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Biocommie: Power and Catastrophe

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Introduction: Catastrophic Contexts

This essay is a prospectus for biocommunism, a communism emerging from the catastrophes capital now inflicts throughout the *bios*, the realm of life itself. After a brief account of the theory behind its terminology, it sets out six elements of biocommunism: new disaster relief systems; opening borders to migrants fleeing calamity; expropriation of capital from crisis-critical industries; rationing of consumption; mobilization of emergency labour; and ecological and economic planning. It concludes with a short reconceptualization of the relation of socialism to communism in the light of species-extinction dangers.

In an account of the present conjunction, Adam Tooze (2021, 6) describes a “polycrisis” of “overlapping political, economic and environmental conflagrations”. He regards this as a departure from world-market normality, but other diagnoses are possible. Alex Callinicos (2022) argues that “the new age of catastrophe” is the logical culmination of capitalism’s competitive accumulation, as a “band of hostile brothers, grabbing as a much as possible, drive humankind over the cliff”. He sees a “multidimensional crisis” with four elements: i) biological, with global warming as exhibit one, but accompanied by other symptoms, such as the zoonotic overspill of a pandemic unleashed by deforestation and commercial agriculture; ii) economic, as problems of stagnancy, inequality and financial instability that manifested in the great crash of 2008 remain unresolved; iii) geopolitical, in the struggle for global hegemony between the US and EU on one side, China and Russia on the other, with lesser powers maneuvering for position; iv) political, as the “extreme center” of globalizing neoliberalism is collapsed by populist eruption, primarily from the far-right. The war in Ukraine provides a condensed expression of these intersecting crises of economics, ecology, epidemiology, and international enmity.

Even two years ago—before the war in Ukraine, before the Covid-19 pandemic—Sandro Mezzadra and Brett Neilson (2019, 50) could write of “a crisis rhetoric” spreading from the economic arena to “other areas of human and social concern” and comprehending “multiple issues of social and demographic sustainability”. They remark that “each of these predicaments has its own complex genealogy and dynamics, but their concatenation and articulation present a novel scenario“ in which “the prospect of exit from the crisis seems ever more remote as its effects continue to circulate in an uneven and syncopated manner.” However, as Mezzadra notes (2022), there can be no assumption that this leads to radical social transformation: familiar terms such as “disaster capitalism” (Klein 2008) and “the crisis state” (Negri 2005) make the point that capitalism now normalizes, manages, provokes and instrumentalizes catastrophe. Even if runaway harms escalate such that “disaster capitalism” becomes disaster-for-

capitalism, the classic option of “socialism or barbarism” is today hardly reassuring (see Lilley et al. 2012) .

Nonetheless, if a mode of social reproduction beyond capitalism is to emerge, it will probably have to traverse polycrisis, be it the current one or another, worse, to come. What follows therefore maps an archipelago of sites, situations and subjectivities, appearing in the midst of an intensifying turmoil, islands of counter-power that might be connected in a new, collectivist system. This emergence is conceived in a near-future horizon, unfolding over a decade or so during which “multidimensional crisis” continues and intensifies. Though abyssal depths, such as full-scale nuclear war, remain unplumbed, successful governance is increasingly defined by the sustenance of populations under mounting ecological, economic and geopolitical stress.

Although the sketch lacks geographical specificity, suggesting a deck of possibilities that might be variously played in different national or regional situations, it is oriented towards conditions in the OECD countries, the so-called “advanced” zone of the world market. It does not attempt to grasp the complexity of catastrophe politics in China’s hybrid command-capitalist economy, recently illuminated by the collective Chuang (2021). Although it touches on issues of migration and refuge, it otherwise inadequately addresses the “uneven and combined” nature of global disaster (Swyngedouw 2013); declarations of an “age of catastrophe” in part reflect arrival of calamities in the planetary North-West that are all too normal in the global South, but also intensifying far more quickly there due to, amongst other factors, the concentrated equatorial effects of global warming on societies already afflicted by the “necropolitics” of colonialism and imperialism (Mbembe 2019).

This is a paper about governance, rather than transition. It discusses the potential organization of a new, communal society but says little about the revolutionary process in which it would be created, though holding these issues together is the only real protection against composing idealist “recipes for the cook shops of the future”(Marx 1873). This essay assumes that the forms of governmentality it describes are constructed in and by ongoing struggles, with the climate blockades, workplace strikes, urban riots and other upheavals that end capital also creating the successor system. It does not elaborate on the magnitude and ferocity of the opposition such movements would confront, but in no way intends to diminish the problems of militant organization, nor pretend to hold a theoretical key to their solution.

Terminological Excursus

Readers eager to review the programmatic implications of “biocommunism” may skip this section, but for those wondering about the origins and implications of such terminology, here is a genealogical note. The term “biocommunism” was first used by this author over a decade ago (Dyer-Witheford 2010) in a discussion of Marx’s “species-being” (*Gattungswesen)*, re-conceived as a dynamic process of collective becoming in an era where capital is a “planet factory” of terraforming environmental change, digital networks, and gene-splicing technics. That iteration of biocommunism was undertaken in a broadly Promethean and accelerationist framework, affirmative of high-technology species re-design. In this paper, I reconfigure biocommunism as a process of combined social and environmental levelling, creating a social system steering itself between the double boundaries of ecological sustainability and an equalized social development. In this version—less asteroid-mining “fully automated luxury communism” (Bastani 2019), more “half earth” re-wilding (Vettese and Pendergrass 2022)—biocommunism becomes a program fusing the goals of contemporary movements fighting against ecocide and inequality—an

“equalogical” power.

Independently, the philosopher Szymon Wróbel I (2020a; 2020b) has developed the concept of biocommunism as process of “population empowerment” in which “power over life is transformed into the power of life itself”, a “fold of being onto itself” (2020a). His exploration offers several plangent formulations resonating with this paper’s line of thought. There is, however, a major divergence between our two accounts of “biocommunism”. For Wróbel it remains a regulative ideal without, and indeed in refusal of, any institutional realization of “biopower”, a “dis-organizing principle”, whereas I consider biocommunism a practical political project in which such power is communized (see Højme 2022).

Obviously both these versions of “biocommunism” stage an encounter between communist thought, pre-eminently Marx’s, with Michel Foucault’s (2007; 2008) proposition that “biopower”—the governance of “life itself“– is a defining feature of modernity, and with its subsequent spin-offs and variants in the work of thinkers such as Giorgio Agamben (1998) and Roberto Esposito (2008). The version I offer here is influenced by the work of Michal Hardt and Antonio Negri (2000) and Tiziana Terranova (2009; 2015), for whom biopower exercised from above can be countered by an insurgent biopolitics arising from below, and of several subsequent developments of this line of thought.

Of particular importance, given the centrality of planetary heating to the age of catastrophe, is the work of Emanuele Leonardi (2012) on the biopolitics of climate crisis, and—alongside several associates—on a new articulation of Marxism with “de-growth” ecology (Leonardi 2021; Barca 2020; Feltrin 2021 and 2022; Lassere 2020a and 2020b). Approaching the issue from a different angle is discussion arising from Frederic Jameson’s (2016) controversial vision of socialism as a “universal army of labour” (to which I will return later), and in particular from Alberto Toscano’s (2016; 2020) proposal of a “biopolitics from below”, and responses by Panagiotis Sotiris (2020) and Gareth Dale (2021) in a pandemic context. None of these sources, should, however, be held responsible for the use made of their ideas in the fabrication of biocommunism.

As the issues of a climate emergency and other ecological disasters is central to the agenda of biocommunism, it can be objected that the term merely replicates the problematic of “eco-socialism”, already the topic of a large and important literature (Foster 2000; Moore 2015). If biocommunism seeks to rephrase the issue, it is in part to convey that ecological crisis has entered a new phase in which the time for averting disaster has expired, and battles are now fought out on already-catastrophized ground, demanding more urgent “measures taken” (Brecht 1929). It is also, however, to dispute the hyphen of eco-socialism, which, while critically important in bringing the ecological and social together in left thought, also continues to conceptually separate them.[1] This obscures the contemporary imbrications of politics with nature so apparent in the current polycrisis where, for example, future carbon dioxide concentrations in the planetary atmosphere for generations to come may depend on disruptions of energy sources arising from an horrific but (by historical standards) relatively small central European war. Biopower, biopolitics and hence biocommunism are terms proper to a moment where “ecological” and “governmental” processes relentlessly loop around in mutual reconfiguration.

Finally, biocommunism is defined by a triangulation between three other concepts of communism —"solar communism” (Schwartzman 1996), “war communism” (Malm 2021) and “disaster communism” (Out of the Woods 2018). That is to say, it affirms the potential of a new and plenitudinous mode of species reproduction drawing on clean, renewable and socially-distributed solar energy, and other renewable

sources, as prophesized by Schwartzman, but holds that this will have to be created under emergency conditions of disaster, rescue, repair and restoration, as a massive operation of “salvage” (The Salvage Collective 2021). It accepts this will require the emergency mobilization of resources, many of which that can only, at this moment, be commanded through the state apparatus (Malm 2021), but also affirms this requires the exertion of forces beyond that apparatus, as argued by Mezzadra and Neilson (2109), including forms of autonomous organization and mutual aid, as envisaged by Out of the Woods (2020) and other anarchist or communization theorists. The overall perspective is therefore that of an “in-against-and-beyond the state” (Angel 2017) struggle pressing towards the tumultuous reconstruction of communism.

Vital Systems

As capitalism’s own forces of production turn against it, biocommunist organization starts at the point of destruction, ensuring the safety of populations struck by disasters, fast and slow: pandemic outbreaks, fires, floods, super-storms, droughts and heatwaves whose frequency indexes global warming, the “savage ecology” (Grove 2019) of war. The multiplication of these terrifying events – and the consequent threat of infrastructural collapse of hospitals, medical aid and burial services, food and water supply, transportation, and energy grids and communication networks – provides the material demonstration that the existing order has taken an “exterminist” (Thompson et al. 1982) direction; the rescue and protection of those endangered becomes a touchstone of any alternative hegemony.

In advanced capitalism the “ready-to-hand toolkit for administering emergencies as a normal part of constitutional government” is the apparatus of what Stephen Collier and Andrew Lakoff (2015, 19) term “vital systems security”. This comprises centralized and specialized organizations, such as the United States Federal Emergency Management Administration or Center for Disease Control, but also regional and municipal networks coordinating rescue and policing operations, medical care, testing, monitoring and hospitalization, and provisions for shelter and sustenance of displaced populations and reconstruction of damaged areas. Collier and Lakoff (2015, 19) describe these networks as institutions of “reflexive biopolitics”, managing risks arise from within the capitalist modernity they defend; the “securing” of “vital systems” was originally designed, in whole or part, to control civil disorders, suppress diseases of urban poverty, or as war preparations, including preparation for nuclear war.

Today, however, biopolitical reflexivity takes another turn, as crisis services are undermined by the accumulative logic of the very order they protect. Neoliberal austerity cut-backs and reliance on just-in-time logistics has depleted vital systems’ security, dismantling supply depots, dissolving organizational centres and outsourcing operations. Those aspects of the apparatus that remain intact are geared to the protection of property and maintaining the circulation of capital. The securing of vital systems is shot through with authoritarianism and discrimination, manifesting in racialized policing of storm-struck cities and repeated failures to protect low-income communities. A 2021 report points to “stark relief problems of capacity and inequity . . . festering for decades” in US disaster preparedness, problems about to be intensified by global warming (Editorial 2021).

In the Covid-19 pandemic, liberal democracies’ response was contradictory and confused. Surprised by a long-predicted pathogen crisis (Davis 2005), their policies oscillated between the dual imperatives of social reproduction (shutdown) and capitalist accumulation (business as usual), beset by institutional incoherencies and material shortages. Decades of underfunding, deregulation and privatization of health

care systems intensified the pandemic “chokepoint” of potential hospital collapse, which had to be managed by broad restrictions on public behavior (Roth 2022). Although relatively generous unemployment benefits were available for some sections of labour, others had to fight for “quarantine wages”, while “frontline” workers had to toil on, sometimes without even proper sick leave provisions. These real failures were all avidly exploited by the far right, mis-representing a scene of disarrayed disciplinarity as a sinister, seamless conspiracy of elite control. Neo-fascists seized on Agamben’s (2020) portrayal of lockdowns and vaccine mandates as totalitarian biopolitics in order to repudiate any broad social solidarity and promote ideologies of individual sovereignty or race war. The task of biocommunism, however, is not to ratify such occult theories, but rather, in criticizing the insufficiencies of capital’s disaster relief, to build an alternative form of vital systems protection.

Biocommunist disaster relief would be a “politics of care”(Fraser 2016), re-funding vital systems degraded by neoliberal neglect and re-thinking their operation. It would make investments to deal with epidemiological, meteorological and military disasters, from distributed vaccine manufacture capacities and urban cooling centres to evacuation and shelter provisions, with special focus on the most vulnerable social strata. It would include the normalization, rather than *ad hoc* improvisation or blunt refusal, of replacement income for lost work, rebuilding of destroyed homes, and reconstruction of disrupted livelihoods, including trauma treatment, relocation and retraining for disaster victims. It should, centrally, train cadres of catastrophe communicators who, across class, gender and racialized divisions, both convey the rationale of governmental policies and relay criticism and counter-proposals from varied social groups to emergency planners. None of this would prevent disaster relief from being painful and contentious, but, in contrast to the seething social toxicity stirred by capital’s partial efforts, would foster communal solidarity.

Nor should vital care systems be purely state led. Mutual aid practices that emerge in catastrophes ground anarchist concepts of “disaster communism”:

Where communism is frequently premised on the material abundance created by capitalist production, disaster communism is grounded in the collective abundance of disaster communities. It is a seizing of the means of social reproduction (Out of the Woods 2018)

Instances include Occupy Wall Street relief operations after Hurricane Sandy (Dawson 2017), community movements after Mexican earthquakes (Cleaver 2005), and volunteer pandemic activism in Milan (Commune 2020). It is romantic to think mutual aid could, at least in the near future, entirely replace state based vital systems, as crucial nodes for marshal technologies, supplies, personnel, and expertise, but the reorganization of such services on a basis that combines state provision and self-organization is a real possibility. In this respect socialist practices of popular mobilization in the face of natural disaster, still alive in Cuba (Fitz 2022) partly as an offshoot of “revolutionary war” tradition, should be revived, as populations’ struggles against capitalocene calamity become a vector of biocommunism.

Borders

A special issue of disaster relief central to biocommunism is that of migration and refuge. The combined and usually inseparable effects of poverty, ecological devastation, war and oppression today displace millions. This “loss of habitat” (Sassen 2016) is concentrated in tropics where global warming is most severe, and malign legacies of colonialism and imperialism deeply mark social order. With “double

injustice" (Buchs and Koch 2017, 113) the populations least responsible for carbon emissions, and most vulnerable in terms of poverty, frail infrastructures and insufficient public services, are subjected to the most serious climate cataclysms. Flight often takes local routes, from one poor and disadvantaged country to another, but also moves towards the rich world, across the Mediterranean, to the US-Mexico border and other frontiers where migrants face exclusion, detention, deportation, criminalization, abandonment and death.

In "border struggles" (Mezzadra and Neilson 2013) migrant communities self-organize and repudiate the sovereign power of states to regulate movement with slogans such as "the border is closed but we will pass" or "no one is illegal". Biocommunism takes this migrant autonomy as a force opening onto the necessity of a new "politics of movement" (Heller et al, 2019). This paper will not enter into debates between advocates of "open borders"—relaxing state regulation on migration—and "no frontiers" —abolishing states—but a broad "de-bordering" orientation is crucial to biocommunism, understanding that this process may have several stages and components, and require building the infrastructures, policies and social practices to allow expanded flows of movement and settlement.

This means biocommunist governance must internalize what are today oppositional activities of movements supporting so-called illegal migration. Thomas Nail (2019) categorizes these under the heading of "sanctuary"—refusing cooperation with (or dismantling) state agencies seeking to arrest and deport migrants; "solidarity"—providing access to medicine, housing, learning and communication; and "status"—recognition as a full member of a new community. However, biocommunism cannot just be an expansion of liberal immigration programs. It must recognize the specifically proletarian nature of global migration and dismantle the many ways capital exploits migration. Thus, sanctuary would become a governmental commitment to the protection of migrants not only from racist persecution, but also from human trafficking, workplace exploitation, and slave labour. Solidarity would encompass the deep, original meaning of the term as *labour* solidarity, and extend to the systematic connection and integration of migrants with unions and other worker organizations, combatting the way capital benefits so powerfully from division and insecurity in the workforce. And status would comprehend new rights of livelihood for all detached from a competitive wage market (discussed later in this paper).

Migrancy is also an issue of international cooperation, involving out-flow as well as in-flow regions. Writing of Honduras and the United States, Joseph Nevins (2018) makes the case for "migration as reparations", whereby populations deprived of the "right to stay" in home regions wracked by destructive colonialisms and climate change gain a "right to move" and participate in the remittance economy. This is a compelling argument but has to be balanced against the dangers of regarding out-migration regions as sacrifice zones fated to become almost unlivable. The logic that currently informs the rich world's offshoring of refugee camps, exporting the brutal problems of migrant detentions, should be reversed in the subsidy of mitigation and adaption of climate change in the areas of its most severe global occurrence. Military interventions causing migrant flight, such as those in Afghanistan, Iraq, Libya, and elsewhere must be terminated, as should the extractive ventures of multinational capital creating ecological and social chaos in the global South, and this all set within a long-term framework of the approximate equalization of living standards at a global level.

De-bordering will be one of the most challenging problems for biocommunist governance, not just because of the practical problems of reorganizing vast planetary population flows, but because of racism. Wróbel is correct when he observes that "the task of biocommunism is to fight . . . above all, the racist cut

of life" (2020, 310). The European and North American response to Ukrainian refugees from Russian invasion demonstrates the humanitarian generosity that migration can inspire, but also, in its contrast to treatment of refuges from other parts of the world, and in occasions of glaring discrimination against Ukrainians "of color", how selective that benevolence can be. Migration is the chosen field on which "fossil fascism" will fight in the era of global warming, setting it against notions of nationalist eco-sustainability (Malm et al. 2021). Yet the costs and dangers of fortification against migration, combined with the labour shortages of zones with aging populations and low birthrates, and with every impulse of hospitality and human-kindness, tell against the far right. As Slavoj Zizek (2015) writes, "the main lesson to be learned" from the current migration crisis is "that humankind should get ready to live in a more 'plastic' and nomadic way" as rapid environmental changes require radical redefinition of national sovereignty. Biocommunism should make this reinvention in favor of the "workers of the world".

Expropriation

Socialized ownership of the means of production is a basic tenet of communism; its importance heightens amidst interweaving disasters. But in a variation on classic Marxist thought, while expropriation is today sometimes vital to expand production, it is at others necessary to shut it down. Two current campaigns by movements for global equality and ecological protection, neither yet successful, indicate this dual case for expropriation of crisis-critical capitalism.[2]

The first is the "no profit from pandemic" campaign for eliminating the intellectual property rights of "big pharma" (Gebrekidan and Apuzzo 2021; Workers' Liberty 2021). Rapid development of Covid-19 vaccines by companies such as Pfizer and Moderna, achieved at record speed in the United States, the European Union and Britain, was an outcome of state-capital cooperation. Governments partnered with drugmakers, pouring in billions of dollars to procure raw materials, finance clinical trials and retrofit factories. Billions more were committed to buy the finished product. But this success created stark global inequities in availability—"vaccine apartheid". The United Nations warned that vaccine inequality between nations allowed Covid-19 to continue spreading and increased the likelihood of vaccine-resistant variants. India and South Africa advanced an initiative at the World Trade Organization (WTO) to temporarily suspend intellectual property rules for Covid-19 vaccines and other coronavirus-related medical equipment (Melimopoulos 2021). Mounting worldwide pressure forced the US to shift from opposition to partial support for the measure, making some short-term patent waiver likely in 2022, but, with global coronavirus deaths over fifteen million, still leaving the full scope of vaccination segregation untouched.

The second example is that of "fossil capital" (Malm 2016). Drastically reducing global fossil fuel use is the paramount priority for ending climate emergency. Decades of regulative failure and unfulfilled industry promises show carbon capital presses relentlessly towards ongoing and extreme production. Even just full use of known reserves would—absent massive and, at the moment, speculative, Carbon Capture and Storage (CCS) ventures—drive atmospheric CO2 concentrations over limits safe for a human habitable planet (McGlade and Etkins 2015; SEI 2021). "Leave It In the Ground" has therefore become a major slogan of ecological movements, supported by planning for the conversion of fossil capital enterprises to public utilities in order to shut them down. Thus, Holly Jean Buck's (2021) reflections on "ending things" includes a five-step fossil fuel phaseout, moving through moratoria on prospecting, subsidy withdrawal, capping and ramp-down of production and "nationalization to exit", with a final stage of "reverse engineering" facilities for CCS (see also Gowan 2018; Renzy et al. 2020).

A major share of global oil production is in fact undertaken by state owned companies, such as Saudi Aramco. Biocommunist socialization of resources therefore cannot be conceived simply as nationalization but as a larger de-commodification of production. Decommissioning fossil fuels would also entail re-purposing existing public utilities, and the replacement of management cadres and organizational reorientation away from the world market. While the major aim would be to terminate carbon emissions, there are other reasons for communal re-possession of both private and state-owned fossil capital, including adequate retraining, pensioning, and reemploying of fossil industry workers (a process crucial to disarm opposition to an energy transition) and ensuring control of CCS technologies.[3]

These two cases illustrate the double-sided case—expansionary for vaccines, terminatory for fossil fuels—for capital expropriation in the age of catastrophe. There are many other examples. For instance, inseparable from discussion of energy extraction is that of governance of electrical grids, in which private and public utility companies with entrenched attachments to carbon capital vie with unregulated green capitalism whose freebooting avarice threatens to make clean energy transition massively expensive for working-class households (Dawson 2020; Huber 2022). Adjacent to the operation of the grid itself is the nexus of platform capitalism, its importance highlighted both by the logistical demands of pandemic crisis, and the destructive effects of social media mis- and dis-information under the same conditions, spurring parallel discussions about the public expansion of basic digital services and of reducing the flows of mis- or dis-information fostered micro-targeted advertising (Muldoon 2022; Tarnoff 2022).

Stressing the “expropriative” aspect of biocommunism qualifies a term now generally used in discussion of collective resource control: “commons.” The concept of “the common” is central to any communism—how could it not be? It has been crucial to developing models of communal ownership more varied and inventive than bureaucratized “nationalization”: trusts, cooperatives, open-source production and peer-to-peer networks. But “commonist” (Dyer-Witheford 2007) discourse can suggest a supersession of capital by a sheer proliferation of commons—say, the creation of open-source software or establishment of worker cooperatives. As these example suggest, capitalism can accommodate a multiplication of commons, even sometimes foster their initiation and certainly reap their fruits. Coexistence of commons and capital is feasible, nearly always to the latter’s advantage: commons move towards communism only when they diminish capital. That is why, in the face of intensifying climate disasters, new disease outbreaks, blackouts, power failures and information wars it is important to emphasize not just developing new forms of communal ownership but also the abolition of privatized ownership and production.

Ration

In the new age of catastrophe, the obverse of socialized production may be rationed consumption. Rationing is not a topic favored by Marxisms; confidence in expanding forces of production steers away from discussion of scarcity. Even eco-socialists, rightly critical of corporations shifting responsibility for climate disaster to individual eco-footprints, fights shy of rationing discourse. Yet in polycrisis, rationing repeatedly rears its head, either as immediate response to shortages of oil, gas or food caused by wartime disruptions and corporate opportunism, or, in a longer-term horizon, as an emergency fallback if carbon taxes, carbon trading and other market mechanisms fail to halt global warming. Biocommunism must therefore revisit the ration question, in both ecological and equalitarian aspects. While the topic summons the binary of “despotic state versus free market”, it also prompts recognition of markets as systems of rationing by price. Focusing on use- rather than exchange-values, rationing foregrounds the material effects of capitalism’s patterns of production and consumption on bodies and ecosystems with

specific metabolic limits and tipping points, rather than endorsing the illusion of infinite fungibility implicit in monetary general equivalence.

Stan Cox's (2013) environmentalist account of rationing shows that: i) the ration was basic to many pre-capitalist societies; b) socialist societies have used governmental rationing as a means of social equalization; c) within capitalism, non-market rationing is regularly deployed to allocate necessities such as food, fuel, or water when escalating inequities threaten social order. In authoritarian regimes, such as that of contemporary Egypt, a food ration for the poor, coexisting with markets for the better-off, is stabilizing and upholds vertiginous inequalities—unless the ration is reduced, an occasion for riots. On the other hand, comprehensive rationing of food and other supplies may, in crisis situations, not only enjoy broad popular support, but also model wider social equalization, as Britain's war time rationing prefigured the creation of a welfare state.

The ruling class's major contribution to ecological crisis is its control of investment in production, but consumption is an aspect of this larger situation. Carbon emissions rise with wealth along a curve steepening dramatically in the corner mapping the habits of a billionaire class with multiple mansions, giant yachts and private jets (Chancel and Picketty 2015; Gore 2020; Roston et al. 2022). Major redistributive measures—increasing wages and welfare at the expense of profits or setting both minimum and maximum incomes—might do much to eliminate such extravagance. Aaron Benanav's (2022) axiom that "abundance is a social relationship" suggests this would contribute both to a more equal and more ecologically frugal society. Conversely, rationing of specific ecologically damaging goods, such as airline flights, would restrain consumption in ways that both reduce ecological destruction and inequalities in access to material resources.

Broader quotas would have more pronounced effects. In their *Half Earth Socialism*, Troy Vettese and Drew Pendergrass (2022, 96) approve of the concept of a "2,000-watt society", with per-person limits in energy use requiring "severe cuts in the rich world while allowing growth in poor countries." But no less a far-left organization than Shell Global (2016) ventured on similar ground in a report noting that the people in the USA consume 300 gigajoules of energy per person per year, while those in Europe and China use 150 and 100 respectively. The document proposed that a "decent quality of life" requires 100 gigajoules per person per year. Meeting this target globally would, conveniently for Shell, require doubling global energy production, but also redistribute it. As Buck (2021, 47) remarks, "reducing US energy use to 100 gigajoules per person while doubling the world's energy production seems like a reasonable starting point" but is also a "radical proposition . . .far to the left" of mainstream Western environmentalism.

Rationing is, however, not just limit but guarantee, as it is prohibition but also promise, and security as well a scarcity. The long-running debate about Universal Basic Income as an initiative is in a way a discussion about a ration, but one that confirms the norm of commodity exchange. More promising is the proposition of Universal Basic Services (Portes et al. 2017), in which all members or residents of a community, region, or country receive unconditional access to some mix of shelter, sustenance, health care, education, and legal aid. However, the shortfall of this proposal is that it too is conceived in the welfare state model, as a subordinate, palliative addition to a market system—a dole of use-values. A salutary reversal of this logic is George Monbiot (2020) "public luxury, private sufficiency" principle. This envisages major social investment in urban environments, public services, collective housing projects and mass transport systems, combined with rotated chances for everyone to occasionally enjoy extraordinary holidays and cultural events, alongside modest, ecologically sustainable levels of personal

consumption. Monbiot shrinks from calling for the decapitation of capital, sticking to a familiar green trope of “neither communism nor capitalism”, but his model actually implies dislodging for-profit accumulation from its direction of everyday life. It points to the organization of society around the universal provision of a limited but assured and broadly equalitarian “basket of goods”; such biocommunist guarantees may become increasingly attractive as capitalist poly-crisis renders markets chaotic, exacerbates social inequalities and accelerates ecological devastation.

Essential Workers

Biocommunism will not be a post-work utopia but rather a radical recomposition of labour. Covid-19 showed how fast such changes can be: work was suspended or relocated, with or without recompense; governments recruited and redirected workers into designated sectors; for millions, home transformed to workspace, for millions of others, a hazardous mobility accelerated; the issue of unwaged, gendered social reproduction labour was highlighted and frontline workers in previously despised low wage sectors or public services loudly praised, but largely without improvement in the conditions of such toils (Benanav 2021; Tooze 2021; Workers Inquiry Network 2020).

In this context, Sandro Mezzadra (2022) proposes as a central figure “the essential worker” governmentally required to work through crisis. As he points out, definitions of who is “essential” vary widely, from hospital staff to supermarket workers to cybersecurity personnel. “Essential work” is thus best understood not as specific tasks, but as a regime of mobilization in which multifarious jobs can be designated as “in the public interest”. Under current conditions, “essential work” legitimizes continued exploitation of labour indispensable for commodity production and circulation—forced labour. But it is worth thinking what form “essential work” could take in a system whose prime directive was the social and ecological well-being of its population.

Writing of climate emergency, Cory Doctorow (2020) criticizes Aaron Bastani’s (2019) “fully automated luxury communism”;

Remediating climate change will involve unimaginably labor-intensive tasks, like relocating every coastal city in the world kilometers inland, building high-speed rail links to replace aviation links, caring for hundreds of millions of traumatized, displaced people, and treating runaway zoontoic and insect borne pandemics. . . .These tasks will absorb more than 100% of any labor freed up by automation. Every person whose job is obsolete because of automation will have ten jobs waiting for them, for the entire foreseeable future.

To this list can be added emergency firefighters, mass tree planters, rewilding land clearers, solar panel installers, housing insulators, coders of climate-sensing software, gigafactory workers, and many more—a belated fulfillment of plans for “a million climate jobs” or a Green New Deal (see Aaronoff 2021; Neale 2021), unfortunately instantiated not in forward-looking crisis anticipation but in increasing chaotic conditions of biospheric deterioration.

Under capital, much of this essential work will, because unprofitable, not be considered essential at all, and remain undone as habitat degradation intensifies. Labour necessary to maintain public order will be performed by threadbare state agencies. More lucrative developments will fall to a growing commercial or private-public climate adaption and mitigation sector. Essential work will be performed under conditions maximizing absolute and relative exploitation, with core teams of technical expertise surrounded by

penumbras of precarious work, shielding enterprises from financially volatile conditions but providing workers minimal protections from mounting environmental risk. In biocommunism, however, catastrophe remediating work–in vital security systems, constructing and running refugia and sanctuaries, operating communal utilities, providing universal rations and services, and in planning of all the above—would indeed be essential. So too would all the household activities of social reproduction. Large portions of these labors would be conducted by organs of communal governance, as public works.

This essay has already mentioned as a starting point of left biopolitics Jameson's (2016) proposal for a "universal army of labour", with obligatory enrolment of all capable persons, performing assigned public tasks—"essential work"—for four hours a day (or an equivalent period calculated weekly, monthly, annually). Jameson's "army" is a deliberate provocation to left anti-statism, but its heresy is self-deconstructive, for this "army" conducts tasks across the entire economy, auto-dissolving its military vocation. Not only would such an "army" internalize within itself many of the disaggregated and contradictory nature of contemporary state functions, but a state apparatus mobilizing this "army" would become indistinct from the larger society it governs.[4]

Such an idea—the extreme development of the "government job guarantee" attached to some versions of Green New Deal (Huber 2022)—may invoke totalitarian nightmares. It can, however, be alternatively conceived as a communized decision-making process rich in contradiction, contention, and social ferment. This decision-making should be understood not as top-down command, but rather in terms of contemporary mission-oriented (*Auftragstaktik*), in which the execution of broad objectives is devolved to on-the-scene units, and "insubordinate" directive violations are expected or even fostered. Biocommunist essential workers can be imagined as having their own work-team organizations, combining features of both worker cooperatives and unions with a say on rations, services, health and safety, task assignment and execution. These will be engaged in projects, such as greening cities, or localization of food supply, protecting, rebuilding and reconfiguring communities of which they may themselves be members, and whose survival and flourishing will be an object of pride.[5] And these communities too will have their own councils and assemblies, which can both contest the work-teams' decisions and practices and collaborate with them to make interventions and adjustments at higher levels of the project. Seen in this light, Jameson's universal army, with half its day dedicated to labour in the realm of necessity and the other half liberated for realm of freedom, comes to resemble the mix of anarchism and central planning imagined in Ursula Le Guin's (1974) sci-fi depiction of the communized planet Anarres.[6] The essential worker becomes "essential" not only in protecting vital social and species functions but also as a crucial agent in a sequence of collective planning activities, to which we now turn.

Planning

All biocommunist measures to remedy and repair the consequences of capitalism's polycrisis require foresight and coordination, that is, planning. The current catastrophe sequence demonstrates the failure of the market as a viable global planning mechanism. It has elicited calls from varied positions on the left, from Leninist to social democratic, for governmental economic and ecological plans (Malm 2020; Brancaccio and Passarella 2022; Krahé 2022). The revival of socialist and communist planning traditions and the proposal of new solutions to their endemic problems, is a major topic of this conference. (Benanav 2022; Groos and Sorg 2022; Heyer 2022; O'Neill 2022). This paper only appends three biocommunist notes.

First, in the era of global warming and the sixth extinction, “red plenty” planning models demand revision to reckon with ecological limits (see Sorg 2022). Biocommunism would be a combination of social and environmental levelling to create a social system positioning itself between a ceiling of environmental sustainability and a floor of equalized social development. The conceptual basis for such planning exists in the “boundary model” presented by green authors such as Kate Raworth (2017), who’s unfortunately named “doughnut economics”—also sometimes termed “arrival” economics (Trebeck and Williams 2019)—proposes humanity occupy a central zone of “fair and just” social development between two encircling dangers of ecological overshoot and economic shortfall. The problem with Raworth’s proposition is, however, its refusal to confront the incompatibility between its goals and capital’s accumulatory drive. In practice, “boundary models” have, since the Rio Earth Summit of 1992 been hijacked by corporate green-washers to legitimize ongoing economic extraction, preserving the “growth” imperative (Barca 2020). Biocommunist planning would therefore be a counter-version, weaponized to fight through to the abolition of capital, where the options offered to hominids by their shifting ecological and economic boundaries could be assessed without such presuppositions.[7]

Second, biocommunist planning need not necessarily supply the highly variegated complex consumerism characteristic of advanced capitalist economies. Although digital, networked and algorithmic planning hold out possibilities for solving historically intractable “calculation problems” characteristic of such economies, it should not be presumed that such a consumption driven society would be the biocommunist *summum bonum*. A mode of production beyond capital could have different goals, trading off high consumerism for free time, environmental plenitude, social solidarity and species-survival. This essay has suggested that ecological and equalitarian constraints may together favor provision of a common “basket of goods”, and observance of “public luxury and private sufficiency” principles, with a subordinated market sector supplying a reduced range of consumer items. To the degree that social consensus is forged around such common goals, calculation problems are simplified. Struggle towards such a goal is truly radical but may come to seem pragmatic in the midst of vast market breakdowns, in which capital initiates its own spontaneous, barbaric “degrowth”.

Third, as or more challenging than the “calculation problem”, is the “transmission problem”—that of ensuring a social coordination in which plans from above are engaged with proposals from below. This is a two- or rather many- sided flow vital in terms not just of accurate relay of information (though this is undoubtedly important), but also of counter-planning alteration, critique and counterproposal. The failure to instantiate a two-way transmission system in state socialism too often resulted in unilateral top-down governing processes that were not only massively uninformed and bureaucratically corrupt but ultimately murderously tyrannical. The tendency for bilateral efforts to degenerate into unilateral authoritarianism will doubtless make many, even (or especially) on the left, recoil from the idea of a communist biopower. Without making any pretense to solve what is probably the prime objection to a planned economy—an objection that that can only be answered by creating counter examples of such an economy’s conduct—I suggest that it is precisely around this transmission problem, which is also, of course, a democracy problem, that thinking about “biopolitics” is useful.

Foucault’s concept of biopolitics is associated with his idea of governmentality—that is to say, government conceived not solely as state power but in a more capillary form, enacted through a range of institutions and organizations with varying relations to and degrees of autonomy from the centralized apparatuses of rulership, combining—in Deleuzian terms—both molar and molecular components, or, in

Foucault's own language, a "mesh of power" (Foucault 2012). The political valency of this "mesh" is ambivalent. It has the potential to be a creeping, insidious and implacable disciplinary mechanism, all the more deadly to the degree that it is diffuse and decentralized. But there is an inverse concept, where the disaggregated and distributed nature of power becomes the occasion to reverse or oscillate the directions of its biopolitical flows from heights to depths, peripheries to centres, hubs to spokes, persistently reconfiguring the architecture of power. The model of biocommunism discussed here would be a form of governmentality in which the unions of emergency workers and the councils of environmental proletarians, alongside other forms of communal power become interlocuters of state planning proposing and revising planning functions that are increasingly diffused out from the official apparatus into what Marx and Engel termed a "vast association"(1848). Wróbel (2020, 37) insightfully observes that the moment when populations cease to be the object of biopower, but become its subject is when "the people" emerge, but—*contra* his rejection of any possible institutional form for this emergence—I contend that in such a moment a "biopolitics from below" (Toscano 2016), a powerful, protagonistic biocommunism, becomes possible.

Conclusion: What's In a Name?

This exposition has so far avoided the Marxian debate over the relation of communism to socialism. Although Marx often used these terms interchangeably (Hudis 2018), it has, post-Lenin, been generally held that "socialism" refers to an initial stage of human emancipation, where liberation must contend with poverty, material shortages, and other residues of capitalism, while "communism" designates a later or higher phase where, with the forces of production freed from archaic restraints, society can be organized according to the principle of "from each according to their abilities, to each according to their needs" (Marx 1875). It could thus be objected that what is described here as biocommunism, including mention of essential labour, rationing of resources and even ecological limits to growth, is really an account of socialism.

However, it may be that in an age of extinctions—both human extinctions and of other species, and risks of human auto-extinction—the relation of socialism and communism should be rethought. Socialism could be understood as a phase in which an emancipatory project depends on a progressive amassing of "biopower", broadly understood as the capacity to regulate not only human populations but their environment, with its vast non-human populations of flora, fauna and other life-forms (Leonardi 2012). Communism—or biocommunism—might then be a moment at which, for still-anthropocentric reasons of self-preservation, biopower is subjected to a social limitation to avoid eradicating the ecological "web of life" (Moore 2015) in which humanity is enmeshed. This would be a point at which "to each according to their need" is re-interpreted by the recognition that human need includes, materially and psychologically, the need for flourishing non-human species and populations of plankton, fungi, insects, frogs and other entities upward along the evolutionary scale.

However, in capitalism, where resource allocation continues to be stratified by intersecting forces of class, gender and racialization, the restraint or reduction of productive powers, repudiating growth to diminish ecological destruction, would be tantamount to reactionary consolidation of established pyramids of exploitation and dispossession. The only way in which a self-diminution of human inter-species ascendancy could be socially tolerable is if it were accompanied by a razing of differential intra-human allocations of wealth and well-being. That is why biocommunism must be a project both equalitarian and ecological, a double subversion of capitalism sufficient to revive a name striking fear in

the current order; “commie”—or rather, “biocommie”.

Notes

[1] This separation is the major point of contention in the long-running dispute between theorists of “metabolic rift” (Foster 2000) and “world ecology” (Moore 2015).

[2] On “the expropriation of expropriators”, see Jacob Blumenfeld (2022)

[3] CCS is a technique originally devised to accelerate fossil fuel extraction by oil and gas companies, who consequently monopolize the knowledge and facilities necessary for its development. “Reverse engineering” such practices at a scale sufficient to remove vast amounts of carbon, burying it underground, is at the moment an unproven possibility, but might become a component of a stop-gap program to control carbon emissions during a transition to renewables. Under the continued control of fossil capital, however, CCS technologies might well be developed—probably with immense state subsidization—to create a perverse circular economy whereby ongoing use of oil and gas, or even coal would be enabled by a perpetual commercialized carbon clean-up economy, financed by government created markets—a fossil fuel bad infinity, rife with probabilities for corruption and technical failure (see Buck 2021; Parenti 2021).

[4] One the many anxieties clouding military thought in the US is that the armed forces are by virtue of their multiplication of tasks becoming no army at all. This is the burden of Rosa Brooks’s (2017) How Everything Became War and the Military Became Everything: Tales from the Pentagon: “Military personnel now analyze computer code, train Afghan judges, build Ebola isolation wards, eavesdrop on electronic communications, develop soap operas, and patrol for pirates. You name it, the military does it.” Jameson’s play is to give this anxiety full scope in a strategy of explosion by expansion.

[5] In that sense, the biocommunist recomposition of capital can be understood not only in an autonomist sense as a refusal of capitalist command, but also as akin to that of Bogdanov’s “proletkult”, where “tektological” theory of system transformation fuses with an affirmation of workers’ constructive capacity: see Sochor 1988.

[6] For insightful analysis of Le Guin’s self-described “ambiguous utopia” see Jasper Bernes (2020).

[7] In regard to algorithmic and AI based planning, the energy demands of the digital infrastructure required by such systems might itself become ecologically problematic: the planning of energy has to consider the energy of planning.

References

Agamben G (1998) *Homo Sacer: Sovereign Power and Bare Life*. California: Stanford University Press.

Agamben G (2020) The Invention of an Epidemic. *American Studies Centre*, 26 Jan. https://www.asc.uw.edu.pl/wp-content/uploads/2022/03/Giorgio-Agamben-Invention-of-an-Epidemic.pdf

Angel J (2017) Towards an Energy Politics In Against-and-Beyond the State: Berlin’s Struggle for Energy Democracy. *Antipode,* 49, 557–576.

Aronoff K (2021) *Overheated: How Capitalism Broke the Planet--And How We Fight Back*. New York: Bold Type.

Barca S (2020) *Forces of Reproduction: Notes for a Counter-Hegemonic Anthropocene*. Cambridge: Cambridge University Press.

Bastani A (2019) *Fully Automated Luxury Communism*. London: Verso.

Benanav A (2020) *Automation and the Future of Work*. London: Verso.

Benanav A (2021) Service Work in the Pandemic Economy. *International Labor and Working-Class History,* 99, 66-74,

Bernes J (2020) Communism Might Last a Million Years. *Commune Magazine 5*, https://communemag.com/the-shield-of-utopia/

Blumenfeld J (2022) Expropriation of the expropriators. *Philosophy and Social Criticism, 0*(0), 1–17.

Brancaccio E and Passarella MV (2022) Catastrophe or Revolution. *Rethinking Marxism*, 7 Feb. https://www.tandfonline.com/doi/abs/10.1080/08935696.2022.2031030?src=&journalCode=rrmx20

Brecht B (1929; 2014) *The Measures Taken.* London: Bloomsbury.

Brooks R (2017) *How Everything Became War and the Military Became Everything: Tales from the Pentagon*. New York: Simon and Schuster.

Buchs M and Koch M (2017) *Postgrowth and Wellbeing: Challenges to Sustainable Welfare*. Palgrave McMillan.

Buck HJ (2021) *Ending Fossil Fuels: Why Net Zero is Not Enough*. London: Verso.

Callinicos A (2022) The New Age of Catastrophe. *YouTube*, 23 Apr., https://www.youtube.com/watch?v=C-DTifOGfM4

Chancel L and Picketty T (2015) Carbon and inequality: From Kyoto to Paris: Trends in the global inequality of carbon emissions (1998-2013). *World Inequality Database*, https://wid.world/document/chancel-l-piketty-t-carbon-and-inequality-from-kyoto-to-paris-wid-world-working-paper-2015-7/

Chuang (2021) *Social Contagion and other material on microbiological class war in China*. Chicago: Charles Kerr.

Cleaver H (2005) The Uses of an Earthquake. *Libcom*, 10 Aug. https://libcom.org/article/uses-earthquake-harry-cleaver

Collier S and Lakoff A et al. (2015) Vital Systems Security: Reflexive Biopolitics and the Government of Emergency. *Theory, Culture & Society, 32*(2), 19-51.

Commune (2020) It's Time to Build the Brigades. *Commune Magazine* 27 Mar. https://communemag.com/its-time-to-build-the-brigades/

Cox S (2013) *Any Way You Slice It: The Past, Present and Future of Rationing*. New York: New Press.

Dale G (2021) Lockdown Politics: A Response to Panagiotis Sotiris. *Historical Materialism* 29:1, 247–262.

Dawson A (2017) *Extreme Cities: The Perils and Promise of Urban Life in the Age of Climate Change*. London: Verso.

Dawson A (2020) *People's Power: Reclaiming the Energy Commons*. OR Books: New York.

Davis M (2005) The Monster at Our Door: The Global Threat of Avian Flu. New York: New Press.

Doctorow C (2020) Full Employment. *Locus Magazine*, 6 July https://locusmag.com/2020/07/cory-doctorow-full-employment/

Dyer-Witheford N (2007) Commonism. *Turbulence 1*, http://www.turbulence.org.uk/turbulence-1/commonism/index.html

Dyer-Witheford N (2010) Digital Labour, Species-Becoming and the Global Worker. *Ephemera: Theory in Politics and Organization, 10*(3/4), 484-503

Dyer-Witheford N (2014) Red Plenty Platforms. *Culture Machine,* 13, 1-26.

Editorial (2021) Fix Disaster Response Now. *Scientific American*, 1 Sep. https://www.scientificamerican.com/article/fix-disaster-response-now1/

Esposito R (2008) *Bios: Biopolitics and Philosophy*. Minneapolis: University of Minnesota Press.

Feltrin L (2021) Against Noxiousness (1971). *Viewpoint Magazine*, 1 April. https://viewpointmag.com/2021/04/01/against-noxiousness-1971/

Feltrin L (2022) Noxious deindustrialisation: Connecting precarity and the ecological crisis. *Verso Blog*, 29 Mar. https://www.versobooks.com/blogs/5312-noxious-deindustrialisation-connecting-precarity-and-the-ecological-crisis

Fitz D (2022) Cuba Prepares for Disaster. *The Bullet*, 4 Apr https://socialistproject.ca/2022/04/cuba-prepares-for-disaster/#more

Foster JB (2000) *Marx's Ecology: Materialism and Nature*. New York: Monthly Review Press.

Foucault M (2007) *Security, Territory, Population: Lectures at the Collège de France 1977–1978*. Basingstoke: Palgrave.

Foucault M (2008) *The Birth of Biopolitics: Lectures at the Collège de France 1978–1979*. Basingstoke: Palgrave.

Foucault, M (2012) The Mesh of Power. *Viewpoint Magazine*, 12 Sep. https://viewpointmag.com/2012/09/12/towards-a-socialist-art-of-government-michel-foucaults-the-mesh-of-power/

Fraser N (2016) Contradictions of Capital and Care. *New Left Review* 100, 99-117.

Gebrekidan S and Apuzzo M (2021) Rich Countries Signed Away a Chance to Vaccinate the World. *New York Times* 10 Nov. https://www.nytimes.com/2021/03/21/world/vaccine-patents-us-eu.html

Gore T (2020) Confronting carbon inequality: Putting climate justice at the heart of the COVID-19 recovery. *Oxfam International*, 21 Sep. https://www.oxfam.org/en/research/confronting-carbon-inequality

Gowan S (2018) A Plan to Nationalize Fossil-Fuel Companies. *Jacobin*, 26 Mar. https://www.jacobinmag.com/2018/03/nationalize-fossil-fuel-companies-climate-change

Groos J and Sorg C (2022) Creative Construction: Planned economies in the 21st century and beyond. Presentation at Socialist Futures, European University Institute, Badia Fiesolina, Emeroteca, May 25–26.

Grove JR (2019) *Savage Ecology: War and Geopolitics at the End of the World*. Durham, NC: Duke University Press.

Hardt M and Negri A (2000) *Empire*, Cambridge, MA: Harvard University Press.

Heller C, Pezzani L, and Stierl M (2019) Towards a Politics of Freedom of Movement. In Jones, R ed. *Open Borders: In Defense of Free Movement*. Athens, GA: University of Georgia, 51-76.

Højme P (2022) Biopolitics and the COVID-19 Pandemic: A Foucauldian Interpretation of the Danish Government's Response to the Pandemic. *Philosophies* 7:34. https://doi.org/10.3390/philosophies7020034

Huber M (2022) *Climate Change as Class War: Building Socialism on a Warming Planet*. London: Verso.

Hudis P (2018) Marx's Concept of Socialism. In Matt Vidal, Tony Smith, Tomás Rotta, and Paul Pre eds. *The Oxford Handbook of Karl Marx*. Oxford: Oxford University Press.

Jameson F (2016) An American Utopia. In Jameson F ed. Slavoj Z *An American Utopia: Dual Power and the Universal Army*. London; Verso, 1-96.

Jones R (2019) In Defense of Free Movement. In Jones R ed. *Open Borders: In Defense of Free Movement*. Athens, GA: University of Georgia. 264-272.

Klein N (2008) *The Shock Doctrine: The Rise of Disaster Capitalism*. New York: Picador.

Krahé M (2022) The Whole Field: Markets, planning, and coordinating the green transformation. *Phenomenal World*, 30 Apr. https://www.phenomenalworld.org/analysis/climate-planning/

Lassere DG (2020a) Bienvenue dans le passé. Autonomie de la nature, combustibles fossiles et Capitalocène. *Contretemps*, 3 Nov. http://www.contretemps.eu/capitalisme-ecologie-climat-anthropocene-ecosocialisme/

Lassere DG (2020b) Retour sur le présent. Espaces globaux, nature sauvage et crises pandémiques. *Contretemps*, 16 Nov. http://www.contretemps.eu/retour-present-espaces-globaux-pandemiques/

Le Guin, UK [1974; 1994)*The Dispossessed*. New York: Mass Market Paperback.

Leonardi E (2012) *The Biopolitics of Climate Change: Carbon Commodities, Environmental Profanations,*

and the Lost Innocence of Use-Value. Doctor of Philosophy Degree in Theory and Criticism, University of Western Ontario.

Leonardi E (2021) Autonomist Marxism And World-Ecology: For A Political Theory Of The Ecological Crisis. *Platforms, Populisms, Pandemics and Riots*, https://projectpppr.org/pandemics/autonomist-marxism-and-world-ecology-for-a-political-theory-of-the-ecological-crisis

Lilley S, McNally D, Sasha Y (2012) *Catastrophism: The Apocalyptic Politics of Collapse and Rebirth*, New York: PM Press.

Malm A and the Zetkin Collective (2021) *White Skin, Black Fuel: On the Danger of Fossil Fascism*. London: Verso.

Malm A (2020) *Corona, Climate, Chronic Emergency: War Communism in the Twenty-First Century*. London: Verso.

Malm A (2016) *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. London: Verso.

Marx K and Engels F (1848) Manifesto of the Communist Party. *Marxists Internet Archive*, https://www.marxists.org/archive/marx/works/1848/communist-manifesto/index.htm

Marx K (1844: 1964) *The Economic and Philosophical Manuscripts of 1844*, D. Struk ed. New York: International Publishers.

Marx K (1873) *Capital Volume One*: Afterword to the Second German Edition. *Marxists Internet Archive*, https://www.marxists.org/archive/marx/works/1867-c1/p3.htm

Marx K (1875) The Critique of the Gotha Program, Marxists Internet Archive https://www.marxists.org/archive/marx/works/1875/gotha/

Mbembe A (2019) *Necropolitics*. Durham, NJ: Duke University Press.

McGlade C and Ekins P (2015) The geographical distribution of fossil fuels unused when limiting global warming to 2 °C Nature 517187–190, https://www.nature.com/articles/nature14016

Melimopoulos E (2021) What are patent waivers for COVID vaccines? *Al Jazeera* 29 Jun. https://www.aljazeera.com/news/2021/6/29/explainer-what-are-covid-vaccine-patent-waivers

Mezzadra S (2020) The Capitalist Virus: Mutations of Capitalism in the Pandemic Conjuncture. YouTube https://www.youtube.com/watch?v=ApKGU9uWuKc

Mezzadra S and Neilson B (2013) *Border as Method, or, The Multiplication of Labor*. Durham: Duke University Press.

Mezzadra S and Neilson (B 2019) *The Politics of Operations: Excavating Contemporary Capitalism*. Minneapolis: University of Minnesota Press.

Monbiot G (2020) Private Sufficiency, Public Luxury: Land is the Key to the Transformation of Society. *Schumacher Centre for New Economics*, 25 Oct. https://centerforneweconomics.org/publications/private-

sufficiency-public-luxury-land-is-the-key-to-the-transformation-of-society/

Moore J (2015) *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London: Verso.

Nail T (2019) Sanctuary, Solidarity, Status! In Jones, Reece ed. *Open Borders: In Defense of Free Movement*. Athens, GA: University of Georgia, 23-33.

Muldoon J (2022) *Platform Socialism: How to Reclaim Digital Future From Big Tech*. London: Pluto.

Neale J (2021*) Fight the Fire: Green New Deals and Global Climate Jobs*. London: Resistance Books.

Negri A (2005) Crisis of the Crisis State. *Libcom*, 29 Jul. https://libcom.org/library/crisis-state-antonio-negri

Nevins J (2019) Migration as Reparations. In Jones, Reece ed. *Open Borders: In Defense of Free Movement*. Athens, GA: University of Georgia, 129-140.

O'Neill R (2022) Central Planning in the Networked Age. Presentation at Socialist Futures, European University Institute, Badia Fiesolina, Emeroteca, May 25–26.

Out of the Woods (2018) The Uses of Disaster. *Commune Magazine*, 22 Oct. https://communemag.com/the-uses-of-disaster/

Out of the Woods (2020) *Hope Against Hope: Writings on Ecological Crisis*. New York: Common Notions.

Portes J Reed H and Percy A (2017) Social prosperity for the future: A proposal for Universal Basic Services. *Institute for Global Prosperity*. https://www.ucl.ac.uk/bartlett/igp/sites/bartlett/files/universal_basic_services_-_the_institute_for_global_prosperity_.pdf

Raworth K (2017) *Doughnut Economics: Seven Ways to Think Like a 21st Century Economist*. Vermont: Chelsea Green.

Renzy R, Skandier CS, and Paul M (2020) Out of Time: The Case for Nationalizing the Fossil Fuel Industry. *People's Policy Project* 20 Jun. https://www.peoplespolicyproject.org/wp-content/uploads/2020/06/OutofTime.pdf

Roston E, Kaufman L, and Warren H (2022) How the World's Richest People Are Driving Global Warming *Bloomberg News*, 24 Mar. https://www.bloomberg.com/graphics/2022-wealth-carbon-emissions-inequality-powers-world-climate/

Roth KH (2022) The Great Fear of 2020. *Endnotes*, https://endnotes.org.uk/other_texts/en/karl-heinz-roth-the-great-fear-of-2020

Sassen S (2016) A Massive Loss of Habitat: New Drivers for Migration. *Sociology of Development* 22, 204–33.

Schwartzman D (1996) Solar Communism. *Science & Society*, *60*(3), 307-331. http://www.redandgreen.org/Documents/Solar_Communism.htm

Shell Global (2016) A Better Life With a Healthy Planet: Pathways to Net Zero Emissions,

https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/a-better-life-with-a-healthy-planet.html

Sochor Z (1988) *Revolution and Culture: The Bogdanov-Lenin Controversy*. Ithaca: Cornell University Press.

Sorg C (2022) Failing to Plan Is Planning to Fail: Toward an Expanded Notion of Democratically Planned Postcapitalism. *Critical Sociology*, Mar. 2022. Doi:10.1177/08969205221081058

Sotiris P (2020a) Against Agamben: Is a Democratic Biopolitics Possible? *Critical Legal Thinking,* 14 Mar 2020 https://criticallegalthinking.com/

Sotiris P (2020b) Thinking Beyond the Lockdown: On the Possibility of a Democratic Biopolitics. *Historical Materialism, 28*(3), 3–38.

Stockholm Environmental Institute (SEI) et al. (2021) The Production Gap Report 2021. http://productiongap.org/2021report

Swyngedouw E (2013) The non-political politics of climate change. *ACME: An International Journal for Critical Geographies*, *12*(1), 1–8.

Tarnoff B (2022) *Internet for the People: The Fight for Our Digital Future*. London: Verso.

Terranova T (2009) Another Life: The Nature of Political Economy in Foucault's Genealogy of Biopolitics., *Theory, Culture & Society, 26*(6), 234–65.

Terranova T (2015) Securing the Social. In S. Fuggle, et al. (eds.) *Foucault and the History of Our Present*. Palgrave Macmillan, 111-126.

The Salvage Collective (2021) *The Tragedy of the Worker:Towards the Proletarocene*. London: Verso.

Thompson EP et al. (1982) *Exterminism and Cold War*. London: Verso.

Tooze A (2021) *Shutdown: How Covid Shook the World Economy*. New York: Viking.

Toscano A (2016) After October, Before February: Figures of Dual Power. In Jameson, F, ed. Zizek, *An American Utopia: Dual Power and the Universal Army*. London: Verso, 211-242.

Toscano A (2020) Last Resorts: Jottings on the Pandemic State. *Crisis & Critique*, *7*(3), 387-397. https://monoskop.org/images/f/ff/Crisis_and_Critique_7_3_2020_The_Year_of_the_Virus_SARS_2_COVID_19_2020.pdf

Trebeck K and Williams J (2019) *The Economics of Arrival: ideas for a Grown Up Economy*. London: Policy Press.

Vettese T and Pendergrass D (2022) *Half-Earth Socialism: A Plan to Save the Future from Extinction, Climate Change and Pandemics*. New York: Verso.

Vettese T (2018) To Freeze The Thames: Natural Geo-Engineering and Biodiversity. *New Left Review* 111, 65-86.

Workers Inquiry Network (2020) Struggle in a Pandemic: A Collection of Contributions on the COVID-19 Crisis Note From Below, https://notesfrombelow.org/media/other/Struggle-in-a-Pandemic-FINAL.pdf

Workers' Liberty (2021) Editorial Expropriate big pharma! Vaccinate the world! Workers Liberty 7 Sep.https://www.workersliberty.org/story/2021-09-07/expropriate-big-pharma-vaccinate-world

Wróbel S (2020a) Biocommunism and Its Role as It Overcomes Biopolitics. *Polish Sociological Review* 211, 301–321.

Wróbel S (2020b) Biocommunism or Beyond the Biopolitical Paradigm. *Philosophical Study*, 10, 293–308.

Zizek S (2015) We Can't Address the EU Refugee Crisis Without Confronting Global Capitalism. *In These Times*, 9 Sep. https://inthesetimes.com/article/slavoj-zizek-european-refugee-crisis-and-global-capitalism

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