeded the rationales for heedless industrialisation and intensive labour exploitation that would return in the Stalin years. Gosplan, the bureau created by Lenin to electrify the Soviet Union, was one of the main supporters of a return to centralised planning, and later became the ministry responsible for five-year plans. The formal interment of Soviet power in 1928, with the first Five Year Plan, prompted a hypertrophic return of the culture of War Communism. In which era, any incipient socialist ecology was permanently crushed. The always-jostling balance of power of various streams within the party and the ecological sciences shifted dramatically, as Chattopadhyay shows. In the context of international economically and militarily competitive state struggle, the vulgarly utilitarian model veered to victory, instrumentalised by Stalinism. 'The zapovedniki', Foster says, 'were converted more and more from reserves for the scientific study of pristine nature into a new role as transformation-of-nature centers', and dissenting ecologists were purged. The subordination of science and nature itself to crudely productivist economics was overt: under torture, the ecologist Stanchinskii 'confessed' that 'the theoretical problems of ecology and biocenology that I posited were completely removed from economic exigencies'.

From that point on, the Russian state was a fossil state. Dedicated to competing with Western economies in conditions of autarky, it required breakneck industrialisation. That in turn required the most efficient and relentless exploitation of the natural resources and labour forces available to a vast overland empire. From the 1960s to the 1980s, against the resistance of Sami locals, the Arctic Ocean was used as a nuclear dump. In 1990, 40 per cent of Soviet people lived in areas of three to four times higher air pollution than was supposedly permissible, and half of all waste water in the capital went untreated. Nothing, of course, was solved by the transition to the most feral iteration of 'free-market capitalism'. By 1996, 50 per cent of Russian water was polluted. In 2010, two hundred cities in Russia exceeded their own air pollution limits. A 2018 Russian environmental ministry document reports an elevenfold increase in deaths due to environmental disasters between 2016 and 2017, and temperatures increasing at more than double the average global rate. Russia remains the fourth-highest greenhouse-gas-emitting country in the world.

The 'metabolic rift', to use John Bellamy Foster's term for Marx's notion of the 'irreparable rift in the interdependent process of social metabolism', that chasmal source of ecological crisis, was, to Soviet planners, a growth strategy.

7. The Politics of the Poles

They explored and explored
And travelled back
With maps of the country
And descriptions of the lifestyle
For honour and glory
For medal and degrees
For having explored a country
Where people live and dwell
—Aqqaluk Lynge

'The collapse of the Soviet system,' McKenzie Wark argues in Molecular Red, 'prefigures the collapse of the American one'. Whether that counts as optimism or not, the implication is that the two systems share a logic, and were and are ailed by a similar problem of exhaustion.

Perhaps nothing better exemplifies this than the fate of the Arctic, the combined work of European imperialists, Russian modernisers, American colonisers, not to mention fossil capital and its twin, 'green capitalism'. That fate, as Cambridge researcher Peter Wadhams dubs it, is a 'death spiral'.

Between 1980 and 2012, the Arctic lost 40 per cent of its sea ice cover, and 65 per cent of ice thickness. Of the oldest ice, 95 per cent is gone, what remains is increasingly fragile 'first year ice'. The waters will imminently be completely ice free each September. And then, for the whole year.

Narwhals, polar bears, beluga whales, the Pacific walrus, peregrine falcons, ringed seals, spoonbill sandpipers, golden plovers, kittiwakes, and black guillemots. Design after exquisite designless design, evolutionary one-offs, anatomical glories, once gone never to be seen again, edging closer to the furnace of global heating. We are proceeding with unprecedented haste towards a new 'hothouse planet'. For the entirety of human history, the Arctic Ocean has been frozen. The last time the Arctic was blue and Antarctica was a warm continent, bustling with redwoods, ferns and swamp cypresses, was during the age of the dinosaurs, when the waters were warm and swum by sharks and plesiosaurs. The Anthropocene is the name, not for the most advanced phase of evolved life, but for a sudden derailing: a spin-off reality, a meltdown.

Jauntily reporting on Canadian and Russian preparations for the big melt, the BBC asks whether the Arctic is 'set to become a main shipping route?' In the summer of 2018, as the region burned, heatwaves and droughts across the world resulted in thousands dying like insects under a magnifying glass. Little noticed at the time, a

Danish cargo ship successfully completed a trial voyage through the Russian Arctic. While the British state has historically invested more in the Antarctic than the Arctic, the government's Office for Science has recently released a report looking at the 'climatic potential for Arctic shipping'. The Arctic, being 'extremely sensitive to climate change', is melting faster than climate-model simulations predict, it says, which could result in 'investment worth $100bn or more' in such profitable domains as mineral resources, fisheries, logistics and Arctic tourism. Of course, the government insists that such development must be 'sustainable'. The US Geological Survey, meanwhile, estimates that 30 per cent of the world's undiscovered gas, and 13 per cent of its oil, may be in the Arctic.

Here is a climate feedback mechanism that is purely intrinsic to capitalism, wherein accumulation-by-extinction is a means to further accumulation-by-extinction.

The disappearance of the Arctic is a commercial boon for which the major Arctic powers are prepared to fight. The United States has a clear military lead in this struggle, demonstrated in a grandstanding US-led NATO exercise in the Arctic last November. The largest since the Cold War, the exercise involved 50,000 troops, and tens of thousands of vehicles, vessels and air crafts, ostensibly simulating their response to an attack on an ally. Russia, however, has the largest Arctic land mass, is immediately adjacent to the planned transpolar sea route, has re-opened military bases in its north, and possesses the world's largest fleet of icebreakers: a legacy of the Stalinist dictatorship. It was also the first to, theatrically, plant its flag in the North Pole. The United States and Canada are investing rapidly in upgrading their own icebreakers, while the UK, responding to Russia's military exercises in the Arctic, despatched 800 commandos to, pathetically, 'demonstrate we're there'. In light of this, the theatrical astonishment at Trump's Secretary of State Mike Pompeo for making all this explicit, calling the melting sea ice a source of 'opportunity and abundance', is cant.

A key danger now is that climate management will be absorbed into defence budgets, 'natural security' made an aspect of 'national security'. For the last two decades, the Pentagon has positioned itself as an opponent of climate change, which it depicts – not incorrectly – as a threat-multiplier, catalyst of social instability and source of future wars. Here is a potential militarised despotism of climate-change management, the germinal climate leviathan of which Geoff Mann and Joel Wainwright have warned. A sovereign 'decider' that takes it upon itself to impose 'natural security' on the basis of an ersatz universalism: protecting life. The natural security state is faire pattes de velours. It is, after all, the military and its supply industries which supply much of our knowledge about climate. Cold War spy satellites provide decades of evidence of glacier melt in the Himalayas. US submarines in the Arctic measure the thinning of ice, while Army and Navy vessels police US access to oil and gas resources, which become more accessible as the ice disappears. Intel, a major military supplier, boasts of the use of its drones for tracking patterns of Arctic ocean wildlife. The CIA funds scientific research into geoengineering, which has a long military pedigree, resulting in predictable mutterings from some quarters (of deflected, degraded resistance, or

worse) about chemtrails and equally predictable rebuttals. This is the god's-eye-view of military and state bureaucracies that, as Christophe Bonneuil and Jean-Baptiste Fressoz argue, has infiltrated the Anthropocene imaginary. A totalising technovision, which enables the planet to be secured for the fraction of the Anthropos that has brought us to this impasse.

Most of the techno-fixes proposed for the Arctic involve geoengineering schemes. One team plans to sprinkle silicate dust over the ice to deflect solar radiation. Another proposes to use wind-powered pumps to bring sea-water to the surface in the hope that it will freeze. Another suggests orchestrating glaciers to firm up ice shelves against accelerated disintegration. Few of these schemes are as yet viable, certainly economically, often scientifically. Far worse, like most such geoengineering proposals, their possible and possibly irreversible effects on regional life and remote weather systems are poorly understood, yet they are vaunted with astonishingly little cognisance of what that means. Climate crisis is, after all, precisely a case of colossal rebound: the fruit of massive scientific-technical intervention into planetary processes. In furthering capitalist mastery over the earth's energy resources, it has already bolstered systemic longevity at the expense of species longevity, and is set to wreak worse hecatombs.

This is not to slip into aestheticised moralism, to mutter of the dangers of Meddling with Powers One Cannot Possibly Understand. It is, however, a severe crisis for the authority of scientific knowledge, particularly insofar as it is subordinated to the imperatives of military bureaucracy and capitalist enterprise. And while some of the consequences of fossil capitalism could have been anticipated, nothing like the specific scale and gravity of the crisis was. It is not irrationalism but rational, rigorous and due humility to suggest that 'knowledge' itself, in the abstract, indispensable as it is, must have a reduced status after the catastrophe. Yet, almost as if none of this had happened, there is now a drive to pile on new, untested and potentially disastrous interventions where it would be effective and ecologically simpler to stop emitting carbon.

But even in a best-case scenario, we will be unable to avoid the question of geoengineering entirely. It would – will – require huge and co-ordinated efforts to lower carbon levels and attempt to cool the planet. As Holly Buck makes vividly clear in her vital work, After Geoengineering, we have come to the appalling pass that we must investigate scientific geoengineering as a mitigatory strategy for human and other survival even in a postcapitalist world.

This is a world away from what is generally meant by geoengineering, which is the orchestration of planetary processes towards continued – eternal – perpetual accumulation.

This points to the real problem with geoengineering as presently conceived. Capitalism is geoengineering. To be anything other than capitalist would be another form of geoengineering. There is no human metabolic relationship with nature that does not engineer planetary processes – potentially this might proceed in considered and commensurate fashion, but overwhelmingly it has been reckless and benighted.

The confluence of capitalist imperialism and ecological disaster is not a recent innovation. The polar regions have long been the object of military designs, their life-processes subsumed under the web of capital. They have also been the object of a complicated imperialist imaginary that both justifies and questions, celebrates and maunders anxiously about, this absorption. Explorers, from Peary to Scott, leading expedition teams of biologists, geologists, botanists and zoologists, marched under the flags of empire, with the intention of transforming what appeared to be a terrifyingly unconquered zone into a mapped, topographically manipulable space. A space for resources, military outposts, whaling and commercial routes, littered with the names of explorers and imperial sponsors. Swerving wildly between mystique, even mysticism, and desublimation, they were most consistent in finding the polar regions empty, yet also pregnant with possibility. Much as, in the Lockean tradition, every potential colonisable land was found empty-yet-fecund, however populated. Even where the endangerment of Inuit, mammal and marine life by whalers, trappers and oil-developers operating in the Arctic was acknowledged, it was a pretext for heightened paternalistic control: Britain in the Arctic seas, Denmark in Greenland and Iceland, Canada in the north-west territories, and the United States in Alaska. Colonialism itself was, in this sense, styled as a precocious, noble form of green capitalism.

The colonial poetics of the polar regions is marked by such ambivalence. Consider Isaac Hayes, the US doctor and explorer of Greenland, who found nothing in that long-populated land but a 'vast plane of desolate whiteness', a 'land of desolation' – one, nonetheless, ripe for commercial profit. Consider Robert Falcon Scott and Apsley Cherry-Garrard, explorers of Antarctica. Faces scalded by snow, blistered fingers filled with tiny icicles, feet marching through permadark, constantly failing and falling into crevasses, they were still entranced by the 'ghostly illumination', the 'cold immensity'. Through their encounters with this 'Monstrous-Feminine', as Barbara Creed terms it, they defined an imperial masculinity at odds with the softening effects of urban civilisation. These tropes, of enchanting and ethereal bleakness, have worked their way into contemporary travel writing, even where it is sensible of the non-emptiness of the polar regions. Thus, Sara Wheeler, the British writer, can't resist describing the frozen north as a 'white Mars', as though it were lifeless. One reason Lovecraft's At the Mountains of Madness remains such a key text of reactionary anxiety is its political-unconscious perspicacity that the seeming blankness of the ice is undergirded by brutal exploitation of a raced underclass – to which insight is added the right-ecstatic terror of triumphant revolution.

The kernel of truth in such poetics is that, however ambivalently, and with whatever disregard for the life they white out, they acknowledge that the polar spaces are incomparable, irreplaceable.

Is a Red Arctic still possible? What would it even look like?

The rubble of the left's defeats reaches to the retreating ice. Russia's current subjugation of the Arctic has its roots in a period of Stalinist industrialisation that was markedly unsentimental about the natural environment. The Russian state built on

the ruins of revolution was ambitiously gigantist in its plans for the north. Faulting the fallen Tsarist regime for its irrational neglect of the tundra, and its sale of Alaska to the United States, Stalin set grandiose development targets in each Five Year Plan. Primitive accumulation in the Arctic was managed by the secret police, and manned by gulag slaves. Coal, gold and spar, extracted from the camps at Kolyma and the Arctic north-east, were the loot from an absolute increase in the rate of exploitation of prison labour, and a brusque overriding of indigenous interests.

Arctic Stalinism was about more than breakneck industrialisation, however. Though a counter-revolutionary dictatorship, the USSR still grounded its legitimacy on a mutilated version of the Bolshevik idiom. Red Plenty, built on a rational, scientifically-guided, industrial order. From the White Sea Canal project, to early Cold War efforts led by climatologist Petr Mikhailovich Borisov to geoengineer Arctic warming, the glamour of Stalinism rested in part on this quasi-mythical Arctic modernism. Stalin's favourite writer, Vladimir Zazubrin, rang in the conquest of the Arctic with gusto. 'Let the fragile green beast of Siberia be dressed in the cement armour of cities,' he declared. 'Let the taiga be burned and felled, let the steppes be trampled'. The 'iron brotherhood' of humanity would be moulded in 'cement and iron'. An authentically Bolshevik note. This story of human uplift, of a gigantic elevation of one-sixth of humanity out of centuries of poverty and ignorance, was tremendously appealing, even to non-communists. Even Fridtjof Nansen, the Norwegian internationalist, sympathised with Russia's attempt to modernise the 'Ice Temple of the polar regions': from a White Mars to a Red Arctic.

There is, was, no Red Arctic. Behind the red ensign of fossil communism, there lay a ruinous reality. Fossil autarky? Fossil state-capitalism? Fossil bureaucratic-collectivism? Whichever it was, however we interpret its system, the dispersal of that dream saw the dwindling in the public imaginary of all non-capitalist roads. Now we meet the death-spiral of the ice-caps without even knowing what a Red Arctic could look like. Instead, once again, science fuses with capitalist imperialism under a 'green' patina. Military bureaucracies, with their panoptic gaze, extend their grip over the framing of solutions. And in this way, secure the terrain for relentless capital accumulation.

8. Who Is 'We', Anthropos?

'Pity would be no more,
If we did not make somebody Poor'
—William Blake, The Human Abstract

The accumulating evidence suggests that we are doomed. But who, exactly, is 'we'? The possibility of political response to the Anthropocene turns upon how we answer this question. In the same way that the responses to the twin revolutions, industrial and political, of the late eighteenth and early nineteenth centuries formed the contours of the intellectual traditions of modernity – conservative to counterrevolutionary, and reformist to revolutionary – so the lineaments of late carbon politics are taking shape in answer to the meaning of 'Anthropos'.

One possibility is to agree with Dipesh Chakrabarty that 'left unmitigated, climate change affects us all, rich and poor.' The hell-world likely to be born on present projections of warming 'cannot be beneficial to the rich who live today or to their grandchildren', even if they can afford to synthesise their own oxygen. Chakrabarty takes seriously the 'anthropos' of the anthropocene: it is the expanding footprint of humanity in general that bears responsibility for the coming storm. Bearers of a common, if unevenly distributed, guilt, we face a shared if unequal fate.

The politics that follow from this position have been pursued most prominently by Extinction Rebellion (XR), a campaign that seeks to use civil disobedience to achieve decarbonisation of the UK economy by 2025. The utopian character of this target admirably reflects the urgency of the task: yet rather than forcing XR into making the fundamental necessary political choice between friends and enemies, the campaign seeks to make capital and the state its – if occasionally truculent – collaborators. 'If you believe', says XR's agitprop video Act Now, 'in people's right to property and if you believe that the state should keep order and safety for people, then you also now have to be against the impacts of catastrophic climate change': thus, deftly, is avoided any reckoning with the connection between those phenomena. Melding the horizontalism of 1990s roads protests with the epistocracy of people who Fucking Love Science, XR actually relies upon the exercise of state violence in its strategy. If enough people get arrested, goes the claim, the state will have to concede the demands to 'tell the truth' and 'act now'.

The courage and sincerity of XR, as well as the shift its activists have achieved in public consciousness of the immanency of climate collapse, are not in doubt. Their strategic perspective and the tactics that flow from it nonetheless, as the Out of the Woods collective point out, display a startling and dangerous naivete. To rely on moral

suasion alone – indeed to treat capital and the state allies in a programme 'beyond politics' that nonetheless amounts to a complete rupture with the present – is to try and make a social revolution without enemies. Such a thing is impossible. As the radical periodical Science for the People put it forty-five years ago in response to the aspiration: 'Ecologists should not waste their time telling the rich to share.'

What of attempts to politicise the Anthropos in a more egalitarian, even anti-capitalist, direction? The most straightforward critique points out a simple truth – the Anthropos presents too thin a category to capture now, in the time of guilt, those who were cast out in the time of plenty. Hence the multiplication of the 'cenes', each delineating a particular privileged subject now enthroned in the geological record: the Eurocene, the Manthropocene, the Anthrobscene. The false universalism of the Anthropocene, writes Kathryn Yusoff in A Billion Black Anthropocenes or None 'erases histories of racism ... incubated through the regulatory structure of geologic relations.' What the inscription of human activity in the geological record really represents is an exclusion from the category of human of the colonised and enslaved: 'racialisation belongs to a material categorisation of the division of matter (corporeal and mineralogical) into active and inert.'

If there is hope, does it lie with the victims?

Certainly, insofar as we consider, for example, the heroic and groundbreaking activism of the Indigenous Environmental Network. Beyond that? Some indigenous cosmologies – what Jairus Grove calls 'forms of life' threatened equally by the homogenising aspirations of (some, we might riposte) Marxists as by those of settler-colonialism – reject the separation of natural and human, object and subject that has precipitated the fossil catastrophe. Traditional environmental knowledges, religions, monotheisms, polytheisms, a-theisms, indigenous cosmovisions uprooted and fragmented by colonial capitalism are summoned in resistance movements. Deep Ecology finds intuitive partnerships with versions of Buddhism, Daoism, and Confucianism. In Bolivia, the Pachamama law, which ascribes rights to the natural world, is partly rooted in an indigenous cosmology in which the earth is a living deity. African rural religious traditions are called on in self-defence by those populations who are routinely described by the IPCC as the most vulnerable to climate change and the least responsible for it. Now they are often read as offering instruction on how to be resilient in the face of, or at least necessarily reconciled to, that catastrophe.

Would that it were so. The promise of decolonising the Anthropocene offers us redeemers: those who are not fallen, for whose sake the earth is not cursed. Yet even here we find the memento mori of the real abstraction of capital. Contrary to Yussof's Afro-pessimist claim (cleaving with the theoretical tendency criticised by Kevin Ochieng Okoth, Annie Olaloku-Teriba and others) that 'Blackness, by its very negation in the category of nonbeing within economies of Whiteness, lives differently in the Earth', plantation slavery was interested not in the purported inertness of its victims but precisely in their human species-being: their capacity for labour. European settler colonists first desired the land and, as Yusoff notes, the precious metals of the Ameri-

cas. The land was inhabited. They solved this problem by genocide, political, physical and cultural of the inhabitants – producing a new problem of the lack of labour. This problem they solved by enslaving Africans. As Barbara and Karen Fields remind us, the point of slavery was to make profits from 'cotton, sugar, rice and tobacco', not white supremacy. Race, and all the categories and cultures that go to make it up, does not belong to a different way of being on the earth. It is and always has been a part of the cosmology of capital, the value-form-of-life.

The Marxist critique of the Anthropocene is often misunderstood because of the commonsense conception of class as a characteristic held by particular human beings – how people dress, how their accents sound, what their parents did for a living. In this conception, groups defined by such characteristics are assigned either the guilt of climate collapse or the potential to prevent or mitigate it. Much as the rich certainly deserve to go extinct first, this is not the Marxist conception of class. Humans act as Träger, bearers of a position in the circuit of M-C-M⊠. Class is a relation, not a characteristic. To conceive of the Anthropocene as Capitalocene means not to restrict the responsibility for it to a particular group of people, the capitalists, but rather to expand it to a process, the accumulation of capital, of which settler-colonialism formed a part. Capital already forms a more-than-human assemblage, one regulated by its own productive and reproductive logics and consuming its various forms of prey – abstract labour, cheap nature – in the process. One might even extend Anna Tsing's insight that the Suharto regime in Indonesia 'made capital into a predator': is the value form now the apex species on the planet?

Seeing accumulation as the pulse of the Anthropocene implies a further step, too, one at odds with the notion of different forms of Worlding: that of acknowledging the astonishing achievements, fossil-fuelled and carbon-dreamt as they perforce have been, of national bourgeoisies of colour.

In a previous phase of capitalism, the 'long boom' of roughly 1945–75, 'development' formed the watchword of those fighting for sovereignty against colonialism. Witness the twenty-point programme issued by the American Indian Movement in the early 1970s: a terse and militant document, reflecting the shared assumptions of anti-colonial revolutionaries of the time, it invoked not an indigenous cosmology but the right to 'health, housing, employment, economic development and education for all Indian people.' Nor was such development predicated on catch-up. The Indians of All Tribes, during their year-and-a-half-long liberation of the island of Alcatraz in 1969–71, offered to the European settlers to 'help them achieve our level of civilisation' and 'raise them and all their white brothers up from their savage and unhappy state'.

This enterprise, unfortunately, was unsuccessful. Nonetheless, globally, after protracted and heroic struggle, most anti-colonial movements ultimately achieved independence and constructed new centres of accumulation. Context – not least the ruthless predations of imperialism in new 'postcolonial' forms – has meant such concentrations have varied enormously in their natures and levels of efficiency. They have exploded in spectacular fashion in such states as China, India and Brazil. There of course, and,

too, in the most compromised and weaker iterations, we see the accumulation of fossil capital at one pole, and proletarian labour embedded in the fossil form of life at the other.

It is no accident, as Hegelians once said, that the vast increase in carbon emissions since 1990, and the fall of the Soviet Union, was accompanied by a world-historic expansion of the global proletariat. According to the International Labor Organisation report The Great Employment Transformation in China, even with declining employment participation, China added 150 million people to its labour force between 1990 and 2015. Similar trends could be observed, and continue, in Pakistan, India, Indonesia and Nigeria. The revolutions of the latter twentieth century, concentrated in the colonial and semicolonial world, were essentially peasant wars in which the (sometimes settler, sometimes indigenous) landlords lost but the peasants did not win. These revolutions provided the basis for the separation of rural labour from the means of production and its agglomeration into cities predicated on carbon infrastructures, even in places where the 'formal' economy provided little secure employment. As noted by the Chuang collective, Chinese growth and industrialisation reversed the Maoist-era 'balkanisation' of the cities, hatching new mega-centres tied to fossil-fuelled logistics, whatever the efforts of the CCP to establish what Wainwright and Mann call 'climate Mao.'

Leaving agrarian life enforces the real abstraction of the separation of nature and culture: one must attach oneself to machines of various kinds in order to gain the subsistence once produced by interaction with the land. For the first time in human history, a majority of our species must live in this way, as proletarians. Capitalism has, one hundred and fifty years after Marx predicted, finally produced enough diggers to complete the grave, but in doing so it ensured all that was left to inherit was the graveyard. A Weltklasse has at last come into being but at the price, unchosen, of the world it was promised. This is the tragedy of the worker.

9. Green Fascism and the Mise-anthropo-scène

'You're not entitled to a pain-free execution.'

—Ohio Assistant Attorney General Thomas Madden

No human intervention is required to turn an oxygen-rich atmosphere, soils packed with organic fuels, and carbon-based organisms into flames. As earth scientist Stephen J Pyne has documented, our world has evolved to burn, and every ecosystem has its fire regime. Without fire, especially in lands poor in nutrients, where the burning off of old growth resets the biological clock, some biotas would die off. If fire is suppressed in some parts of the world, the resulting damage to the local ecosystem makes uncontrollable wildfire more likely. This, famously, is the case for letting Malibu burn. The California grasslands burn, on average, every couple of years, to no great loss as far as the plantlife is concerned. The shrubland burns every five years. The chapparal and woodland communities fringing Malibu currently burn once a decade. It is futile, wasteful, reckless, to build rich communities in flammable coastal areas destined to go up in smoke. Fire-suppression efforts introduced to preserve these communities change the biochemical composition and moisture-resistance of the soil, and make the fires more extreme.

Australia, too, is 'meant' to burn, as it did from July 2019 to March 2020. Currently, around 5 per cent of the Australian land surface is hit by wildfires each year. This destroys 10 per cent of the continent's 'net primary productivity' – the ability of its tropical forests, woodlands and savannah to photosynthesise solar energy. These fires are also more severe than they would be without climate change, but if they didn't happen at all, parts of the continent would die. Since Australia broke off from ancient Gondwana, it has evolved ecosystems packed with pyrophytic and pyrophilic trees and plants, across large, low-nutrient, parched landscapes.

The problem with current wildfires is not even that there are too many. If anything, Pyne stresses, recent decades have seen a 'fire famine', brought on in part by misguided, colonial-capitalist efforts at suppression. Rather, the problem is the aggravation of the 'wrong', biologically destructive type of fire. Those tactics of fire suppression, a manifestation of what Alfred Crosby calls 'ecological imperialism', insofar as they exported a fire regime appropriate to temperate parts of Europe, exacerbate the appearance of 'bad' fire, redouble the effects of global heating on wildfire severity. Fire seasons start earlier, finish later, and kill off vital ecosystems. The vicious feedback loop so kindled, wherein wildfires pump more black carbon into the atmosphere, contribute to

the retention of heat, the melting of Arctic ice and the dwindling of the albedo effect, ensures yet more severe wildfires. The capitalocene is also, to borrow Pyne's phrase, the 'pyrocene'.

In 2020, the plague of infectious micro-organisms intersected with such a plague of flame, from Australia to the western US to the Arctic forests. Each ecological crisis lent itself to pseudo-Darwinian assertions of vigorous autonomy and resilience on the right, coupled with contradictory exhortations against hallucinatory enemies. In mid-September, as wildfires ravaged Oregon, armed militias patrolled roads and small towns in search of 'Antifa' arsonists. Pointing their guns at journalists, at anyone who didn't look like they were 'from around here', the far right's febrile online rumour-mill had it that the fires were part of an effort by antifascists to destroy the town.

That these fires were undoubtedly aggravated by climate change registered, of course, not at all for most working in the framework of fascist counter-subversion. Even those able to accept that capitalogenic global heating poses an imminent biological threat to the conditions of their own survival, much as do capitalogenic plagues, their cognitive mapping requires a simpler friend/enemy distinction, calling forth its folk devils, enemies of civilisation – in this case, tellingly, antifascists. As for the thought that Trump himself is a co-author of the fires, insofar as his policies were expected to add an extra 1.8 billion metric tons of greenhouse gases in the atmosphere by 2035, thus intensifying the severity of the planetary burn, that is treason to those who know that climate change is a Chinese hoax. Likewise, that fires are indeed started deliberately, and that the slash-and-burn deforestation of the Amazon has terrifying effects on the US Midwest and Pacific coast, is unthinkable to those whose deep sense of US civilisation is anchored in heedless capital accumulation. But denialist as it is, this effort to contain threats to nature with AR-style rifles and side-arms also contains the germ of ecofascism, in which the defence of the biosphere is coterminous with the extirpation of mutinous biological forms.

And should the climate leviathan fall into the hands of twenty-first century fascism?

Throughout Europe and the Americas, the resurgent far right and the most reactionary right in power is still overwhelmingly associated with climate denial, the latter's conspiracist predicates finding a convivial home alongside fantasies about Eurabia and 'cultural Marxism', channelling resentment at the revelation of climate collapse into the death drive: Bolsonaro opening the rainforest to profitable destruction, Trump tearing up even the feeble commitments of the Paris Accords. Yet as populations move from the Global South, fleeing conditions that will never be purely and solely recognisable as climate collapse, but are already clearly inextricable from and imbricated with it, the reactionary right stakes its popularity on dreams of walls, of pulling up drawbridges and manning gunboats, of insisting that the desperate will not be saved – from which, of course, it should follow that there is a crisis from which escape is needed. Thus out of its very sadism and racist predicates some in the denialist right may become either gloaters invested in the change that hurts others more than them, or 'conservationist' ecofascists themselves – or, given the power of disavowal, both.

The denialism of the far right differs in several respects from that of the class self-defence of fossil capital. Since Kyoto, the fossil giants, with salient exceptions, have abandoned open affiliation with the denialist industry in favour of greenwashed capitalism. Where once a well-funded global denial operation linked the defence of fossil fuels to the fading dreams of petromodernity – fast cars and free markets – now BP segues smoothly into claiming to be 'Beyond Petroleum', and even ExxonMobil is a supporter of the Paris Accords. It was left to the hard-right Trump administration to rebrand fossil fuels 'molecules of freedom'. Where once it was the extraction firms themselves declaiming that carbon dioxide was a precious, life-giving gas that had been unfairly demonised, now it is the far-right Alternative für Deutschland that denounces Greta Thunberg as part of a public-relations hoax that seeks to 'bedevil the plant-nutrient carbon dioxide'.

The firms specialising in extraction had known for some decades of the damage they were doing. Since their profit model depended on the most up-to-date scientific knowledge, they were unable to live in delusion. Frank Ikard, president of the American Petroleum Institute, had explained as early as 1965 the 'catastrophic consequences of pollution'. The carbon dioxide 'being added to the earth's atmosphere by the burning of coal, oil, and natural gas' would cause 'marked changes in climate beyond local or even national efforts' by the turn of the millennium.

To the aggressively pro-capitalist politics of the traditionalist denialist industry, moreover, the new far-right has added a Spenglerian metaphysics of race and civilisation. To Fear of a Red Planet, they have added Fear of a Black Planet. The denial industry always warned that climate change is a Marxist Trojan horse; now, as Trump reiterates in tweeted block capitals, the claim is that it is a Chinese Trojan horse, an attempt to undermine Western economies. Pamela Geller, using the language of Ayn Rand, denounces climate change as a scam to loot the wealth of the 'producers' in favour of the 'moochers'. Breivik's manifesto warns of 'Enviro-Communism', claiming that the 'global warming scam' is a means to pillage the resources of the West and redistribute them to the Third World. In some cases, this dread of the world's poor and raced is fused with loathing for (tacitly raced) speculators, as when UKIP's Gerard Batten denounces the 'hoax' as a 'scam to milk the masses!'. From Donald Trump to Andrzej Duda, moreover, the new far right is consistent in linking fossil extraction to national revival, as though such territorially aloof energy sources as water, wind and sun are not to be trusted with national-popular rebirth. Trump is, after all, surprisingly open to certain renewals, such as ethanol: 'the rich harvest of American soil,' he enthused, 'is turned into fuel that powers American cars and industries.'

Old-school paleo-denialism is always just one step away from outright nihilistic affirmation. The Trump administration let slip, as an attempt to justify abandoning fuel-efficiency standards, that it expected a catastrophic four degrees global warming by 2100. As ideologically committed as most of the far right is to its denialism, there is a tendency for it to slip into that affirmation. What does it mean, for example, that that Trump administration cited catastrophic climate change as a justification, and openly

gloated over the economic opportunities presented by the disappearance of Arctic ice? Part of the implicit logic is, party now while there's time. The Bolsonaro administration, if not always Bolsonaro himself, is quite explicit in these underpinnings. Its appointed boss of the national oil company, Petrobras, openly affirms that fossil fuels must be extracted 'while there is time. In some decades, oil will lose the relevance it has today'. As Naomi Klein points out, the siren song of capitalist nowhilism was already audible in denial propaganda and among its supporters in the state and evangelical churches. Yet, it is too generous to read affirmation as merely indifference towards future generations. There is a tendency, which Klein calls the 'meaner side of denial', for it to manifest as an open embrace of the rigours of apocalypse.

Faced with concrete, real-world evidence of climate change, they become crude pseudo-Darwinians, citing the virtues of adaptation. Populations 'can acclimatise to warmer climates', the US Chamber of Commerce insisted. 'When it rains, we find shelter. When it's hot, we find shade', Texas congressman Joe Barton asserted. Disaster capitalism offers its services to the rich in the form of Xanadu-like climate-secure residences, an ecological variation on nuclear-age survivalism. If some can't adapt, that's their problem. Tory columnist Andrew Lilico accepts that climate change is happening, but argues that it's too costly to capitalism to stop it, so we must adapt. How would the tropics adapt to four degrees of warming? By 'being wastelands with few folk living in them. Why's that not an option?' The rightwing columnist, Jim Geraghty, looks forward to climate change destroying 'threatening states' and 'ensuring a second consecutive American century'. Here, then, is a darker telos of the new far right. In practice, the effects of ecological despoliation have always, as a matter of deliberate and calculated strategy, been offloaded onto the working class, especially raced workers. Now, climate change can become a weapon of open race war, and of eco-eugenic class war.

And yet the far right does not live only in denial.

It is also manifestly not the case, as Rebecca Solnit contends, that environmentalism is intrinsically antithetical to white supremacy. That this claim appeared mere days after the Christchurch massacre, carried out by a declared ecofascist, is evidence of a sort of cruel optimism: the faith that ecological consciousness on its own, and the holistic appreciation of the 'web of life' that it engenders, is sufficient to dissolve the libidinal ties of race and nation and clear the path for liberal cosmopolitanism. In fact the earliest manifestations of ecological consciousness, of the connectedness of all matter, biotic and abiotic, were fused with romantic nationalism.

Long before the Pachamama law enshrined the rights of nature in Bolivia, the German nationalist Ernst Moritz Arndt hymned 'the rights of wilderness', urged fellow citizens to 'save the forest', as much as to save the spirit of the German people and stave off industrial modernity as anything else. In this purview, every 'shrub, worm, plant, human, stone' belonged to a 'single unity': but some humans, such as Jews and Slavs, were least therein. The Volkish movement that emerged to protect this set of natural relations, and what they viewed as man's natural habitat, blamed Jews for foisting

industrial capitalism on the German people. Ernst Haeckel's invention of the term 'ecology' was founded in his combination of eco-holism, racist social Darwinism, and volkishness. Historically, the far right treated racist murder as biological conservation and segregation as good husbandry.

The predicates of a future ecofascism are well-conserved, and propagated by authoritative and more mainstream – if, increasingly, unease-generating – figures in the green movement. From Garret Hardin's crypto-fascistic fables to Paul Kingsnorth's 'Dark Mountain', lamentations for an England are submerged by globalisation and immigration.

Among those strains of the European far right which are not militantly denialist, the consensus is overwhelmingly that immigration, and the growth of poor populations, is the problem. In France, Marine Le Pen's Rassemblement National derides and despises 'nomads'. This is a category that, like classical anti-Semitic imagery, or indeed like May's 'citizens of nowhere', binds the global poor and the mobile rich in a single phantasmagoria of national treason. 'Nomadism' is to blame, according to Le Pen's ally Hervé Juvin, for environmental degradation, by turning 'the most fertile and diverse ecosystems' into 'unsustainable territories under demographic pressure'. In Germany, the AfD's Björn Höcke espouses 'population ecology', in which violent borders prevent Europe from absorbing surplus population and contributing to galloping overpopulation. Christchurch murderer Brenton Tarrant's maudlin, greened-up Breivikism mined a similar ideological vein.

It is, unfortunately, not impossible for distinctly fascist solutions to climate change to be imposed, along despotic and ultimately genocidal lines. The mise-anthropo-scène presents ample opportunities for various lines of racist, patriarchal and militarist policy to be represented as mitigatory, or adaptive – and, from within the predicates of fascism, such policies would in fact be mitigations and adaptations. The very aspects of ecological disaster which throw capitalism into crisis, and which indicate the need for a social mobilisation tantamount to war, are just those which could give rise to a far-right climate leviathan, with the military organising what the bourgeoisie cannot.

The drive to protect fundamentally capitalist social relations while reducing global energy use and overcoming polluting industrial methods is exactly what could spawn a new eugenics, a new extractive imperialism (as lithium, and perhaps uranium, are obtained by force), and renewed forms of patriarchy. The scarcities and market failures produced by heated, acidic seas and unfertile soil, the increased rate of natural disasters consequent on global heating, lend themselves to every form of apocalyptic reaction, whether theocratic or secular. Above all, they would tend to intensify the libidinal bonds tying subjects to the apparent securities and consolations of the nation.

10. Meming Prometheus

'To learn which questions are unanswerable, and not to answer them: this skill is most needful in times of stress and darkness.'

—Ursula K. Le Guin, The Left Hand of Darkness

The new far right has yet to mature into anything displaying the organised and armed force of historical fascism. However, this only buys the left breathing room. Out of the business of history-making for so long, we must swiftly revise our classical visions and strategic preconceptions. We must formulate a version of plenty, of abundance, that does not brazenly override ecological limitations.

The left is particularly sensitive to anything smacking of Malthusian arguments about 'overpopulation': given the historic resonance of such arguments with racism and eugenicism, this is not surprising. Thus, for example, the understandable and widespread criticisms levelled at Donna Haraway for her recent urgent insistence on reducing population to around two billion as part of left strategy, which Sophie Lewis in a sympathetic, almost anguished critique, calls 'primitivism-tinged, misanthropic populationism'.

Such justified criticism, however, can elide with less persuasive contrarianism on the axis of productivism. This underlies the wide-ranging arguments on the left over issues of economic 'degrowth', its necessity or otherwise. The so-called 'ecomodernist' position, advocating climate intervention by radical redistribution plus technofix, has recently been (notoriously, for many) exemplified in the Jacobin issue, Earth, Wind and Fire, and in Leigh Phillips's Austerity Ecology and the Collapse-Porn Addicts, with its provocatarian, Marxist-épatering chapter titles such as 'There Is No "Metabolic Rift" ' and 'In Defense of Stuff'.

Unlike many ecosocialists, Salvage is not, in principle, opposed to Promethean aspiration and speculation – the opposite, in fact. Quite apart from the literally epochshaking nature of the revolutionary social change we espouse, we dissent from the view of those many socialists for whom any talk of geoengineering, for example, is anti-socialist – 'science-fiction fantasy bankrolled by the ruling class', as Keith Brunner puts it. Contrary, with comradely respect, to John Bellamy Foster, we do not see it as self-evidently ecologically questionable that 'smart parking meters, robo-bees, and new potentialities for geoengineering' are 'perfectly compatible with "socialist ecology" '. The hermeneutics of ecomodernist suspicion are not without traction: dystopias can be politically polyvalent, but misanthropic, even symptomatically sadistic, collapse-porn is certainly a culturally prevalent current thereof. And, too, it is undoubtedly the case that some

left opponents of ecomodernism indulge in the kind of 'green moralising' of which Peter Frase complains.

But such moralising is a political failure, not definitional to a left ecology. And there are, moreover, major problems and lacunae in left ecomodernism. It is predicated on a faith position that 'we can' overcome ecological problems, on the basis of the most tendentious scientific and/or sociological extrapolation, if any – as when Phillips blithely insists that 'you can actually have infinite growth on a finite world'. It validates that particular narrow conception of the polysemic word 'growth' – 'growth', for Phillips, 'is freedom' – without anything approaching adequate interrogation of the history and ideology of the concept, as extensively outlined by Gareth Dale, for whom '[t]he growth paradigm ... is a form of fetishistic consciousness' that 'functions as commodity fetishism at one remove'. This strain of eco-modernism performs a relentless elision of analysis with a kind of cruel-optimistic hectoring: when Connor Kilpatrick criticises 'a politics of fearmongering', or Phillips 'catastrophism', they ignore the possibility that ecological fear, far from being mongered, is entirely appropriate, if not too little and too late, that catastrophe is indeed almost here. Let alone the crucial point that after decades of exhausting boosterism, left and right, that such earned fear can be politically inspiring – that, as Gerard Passannante puts it, 'as we face the frightening effects of climate change, catastrophising may be something we can't do without'.

The most robust and inadequately fearful ecomodernist extropianism, the Elon Muskrattery of the left, feels predicated on a category error: it has mistaken a kind of ludic meme culture around the aesthetics of post-scarcity and 'Luxury Communism' for a research programme, or even, at its worst, for a conclusion. This is not to denigrate the memes. Provocations and utopianism are play, relief, and can be goads to thought and action and Sehnsucht. They are valuable – if vanishingly rarely worth much as blueprints. But it does not take much for provocation to become swagger to become mannerism, and thence a new kind of rote thinking.

The instant one starts to get into granular details about possible ecological limits, problems arise – as, indeed, often does anger. But limits haunt ecomodernist writing too. Phillips cheerfully cites various studies suggesting – depending on various ecological and technological variables – that the world could potentially support more people than are alive today by factors of twelve and more – 96 billion, 150 billion, 282 billion, 100 quintillion people. Crucial, though, is not only that the desirability of those various possibilities is questionable (the last involving a cramped planet of cannibals): what is also key is that even for a writer so committed to limitlessness, there are conceptual upper limits.

Where Phillips is clearly right is that the question of what this number is has no meaning absent a wide range of other variables and aspirations. We can go further. It is precisely due to the Promethean scale of the project to utterly reconfigure of the world and thus the humans who will remake it that we can know neither their capabilities nor their drives and desiderata in advance. This is not an evasion but rigour.

The obvious problem with Haraway's proposal is that she proposes a drop in population, one dramatic enough to provoke alarm: an underlying problem is that she proposes a specific number at all, because she – anyone – can only do so with a pre-revolutionary consciousness, stained by the muck of history. Not only do we not claim that speculation about a post-capitalist future is verboten, we hold it to be necessary. But we must be clear about the categoric nature of those ruminations, the veil between us and prediction. Ecosocialists, we take the existence of limits seriously; ecosocialists, we take seriously the fact that we cannot yet know them. Indeed, it is an urgent task to usher in a society in which we might. No more than we can write the cookbooks of the future can we plan its population limits. To think otherwise is unseemly prefiguration – the bad Prometheanism of the quotidian. Which, too, afflicts the ecomodernist – who is, on the axis of the human soul, not Promethean enough.

The repeated evocations of left 'austerity' in the bestiary of the ecomodernists is rhetorically effective in the rubble of the neoliberal project of that name. Against which are deployed defences of the having of stuff that are pitifully uncurious about the possibility of the emancipated human of the future wanting anything other than yet more stuff. 'What exactly is wrong with gaming consoles, OhMiBod dildos that plug into an iPhone, or Hello Kitty Fortieth Anniversary plastic toys in Happy Meals anyway?' asks Phillips. To which the radical answer should not be histrionic anticonsumerist moralism, but the counter-question 'What exactly is right about them?' Indeed, what exactly is right about there being anything right about them at all? What is right or inevitable about object-oriented cathexis? Is its relationship to commodity fetishism of so little interest to the radical?

As with population limits, so with trinkets: we cannot ultimately know what the tchotchkes of a liberated people will be, nor how many they will have, nor if they will have any at all. But that aporia does not preclude critique of such hankering or scepticism about its immortality, and the acknowledgement that we cannot be certain goes for the ecomodernists no less than for those they chastise. 'Why shouldn't people have these things that bring them pleasure?' Phillips insists. As if what la-las bring us pleasure is immutable, apolitical, unconflicted. As if, under capitalism, those things and our pleasure itself cannot be sources of despair.

Production is not productivism. Intervening in and acting on nature is not ruining it, nor humanity. There is not, in Lenin's urgent aspiration for nationwide electrification, any necessary and intrinsic subordination of radical ecological politics to narrowly defined productivism. Nor even is there – quite – in Trotsky's sternly ecstatic utopian dreams of geological reconfiguration – terramorphing – at the close of Literature and Revolution, his assertions that the literal movement of mountains will, after capitalism, 'be done on an immeasurably larger scale [than hitherto], according to a general industrial and artistic plan', that 'man', in the end, 'will have rebuilt the earth, if not in his own image, at least according to his own taste'. But it would be disingenuous to deny a strong tendential logic towards it therein, and it is hardly a surprise that it was used as epigraph for Earth, Wind, and Fire, nor that Trotsky's own record of support for

projects such as, for example, the construction of the Dnieper Dam, was characterised by unedifying attacks on critics, like the Bolshevik engineer Peter Palchinsky, of the ecological and social effects of its ill-conceived gigantism: Trotsky's 1928 smear about 'the collusion of the Shakhty specialists [Palchinsky's circle] with capitalists' saw him side with Stalin against the accused in the first major show trial in Russia.

Victor Serge, famously, argued against the facile equation of Bolshevism and Stalinism not on the grounds that the former did not contain a germ of the latter, but that it 'also contained many other germs, a mass of other germs'. So, too, for what Foster calls 'reckless productivism'.

Literal 'conservation' – a dream of stasis – is not in and of itself necessarily a good. And indeed, there must be, for any dream of the future, of emancipation, a place for truly epochal and transformative aspirations. But if this is Prometheanism, Prometheus here must be, not bound by, perhaps, but sublated with a rigorous humility. Otherwise it will be at best a kitsch performance, at worst dangerous.

11. Salvage Communism: An Unrealistic and Necessary Step

'Amidst the ruins, within the terrible opening of the interruption, pitched against the conditions that produce and seek to capitalize upon that interruption, we are close to complete change.'

—Out of the Woods, 'The Uses of Disaster'

All politics must become disaster politics. The 'disaster capitalism' of which Naomi Klein has written, in learning ways to instrumentalise and profit from disaster, will be less disinclined to avert disaster in future. In and of a warming world, politics must perforce adapt. This does not mean only the incorporation into traditional political currents of newly pressing themes, to have 'a line' on such issues: it means the reconfiguring under pressure of those currents, new ways of having and acting on any lines. This is the nature of political adaptation to contexts of catastrophe.

Now, as the evidence for catastrophe piles up, we are even seeing the development of an instrumentalist Bad Hope-inflected thin pessimism, an inadequate catastrophism in the service of liberal status quo. Nowhere is this more clear than in the recent remarks of erstwhile Democratic Presidential candidate Andrew Yang.

Even if we were to curb our emissions dramatically, the earth is going to get warmer ... We are too late. We are ten years too late. We need to do everything we can to start moving the climate in the right direction, but we also need to start moving our people to higher ground – and the best way to do that is to put economic resources into your hands so you can protect yourself and your families.

Yang, feted as a futurist, is indeed here a vanguardist in the construction of an extraordinary Disaster Centrism, of which we can expect to see much more. Still a little strange in the liberal mouth, in some form or other it is likely rapidly to become the most era-appropriate iteration of the ideology of Betterness-than-nothing among liberal elites. What exactly is deemed 'better than nothing' (BTN) of course, is itself a matter of ideology. As outlined here, the dominant BTN ideology, in variants of green capitalism, has not, in fact, been amelioratory at all, and holds great responsibility for the continued development of the worst.

Particularly where catastrophe bites hardest, more radical politics, too, will increasingly take on such a colouration. After the terrible 2018 Kerala floods, the Communist-ruled local government was allotted a quarter of the funds it requested for reconstruction. When foreign states offered financial help, Modi's government instructed Indian embassies that it was not to be accepted. Trolls and right-wingers spread claims that

the floods were somehow a result of Kerala being too communist, containing too many eaters of beef, and so forth. The government's plan, writes Binu Mathew at countercurrents.org, is that '[w] hen Kerala is crushed the right wing will step in with charity to help people ... to prepare the ground in the "fortress" Kerala to be receptive of the fascist Hindutva ideology ... And that is called "Disaster Fascism" '.

It is a small hope that some communisms, too, adapt. As the Out of the Woods collective has eloquently argued, it must become a disaster communism that 'emphasizes the revolutionary process of developing our collective capacity to endure and flourish'.

What forms of intervention, what nature of activism that might mean we are still learning? Salvage-Marxism is a disaster communism conditioned by and pining for a party form that it knows did not deserve to survive, and did not: learning to walk again, pain in that phantom limb and all.

'The whole landscape flushes on a sudden at a sound.'
—Gerard Manley Hopkins

The climate crisis is so comprehensive in its reach, so thorough in its unsettling effects, that it has called into question not only the foundations of a certain kind of socialism, but also the Enlightened verities upon which both capitalism and its opposition have sought their foundation.

The crisis is totalising, destabilising the epistemological atomism of capital, provoking a search for holisms, spiritual and theological alternatives to the death cult. After all, as Catherine Keller puts it in The Political Theology of the Earth, the appointed time is running short: a kairotic contraction akin to Walter Benjamin's 'messianic time'. All realistic solutions, defined by capitalist realism, are inadequate. All adequate solutions, defined by the exigency of the crisis, are unrealistic. Recent debates in the New Left Review bring this into stark relief. The economist Robert Pollin strives for political efficacy in calling for a green techno-solution that allows all global populations to continue to consume as much energy as they presently do, albeit within a New Deal framework. That this appears to be realism, is an indication of how captive we are to capitalist theology, so that our very mental operations, our conception of what is feasible, is governed by its rituals. On the other hand, our Towards the Proletarocene contributor Troy Vettese calls for E. O. Wilson's 'half-earth' approach to the use of the planet and a transition to vegan communism. That this, though obviously equal to the crisis, appears to be wildly, desperately unrealistic, is an indication of how much would have to be achieved, and how quickly consent gained for radical new ideas, coalitions assembled, tactics innovated, the unthinkable realised.

The striving towards a new totality, a new cosmic apperception, is ubiquitous. From Roy Rappaport to Ursula Goodenough, those apprehensive of the role of capitalist science in climate change have often sought religious answers. The striving towards new holisms recognises the scale of the crisis afflicting life. To truly address it would necessitate a transformation of a scale scarcely imaginable from this low vantage-point. A revolution in how we metabolise the planet, how we relate to all matter, what we eat,

how we travel, what we think is good, what we think is pleasurable. A complete and irreversible transvaluation of values. Not for nothing, both new materialisms and new theologies strive for a re-enchantment of the earth, a hope shared by Jewish mystic Arthur Green and philosopher Jane Bennett. Though it changes nothing physical about matter to describe it as miraculous or inhabited by deities or ancestors, to enchant it and be enchanted by it, it might change the human relationship to matter. But such moves, however appealing, are hardly risk-free. The danger here is that, as with the polar enchantments of nineteenth century explorers, it becomes part of the means of natural annihilation.

The poetics of eco-theology evokes, in its totalising, the prospect of restored 'balance'. Of a mending of the 'metabolic rift' with nature. Of a restoration of the 'sacred balance', hymned by the Rabbinic Letter. Of a stewardship of God's original 'perfect equilibrium' rhymed by the Islamic Declaration from Istanbul in 2016. Of the brotherly treatment of our 'sister earth' carolled by Pope Francis in his second encyclical 'Laudato Si': a lamentation which, in the tradition of the 'environmentalism of the poor', registers the 'cry of the earth' as the 'cry of the poor'. 'Balance' is the cri de coeur of Eco Dharma, the Māori cosmos and the Green Bahái.

Etymologically, 'balance' contains a root word for 'two', suggesting a coupling, a conjugation of two distinct yet related and roughly equivalent quantities. Taken too literally, this ranks humanity too highly in the scale of cosmic history. Insofar as it faults human stewardship for not keeping with perfect equilibrium, which according to the law of entropy is equivalent to the heat death of the universe, it also asks too much. Insofar as it faults human meddling, it misrepresents our dilemma. The universe is observably not the sort of place that would be just dandy without human meddling. We were always just a stray asteroid, or a chance shift of the earth's tectonic plates or a volcanic explosion, away from extinction. To these prospects, of course, we have added new and lethal dangers. Yet never in the history of the planet, through its eons of snowball earth, hothouse earth, and regular, ruthless mass extinctions, has it been in anything but the most chance and temporary of equilibria. And to the baleful prospects, of course, we have added new and lethal likelihoods.

The danger here is that the ideologeme of 'balance', even when raised in self-defence by the exploited, colonised and racially oppressed, could perform in roughly the same way as 'sustainability'. That, we may end up calling for an appropriate 'balance' between the needs of a society covertly defined as always-already capitalist or becoming-capitalist, and the needs of the earth defined so as to trump certain capitalist rituals of investment while remaining permanently captive to and in danger of being encircled by the cult. Capitalism in perpetuity, even if it were conceivable outside its cultic nowhilism, would not be commensurate with any plausible scenario of human survival. Worse still, it can be retconned as some variant of that slowly growing ecofascism, wherein the raced populace and cosmopolitan modernity are blamed for unbalancing the earth, making the homely unhomely, the oikos unoikos.

Nor can theology be restored as a story of divine creativity, in the style of the 'geologian' Thomas Berry, for whom 'each of the events in the natural world is a poem, a painting, a drama, a celebration,' the great evolutionary transformation of the Cenozoic era was 'a wildly creative period of inspired fantasy and extravagant play' leading to a 'supremely lyrical moment when humans emerged on the scene'. Idealise 'Mother Nature', she – it – sneezes some pandemic in your face. All such creative acts, if such they can be considered to have been, were maniacally indifferent to suffering and need. This kind of god's-eye view must perforce be far too callous, far too inappropriate to the intense reality of a lived experience on the everyday scale, for humans to be happy with it.

If, as Keller puts it, theology is the study of that which matters unconditionally, we must have a better theology. A materialist theology, respectful of the texture of matter, disrespectful of capitalist anti-matter. We call, not for a Deep Ecology, but for a Deep-Historical Materialism: the extension of materialist theology into the realm of geologic 'Deep Time', of paleo-ontology, paleo-oceanography, and paleo-climatology. We call for an aleatory materialism, a materialism of the encounter, which recognises life as a fluke worth preserving, and human existence as a lucky 'spandrel', a contingent byproduct of the cycle of earthly extinctions that Stephen Jay Gould called 'Siva's dance of death'. We call for a Darwinian ecology, which recognises as Darwin did the irrevocable human dependence on the most humble creatures: not least the worms and microbes which consume us when we die. We call for a mass outbreak of red geoengineering, collective work farther reaching and deeper in its action, than the Renaissance, or the Enlightenment, or the bourgeois-democratic revolutions, or the colonial freedom movement. We call, as Berry does, in all the necessary humility imposed by the climate crisis, for a 'Great Work'.

In the era of Marx and Engels, and in the long century after, communists dreamed of liberating humanity and enjoying a world of plenty, sharing in abundance. Had October inaugurated a new era of revolutions, had barbarism's reign ended a century sooner, perhaps that is the world we would have. If Luxury Communism – automated or otherwise – was possible at that moment, our hypothesis is that now, as we race past tipping point after tipping point, it is no longer – at least not before a long and difficult age of repair. From our benighted vantage point, the birth, growth and exploitation of the working class has been inextricable from biocide and catastrophe. That is to say, global proletarianisation and ecological disaster have been products of the same process. The earth the wretched would – will – inherit, will be in need of an assiduous programme of restoration. While we may yearn for luxury, what will be necessary first is Salvage Communism.

We yearn for the commencement of human history, after an irrevocable decision against barbarism. Such an epoch of classless ecology and society would – will – be of and for a humanity that neither denies its unique nature among Terran life, nor retreats into blinkered exceptionalism – that articulates, that is, an aufhebung of Prometheanism and humility that does not yet have a name. But to have the slightest

chance of reaching such a moment, we must strive precisely for a class unbalancing of the earth. Against all dreams of compromise, against geo-Fabianism, the only path to an Anthropocene of a liberated and self-transformed Anthropos runs through the destruction of the Capitalocene, the Proletarocene dawn.

Back Matter

Acknowledgements

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About Salvage Editions

Salvage Editions is a new collaboration between Verso Books and Salvage. Edited by the Salvage Collective, the series publishes writers we admire on various topics. Some of these interventions are newly written; others extend and develop arguments initially published in Salvage. As with our short-form publishing, the books in this series intervene in the key theoretical and political questions thrown up by our moment in ways both politically incisive and stylistically ambitious and engaged. We do not believe, put simply, that radical writing should not also strive for beauty.

Salvage is a publication born out of defeat, first published in 2015, into a largely drab and unprepossessing political climate. The origins of the project go back to 2013, and a vicious political schism in the British far left. In this context, the small group that went on to found Salvage, several of whom still form the core of the editorial

collective, remained committed to the emancipatory Marxist politics that had shaped us. To Salvage we also brought a commitment to a non-sectarian critical curiosity, a reinvigoration of our thinking and activism with cutting-edge currents of radical thought, and ruthless scepticism towards the leftist culture of sentimentality, nostrums and bromides out of which we had emerged. A militant humility.

Unlike the traditional activist left in the UK, who appear convinced that the stylistic tics of 1970s industrial militancy and twelve-point Times New Roman are as genetically predetermined as eye colour, we embrace the aesthetic in politics. As such, Salvage has always strived to work with writers to produce not only the most politically and intellectually rigorous form of their thinking, but to embrace the materiality of style, of writing – of that protean beauty – itself. We work with poets, visual artists and fiction writers, publishing these forms alongside essays in the print issue, itself very deliberately an aesthetic object.

Core to Salvage has also been a certain political pessimism. This is not mere provocation. Nor has this pessimism ever been an a priori commitment: indeed, when possible we are not hesitant to express our gladness, and sometimes our surprise, at reasons to be cheerful. Rather, our pessimism has always been based on our reading of the conjuncture. A refusal to sugarcoat the adaptability of capitalism and oppression, the parlous state of the class struggle, or the scale of what faced and faces the radical left. It was, too, a repudiation of that bullying by parts of the left, according to which optimism is mandatory, its absence a political failing.

It has been a wager of Salvage that, far from being a pathology, a rigorous pessimism may be, counterintuitively, politically inspiring – there being nothing like the obligatory optimism of the socialist left, its implicit voluntarism, and the inevitable shame of exhausted activists when capitalism remains stubbornly un-overthrown, to demobilise the activist. The moving communications we have received from comrades around the world lead us to conclude that this is, at least for many on the left, true.

Rupture, successful overthrow, however, is our core aim. Our pessimism has sought, and seeks, unendingly to falsify itself.

Over the years and issues, a cluster of concerns has emerged as core to Salvage's project. Global political economy; modern political subjectivity; the social industries; sexuality, race and identity; and eco-socialism. We insist not that our positions are the only possible correct ones for socialists, nor even for us: rather that they should, would, perhaps will, not be cast out of the conversation of the healthy, habitable left we deserve, and do not yet have. To that extent, Salvage is the journal of a faction prefiguring a party.

For more on Salvage, for all our non-fiction and all our editorial perspectives since the first issue, and for information about subscribing, please go to salvage.zone.

The Salvage Collective
The Tragedy of the Worker