

Eco-socialism will be anti-eugenic or it will be nothing: Towards equal exchange and the end of population

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Abstract

In this article, we draw attention to similarities and synergies between eco-fascist and liberal forms of populationism which encourage reproductive injustices against Indigenous women and women of colour globally, increasingly in the name of climate change mitigation. Calls to intervene in the bodily and social autonomy of racialised women, at best, distract from ecological crisis and, at worst, encourage violent forms of reproductive injustice. We urge instead for an honest reckoning with the root problem of ecologically unequal exchange (EUE) as the system of global extraction, which enacts environmental harm and reproductive injustice. Finally, we call for an anti-imperialist eco-socialist move towards equal exchange on a world scale to end the flow of undervalued resources from the South and to limit the contaminating activities these enable. We also stress that an anti-imperialist eco-socialism needs to be attuned to the teachings of reproductive justice movements and resistant to creeping liberal eugenicism, as much as to the overt eco-fascism which has proved so deadly in recent years.

Keywords

climate change, ecofascism, eco-socialism, populationism, race

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As Bikrum Gill (2021: 1, this volume) argues, ‘race underwrites the distinctively exhaustive society/nature relation fuelling . . . the productive excess and ecological exhaustion of the capitalist world-system’. To accept and extend Gill’s claim, we argue that race

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underwrites many of the dominant solutions and novel innovations of governance developed within the frame of environmentalism and in response to the urgency of climate change, particularly in relation to the enduring construction of ‘overpopulation’ as an environmental problem. To substantiate this, we revisit how ‘population’ – already a term for racialised groups developed through colonial management – became re-articulated with ‘environment’ in key formative publications in environmental studies due to the efforts of white nationalists in the mid- to late-20th century. Absent any serious reckoning with this lineage, liberal environmentalism continues to launder effectively white nationalist priorities into their policy-oriented analyses. Here we trace this relationship from the white nationalist populationism of Garrett Hardin through to the liberal environmentalist populationism of Partha Dasgupta.

We situate this population fix as the necessary ideological thimble that justifies a capitalist world-system structured to extract value and resources from peoples of colour in the periphery – extraction which super-exploits and degrades peripheral labour, social orders, and ecologies, and drives migration to the core.¹ Such flows are then remoulded and represented as natural facts and threatening forces to northern audiences through populationist discourses to justify border violence and political exclusion (see Turner and Bailey, 2021).

The first section of this article revisits ‘population’ as a racialised ‘managerial noun’ (Murphy, 2017: 135), which prepares the ground for coercive reproductive interventions in the name of ecology. Here we consider the synergy and reciprocity which connect ecofascism with liberalism through the foundational white nationalist populationism of figures like Garrett Hardin. The second section uses the lens of ecologically unequal exchange (EUE) to bring into focus the system of extraction and exploitation, which connects environmental harm and reproductive injustice. The third focusses on some elements of an anti-eugenic and anti-imperialist eco-socialism, using historical Third World documents that raised and dismissed the population-development nexus, and contemporary struggles which are the mooring for a committed programme towards global developmental convergence. We conclude by reasserting that an anti-imperialist eco-socialism needs to be attuned to the teachings of reproductive justice movements and resistant to creeping liberal eugenicism as much as to the overt eco-fascism which has proved so deadly in recent years.

From replacement narratives to reproductive interventions

On 15 March 2019, a self-described ‘Ethno-nationalist Ecofascist’ murdered 51 Muslim worshippers at two mosques in Christchurch, New Zealand (Forchtener, 2019). The white Australian killer distributed a ‘manifesto’ titled *The Great Replacement* wherein he lamented the destruction of the environment due to ‘overpopulation’. Although he specifically targeted Muslims in an atrocity rightly identified as Islamophobic, the killer’s manifesto made a broader and all-too-familiar separation between whites and people of colour in his understanding of population. Referring to ‘Western’ and ‘white’ nations he bemoaned dwindling white fertility rates in opposition to non-white ‘races’ with ‘higher fertility rates’ who seek to ‘ethnically replace my own people’. In the killer’s own words:

the environment is being destroyed by over population, [*sic*] we Europeans are one of the groups that are not over populating the world. The invaders are the ones over populating the world. Kill the invaders, kill the overpopulation and by doing so save the environment.²

The manifesto's ideology is often traced back to a 2011 work of Renaud Camus, titled *Le Grand Remplacement*, and understood as a sibling of US white genocide conspiracies. However, the basic ideas which inspired the Christchurch massacre have much deeper roots. European colonial projects, which governed most of the world through force and violence for much of the past 400 years – the politics of accumulation on a world scale – developed the abiding categories of population and the technologies to control those categorised. Beginning with a political dissection of the world along what Du Bois (2008 [1903] 3) called 'the color line' between those racialised as white and those racialised as non-white, colonial projects cast 'population' as an object to be managed 'scientifically'. In the early 20th century, British colonial administrations became increasingly concerned about the racial balance of power across the white/non-white colour line (see Ittmann, 2013) fixating on perceived low white birth rates relative to the higher fertility rates among communities of colour in restive colonies. These concerns over the racial balance of power motivated the development of techniques of demographic calculation, and today, the technologies of population measurement crafted in the service of colonial projects remain baked into the discipline of demography.

By the mid-20th century, foundational figures in environmental scholarship, influenced by a range of Malthusian, eugenicist, economicist,³ and white supremacist ideologies, were embedding population concerns into disciplinary structures. Furthermore, indeed critically, these foundational environmental studies scholars driving populationism were responding to the Third World national liberation/Bandung project and its attendant threats to unfettered and cheap imperial access to resources from former colonies (Greene, 2019). As a key example, one of the most widely taught and widely cited texts in environmental studies and related fields is *The Tragedy of the Commons* written by Garrett Hardin in 1968 (see Bhatia, 2004; Oakes, 2016). Seeping into everyday usage, even the title itself has become something of a cliché. However, rarely is it acknowledged that Hardin was an open and vocal white nationalist who invested environmental texts with racist logics (see Bhatia, 2004; Mildemberger, 2019; SPLC, n.d.). *The Tragedy of the Commons* exhorted population control in terms such as: 'freedom to breed will bring ruin to all'; while his truly cold-blooded 1974 essay *Lifeboat Ethics* advocates for the abandonment of the populous poor to save the rich few in a limited planetary 'lifeboat'. Garrett Hardin, like others who shared his views, such as Richard Lynn and J. Phillippe Rushton,⁴ contributed to the development of the journal *Population and Environment* (Bhatia, 2004). Still published today by Springer, the archive of *Population and Environment* remains littered with texts informed by white nationalism and scientific racism.

If white nationalists and scientific racists were vital in shaping the disciplinary priorities of environmental studies, the transfer of ideas has also been reciprocal. So, in turn, what Bhatia (2004: 194) calls 'reactionary ecology and the politics of population control' have long fed back into the nationalist environmental arguments of organised white supremacy in the United States and beyond. Those familiar with the open climate denialism of the Trump years in the United States might find this somewhat incongruous. However, white nationalist eco-fascism and related movements are less in contradiction with, and more a complement to, 'fossil fascist' movements, which have been especially visible under Trump. Both pivot on 'population' concerns, are violently anti-immigration, and both seek to preserve white majorities through hard borders while discounting life outside of those borders in the Global South as sacrificial. Equally, both seek to preserve an imperial 'way of life' based on privileged access to global wealth.

For Hardin and others, the academic sphere has been a domain for laundering racist agendas into citable concepts, which pass as respectable. And many liberal environmentalists have been only too willing to uncritically incorporate those ideas into their own work. One of the most recent liberal interventions into the environmental policy domain in the United Kingdom, *The Economics of Biodiversity: The Dasgupta Review* by economist Partha Dasgupta is a key example of the laundering of white nationalist priorities into establishment liberalism. Taking Hardin as the accepted base for analysis, Dasgupta advances an assessment of threats to biodiversity which devotes much time to the ‘problem’ of Global South, and particularly ‘African’, fertility.

Dasgupta’s report is an exercise in economism and calculation in which all biotic life has an accounting value, working on the principle that ‘nature’ cannot be valued at all unless quantified in this way. Using the abstractions of liberal economics, in which people are conceived of as utility-maximising individuals, Dasgupta (2021a: 232) compares ‘reproductive behaviour’ in the Global South with ‘consumption practices’ in the Global North as similarly egoistic personal choices, notwithstanding one key difference: Global South reproductive behaviour is accelerated by what he presents as improper communal social forms. Taking Hardin’s work as a point of departure, the report claims: ‘conformist preferences over reproductive behaviour can amplify the tragedy of the commons’ (Dasgupta, 2021a: 234). Here, the white nationalist imperative behind the political choice to split humanity down the colour line and identify the reproduction of people of colour as the problem to be solved through intervention is stripped away by Dasgupta, leaving a seemingly innocuous statement fit for liberal analysis.⁵

Dasgupta also pushes back against the apparent advances made by reproductive rights movements in the past three decades. Indeed, for today’s Malthusian, eugenicist, and economic commentators on population, the 1994 *International Conference on Population and Development* in Cairo remains a focus of antipathy for what it appeared to achieve. The conference established reproductive rights as fundamental to family planning initiatives, replacing the overt coercion of older population control interventions. In fact, the Cairo shift from coercion to rights has simply meant that coercive practices, such as pressure to take long-term injected or implanted contraception, are often couched in terms of individual feminist choice and control (see Wilson, 2017). Yet even this ‘strategic appropriation’ (Wilson, 2017: 57) of the language of women’s rights is a step in the wrong direction for Dasgupta.

Referring to the ‘Impact Inequality’, which he defines as ‘the imbalance between our demands and Nature’s supply’, Dasgupta (2021b: 1) works to extend Amartya Sen’s presentation of pollution as oppression to incorporate *population as oppression*:

In a world where the Impact Inequality holds, and holds strongly, it may seem reasonable to insist on the rights of future generations when an appeal is made to curb our impact on the biosphere. Sen (1982), for example, likened persistent pollutants to instruments of oppression: ‘Lasting pollution is a kind of calculable oppression of the future generation’. But if additional births can be expected to contribute further to the discharge of persistent pollutants, why does a couple’s reproductive rights trump the rights of future people not to be oppressed? That is the kind of ethical dilemma the language of reproductive rights misses. (Dasgupta, 2021a: 193)

Here, reproduction itself is reformulated as oppression in a critique of the reproductive rights framework which the author sees as infringing on the ‘Impact Inequality’ between human demand and nature’s supply. The report remains focussed on calculating an

absolute number of humans rather than on the relative impact of humans on the biosphere, based on their relationship to the means of production and their insertion in patterns of accumulation on a world scale. Indeed, unmentioned is the fact that the carbon emissions produced by higher fertility and poorer societies are comparably negligible, as we explain later.

Typical of liberal analysts, Dasgupta does not directly order states and organisations to replicate coercive population control measures. However, like many academics identifying ‘overpopulation’ problems, he does prepare the ground and direct the reader towards potential areas for intervention. The report proceeds to home in on ‘Africa’, and specifically ‘Sub-Saharan Africa’ as a site for legitimate intervention. In this part of the world, understood in broad brush racialised generalisations, timeless ‘traditions’ are identified as being at the roots of high fertility, including: ‘kinship-held agricultural land, the practice of polygamy, lack of access to modern methods of contraception, low education among women, and kinship obligations to share the fruits of effort’ (Dasgupta, 2021a: 242). Dasgupta pinpoints kinship structures and the lack of nuclear families as key factors generating high fertility in ‘Africa’. The reason for this, in the liberal economic worldview, has to be that the ‘costs borne by parents are lower when childrearing is shared among kin than when households are nuclear’. Continuing with this line of argument, Dasgupta states:

Fosterage creates a *free-rider problem* if the parents’ share of the benefits from having children exceeds their share of the costs. The corresponding externalities are confined to the kinship. Other things equal, reduction in those externalities would be accompanied by a fall in the demand for children. (Dasgupta, 2021a: 242 [emphasis added])

Behind this mention, dressed up in the language of externalities, is the suggestion that interventions should go far beyond contraceptive programmes and restructure kinship-based societies. If such communities can be steered towards more individuated and nuclear family-centred ways of being, parents would have to take sole responsibility for their own biological children, eliminating the ‘free-rider problem’ that communal support structures supposedly create. Overall, tools of economic calculation are applied sweepingly to African women’s private and collective lives to suggest the optimum level of reproduction according to Dasgupta’s sums.

The underlying assumption is that external Western-dominated states and institutions could and should intervene to alter the structures of ‘African’ society to limit reproduction among those whose production activities impact most lightly on the environment. This evidences the racial structures of the international and its hierarchies of sovereignty. Shifting race, nation, class and gender hierarchies enduring from the colonial era determine who assumes the power of intervention; who becomes the sacrificial object of intervention; who has bodily and social autonomy, and whose body and community are designated as sites of intervention. Such structural hierarchies determine whose present-day reproductive rights and freedoms are marked as sacrificial in the name of the ‘future generations’ of others. Furthermore, the character of intervention to these ends is informed by existing repertoires of thought on population, which are firmly rooted in anti-poor, misogynistic, and racist projects.

Dasgupta’s population fixation seems all the more abhorrent given that the wealthier countries with below replacement birth rates of about 1.9 per woman were responsible for 86% of global greenhouse gas emissions in 2018. The 9% of the global population with

birth rates of around 4.6 were responsible for only 0.5% of global emissions in the same year (see Ritchie, 2018 for emissions by region and World Bank, 2019, for fertility rates by region). Clearly, the ecological impact of the high fertility poorest is negligible and Dasgupta's obliquely suggested interventions into African fertility and social organisation would bring no discernible ecological benefits. Counterarguments hold that, regardless of low emissions per capita, the populous poor encroach on land and resources, accelerating Third World biodiversity loss. However, these arguments neglect to consider the vast and ever-expanding acreage dedicated to producing livestock feed, food crops, biofuels and similar commodities for export to high-consumption areas of the low-fertility First World. The blame for biodiversity loss lies with such commodity production and the capitalist system in which it is embedded, not the subsistence of the poorest communities.

Third World thinkers in particular have shown how the reservation of land for extraction relates back to 'overpopulation' interventions. One rationale is that such efforts might suppress poorer populations' resource needs and make it easier to funnel resources to northern populations and northern accumulation. As Amin once argued, 'If the masses of the Third World could divert these resources and exploit them for their own benefit, the conditions under which the capitalist system functions at the center would be upset' (1977: 358). Patnaik (2007) develops this reasoning further, writing in the *Ideology of Overpopulation*, that population increase disturbs wealthy countries because 'it will necessarily mean that these countries will absorb a slightly higher share of the scarce or non-renewable resources whose world supply has been successfully hogged by the advanced countries so far'. To loop this back to what we know about the racial formation of demographic calculation: there is a connection between the racial balance of power in demographic terms and the racial balance of power in resource terms which connects to the paradoxically enduring fragility of the extractive global system.

Although figures like Dasgupta often present populationism as simply an abstract debate, in reality this inspires often coercive, and even deadly, interventions in the reproductive autonomy of working-class, racialised, and lower caste women (and sometimes men). Technologies of sterilisation and coercive reproductive restriction established under colonial states were further developed and extended across racialised, Third World and Indigenous communities, often under the banner of 'development'. For example, after the French decided not to develop the industrial base in its overseas department of Reunion Island, without need for labour the area was recast as 'overpopulated', and the state oversaw 'thousands of abortions without consent' in the 1960s and 1970s (Vergès, 2020: 1). Across Turtle Island (the United States and Canada), forced sterilisation has long been part of successive settler colonial state extermination projects against Indigenous communities and has extended into recent times (Clarke, 2021). Fifteen women died within the same week in 2014 after being subjected to sterilisations in postcolonial India, where millions of Dalit, Indigenous Adivasi, and poor women are subjected to tubectomies in dangerous sterilisation camps (Wilson, 2018: 91). From 1996 to 2001, the Peruvian state sterilised over 272,000 Indigenous and poor women and over 22,000 Indigenous and poor men in a campaign of 'institutionalised genocide' in the guise of family planning (Carranza Ko, 2020: 91, 95). With such violent cases in mind, reproductive justice movements, developed by women of colour and Indigenous women, seek to secure rights to have, or not to have, children, as well as to secure the conditions necessary to give birth and raise healthy children (Ross and SisterSong, 2009: 4). These movements increasingly converge with environmental justice objectives as coercive

reproductive restrictions become ever more commonly enacted or gestured towards in the name of climate change.

Overall, an environmentalism which mobilises population is, at best, a racially structured distraction from the colonial-capitalist roots of the ecological problem: ongoing racially structured EUE (extraction). In short, ‘population’ distracts from meaningful solutions to ecological crisis. Populationism framed as environmentalism also serves those who fixate on the racial balance of power in demographic and resource-use terms. And at worst, it provides grounds for harmful interventions into the bodies and social lives of women of colour in the Global South, which has extensive and violent precedent. The next section thus mobilises theories of the production of North-South polarisation to establish the world order’s reliance on permanent differentiation and obdurate disparities in resource use and environmental harm, both intra-nationally between classes and inter-nationally between national aggregates.

Unequal exchange and ecological crisis

The ecological crisis is rooted in an extractive, uneven, and polarised process of global accumulation. Here, we draw on EUE, as well as cognate and antecedent Third World approaches, to clarify the dynamics of this process. EUE identifies global extractive structures which synchronously feed excessive Global North consumption with undervalued commodities and labour from the Global South, enclose global atmospheric commons (Sharife, 2011), and displace ecological harm disproportionately onto the South, as part-and-parcel of accumulation on a world scale. Producing and maintaining this system has also been bound up with managing the reproduction of racialised populations, from the engineered reproduction of plantation labour, to the arrested reproduction through forced sterilisation of Indigenous residents on land marked for primitive accumulation. Ecology, extraction, and population are braided together within the world system, and how these relations are interpreted and acted upon is *political*.

Clearly, the relevant unit of analysis to understand capitalism and its effects on the climate is the globe. We use EUE to diagnose the origins, manifestations, and futures of this global climate crisis. EUE itself emerged as an ecological turn in world-systems theory, which emphasised core-periphery or core/semi-periphery/periphery interaction (Bunker, 1988; Frey et al., 2019). World-systems theory rightly noted that the development of the world-system was a historical and global class struggle. Colonialism was central to value concentration in the core, with ‘European representations of others remain[ing] marked by this polarization, and in fact serv[ing] as a means of justifying it’ (Amin, 1989: 176). Accordingly, the underdevelopment of the periphery was not due to immanent defects or lags in its development process. Because peripheries lose value through core territorial and mercantile aggrandisement, underdevelopment and development were, and are, two sides of the same world-historical coin (Amin, 1974). Contemporaneous Third World ecological manifestoes echoed such concerns, making clear the environmental crisis’s primary roots ‘in economic and social structures and behaviour within and *between* countries’, in the words of The Cocoyoc Declaration (1974). As the document argued, ‘the very cheapness of the materials was one element in encouraging the industrialized nations to indulge in careless and extravagant use of the imported materials’. This position illuminated then-prominent theories of uneven exchange, and foreshadowed later EUE arguments, upon which we now draw.

EUE clarifies that capitalism, whether in its colonial or imperialist stages, has meant unequal exchange of energy and biophysical matter, alongside well-known inequalities in embodied labour through uneven exchange (Emmanuel, 1972).⁶ EUE shows that the price system, including the limitless fungibility of exchange values, facilitates core import of materials and semi-finished or finished products. The socio-physical technics of ‘development’ are the ‘result . . . of the societal flows of resources which reproduce, and are reproduced by, these entities’ (Hornborg, 2009: 242). Global terms of trade and unequal exchange keep the physical artefacts of the core running, while obscuring how those terms of trade impact the periphery. The law of value, bodyguarded by constant violence and interventions, facilitates the core’s import of value and export of entropy, and the periphery’s export of value and import of entropy. Ongoing development in the North means human and ecological de-development or underdevelopment in the South. CO₂ emissions, for now the ineluctable output of growth, also produce climate change-induced de-development (Roberts and Parks, 2006).

The physical system of EUE dates back to the colonial period, when the goods which facilitated northern development began to be extracted from the physical landscapes and human beings of the South. From this period onwards, as Fanon (1985 [1961]: 81) famously put it, Europe was remade as ‘literally the creation of the Third World’. European colonisers deployed a civilising mission rhetoric, ostensibly to bring ‘improvement’ to ‘environmental disarray’ – in reality, bringing degradation to sustainable Indigenous ecologies – to justify colonial aggrandisement. As the colonial era wore on, the fields and labour of the people of Java, the Deccan, Egypt, and elsewhere produced physical commodities, imported into the core, used in manufacturing, or re-sold – the ‘ghost acreage’ of metropolitan consumption (Ajl, 2021a; Borgstrom, 1974; Tilley, 2020). Wealth drained as the core-periphery pair hardened (Bagchi, 2008). Core imports from the periphery were largely agricultural, especially tropical goods like sugar, spices, and tea ungrowable in northern climates, and teak and other timbers, inducing widespread and ecologically catastrophic deforestation (Gadgil and Guha, 1993). Plantation monocrop cultivation systems also produced rapid ecological degradation, developmental disarray, and/or colonial genocide in franchise colonies like India and Indonesia (Patnaik, 2018; Tilley, 2020).

European expansionist projects also instigated settler-colonial genocide by means of colonial disease-spreading and direct territorial conquest through the settling of the ‘frontier’ (Dunbar-Ortiz, 2014). Central to extractive and settler colonial projects has been the differential management of ethnic groups as racialised ‘populations’ to be diminished or reproduced in direct relation to colonial economic objectives (Bendix, 2016; TallBear, 2018). Over the course of these colonial centuries, Europe developed extermination techniques to be used against those racialised in relation to land to facilitate expropriation and the consolidation of settlement. In tandem, colonial powers developed techniques to coerce reproduction among those racialised in relation to the category of ‘labour’ for exhaustion on monocultural plantations and in extractive industries. To stress our point here: the emergence of ‘population’ as the management of racialised biological groupings, which contemporary figures like Dasgupta still mobilise in the present, is thoroughly bound up with the extractive systems which bestowed ecological crisis upon us in the first place.

Colonial territorial extremities also worked in tandem. Core wealth extraction from the franchise-colonial peripheries exported goods to the European core, which re-exported them to its own settler colonies. The core exported domestic social contradictions in the form of the European working-class as a surplus or ‘redundant’ population fix. The

extirpation of social systems through colonisation radically changed ecologies (Cronon and Demos, 2003; Merchant, 1989) and ripped apart modes of socio-ecological regulation, which required human tending to facilitate value drains to the core (Anderson, 2005; Estes, 2019). Such colonial drains of value, not least through the exhaustion of the periphery's agricultural land, along with managed movements of populations, produced the current world-system in both economic and ecological terms.

Importantly, colonial drains also produced the world-system in a very specific way, eliciting a transformation of the energy regime. That regime, against other ones, began to draw on the historically sedimented products of past photosynthesis – hydrocarbons. By enhancing the energetic basis of accumulation, it laid the basis for the emergence of British industrial capitalism. Yet from industrial capitalism's dawn, burnt coal appropriated atmospheric commons with *longue durée* effects on the periphery of the world-system, which have only recently become apparent in the deadly effects of the climate crisis. At least initially unknowingly, European industrial capitalism was not merely pillaging and de-developing the colonised South, but also appropriating the future through enclosing the atmospheric space available for 'cheap' paths to development (Warlenius, 2018).

The postcolonial period saw transformations in the world division of labour through outsourced and offshored production, which superficially and partially shifted the locus of CO₂ emissions but maintained the magnitude and direction of the value flows, which ensured uneven development on a world scale. Overall, the period after Global South nations won their independence, especially from 1970, witnessed massively increased human appropriation of net primary production alongside rising intra-national and international income inequality, and displaced ecological loads (Haberl et al., 2006). Within this picture, we broadly separate out transformations within agricultural and industrial circuits of production – although a central component of escalating environmental damages is the industrialisation of southern agricultures.

Until 1960, the United States, Western Europe, and Japan were overwhelmingly responsible for overall CO₂ emissions because of their relatively early industrialisation and accompanying use of coal and oil, domination of atmospheric 'space' for the wastes, and appropriation of global primary productivity. In the late 20th century, shifts began to take place which generated rising CO₂ emissions in the periphery and semi-periphery too. Nonetheless, the core continued to concentrate the 'clean', higher value components of the value chain, increasingly boasting of clean *territorial emissions* in relation to the 'dirty' South onto which core *consumption emissions* are displaced. Peripheries pollute their environments, including through subcontracted industrial processes, while capturing relatively little of the value of the commodity chain – indeed, this has been a major inducement for off-shoring in the first place (Jorgenson and Rice, 2005). Rising emissions in the periphery and semi-periphery are not commensurate with rising consumption in those areas, since emissions produced within national territories often occur in order to produce commodities which are consumed in the core. The top 10% and a fortiori the top 1% of consumers contribute much more to CO₂ emissions than the remaining 90% or 99%. China, for example, despite its much-heralded rise as an offshore platform for multinational corporations, is a net exporter of value to the core even while it carries out its own EUE with Cambodia through deforestation for timber and Brazil for soy (Cope, 2019; Frame, 2019). Metals and rare earths are similar: while needed for all kinds of clean-tech, currently production is concentrated in Western China, placing the Yellow River Basin in great peril, because rare-earth mines in the United States were closed amid rising ecological loads (Kalantzakos, 2018; Klinger, 2018).

Agriculture is also central, reflected in its increasing prominence in Intergovernmental Panel on Climate Change reports (IPCC, 2018, 2019). Around 25% of world greenhouse gas emissions come from agriculture, cattle rearing, and deforestation (IPCC, 2019). Agriculture, historically a mechanism for storing atmospheric CO₂ in soils and vegetative material, has become a major source of US and global emissions. De-agrarianisation has replaced labour with capital inputs, and such capital inputs are CO₂-based. As Vandermeer et al. phrased it,

We have moved from an 'ecosystem function' of energy generation to one based on fossil fuels, thus converting an agricultural system whose main purpose was to provide energy to human beings, to a system that is a net consumer of energy. (Vandermeer et al., 2009: 33)

In effect the industrial food system, far from improving on efficiency, is draining and degrading ecologies.

CO₂ emissions from agriculture have likewise increased in the periphery, where ecological crises are interlinked in nearly unbreakable chains with social crises splaying across city and countryside alike. During the 20th century, we can posit an ideal-typical de-developmental and ecologically entropic sequence. Throughout most of the periphery, albeit at a pace slower than in the core, and after a period of sustained anticolonial and postcolonial struggle to wrest land and infrastructure from the colonial powers (Ajl, 2019; Tilley, 2021), 'modernization' came to agricultural systems. This transformation was enacted above all through the Green Revolution, intended explicitly to deter 'red' revolutions in non-Communist Asia and further afield.⁷

The 'development project' replaced labour-intensive and capital-input-light polycultures with labour-light and capital-input-heavy monocultures (McMichael and Weber, 2020). Polycultures yielded to monocultures where the latter had not yet been established through colonial plantation systems. Biological simplification brought technological remediation. Until about 1973, these processes greatly damaged the ecology, while often slowly increasing national food-grain production per capita. At that point, the secular tendency inverted. Amid the neoliberal counter-revolution against the rise of the South, in many places export monocrops replaced food-grain production. Land grew ever-more-concentrated (De Janvry, 1981; Patnaik, 2003) and, as technology replaced labour, surplus labour reserves increased. This ecologically degrading and emissions-generating de-agrarianisation process has therefore also rendered rural communities as surplus 'overpopulation', where many had once been subject to colonial coercion to reproduce themselves as labour and fix their chronic 'underpopulation' status.

Both during the period of 'national' and neoliberal agricultures, 'global de-peasantization' was the order of the day (Araghi, 1995), echoing northern developmental models based on a false 'universalism'. Universal development models were, in turn, based on the denial of the colonial-racist impact of northern developmental paths, retroactively alchemised into ideal-types (Jha et al., 2020). During the immediate post-independence national-development period, projects attempted to create sufficient jobs, usually through import-substitution industrialisation, to employ jobless migrants from the countryside, and provide the necessary social infrastructure for them in the cities. Counter-revolutions from the core and pressures to shift back towards the so-called 'comparative advantage' of primary resource exports brought 'jobless growth' and an increased 'urban residuum' of surplus populations. Swelling labour reserves compressed wages in the periphery and

semi-periphery, lubricating the displacement of polluting manufacturing sectors away from the core.

Although colonisers were well aware of the genocidal and impoverishing effects of their projects in the immediate term, colonial capitalist developmental paths to the present used energy which seemed cheap to them, only because the broader long-term cost in human lives and developmental outcomes could not, at least initially, be properly assessed (Georgescu-Roegen, 1971). In consequence, those racialised and formerly colonised countries, classes, and communities least responsible for climate change, and which have least degraded or used the primary-productive capacity of the globe, will suffer or are already suffering the most from it. Because of the long-term legacy of underdevelopment, they also have the fewest resources with which to invest in protections from the harms of climate change.

At a slew of post-2000 climate negotiations, the countries of the formerly colonised world demanded reparations for climate debt. They argue that developed countries owe the underdeveloped countries reparations, remediation, and supporting resilience and restructuring. Such rhetoric was even influential within leftist environmental movements in the core (Martinez-Alier, 2012) and there have been attempts to weld together the frames of ecological debt, environmental justice, and EUE (Roberts and Parks, 2009). However, these have been recently sidelined in the United States as the corporate-oriented Green New Deal (GND) of Alexandria Ocasio-Cortez and the social democratic GND of Bernie Sanders overwhelm earlier discourses rooted in the demands of La Via Campesina, the island states confronting inundation, the G-77, and paladins of a South-centred climate movement like that responsible for the Cochabamba People's Agreement of 2010 (Ajl, 2021a). Such elements are the components of a meaningful anti-imperialist eco-socialism, to whose parameters we now turn.

To where? Possibilities for anti-imperialist eco-socialism and the end of population

As we've seen, liberal analysts like Dasgupta deploy population as a focus for environmental action, but such a focus on falsely concrete aggregates distracts attention from the social relations which produce environmental breakdown. In particular, colonial/imperialist capitalism has been and continues to be central to such breakdowns, to the dehumanising reduction of communities as under/overpopulated, and to the development of technologies of measurement and intervention which cast women's bodies as tools of the state in population control. EUE illuminates how this socio-ecological disarray is rooted in the uneven development of capitalism as a historical system. Furthermore, EUE also suggests that social reproduction concerns – encompassing the ecology, the physical substrate and necessary gendered social conditions for reproduction – are part-and-parcel of accumulation on a world-scale, a position long articulated by anti-colonial feminists and political ecologists (Federici, 2004; Mass, 1976; Salleh, 2017; Vergès, 2020).

We now consider how EUE informs possibilities for rupture from colonial capitalist exploitation and ecological degradation, as well as possibilities for an anti-imperialist eco-socialism. In simple terms, ecological repair is sought in part through *equal exchange* on a world scale, which would bring an end to core over-consumption fuelled by cheap resources from the South. This returns us to some of the primary concerns of Third Worldist projects which have many times been attempted but almost always crushed by imperialist interventions. Ceasing EUE requires action within a peripheral spatial-social

unit and thus implicitly raises a national question: de facto and de jure national liberation in the expansive Cabralian sense of sovereign and popular control of the productive forces (Cabral, 1979). Plausibly, this would involve eco-socialist delinking, which would involve collective decisions around which production processes to undertake based on an ecological and popular law of value (Ajl, 2021b).

Returning to the suggestions of the Cocoyoc Declaration (1974: 5), such a system would rest on 'increased national self-reliance' excising 'exploitative trade patterns depriving countries of their natural resources for their own development'. On the environmental front, that means retooling technology so that 'low waste and clean technologies should replace the environmentally disruptive ones' alongside a 'more rational use of the available labour-force to implement programmes aimed at the conservation of natural resources, enhancement of environment . . . as well as the strengthening of domestic industrial capacity to turn out commodities satisfying basic needs' (Cocoyoc Declaration, 1974: 8). In short, these were proposals for an alternative, more self-reliant and socially interdependent economic system, with attending to basic needs and safeguarding the environment understood as tasks which could go hand-in-trowel. Delinking in this way does not mean autarky but putting the basis for interaction with the international system under national-popular control. To that end, remedial measures could include confronting, rather than accepting, given market prices as the basis for trade through producer cartels, shifting to barter exchange of use-values, demanding *equal* exchange, or rejecting the production of certain cheap commodities (Yaffe, 2009: 173).

Centring national liberation also requires reckoning with its contradictions and pitfalls (Fanon, 1985 [1961]) and a reminder that anticolonial nationalist projects also gestured towards wider horizons of South-South cooperation and community beyond the bounded and exclusionary confines of the nation-state (see, for example, Getachew, 2019; Salem, 2020). This also requires engagement with the Fourth World question, taking seriously those Indigenous communities and ecologies sacrificed in the service of national developmentalist projects to which they do not ascribe, as in the case of the West Papuans (see Hernawan, 2016). The national question also leads us to conflicting sovereignties between majorities, Indigenous groups and internal racialised Others, as well as to the contradictions between gendered rights and interests – not least reproductive justice claims – under patriarchal states (see, for example, Wilson, 2018; Wilson et al., 2018).

This brings us to the social agents which might compel projects to bring an end to EUE. Extensive work on environmental distribution conflicts tells us that environmental justice movements, especially Indigenous and peasant movements, in the global periphery and the core are consistently leading struggles for land rights, rights to water, rights to clean air and the protection of sustainable ecologies (Estes, 2019; Parasram and Tilley, 2018). By rejecting the operation of the law of value within spatially circumscribed areas, these are the social subjects of an actually existing anti-imperialist eco-socialism. Agroecology and food sovereignty also describe such a struggle. In the periphery, food sovereignty stems and stanches value outflows, because such value outflows are asymmetric exchanges of tropical agricultural goods, not growable under any conditions in the core (Ajl, 2018, 2019). For other goods, for example, food grains on which peripheral countries are so often reliant, cereal imports also lead to value outflows (Friedmann, 1990). Smallholder ecological producers, as organised in confederations like La Via Campesina, mobilise against forms of exploitation and expropriation which operate through capitalist agriculture and industrial agribusiness: whether usurious credit, land concentration, input-dependence, or cheap monocrop export-orientation. Rather, in their

place, La Via Campesina (2018: 27) make the case that 'Peasant Agroecology is the first and most important step towards achieving Climate Justice'. This also means redistributive land reforms, which have been central to every historical anticolonial delinking experience. Because EUE proceeds through sites of extraction, communities in El Salvador, for example, have mobilised against that extraction by shutting down gold mining. EUE could then be alleviated, but it can also be stopped through a national political dynamic which asserts control over its productive processes and through South-South collaboration to end the undervaluation of resources for extraction to the North.

We have limited most of our discussion here to the periphery and the semi-periphery, but this is not because eco-socialism lacks social agents in the core. In the first place, long-running social reproduction concerns make many people in the core a natural constituency for eco-socialism, provided this is not premised on re-exporting socio-ecological contradictions to the periphery via resource aggrandisement, land grabs, and other forms of market-based or state-based acquisition of the periphery's physical means of production. This connects to our earlier discussion concerning Malthusian populationism and white supremacy as organising conceits to justify unequal appropriation of productivity. Production of cheap biofuels and cheap palm oil for export is in a zero-sum game with food crop production or the need for inputs for a sustainable manufacturing/industrial convergence with the core (La Via Campesina, 2010). Thus, eco-socialism in the core requires a firm commitment to respecting peripheral national sovereignty and Indigenous sovereignty, the reverse-coin of the peripheral aspiration to national liberation. In a word: anti-imperialism.

Conclusion

When Fanon (1985 [1961]: 81) said Europe is 'literally the creation of the Third World' he alluded to the colonial processes of extraction of stolen or grossly undervalued material and labour value from South to North. Here we extend this further by engaging with the theory of EUE to show how this structural basis of the world economy has also enabled ecologically disastrous cheap consumption in the Global North and driven the North's enclosure of the atmospheric commons. Without the constant flow of cheap energy, biophysical matter, and the product of embodied racialised labour since the colonial era, the concentrated excess of planet-choking activities in the North would simply not be possible.

EUE has also been dependent on colonial and postcolonial efforts to manage, reproduce, move and restrict racialised 'population' according to the need for labour in the mines, plantations, and factories of the South. The population management concerns of colonial ideologues, especially in relation to maintaining the racial balance of power across the colour line, survived into the present and are adapted and reinvigorated in growing white nationalist and eco-fascist movements. Yet there has never been a firewall between far-right and liberal discourse and, as Environmental Studies emerged in the mid-20th century, white nationalists like Garrett Hardin laundered their priorities with ease into the mainstream. Their efforts to fuse population with environment have left us with an impoverished field in which establishment liberals like Dasgupta can seriously suggest interventions in the social orders of racialised women with the lightest ecological footprint to restrict reproduction as a viable and useful course of action.

Here, we call for the forthright rejection of populationism, whether from eco-fascist, liberal, or indeed socialist circles. The broad histories and contemporary instances of

coercive and dangerous forms of sterilisation show us that such discourses lead to violence against poor women of colour, in particular. We call instead for an honest reckoning with unequal exchange as the actual system of extraction, through which both environmental harm and reproductive injustice are enacted. To reiterate, ecological (and social) repair is only meaningfully possible through an anti-imperialist project working towards equal exchange on a world scale, ending the flow of undervalued resources from the South, and the excess of contaminating activities these enable. Meaningful anti-imperialism stretches to, and indeed centres, the social and corporeal sovereignty of racialised and Indigenous women and their communities across the Global South and North. This means fiercely rejecting interventions in the social structures and bodily autonomy of women of colour in the name of the environment. To reinforce this, we conclude by reasserting that an anti-imperialist eco-socialism needs to be attuned to the teachings of reproductive justice movements and resistant to creeping liberal eugenicism, as much as to the overt eco-fascism which has proved so deadly in recent years.

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Notes

1. We use core, First World, and Global North, interchangeably on one hand, and periphery, Third World, and Global South, on the other hand.
2. Quotes from the unpublished manifesto of the Christchurch killer.
3. To be clear, Malthusian populationism concerns the perceived excessive reproduction of the poor, which threatens access to resources by the rich. Eugenics is concerned with managing heredity to 'improve' racial 'stock' by encouraging reproduction among those with 'desirable' traits. Economic populationism is concerned with the differential management of target populations to foster economic growth at the national scale (see Murphy, 2017; Wilson, 2017, 2018). Although these originated as distinct projects, which in many ways were in opposition to each other, we would argue that they are often combined and blurred together in contemporary populationism.
4. It is important to note here that political interventions to centre population alarmism within the environmentalism literature are much broader and more varied than Hardin. Paul Ehrlich's *The Population Bomb* and The Club of Rome's report on *The Limits to Growth* are among other influential populationist interventions with variously distinct and overlapping lineages of influence on contemporary environmentalism. The work of Betsy Hartmann comprehensively situates such interventions and lineages (e.g. Hartmann, 1995).
5. A broader analysis would account for eugenicist influences on the priorities and structures of liberal economics (e.g. Singerman, 2016), which make the field amenable to importing eugenic populationism from environmental studies, but such a discussion is beyond the scope of this particular article.
6. On the need to trace continuities between different periods of capitalism, see Patnaik and Patnaik (2016: 195–196).
7. China and other centrally planned economies are excepted from this sequence (Amin, 1983; Eisenman, 2018; Sharma, 2017).

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