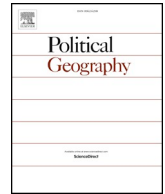




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Is less more ... or is more less? Scaling the political ecologies of the future

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A B S T R A C T

Imagining progressive environmental futures, especially among critical scholars, can be a fraught enterprise. While some theorists and activists turn towards the social emancipatory power of modern technological interventions at scale, others point to the revolutionary power of degrowth, simplicity, and conviviality. These competing political geographical imaginaries are often strident in their response to one another, though they share core materialist commitments. This essay reviews these contrasting approaches in light of the tradition of political ecology, within the context of an Earth economy that is trending towards higher levels of energy and lower levels of human labor, weighing the degree to which the work and conclusions of political ecologists are congruent with either perspective, neither perspective, or both. The conclusions suggest that, while these two traditions have inverse, or at least orthogonal, views of economic scale, they may not be beyond compromise. Socialist modernism and degrowth sprouted from the same seed, share a political ecological tradition, and may indeed require one another. Eschewing both utopian and dystopian aspirations may open the door to progressive reconciliation and action.

I am standing amidst hundreds of milk cows in a vast dairy barn in central Wisconsin. In many ways, what I see reminds me of the dozens of other Concentrated Animal Feeding Operations (CAFOs) I have encountered over the years. The number of animals is mind-boggling; rows upon rows of cows are munching away on feed and silage. The size of the animals, bred for explosive productivity, is incredible; each animal produces 23 thousand pounds of milk every year. The excrement from these animals is removed by machinery and funneled through sluices towards a perilously large nearby lagoon. All of this is pretty familiar to anyone who has spent time in rural Wisconsin, where the number of farms has fallen from 167,000 to 9100 in the period since 1930, while production of milk has skyrocketed from eleven billion pounds annually to more than thirty billion (Wisconsin Agricultural Statistics Service 2019). The shed I am in, with perhaps eight hundred milking head and run by a small single family, is actually tiny by regional standards.

It is not difficult to mount a straightforward political ecological critique. The central cause of this race towards productivity comes from a crisis of overproduction. With more and more milk in constant circulation, prices have fallen, creating a treadmill of intensification. In the process, the human workforce is minimized. Given the high cost of labor (and the difficulty of finding anyone willing to do the back-breaking work), a mostly immigrant workforce has emerged in the sector: underpaid variable capital. This process, in turn, also undervalues the natural capital on which it stands, creating animal suffering and reckless nutrient overloading in the watershed in the form of cow feces loaded with nitrogen and phosphorus. The second contradiction of capitalism is made manifest in oceans of manure (O'Connor 1996).

On closer inspection, many things about the system are unfamiliar,

however. First, there are no laborers visible anywhere at all (apart from the cow-workers themselves). The animals move freely around the interior space, queuing politely whenever they feel the need to for milking. At that point, robots do the work. Each giant red machine knows every animal and her unique physiology, and they relieve each cow until she steps away, making room for the next.

This is a surreal cyborg affair, but the owner tells me that this technological innovation has allowed him to maintain and raise wages for his very small remaining workforce and has freed time for him to see his grandchildren, rather than having to march hundreds of animals to the milking parlor in the middle of the night in January.

Other technologies abound. The nutrient sludge from the dairy is actually funneled to a massive biodigester, which captures the methane and burns it to power the operation, which results in a significant net decrease in the farm's carbon footprint. The liquid residue of this process is then applied to the dairy's land, which produces the cow feed, all on site, in a semi-closed agronomic loop. The owner tells me the farm's soil quality has improved steadily since the machine was installed and his energy bills have evaporated; he no longer buys industrial fertilizer or power from the grid.

Whether the animals are experiencing a better "quality of life" than their counterparts at other dairies around the state is an open question. To a great degree the animals have been problematically reverse-adapted to suit the needs of the machines, rather than the reverse (Holloway, 2007; Holloway, Bear, & Wilkinson, 2014). This should give us pause. Even so, the increased productivity of the herd is unquestionably associated with decreased stress levels.

More to the point, this suite of technologies has made it possible for this smallholder to achieve the three aspirations common to all such

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enterprises around the world: *security, autonomy, and freedom from drudgery* (Chayanov, 1986). First, the farmer is able to securely keep and maintain his land and pass it along to his children, who are now far more inclined to accept the responsibility of farm management under these innovative conditions. So too, the operation has allowed the producer to achieve a level of autonomy from the global production system, even as he is deeply embedded in it. Specifically, though the system is by no means “circular”, in the sense that it still relies on external inputs and subsidies, the material demands that reproduce the means of production are self-provisioned to a remarkable degree. At the same time, the innovations on display here crack the code that bedevils all such producers: increasingly intensifying production in a way that does not result in crushing self-exploitation – the drudgery of nightly winter trips to the milking parlor at twenty-six degrees below zero (Centigrade).

Finally, it should be noted that the production system has moved from one where the farmer is a capitalist – in the sense that he purchases labor power to unleash it on the production system in search of valorized investments – into one in which the chief inputs come from family labor. He has become, in essence, repeasantized. Following the insights of Jan Douwe van der Ploeg (2018), the characteristics of the production system make this farmer one of a billion “new peasants” around the world, rural actors seeking a meaningful livelihood amidst the maelstrom of globalization.

These facts do not obviate the need for political ecological critique, but they raise some questions that are difficult to answer. Is there anything good about this Anthropocene dairy machine? Is it inherently evil precisely because it is a solution to the problems that capitalism has thrown in the path of this farmer? Are these kinds of technologies – or more radical ones like geoengineering, genetic modification, and nuclear power – only sensible in a contradiction-filled economy?

Put another way, in a just, democratic and sustainable ecosocialist future, will robots milk cows or will all production be on tiny family operations where humans toil at cows utters in the freezing cold at three in the morning. What does a good Anthropocene look like, and what is the role of political ecology in charting the way there?

More specifically, the case points to two key global trends with implications for the geography of production and exchange that impinge on the answers to the questions posed above. This system operates, quite differently than many that have come before, amidst 1) a scarcity of labor and 2) an abundance of energy. For Wisconsin dairy, the decline in available workers has been precipitous, after all, with demographic change, decreased immigration, and an overall trend away from rural labor. Similarly, a system built on robots, even one where much if not all of the local energy is recovered through biodigestion, is one that necessarily follows on the availability of a great deal of energy, which is materialized in the robots themselves, the transportation system for oceans of milk, and the flow of the significant quantities of water that undergird the system. This trend is one where a *scarcity of labor* and a *surplus of energy* generate certain political ecological outcomes. Technological choices are following from, rather than leading to, capitalist expansion, and they are doing so amidst a global shift in the political ecology of energetics.

1. Political geographies of labor and energy

These twin contractions and expansions, of labor and energy, are not in any way unique to Wisconsin. Global labor scarcity is a fact in much of the world, owing heavily to demographic transition resulting from revolutionized gender relations, unprecedented urbanization, and a host of other political economic transitions. This is of course, uneven. Nations with fertility rates below the replacement rate number half of the total around the world, nonetheless, trending towards demographic contraction, even in nations and contexts that had experienced high levels of growth only recently (Longman, 2004; Robbins 2016; Robbins and Smith 2016).

So too, energy surplus is a fact in much of the world, even in a world of gross and uneven energy poverty (Sovacool 2012). The [International Energy Agency of the OECD \(2018\)](#) reports that global energy demand in 2017 reached an estimated 14,050 million tonnes of oil equivalent (Mtoe), an unprecedented level of overall energy production. That a vast majority of that energy come from fossil fuels propelling catastrophic climate change is an undeniable disaster, but overall energy scarcity, at a global scale, is not the current crisis in the global economy. Even if an energy revolution were to occur in the next two decades, in time to head off three or four degrees of global warming, the total energy budget of the planet (even if supplied entirely by renewables) is unlikely to have significantly declined, as high levels of increased efficiency will likely be met by new levels of demand; 1.1 billion people – 14% of the global population – currently live without electricity.

That high fertility and low energy access coincide is a fact, although the relationship of one to the other is remarkably underexplored. That is, for producers, communities, and families around the world, the political ecology of their daily lives is governed by a set of complex tradeoffs related to human labor power or its technological offset, a fact that is rarely analyzed or incorporated into political geographic and ecological enquiry and theory.

Classical cultural ecology (Bayliss-Smith, 1982), and the allied field of farming systems (Turner and Brush 1987), however, has demonstrated repeatedly that producers recruit manufactured joules of energy to offset those from lost human and animal labor power. Where energy is abundant, the costs of offsetting human work is lowered; where labor is scarce (as is increasingly the case in so much of the world), even at high energy costs, labor-saving is paramount. In many parts of the world accustomed to low energy access and high-labor access, moreover, there has been a radical inversion of the sources of work-power (not only, but especially in agriculture), with technological implications that are likely irreversible, and unquestionably long-standing. Greater and greater power, fewer and fewer workers; growth and reduction; expansion and contraction.

This first suggests we pay far more attention to labor/energy relations in geography, as their twinned and complex relationships unquestionably will dominate the future of the planet. These two global trends, and the kinds of contradictory outcomes of the sort demonstrated in Wisconsin, demand more research and theory.

They also suggest that many current debates, especially those concerning the scale of progressive economic and social action, may be framed unhelpfully, and might benefit from careful empirical enquiry. The unnecessary impasses between well-meaning thinkers on two sides of debates concerning the nature and trajectory of economic growth, more specifically, might benefit from geographic and political ecological research. Among these, the paradigmatic debate is one in which political ecology is implicated but about which it might best remain ambivalent: degrowth versus socialist modernism.

2. Less is more: degrowth

Owing to the radiative forcing of anthropogenic greenhouse gases (especially CO₂), it is reasonable to predict an average increase in global temperatures between 2 and 4 °C in the next century (keeping to Paris goals of 2° now seems unrealistic). This will necessarily be accompanied by an unpredictable range of regional changes of climate and weather, including increased drought in some places and increased flooding in others, decreasing sea ice, rising sea levels, growing storm intensity, and the potential collapse of circulating ocean currents that regulate continental conditions. The plant and animal species at risk around the world are countless, with deeply systemic impending crises if species deeper in the global food and energy web are eliminated; loss of key insects, plant, and marine plankton portend the collapse of whole ecosystems. Even if gas emissions stopped entirely today, a century of warming, with all these attendant effects, is already built into the

system. (Pachauri and Meyer 2014). Catastrophic conditions can be assumed.

On the one hand, it is clear that climate change is a crisis that is born of accumulation, and that this consensus is shared by critical scholars across a range of positions within debates about growth. Impacts from climate change are agreed to be the result of vast externalities of the capitalist engine. Here, surpluses in production, accruing to investors and owners of productive resources, are effectively squeezed from “unpaid” factors of production, eschewing the real costs increasingly born by nature; the Earth system becomes a “sink” for carbon, in short, but one whose mechanisms redistribute the violent risks and results of global change (Moore 2015). The economies and communities that benefit from a regime that thrives on combustion of fossil carbon, notably, are not those at greatest risk for the impacts of their effects. The geographic unevenness of these impacts for vulnerable populations are understood to include those of inundated Pacific Island nations and subsistence populations in drought-prone regions of the world. On this, most critical scholars agree.

On the other hand, the reality of global climate change and the other potentially catastrophic and fully anthropogenic environmental changes in the world around us has propelled divergent and distinctive views of possible futures. Degrowth is prominent among these. Both an intellectual tradition and a localist economic movement, degrowth is an idea with formidable pedigree. The French philosopher Andre Gorz originally posed *décroissance* (degrowth) as a puzzle in the early 1970s. If the limiting capacity of the Earth requires an economy in which no growth occurs or even necessitates contraction (degrowth), can capitalism survive (Kallis, Demaria, & D'Alisa, 2015)?

Following in this tradition, degrowth holds that insofar as capitalist accumulation is underlain by an organic need for continuous and unrelenting growth, and because this drive for growth is what propels our contemporary environmental crises, doing less, making less, and consuming less become the tactics for a sustainability transition. As clearly framed and defined by one of the movement's most convincing advocates, Giorgos Kallis (2017: 10), degrowth is “an equitable downscaling of production and consumption that increases human well-being and enhances environmental conditions”.

Championed by well-credentialed ecological economists and heavily representing European regions where contraction of the economy is in fact ongoing (e.g. Spain), the writings of degrowth advocates combine theoretical analyses of the economy with pragmatic strategies for separating communities from the capitalist growth machine. There have been a number of other powerful reiterations of this kind of thinking. Most prominently, Naomi Klein (2015) has argued not only that climate change spells an end to capitalism, but that in a post-capitalist world *we must consume less*.

Conceptually, the degrowth tradition is familiar from many anarchist and cooperativist ones, and stresses natural limits, equity, and a critique of development as a tautological normative ideology. In practical terms, degrowth largely champions localized experiments in autonomous economics, based on use value rather than exchange value, including things like cooperatives, community currencies, and systems of shared labor and barter. Though aspirational in some regards, degrowth ideas are unquestionably mirrored in a number of already-existing institutions, as far flung as industrial worker cooperatives in Argentina (Faulk, 2008) or community economic organizations in New England Fisheries (Snyder and St. Martin 2015).

The degrowth tradition is also characterized by a skepticism of technology, especially technology at scale. Tactics like urban gardens and do-it-yourself bike repair cooperatives are more likely to appear in the degrowth literature than worker-owned nuclear power plants, or municipal-scale electric grids. This is chiefly because the scaling of organization and the hierarchical nature of complex systems management appear to violate degrowth's underlying principle of *autonomy*: self-governance and the power to make collective decision-making. Only smaller systems, shrinking appetites, and localized management

can unleash conviviality (a powerful concept from the degrowth literature), satisfaction, and freedom. For degrowth advocates, less is more.

Notably, in terms of the energy/labor nexus, the assumptions of degrowth imply a recognition that deescalating energy production overall (presumably in favor of labor) is inherent to a strategy to evade environmental catastrophe. The very presence of the global energy glut described above, in a sense, provides oxygen for capitalism's fire.

This perspective on an alternative future and its assumptions concerning energy and labor, are compatible with political ecology in a number of ways. The field has gone to great lengths to empirically demonstrate the way capitalist accumulative strategies tax social relations and natural systems. Moreover, efforts in development and conservation have been shown to repeatedly dismantle adaptive, cooperative, local, rational, humane, and sustainable socio-natural institutions, including most forms of common property institutions. A rearticulation of local, sane, low-energy, social formations, based on meaningful human labor, can be seen as some part of the political ecological mission. Indeed, the Club of Rome's original neo-Malthusian report (Meadows, Meadows, Randers, & Behrens, 1972) simultaneously ignited the spirited critical response of early political ecologists as well as those of early *décroissance* (and the continental *écologie politique*). Degrowth, it would seem, is a future that is compatible with political ecology. Some might argue they are duplicative.

3. More is less: modernist socialism

Even so, there are elements that does not sit as well in political ecology, at least some forms of this diverse field. First and foremost, political ecology continuously and convincingly has made strong arguments against *natural limits*. Whether deconstructing carrying capacity (Sayre 2008, 2017), undermining the inanity of Malthusianism (Harvey, 1974; Robbins and Smith 2016), or challenging the political assumptions of planetary boundaries (Brown, 2017), political ecological stories have always pointed to the way scarcity is a construct that is allied with elite power, not emancipatory process (Mehta 2010). Emancipation should bring more to more people, not less. Degrowth's insistence on the urgency of less, as a discourse, puts it in friction with political ecology's rejection of elitist arguments and policies that advocate forms of self-denial.

Second, albeit less forcefully, the tacit distrust in modern technology, so apparent in degrowth thinking, is viewed with more ambivalence in political ecology. “Techno-fixes” and “expert knowledge” are usually and justifiably viewed as contentious and complex in political ecological work (Birkenholtz, 2008; Escobar, 1999). Even so, many empirical studies have shown that the embrace of modern technology and institutions is not always a fast road towards cultural collapse, loss of indigenous identity and knowledge, and immiserating in wage labor. Communities have been shown to effectively adopt a wide suite of technologies and institutions, even energy-intensive ones, to maintain and restore their autonomy and culture (consider Tony Bebbington's classic case of Andean farmers; see also the work of Manuel Prieto) (Bebbington, 1993; Prieto 2016).

In this vein, strong arguments have been made on the socialist left that degrowth is actually the reverse of progress. Writing for the dissenters, journalist Leigh Phillips (2015) makes the case that austerity thinking is both unhelpful for arresting global change, which may require action at a far greater scale than the slow energy transition has mustered to date. Most of the world's population is quite keen to obtain even rudimentary improvements in the quality of their lives, and such improvements will need technological savvy and high levels of increased, if efficient, production to be met. Given that roughly 600 million people in Africa currently live without electricity, Phillips may have a point. He is supported in this cause by others in critical academic scholarship, which is either critical of, or ambivalent about, degrowth (van den Bergh, 2011; Kilpatrick, 2017).

In this way, *some* of his thinking aligns with the (problematically apolitical) “Ecomodern” movement, which holds that technology can steadily diminish the impact of people on the Earth rather than increasing it. They argue, notably, that continued technological advancements have progressively *dematerialized* the human footprint, at least in relative - if not absolute - terms (Asafu-Adjaye et al., 2015). Every energy revolution, notably, has brought with it diminished environmental impact per unit, with wood and other biofuels replaced by coal, in turn replaced by natural gas, giving way towards wind, solar, and nuclear power. It takes less stuff, they point out, to make more stuff all the time. The way to less, in short, is more.

While similarly eschewing a politics of “fearmongering and austerity” to create a radically more just future (Kilpatrick, 2017: 27), socialist moderns go further, of course. In a recent special issue of *Jacobin*, they outline a paradigmatic shift towards an anti-capitalist version of this modernism, where the machinery of the economy is brought to bear to emancipate workers and heal the anthropogenic wounds of the Earth, including large-scale planning and the implementation of widely distributed modern industrial solutions to global problems.

What this looks like in practice is an open question. David Schwartzman has called, for example, for global “Solar Communism” (Schwartzman 1996), a combination of massive demilitarization, conversion of fossil fuels to global scale industrialized renewables in wind and solar, and an embrace of total employment. Here, he suggests the urgency of degrowth of the MIC [Military Industrial Fossil Fuel Nuclear State Terror and Surveillance Complex] ... coupled with global growth of material production required to create a green physical economy and urban spaces, including the repair of the physical infrastructure, expansion of mass transit, including rail, and of course the generation of wind/solar energy supply to replace fossil fuels/nuclear power” (Schwartzman 2014: 238).

Even Schwartzman is skeptical of some contemporary technologies, however, including GMOs and nuclear power. Others from this camp are more confident on this front and have made space for a range of highly technical and broadly scaled technologies, like geoengineering, a catch-all phrase describing effort to deliberately tinker with the climate system (through aerosol release, planting trees, or similar efforts). As Peter Frase (2017: 84) puts it, “what matters is ultimately less the techniques of geoengineering than how they are implemented, and by whom. In this way, geoengineering resembles genetically modified organisms: not inherently objectionable, but potentially monstrous when developed by capitalist agribusiness for the purpose of profit maximization.” Thus, technologies, even those requiring high levels of coordination and sophistication (nuclear power might well fit such a scenario), might be part of a modernist, socialist agenda.

Either way, these modernist proposals all share a conclusion that the labor/energy balances needed by 2050 will necessarily require moderate growth, though not further growth of capitalism. This represents a qualitative rather than solely quantitative model of economic change, but is one that relies heavily on technological advances opposed by carbon capitalism.

It is perhaps this, the divergent embrace of technological action *at scale*, rather than specific technological choices, that fundamentally splits these ecosocialist moderns from their degrowth colleagues; trust or distrust in the notion that “small is beautiful” may be the *political geographic* litmus test that determines membership in the two schools of thought.

What does political ecology have to say on this score? Work in the field has often developed impressive critiques of romantic environmentalism and revealed on many occasions how the embrace of specific small “green” choices and economies, like the organic movement (Guthman, 2004), has only hardened the power of capitalism and the state. Nowhere, of course, has political ecology diverged from the underlying and shared argument of both degrowth and modernist ecosocialism: that capital accumulation is bad for people and nature and that our current order, the Anthropocene, is something more

Capitalocene (following Moore 2015).

Nowhere, however, has political ecology argued the need for limits, nor assumed a single position on technology. Most compellingly, political ecological case analysis has provided plenty of fodder to feed our caution about how any system of production is more “natural” than any other. Instead, it has mounted a number of convincing empirical critiques of localism and green romance. Socialist modernism, it would seem, is also a future that is compatible with, but not reducible to, political ecology.

4. Neither more nor less: the shadows of utopia and dystopia

These two political geographies of the future have proponents whose dogma can be stifling. Phillips has gone as far as describing the environmental left as peddlers of “collapse porn”. Marxist ecologist John Bellamy Foster (2017) has described Phillips not only as a “Promethean” (a label many moderns appears to accept) but also as a “reactionary,” surely the worst epithet one Red can lob at another. In short, whatever the merits of the two ways of thinking, both of which have some resonance with political ecology, the two sides have become encamped and largely deaf to one another.

In light of the observations about labor and energy noted above, this seems unfortunate. From the one side, it seems entirely unnecessary to denounce local electricity coops and other actually-existing experiments in decentralized collectivist environmental action as all equivalent to romantic green consumerism, or “locally woven organic carrot pants” in Phillips’ words. A vision of a fully mobilized large-scale technological socialist modernization in no way precludes the need for ongoing experiments in “conviviality” lauded by degrowth scholars and activists. Indeed, the models for worker-ownership and governance that both camps embrace are more likely to grow from a *political concatenation of regional and local enterprises* than spring fully-formed in a global deliberative body (like some new International). Socialist modernization arguably first *requires* local-scale organization and autonomy.

On the other hand, the hostile response to scaled, intensive, and technical innovation presented in degrowth literature is unwarranted. This response is perhaps best summarized by one on-line commenter (responding to Robbins and Moore 2015) insisting on the need for small-scale solutions: “given the hugely concentrated and highly *sophisticated* nature of nuclear power technology, how can collective and reflexive control ever be achieved? Small-scale and community-managed nuclear power sounds a bit of an oxymoron” (my emphasis). This echoes far older critical approaches to technology, rooted in the work of Marxist thinkers like Andre Gorz (1979), who stressed, as articulated by Barca (2019), that “only those technologies that could be controlled at the community scale, bring about greater individual or local autonomy, preserve the reproduction of life, and facilitate producers and consumers’ control should be developed.”

Yet this is an empirical question and not one that can be known in advance. At bottom, nuclear power plants are managed by an enormously sophisticated (and typically unionized) workforce, after all. These women and men are entirely similar to their counterparts on cooperative factory floors in Argentina enmeshed in complex global supply chains or to autonomous organizations of New England fishers who rely on complex information technology and increasing sophisticated gear. That nuclear plants are not worker-owned is an institutional, rather than technological, failing.

Moreover, while the Heideggerian (1977) urge to treat technology as “Standing Reserve” has been crucial to political ecological skepticism surrounding environmental “fixes”, it shouldn’t force us to take any specific innovation off the table. Indeed, Heidegger’s own selectivity surrounding specific technologies are notable and arbitrary, insofar as those he suspected most were not those of decentralized agrarian life but always instead those of “sophisticated” modern industrialization. Many emerging revolutions will be taken up and expanded whether we

want them to or not, after all, reaching rapid inflorescence in the near future, including intriguing potential tools like CRISPR genome editing and modular nuclear power. An insistence on a socio-ecological future that eschews *sophistication* is effectively primitivist.

Returning to our farm in Wisconsin, where energy is being unleashed to address labor shortages amidst unprecedented capitalist accumulation, we can already hear the reading of optimists and pessimists of technological adaptation. For modernists, the technology of these farms untethers the possibilities of producer communities, lowering their material footprint, and improving human conditions. They need only be unlocked from capitalism, driving towards utopia. For the critics, robot milkers, to say nothing of other technologies like climate geoengineering (Muraca and Neuber 2018), are signs of production run amok – scaling beyond anything convivial, and creating a moral hazard that disallows more radical action, on the road to dystopia.

This impasse, it seems, is less about what is desirable, or even possible, than it is about the problems with both dystopia and utopia, which haunt all ecological futures. On the one hand, *dystopia* is the metastasized form of all “limits” thinking, after all, and Apocalypse is by its nature the territory of fanatics (Bruckner, 2013). Harnessing it for ecological critique, even with the best intentions (e.g. Klein, 2015), seems regressive at best, disastrous at worst. The moderns are allergic to its siren call.

Similarly, *utopias*, even and especially globe-spanning socialist ones like those of Schwartzman (who explicitly labels his project a “Red-Green Utopia”), are also dangerous. As China Mievilleville (2015) has suggested, utopias are their own worst enemies. Blinding us to the truly revolutionary transformations that real change would require (this is already a capitalist utopia for a very few after all), utopias cause us to forget rather than act. Utopias have also long been the roadmaps of monsters, from settlers in American westward expansion to the fascists of Europe who have sought to “weed” out the unwanted in their socio-political Aryan gardens. The degrowth community hears in modernist aspirations the drumbeat of false utopia, and a form of what Mievilleville calls “bad hope”.

Whatever its name, paralyzing end-of-the-world thinking is the twin of unvarnished daydreaming in the face of deeply structural problems. Bad hope is the enemy of revolutionary change, while bad despair is a friend to the status quo. “Bad hope and bad despair”, in Mievilleville’s words, “are mutually constitutive ... Utopia? Apocalypse? Is it worse to hope or to despair? To that question there can only be one answer: yes. It is worse to hope or to despair” (Mievilleville 2015).

By implication, however, there must be good forms of hope and despair, which acknowledge terrible realities, uneven injustices, and structural barriers, while moving towards revolutionary change. These kinds of hope and despair seem to be contained precisely in the competing visions of degrowth and modernist ecosocialism. Both are visionary political ecologies. Both are potentially practicable. *Both may require one another*. Yet, each sees, in the other, the shadows of bad utopias and bad dystopias they both abjure.

The role of political ecology must be to catalogue experiments in these kinds of visions of the future, and to chase away these shadows. Development and modernization, conservation and protection are often twinned with marginalization, degradation, and control, even while local, decentralized, and traditional can be linked to patriarchy and provincialism. Political ecology can and should record the way efforts to change the world - improve or protect, innovate or restore, grow or diminish - can and do actually transcend the dysfunctions of things as they currently are, even while it must continue to critique the flaws in each. Political ecology, in this sense, with its “hatchet” and its “seed” (Robbins 2012), is still a useful text. We would do well to pursue it to help guide us beyond the socio-ecological violence of our current, high-energy/labor-scarce world towards a better future.

Declarations of interest

None.

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