We Are All Degrowthers. We Are All Ecomodernists.

Analysis of a Debate

Kevin Carson

Center for a Stateless Society

INTRODUCTION

One of the biggest problems with the debate over “degrowth” is the term itself. In many ways, “degrowth” is an unfortunate choice for a label because it is so ambiguous. On its face it carries some unfortunate visceral primitivist associations. At the same time “growth” itself is an equally ambiguous word, serving for many as a stand-in for technological advancement and progress of all kinds.

And it raises questions as to just what its proponents are seeking degrowth in: Standard of living? Consumption? GDP? Resource use? Any number of alternative scenarios are at least plausibly compatible with the “degrowth” label, if it is taken literally at face value. No doubt the kind of neo-primitivism associated with the Archdruid Report would qualify. But the post-scarcity communism of Star Trek — a moneyless economic system in which virtually any good can be obtained from a matter-energy replicator, the concept of GDP is meaningless, and humanity’s ecological footprint on Earth is close to nonexistent — qualifies equally.

The problem is compounded by the fact that both advocates of degrowth and its ecomodernist critics often fail to clearly define, in the course of debate, just what they mean respectively by the terms “growth” and “degrowth.” It’s easier by far to pick up on what emotional associations those terms carry for them.

In many cases the best we can do is attempt to reconstruct, from their statements in passing, some of what they mean by the terms. This paper is my attempt to do so — and evaluate the areas of disagreement between the two sides and synthesize the positive aspects of both — based on a recent exchange between degrowth advocate Jason Hickel and ecomodernist Leigh Phillips which provides a pointed illustration of the issues involved. In the course of analysis, I will be relying primarily on the exchange between Hickel and Phillips, and subsequent commentary on it by others; I will refer to older and more fundamental texts behind the degrowth and ecomodernist movements, but will do so for the most part only to shed light on the current debate.

THE INITIAL SALVO — JASON HICKEL

Definitions. In "Degrowth: a theory of radical abundance,"[1] Jason Hickel identifies "degrowth" primarily with reduced material throughput, as a means of reducing energy demand and meeting the Paris Agreement targets for reducing CO2 emissions. He cites the IPCC's 2018 Low Energy Demand (LED) plan, specifically, which calls for a 40% global reduction in energy consumption, with 23% of that reduction falling on the Global North and 57% on the Global South. This, in turn, will likely entail "reducing aggregate economic activity as presently measured by GDP."

Hickel denies that this will necessarily amount to a reduction in real standards of living, even in the Global North.

> ...proponents of degrowth argue that a planned reduction of throughput can be accomplished in high-income nations while at the same time maintaining and even improving people's standards of living. Policy proposals focus on redistributing existing income, shortening the working week, and introducing a job guarantee and a living wage, while expanding access to public goods.

Hickel argues that abundance can be achieved by converting enclosed private wealth into public goods and eliminating waste production. His recommendations include:

> ...to legislate extended warranties on products, so that goods like washing machines and refrigerators last for 30 years instead of ten. Another is to ban planned obsolescence, and to introduce a "right to repair" so that products can be fixed cheaply and without proprietary parts. We could legislate reductions in food waste..., tax red meat to promote a shift to less resource-intensive foods, ban single-use plastics and disposable coffee cups, and end advertising in public spaces to reduce pressures for material consumption. Ultimately, however, to accomplish significant and sustained reductions will likely require imposing a cap on annual material use and tightening it year by year until it reaches what ecologists identify as sustainable levels....

1 Jason Hickel, "Degrowth: a theory of radical abundance," *real-world economics review*, issue no. 87 (2019) <https://static1.squarespace.com/static/59bc0e610abd04bd1e067ccc/t/5cb6db356e9a7f14e5322a62/1555487546989/Hickel+-+Degrowth%2C+A+Theory+of+Radical+Abundance.pdf>.

The objective of degrowth is to scale down the material and energy throughput of the global economy, focusing on high-income nations with high levels of per capita consumption. The idea is to achieve this objective by reducing waste and shrinking sectors of economic activity that are ecologically destructive and offer little if any social benefit (such as marketing, and the production of commodities like McMansions, SUVs, beef, single-use plastics, fossil fuels, etc.).

Degrowth scholars acknowledge that reductions in aggregate throughput are likely to entail reductions in aggregate economic activity as measured by GDP, given the historically tight coupling between throughput and output.…

A recession is categorically different to degrowth, however. A recession is a shrinkage of the existing economy (an economy that requires growth in order to remain stable), while degrowth calls for a shift to a different kind of economy altogether (an economy that does not require growth in the first place).…

The core feature of degrowth economics is that it requires a progressive distribution of existing income. This inverts the usual political logic of growth. In their pursuit of improvements in human welfare, economists and policymakers often regard growth as a substitute for equality: it is politically easier to grow total income and expect that enough will trickle down to improve the lives of ordinary people than it is to distribute existing income more fairly, as this requires an attack on the interests of the dominant class.…

Existing empirical evidence demonstrates that it is possible to achieve high social indicators without high levels of GDP per capita. Past a certain point, the relationship between GDP per capita and social indicators begins to break down. Take life expectancy, for instance; while there is a general correlation between GDP per capita and longevity (countries with higher GDP per capita generally have better life expectancy), the relationship follows a saturation curve with sharply diminishing returns. Longevity depends on other important variables besides GDP, such as investment in universal healthcare. For example, Costa Rica’s healthcare system allows the country to match US life expectancy with only one-fifth of the US GDP per capita. Similarly, there is a tenuous relationship between GDP per capita and happiness, or well-being. In the United States and the United Kingdom, for instance, happiness levels have remained unchanged since the early 1970s, despite significant growth in real GDP per capita. According to the Gallup World Poll, many countries (Germany,

> Austria, Sweden, Netherlands, Australia, Finland, Canada, Denmark, and most notably Costa Rica) have higher levels of well-being than the United States does, with less GDP per capita.
>
> The same pattern applies to many other social indicators. The GDP per capita of Europe is 40% lower than that of the US, and yet Europe performs better in virtually every social category, as European countries tend to be more equal and more committed to public goods. But even European countries have significant room for improvement. Inequality in Europe has worsened significantly since 1980. From a degrowth perspective, this represents an opportunity: there is no a priori reason why Europe's social performance cannot be improved still further – without any additional growth – by distributing existing income more fairly and using progress taxation to expand public goods.
>
> In order to purchase housing, then, Londoners have to either increase their aggregate working hours or take out loans, which are effectively a claim on their future labour. In other words, people are required to work unnecessarily long hours to earn additional money simply in order to access shelter, which they were previously able to access with a fraction of the income. In the process, they produce additional goods and services that must find a market, thereby creating new pressures for consumption – pressures that manifest in the form of, for example, aggressive and increasingly insidious advertising schemes.
>
> On top of this, new "utilities" like Uber and AirBnb could be taken into public ownership, or public alternatives could be created, thus enabling the emergence of "platform commons" which would allow people to exchange their material resources (cars, homes) without having to pay exorbitant and unnecessary fees to private monopolies.

Although removing embedded rents from the economy and reducing inequality is indeed vital, I believe Hickel errs in making it the "core" of a degrowth agenda, and seriously neglects the sheer scale of waste production in the capitalist economy whose elimination would reduce the ecological footprint of the economy as a whole. The latter is something I will discuss more below.

A lot hinges on the term "aggregate economic activity," because both sides in the debate make much of the implications of reducing it without clearly defining what it actually means.

Hickel is correct that decoupling GDP from material consumption is impossible in any meaningful sense, but the claim of "historically tight coupling between throughput and output" is a tautology. "Output" (as measured by GDP) can for all intents and purposes be *defined* as throughput, since it amounts to a measure of the money value of inputs consumed in production. The greater the amount of waste production, or the more inefficient the production process in its use of resource inputs, the higher the GDP.

So anything that increases the efficiency of input use in a given unit of output, absent the use of artificial property rights to create rents over and above the actual cost of inputs, will by definition reduce total money income. Technological progress that increases the efficiency of production will by its very nature be deflationary, unless capital is able to counteract that effect by creating artificial scarcities.[2]

As we saw at the outset, Hickel defines "degrowth" as "reduced material throughput." Elsewhere, writing with Giorgos Kallis, he cites definitions of "green growth" in several ecomodernist writings. OECD: "fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies…." World Bank: "economic growth that is efficient in its use of natural resources…." UNEP definition of "green economy": "one that simultaneously grows income and improves human well-being 'while significantly reducing environmental risks and ecological scarcities...'"[3]

Although none of the definitions specifies what "growth" itself means, Hickel and Kallis criticize these definitions primarily for their treatment of resource consumption and decoupling it from growth, rather than for their failure to define growth. This will be a lamentably common pattern throughout the debate, in which the word "growth" is used for the positive or negative value associations it conjures up for the respective parties, rather than in reference to any clearly defined concept. They do identify growth specifically with GDP growth several times in the same article; although neither side adheres a single consistent definition of "growth," on

2 Kevin Carson, "Abundance Creates Utility But Destroys Exchange Value," *Tea, Earl Grey, Hot Blog*, February 3, 2014 <https://teaearlgreyhotblog.wordpress.com/2014/02/03/abundance-creates-utility-but-destroys-exchange-value/>.
3 Jason Hickel and Giorgos Kallis, "Is Green Growth Possible?" *New Political Economy*, April 17, 2019 <https://www.tandfonline.com/doi/abs/10.1080/13563467.2019.1598964>, p. 2. Pagination is from pdf downloaded at Library Genesis.

the whole the degrowth advocates are at least less unsatisfactory in this regard than the ecomodernists.

Hickel is much clearer about the concrete meaning of “degrowth” in an article for the *Irish Times*, where he directly draws a line from eliminating waste and planned obsolescence, to reducing material consumption, to “scaling down aggregate economic activity” — which “may well lead to less gross domestic product (GDP).”[4]

I was pleased to find that Kate Raworth shares my questions about just what “growth” and “degrowth” are actually supposed to be increases or decreases *in*:

> 2. **Defining degrowth.** I have to admit I have never quite managed to pin down what the word means. According to degrowth.org, the term means ‘a downscaling of production and consumption that increases human well-being and enhances ecological conditions and equity on the planet.’ Sounding good, but that’s not clear enough.
>
> Are we talking about degrowth of the economy’s material volume – the tonnes of stuff consumed – or degrowth of its monetary value, measured as GDP? That difference really matters, but it is too rarely spelled out.
>
> If we are talking about downscaling material throughput, then even people in the ‘green growth’ camp would agree with that goal too, so degrowth needs to get more specific to mark itself out.
>
> If it is downscaling GDP that we are talking about (and here, green growth and degrowth clearly part company), then does degrowth mean a freeze in GDP, a decrease in GDP, being indifferent about what happens to GDP, or in fact declaring that GDP should not be measured at all? I have heard all of these arguments made under the banner of degrowth, but they are very different, with very different strategic consequences. Without greater clarity, I don’t know how to use the word.

And she framed her own agenda as replacing an economy that must grow whether or not it makes us thrive, with an economy that makes us thrive

4 Jason Hickel, “'Mindless growth': Robust scientific case for degrowth is stronger every day,” *Irish Times*, September 9, 2019 <https://www.irishtimes.com/opinion/mindless-growth-robust-scientific-case-for-degrowth-is-stronger-every-day-1.4011495>.

whether or not it grows.

Raworth's questions caused Giorgos Kallis to pin down "degrowth" specifically as "a decrease of global carbon and material footprint, starting from the wealthy." And achieving that goal would more than likely result in a decreased GDP.[5]

RETURN FIRE — LEIGH PHILLIPS

Definitions Redux. Leigh Phillips — author of *Austerity Ecology* and coauthor of *The People's Republic of Walmart* (a popular left-accelerationist work) — attacks the degrowth movement in two recent articles. In them he uses Hickel as his primary foil. Although Hickel was not entirely satisfactory in clearly spelling out what "degrowth" entails, he at least managed to convey the central idea of reducing resource extraction to sustainable levels. Phillips, on the other hand, is practically incoherent. In his first piece,[6] he equates degrowth to everything from Malthusianism to Thatcherite austerity:

> In this context, it is crucial to understand that the market is at fault for our current predicament, not growth — as far too many on the green Left (and even many establishment figures such as Lord Attenborough and Prince Charles) contend. Those who argue for limits to growth or, even degrowth, forget the historic battle that the socialist Left dating back to Friedrich Engels mounted against Malthusianism. Worse, they neglect the impossibly severe implications of their claims. Former World Bank economist and leading expert on global inequality Branko Milanović has performed a back-of-the-envelope calculation estimating that if we did as the limited-growth advocates demand, while eliminating economic equality (by apportioning all the world's wealth equally among the roughly 7.7 billion of us), each person would receive an annual income of $5,500. This would be such a radical constriction of Western workers' standard of living that the austerity and wage restraint of a Margaret Thatcher or Ronald Reagan would appear benign by comparison.

5 Kate Raworth and Giorgos Kallis, "Has 'Degrowth' Outlived Its Name?" Commons Transition, February 23, 2016 <http://commonstransition.org/to-degrowth-or-not-to-degrowth-that-is-the-question/>.
6 Leigh Phillips, "Planning the Earth System: A Call for a Global Democracy" *The Breakthrough Journal* No. 11 (Summer 2019) <https://thebreakthrough.org/journal/no-11-summer-2019/planning-the-earth-system>.

> Beyond the injustice that would result from a steady-state economy, let alone actual degrowth, by targeting growth instead of the market, the green Left and its allied figures have lost sight of the real problem at hand. We did not save the ozone layer by limiting growth in the production of fridges and cans of hairspray. It was regulatory intervention in the market that did the trick. It was *planning*, in other words — global economic planning.

The one-to-one equation of per capita dollar income to material standard of living is about as bald-faced and vulgar — and as unjustified — as it's possible to be.

In his second piece,[7] Phillips is at least somewhat more nuanced. To be sure he begins with the same "Malthusian" canard:

> Yet at the very moment that the socialist case for planning should be at its most obvious, sections of the environmental community have embraced a revival of 'limits to growth' philosophy, or Malthusianism —an ideology the left battled against dating back to Friedrich Engels' arguments against its eponymous founder, Thomas Malthus—this time going by the name of 'degrowth'.
>
> Rallying under the slogan that you can't have infinite growth on a finite planet, the philosophy has been articulated in slightly varying forms by academics such as Jason Hickel, Giorgos Kallis, Kate Raworth and Tim Jackson, and builds on the work of earlier thinkers such as Serge Latouche, Nicholas Georgescu-Roegen, Herman Daly, E.F. Schumacher and the Club of Rome's 1972 *Limits to Growth* report. But it has also been embraced by green NGOs such as Greenpeace, and America's leading climate campaign group 350.org.
>
> Rather than viewing the market's irrational production as the source of environmental challenges, the degrowth position views the source to be *economic growth*.
>
> Even some Green New Deal advocates get a little confused when they call for an end to growth as well. (This is an odd position, as it is quite difficult to imagine how trillions in infrastructure spending that created sufficient additional jobs to soak up all unemployment and significantly push up wages would *not* result in economic growth).
>
> The degrowth argument says that growth drives energy demand

7 Phillips, "The degrowth delusion" (*Open Democracy*, August 30, 2019) <https://www.opendemocracy.net/en/oureconomy/degrowth-delusion>.

> up, thus making it harder and perhaps even impossible to decarbonize the economy. But a reduction in material throughput would reduce energy demand, thus making the clean transition more achievable. And to reduce material throughput, we have to reduce aggregate economic activity.

Phillips himself seems to be "a little confused," since he continues to frame an entire debate over whether something called "growth" (or increase in "aggregate economic activity") is possible, desirable or compatible with ecological survival, without ever explaining what "growth" actually is.

I would note, parenthetically, that the problem with the Green New Deal is that it incorporates so much DNA from the original New Deal: That is, it's a Hamiltonian program to find outlets for underutilized investment capital and labor-power, in order to prevent deflation. It does this by attempting to replace all existing transportation use on a one-to-one basis with electric cars, high speed rail, etc., instead of reducing the total need for transportation by rationalizing the economy. This is the very definition of growth, in greenwashed form, and is indeed incompatible with degrowth.

The confusion continues, as Phillips repeats the accusation that degrowth would impose "austerity" on the public and "bring an end to progress itself," while proposing something called "socialist growth" that would create new value in an ecologically sustainable way — all, again, without ever specifying what this growth is.

> However, what is foreclosed by the notion of degrowth is the possibility of *socialist* growth: a boundless—if carefully planned—increase in the creation of new value that does not undermine the ecosystem services upon which human flourishing depends.
>
> And because degrowth rejects the notion of socialist economic growth, it commits three grave errors.
>
> First, degrowth lets off the hook the real source of the problem, thus condemning civilisation to dangerous climate change and parallel ecological threats.
>
> Second, degrowth unwittingly endorses what would be an imposition of austerity on the Western working class far beyond anything a Thatcher, Cameron or May could imagine, this time in the name of the planet.
>
> And, worst of all, degrowth would bring an end to progress itself—

> the steady expansion of freedom for all humanity.

He fails to specify what “the creation of new value” actually means, and seems to be unaware of the distinction — or at least unaware of the significance of the distinction, for purposes of this discussion — between exchange-value and use-value. It is arguably possible to create a great deal of new use-value, or at least maintain existing levels of it, while reducing the total amounts of both monetized exchange-value and physical resource extraction. On the other hand, the great bulk of exchange-value created under capitalism amounts to waste production of one kind or another, or economic rents. And again, it’s the failure to distinguish between use-value/standard of living, GDP and resource extraction, and the implicit equation of “growth” to technological progress, that is responsible for the sorry quality of debate on “degrowth.”

> Had we embraced degrowth with respect to ozone depletion by attempting to arrest growth in, say, the number of fridges in the world —or even reduce the total number—instead of regulation to enforce technology-switching, disaster would have befallen us. Saying "this many fridges and no more" would only have arrested the *growth* in emissions, not emissions *tout court.* (For the same reason today, it is not enough to keep greenhouse gas emissions steady, but eliminate them)
>
> It simply would not have worked in any case, as by what right can developed nations tell the global south that they cannot keep their food fresh while they continue to do so? (Indeed, one might say that the socialist argument is instead: There still are not *enough* fridges in the world.)

This example is something of a jaw-dropper, given that the actual reference to refrigerators in Hickel’s original article was concerned entirely with reducing throughput by extending their lifespan, not by restricting their number. It’s entirely spurious to equate “degrowth” to fewer refrigerators. It could just as easily mean reduced refrigerator *output* and/or refrigerators with smaller resource footprints — along with *more* widespread refrigerator ownership and more useful refrigerators — through more efficient use of energy and other material inputs and longer product life. Besides increased energy-efficiency, such improvements might include ephemeralization of design to reduce material inputs, and shifting to modular designs to eliminate planned obsolescence and enable easy repair by replacing

individual modules while keeping the rest of the refrigerator in operation. They might also include as much cradle-to-cradle recycling as possible when they finally wear out. And all these improvements, I would argue, are not just *compatible* with degrowth but are, by definition, actual *examples* of it.

From here, Phillips goes on to set forth — as examples of good growth and models for future socialist growth — things that actually fall within the definition of *degrowth* used by its own advocates.

> Indeed, once a nation reaches a certain per capita income threshold, net deforestation ceases. Globally, tree cover has increased over the last 35 years.
>
> * * *
>
> Across the Atlantic, there were more dairy cows in the United States in 1870 than today, when the country has roughly ten times the population, according to the US Department of Agriculture. US crop production has increased even as agricultural inputs such as fertilizer, water and crop acreage have declined or plateaued, with the decline in fertilizer use being particularly sharp. Corn acreage has been absolutely decoupled from corn production. American potato yields continue to increase but the potato market is saturated, so potato production has plateaued, meaning that land is removed from production. Across the agricultural sector, this has meant an area of farmland the size of Washington State has been returned to nature, according to a forthcoming analysis by MIT business scholar Andrew McAfee.
>
> McAfee also notes how US consumption of metals marched in lock-step with GDP until about the 1980s. Since then, consumption of important metals such as aluminium, nickel, copper, steel and gold have plateaued or declined. This takes into account imports and exports, so globalization is not the reason for this.…
>
> Denmark, a world leader in nitrogen pollution management, has achieved a reduction in fertilizer use even as agricultural output has increased...

Again, these are all *examples* of degrowth — i.e., decoupling material resource inputs from consumption, and reducing the absolute amount of those inputs. But wait — there’s more!

> The average human does not consume resources at a fixed rate, unlike the average specimen of other species. We are not like bacteria in a petrie dish. Through technological innovation and political change, we can, if we choose, produce the same value with fewer resources, both relatively and absolutely.

Which is… (all together now) DEGROWTH — at least if we read "value" as actual use-value and not Phillips's shibboleth of GDP. I'm restraining my impulse to bang my head on the desk here. Producing the same use-value (*not* exchange-value) with fewer resources is degrowth. So Hickel and Phillips are agreed on the imperative of reducing resource extraction, which is the primary content of the "degrowth" concept.

The most frustrating part of all this is the frequency with which Phillips fails to realize that he's calling for essentially the same thing as degrowth and, in so doing, contradicting his own rhetoric elsewhere. In his earlier book *Austerity Ecology*, for example, he writes:

> The mantra we keep hearing from the anti-growth advocates, "You cannot have infinite growth on a finite planet," seems so obviously true. Which is why it is so seductive to green activists. It's designed perfectly for a banner or placard. But it is only true if the rate of consumption is fixed, and we have just shown how in two clear ways — technological innovation and reorganization of our political economy—we can alter the rate of consumption. Indeed, the rate is constantly changing….
>
> So long as we can keep innovating, changing the rate at which we use a resource, in principle and in our mathematical imagination any bounded lump of anything can be divided infinitely, even while being finite. Thus, counter-intuitively, you can actually have infinite growth on a finite planet.[8]

(Never mind that the "infinite growth" he refers to is growth in actual consumption of use-value, and is irrelevant to the primary senses in which degrowthers use the term.)

And in the passage below, he comes close to explicitly defining "growth" in

8 Leigh Phillips, *Austerity Ecology & the Collapse Porn Addicts: A Defense of Growth, Progress, Industry and Stuff* (Winchester, UK and Washington, US: Zero Books, 2015), p. 42 (pagination from pdf version downloaded at b-ok.cc).

terms of increased use-value — despite his ubiquitous identification of "growth" with an increase in "economic activity" or GDP throughout his entire body of work.

> Under capitalism, we… often inadvertently use much more of a resource regardless of whether we have a new technology that allows us to use less of it to produce the same number of widgets.
>
> Why is this? What is the mechanism that drives this overproduction, this carry-on-regardless approach to resource use? The degrowthists will tell you that it is capitalism's requirement for growth. But this is far too crude a description of what occurs. What is fundamental is not growth per se, but capital's need for self-valorisation, or put another way, for self-expansion. A firm cannot receive back in value precisely what it has put in, otherwise it would go bankrupt. It must receive more value than it put in. Like a bicycle wheel, capital must keep on keepin' on or it will fall over. Superficially, this appears to be the same thing as growth, but it is not.…
>
> A democratically planned economy, however, would make production decisions on the basis of use-value — that is, on their utility to society — rather than just letting capitalists chase capital self-valorisation willy-nilly. We can continue to grow, but in a rational, planned fashion, avoiding the problem of inadvertent overproduction. We can slow down or hold tight or rearrange production until new efficiencies from technological innovation (i.e. a change in the forces of production) are forthcoming. If a certain form of pollution offers less utility to society than not polluting in that way, then we simply do not do so. It is not that the beast is caged, as with social democracy — or at least as social democracy claims to attempt. There is no longer a beast to cage.
>
> Thus the problem with capitalism is not economic growth, but lack of planning, and so our target should be the mode of production (capitalism), not growth itself.[9]

I'm scratching my head, incidentally, as to what substantive content for "growth" is left once we distinguish it from capital's drive to expand the monetized circuit of capital. And there's more than a little inconsistency involved in lionizing GDP as his metric of growth in virtually everything he writes — and then advocating "growth" in use-value rather than the expansionary circuit of capital here.

9 *Ibid.*, p. 44.

Despite all this, Phillips is not hindered from repeatedly denouncing degrowthers as “Malthusian doom-mongers” and insinuating that degrowth is opposed to technological progress.

> Let us assume we have identified a maximum production of 'stuff' beyond which there is ecological calamity. The global economy now only produces that amount of stuff and no more. Let us also assume a perfectly egalitarian distribution of that stuff amongst the world population. But there is no restraint on population growth.
>
> What happens the next day? Some babies are born and all the 'stuff' again equally distributed, but this time each person must have less 'stuff' that the previous day because the amount of stuff does not grow but the number of people does.
>
> * * *
>
> The degrowther says: Innovation can't save us! There's an upper limit to what humans can have and/or an upper limit on the number of humans. *Slam on the breaks!* [sic]
>
> The socialist says: Through rational, democratic planning, let's make sure that the innovation arrives so that we can move forward without inadvertently overproducing. And move forward we must, in order to continue to expand human flourishing. So long as we do that, there in principle no limits. *Let's take over the machine, not turn it off!*[10]

The Question of Waste and Efficiency. Phillips gets more than halfway through his article before directly addressing an actual degrowth argument and not a strawman. After presenting numerous examples of reduced resource extraction without reduced material standard of living, not as examples of degrowth (which they are) but as a rebuttal to it, he finally acknowledges (albeit with the implication that it’s an atypical position) that “some degrowth advocates, notably anthropologist Jason Hickel, counters [sic] that degrowth is not a politics of austerity or scarcity but one of abundance.” He continues:

> A planned reduction of the throughput of high-income nations can occur while standards of living are maintained or even improved. This can be achieved, he says, by a redistribution of existing income, a shortening of the working week, the introduction of a job guarantee

10 Phillips, “The Degrowth Delusion.”

> and living wage and, crucially, an expansion of access to public goods.[11]

Having at least acknowledged this, Phillips goes on to argue that, notwithstanding the fact that these proposals are "excellent ideas," they will "in the absence of economic growth, still result in an equality of scarcity, not of abundance."

And he makes this flat assertion without ever having defined what he means by "growth," or why it is necessary for abundance. He's still riding on its cultural connotations of "progress" and "human flourishing." Is "growth" measured by GDP, which is basically just an accounting measure of the sum total of exchange-value? Is it measured by the amount of use-value or material units of consumption? Is it both? And if so, why must increased levels of material consumption be associated with increased monetary activity?

Here Phillips again cites Branko Milanovic's estimate of a global mean GDP of $5,500 to achieve the degrowth agenda. The unstated assumption here, again, is that a dollar of per capita income directly equates to a dollar of material consumption or well-being. But consider the share of the total annual expenditures our income finances that don't go towards any material benefit at all. E.g. the half or more of rent that goes towards tribute to a landlord for land she didn't produce. Or the 90% or more of patented drug prices that are monopoly rents rather than the actual human and material costs of the drugs. Or car payments, gas and fuel made necessary by car-centered urban design.

The same consumption goods vary widely in price from one society to another based on the respective amounts of artificial scarcity rents, administrative overhead, and other waste embedded in them. Take a look, for example, at the difference in price between identical MRI machines and identical MRI scan procedures, in the United States as opposed to (say) France. As Paul Goodman noted, thanks to waste and administrative overhead in the "kingdom of cost-plus," "[e]verywhere one turns there seems to be a markup of 300 and 400 percent to do anything or make anything." And meanwhile in a society with a quarter of the U.S. GDP the

11 *Ibid.*

people somehow do not seem significantly “worse off” than Americans.[12] If all the embedded monopoly rents and subsidized waste in the prices I pay were eliminated, I would do very well indeed on $5,500.

Phillips at least acknowledges the degrowth argument that resource use could be reduced a great deal by eliminating waste production, but still manages to mostly miss the point:

> The degrowthers respond that the reduction in productive activity in the West would not be across the board as in Milanovic's thought experiment. Instead, socially useful production would continue as normal while socially unnecessary production would cease. Hickel lists as examples of those sectors that are "ecologically destructive and offer little if any social benefit" as: marketing, McMansions, SUVs, beef, single-use plastics and fossil fuels.
>
> We might well contest whether all of these truly offer no social benefit. Single-use plastics such as condoms, syringes and catheters have delivered public health revolutions. Marketing is not only the preserve of breakfast cereals and running shoes; a great many enterprises that are not profit-driven, from epidemiologists to community theatre troupes, still need to communicate information in a compelling way. I may find McMansions and SUVs to be unnecessary but the problem they pose is their combustion of fossil fuels, a problem shared by the very socially necessary heating of much smaller houses and transportation of people and goods in buses, trains, ships and yes also cars and planes. Beef is indeed pretty much inarguably carbon-intensive, but it certainly isn't socially unnecessary. Humans in general find meat and dairy particularly tasty because the density, quality and absorbability of essential nutrients is greater in animal products. There are far more nutrients in a kilo of chicken than in a kilo of celery. Without the nutrient concentration of meat, we might never have become the creatures we are.[13]

In a Twitter exchange with me, he accused Hickel et al of “hand-waving” on the amount of waste production to be eliminated and called for “quantify[ing] that shit.”

12 Paul Goodman, *People or Personnel*, in *People or Personnel* and *Like a Conquered Province* (New York: Vintage Books, 1963, 1965), p. 124.
13 Phillips, “The Degrowth Delusion.”

> That's the problem. Degrowthers *think* it's a lot. But it is never quantified. In my piece I reference Hickel thinking plastic, marketing and beef are needless production. They're not, but even if they were, is that really 2/3?[14]

But Phillips's own approach to Hickel's assertions of waste confirms my suspicion that the former is significantly underestimating waste. He approaches it entirely on a sector-by-sector or product-by-product basis, ignoring questions of efficiency in production methods *within* sectors. He quibbles over whether each industry or sector in a long list entails some partial amount of social necessity, while ignoring the question of *how much* of a given industry or sector — necessary or not — is comprised of waste. And he ignores the question of whether most necessary goods are produced by the most efficient, least wasteful methods. All of this is an exercise that strikes me as "woolly thinking" (to borrow a term), if not willfully obtuse.

Some single-use plastics are necessary, but eliminating the unnecessary ones — like replacing disposable water bottles with reusable bottles for filtered tap water — would probably eliminate the majority of bulk plastic devoted to single-use products. Current advertising might contain some grain of necessary information, but eliminating the vast majority of advertising time and space taken up by irrational and informationally empty content would be a huge savings in resources. The "necessary heating" of smaller houses is far less than that required for a McMansion, particularly if passive solar designs are taken into account. And for god's sake, Leigh, did it not occur to you that the trains and buses you mention provide the same transportation functions as SUVs with far less energy consumption per person-mile?

The business about beef as concentrated protein is just nonsense. It's quite easy to obtain a sufficient day's amount of protein from a 2000 calorie diet centered on a mixture of whole grains and legumes, and consuming the lentils and brown rice or whatever directly takes about a twentieth of the arable land that growing cattle feed for an equivalent amount of beef protein would require. People are actually starving *because* the land they once used to feed themselves was stolen to grow cattle feed instead.[15] This

14 Leigh Phillips, Twitter, August 30, 2019 <https://twitter.com/Leigh_Phillips/status/1167552579540267009>; <https://twitter.com/Leigh_Phillips/status/1167554475336392704>.

15 Note — I'm not a vegan or vegetarian. Simply downscaling beef consumption to what can be feasibly raised on land primarily suited to pasture, and eliminating grain-fed beef, would eliminate

is basic Frances Moore Lappé stuff, heavily backed up by fact. But I get the feeling that most of Phillips's knowledge of agricultural technology comes from USDA "America Feeds the World — Hoo-raw!" propaganda and Ron Bailey's Borlaug hagiography at *Reason*.

> But such woolly thinking over what counts as socially necessary is not our main concern here. Instead, the salient point is that even if we agreed that these sectors were socially unnecessary, combined they clearly do not amount to two thirds of Western production.
>
> "But these are just examples of socially unnecessary production! There are many others," Hickel and others might respond.
>
> Perhaps. But could we really say, even if we conceded that production of a great many items is irrational, that *a full two thirds of production in the West* is superfluous, manufacturing trifles that we don't really need?[16]

But again, this framing is wrong-headed. That two-thirds isn't just a matter of identifying the entire sectors of the economy that are waste production and eliminating them (although there are obviously waste sectors, most notably the military-industrial complex). It's determining whether the specific goods produced by a sector, even if they satisfy a need in principle, are the least wasteful and most efficient form of that good (SUVs *vs.* trains). And even more, it's a matter of how much waste production is included even in goods we want to produce. Administrative overhead, planned obsolescence, transportation costs resulting from inefficiently large production scales and offshoring for cheap labor, and other forms of waste based on inefficiently designed industrial processes, are not categories of consumption; they're endemic to all capitalist industry.

The problem lies in how little Phillips questions capitalism's current production methods, and the extent to which he takes its just-so stories about efficiency at face value.

Perhaps even more important, Phillips's position is incoherent at the label of basic logic. He's already argued that the use of actual material inputs can be reduced to ecologically supportable levels without reducing real consumption of use-value, through improved production methods which

most of the industry's ecological footprint. Ditto decentralizing poultry production to the local level and eliminating factory farming.

16 Phillips, "The Degrowth Delusion."

make more efficient use of inputs. And this is essentially just another way of saying that the portion of current resource input use that's above ecologically sustainable levels is *waste production*. In other words, he's making the *very same* substantive argument about the amount of waste production that can be eliminated in order to reduce material throughput to sustainable levels without affecting quality of life — only he's making it in terms of the share of material inputs that go to waste production, rather than the share of GDP. This is where his fetish for GDP, as a metric for growth, has gotten him.

Back to the Straw. After at least tipping his hat to Hickel's actual argument, Phillips resumes his original mischaracterization of it — if anything in even more vulgar terms, if such a thing were possible:

> The degrowth promise of "radical abundance" is ultimately no material abundance at all, but simply a secular repetition of the Christian encouragement of James 2:5 that however *poor in the world* we may be, we are nevertheless rich in spirit.
>
> * * *
>
> The socialist argument has ever been that capitalism irrationally constrains what we have. It limits production to the set of things that are profitable, while the set of things that are useful is much larger. Therefore Pankhurst was right to define socialism in this way: We could have so much more!
>
> The history of progress, which is to say the history of humanity's endless search for an expansion of freedom, is as Leon Trotsky put it: the steady increase of the power of man over nature and the abolition of the power of man over man. "The historic ascent of humanity, taken as a whole, may be summarised as a succession of victories of consciousness over blind forces – in nature, in society, in man himself."
>
> * * *
>
> In contrast to this unbounded expansion of freedom, degrowth imposes bounds, denounces this unceasing human striving as "productivism". It says: "This much and no more. This far and no farther." Degrowth asserts we have enough, indeed already too much. Yet to perform more scientific research or engineer further technological development presumes a lack, an insufficiency, a desire to know more and to do more. So if we already have enough, then there can be no more development, no further scientific discovery, no

> additional technological invention. It is the Amish-ification of the world.
>
> This is no philosophical sophistry. Imagine again a perfectly equal and static economy as the degrowth advocates demand. In this society, if a researcher invents a new technology, a widget that can solve a problem, then that widget would have to be produced *in addition* to all the widgets already produced. It would therefore be *an expansion of economic growth*, and we have forbidden that. "Aha!" a degrowth advocate might respond, "but what if that new widget replaces an old widget, and performs its function more efficiently, allowing production of the old widget to be retired and replaced by the new widget? Surely that actually reduces overall production and allows some additional room to grow within the overall hard limit?" This is indeed true. But this is basically all that decoupling is. So such a response is just another form of argument for the feasibility of decoupling.
>
> Thus an end to growth declares an end to technological development, an end to science, an end to progress, an end to the open-ended search for freedom—an end to history.[17]

...Or maybe ecomodernism and left-accelerationism just conflate an end to growth with all those things. And again, a degrowther could turn Phillips's observation around on him and say "your decoupling is all that degrowth is." If anything is delusional it's not the belief that we could cut out the portion of GDP made up of waste without hurting quality of life, but the belief that we could reduce resource consumption to sustainable levels through increased efficiency *without a corresponding collapse of GDP.*

Phillips was even more shameless in making such assertions in his full-length book *Austerity Ecology.* For example, here's how he treated Naomi Klein:

> "Which is fine," Klein continues, "except that we happen to have an economic system that fetishises GDP growth above all else ... The bottom line is that an ecological crisis that has its roots in the overconsumption of natural resources must be addressed not just by improving the efficiency of our economies but by reducing the amount of material stuff we produce and consume."
>
> De-growth and an end to overconsumption cannot be achieved

17 Phillips, "The Degrowth Delusion."

> without combatting capitalism, because capitalism is built upon these pillars—hence Klein's phrase, "Capitalism vs the Climate." It does look at first glance as though revolution becomes, as she puts it, a species-wide existential necessity.
>
> The first point I really want to underscore here is that one cannot in one breath rage against the imposition of economic austerity—the series of radical cuts to social programmes and depression of wages imposed by most Western governments in the wake of the global economic crisis—while arguing against economic growth. Austerity and 'degrowth' are mathematically and socially identical. They are the same thing. What green degrowth partisans are actually calling for is eco-austerity.[18]

Several points worth noting here. First, Klein is correct about the fetishisation of GDP growth, because GDP is a measure of all "economic activity," including waste production, and amounts to the total market price of all goods and services produced. Price, in turn, is simply the total money cost of all inputs consumed in production; that includes not only actual labor and material inputs, no matter how inefficiently used, but also the rents paid to the owners of land, capital, and intellectual property for the "service" of allowing production to take place. Phillips's treatment of reduced per capita GDP as synonymous with "austerity" is just plain dumb.

Second, Klein refers to the reduction of natural resource consumption "*not just* by improving the efficiency of our economies" (emphasis mine), making it clear that she is not opposed to technological progress but sees it as an ally in achieving at least part of her degrowth goals.

Third, Klein's phrase "reducing the amount of material stuff we produce and consume" is open to more than one interpretation. Reduced material throughput is indeed compatible with an absolute reduction in the amount of use-value consumed per capita. But it is also compatible with reduced material intensiveness in the design of the same amount of use-value, and/or in the production process, and also with a change in ownership arrangements that reduces the unused idle capacity of things we own.

Phillips himself not only admits but celebrates the fact that technological progress reduces the amount we consume in the latter sense, by decoupling use-value from material inputs. Where he goes wrong is in

18 Phillips, *Austerity Ecology*, p. 26.

equating this process with “GDP” or “economic growth.”

He demonstrates a similar lazy conflation in his treatment of “stuff,” in his attack on Annie Leonard’s *The Story of Stuff*, ignoring the conceptual distinction between “the amount of stuff we consume” in the sense of the resources consumed to produce it and the sheer mass of material going into landfills, and in the sense of use-value. Considering the amount of attention Leonard devotes to problems of planned obsolescence and other forms of waste, and promoting technological innovations in modular design and cradle-to-cradle recycling, I think it’s fair to dismiss this conflation as dishonest. And it’s even more dishonest, given that emphasis, to go from quoting Leonard’s critique of the humanitarian disaster of coltan mining as an issue on the *resource extraction* side to demagoguing about wheelchairs, dialysis machines, and diagnostic computers on the *use-value* side. And despite Phillips’s framing of Leonard as joyless eco-scold, I strongly suspect her actual objection is not to smart phones or gaming consoles as such, and that she’d be perfectly happy with a world in which people were free to enjoy these things so long as they were efficiently produced, designed for long life and ease of repair, and not thrown away and replaced every two years.[19]

All this demagogy about “austerity” is even more unfair when we consider that, in a real sense, Phillips himself almost certainly advocates austerity. I think it’s quite likely that Phillips favors limiting consumption to the level that’s compatible with the ecologically sustainable use of material inputs, given the efficiency level of production technology at any given time. Treating the consumption of use-value as something with finite limits at any given time is, by definition, austerity. Reality itself is guilty of “austerity,” in the sense that the maximum possible level of output right now is finite; anything short of the mythical land of Cockaigne is an austerity economy in that sense. Of course he also advocates using production technologies that most efficiently maximize the output of use-values from a given quantity of inputs, and developing technologies that increase the quality of life compatible with any finite level of inputs. But then so do almost all degrowth advocates; they just disagree on the level of use-value output that’s realistically possible from the maximum level of technological efficiency.

As it happens, I think Phillips is closer to the truth when it comes to the

19 *Ibid.*, pp. 61-62.

potential for more efficient technologies to increase the use-value we can extract from a given level of physical inputs. And his optimism is correct regarding the prospects for decoupling resource consumption from the production of use-value.

He is wrong, however, in equating “growth” in “economic activity” with progress, or dismissing degrowthers as apostles of “austerity” and “asceticism.” “Austerity” is a red herring.

Elsewhere in the same book he writes: “This new paradigm of rejecting growth and embracing limits is also by definition a rejection of progress.”[20]

No, it is not. A reduction in the size of the money economy and the scale of its material inputs is not, in any way, shape or form, a rejection of technological progress. Period.

Technological progress isn’t an alternative to degrowth; it will be the cause of it. Anything that reduces the total material inputs going into the production of the use-value we consume will, by that very fact, also reduce the total amount of exchange-value created and the size of the economy in money terms — unless the increase in productivity is enclosed as a source of rents to prevent prices from reflecting the reduced costs of production.

He continues his assault on Klein:

> But all this sort of “embracing other, less material ways of well-being” ignores that you can’t make music without instruments or write poetry without ink and paper, and instruments and paper can’t be made without raw materials that need to be chopped down or mined. A whistle is made of tin and a trumpet made of brass. This argument (or mood, really; it’s less an argument than a sentiment) also forgets that it is increased productivity through technological advance (combined with trade union organising) that gives us more free time that would allow us to be more neighbourly and community-oriented. So this immateriality of “other kinds of growth,” of “selective degrowth,” is a fantasy. While we can steadily dematerialise production via technological innovation, and though knowledge itself is certainly immaterial, knowledge will always be linked to the material, both in its origins and its products. New knowledge depends

20 *Ibid.*, p. 29.

> on old technologies, old stuff, and gives rise to new technologies, to new stuff.
>
> Think about it this way: if we have retreated to the optimum economic stasis-point of the Kleinian imaginary, where we are supposed to no longer be overshooting our carrying capacity, then each one of us has all the right amount of 'stuff'—no more and no less. But now, if through the expansion of our knowledge, we develop a new technology that does not replace—or only partly replaces—a previous technology, and yet we want to put it into production because of its manifest benefits to society, then we will have to give up production of some other technology to make room for it. But hold on—we've already decided that we have all the stuff that we need, no more and no less. That means that we cannot give up that old technology. Thus we either invent nothing new (or at least only those new technologies that perfectly replace old technologies without any overall expansion of production), or we have to grow. Therefore, the steady-state economy must by definition refuse most technological advance, and even most new knowledge as well. The steady-state economy is a steady-technology economy, a steady-science economy. It is a static society, the very definition of conservatism.[21]

This is the very definition of intellectual dishonesty. "Less material" doesn't mean "completely dematerialized"; paper and flutes are material, but they're *less* material-intensive than centrifugal bumble puppy or whatever growth-maximizing pastime Phillips envisions as worthy of his brave new socialist society. Shifting to less material-intensive ways of doing the same things, as well as to other things that are less material-intensive in the first place, is entirely compatible with selective degrowth. And the degrowth literature is full not only of acknowledgements that dematerialization through technological progress is possible, but of positive celebrations of that potential by many degrowthers. For example, one future degrowth scenario, viewed by a "Guest" in 2013 *a la* William Morris, combines tool libraries, modular design, and right to repair with remote medical diagnoses by Internet. A great deal of production has been automated as well.[22] I imagine a great deal of the remaining necessary clerical labor would also be replaced by remote work in such a scenario, and most business travel by

21 *Ibid*., pp. 29-30.

22 Simon Parker, "Beneath the Stones," in "2031: we're borrowing fixable vacuum cleaners, regularly assembling as citizens, and cyber-monitoring our health. Desirable?" *The Alternative UK*, September 27, 2019 <https://www.thealternative.org.uk/dailyalternative/2019/9/28/beneath-the-stones-future-gov-simon-parker>.

teleconferencing. At any rate it's not what I'd call a "steady-technology economy"; that accusation is just plain stupid. If there's a point of legitimate disagreement, as expressed by Hickel and many others, it concerns whether such dematerialization through technological advancement is alone *sufficient* to achieve the required amount of degrowth in resource inputs. But it's as dishonest as hell to say either that degrowthers oppose technological progress or that degrowth would prevent such progress. One thing Phillips can honestly say is that he's not dematerializing is the use of straw.

Waste, Logistical Chains, "Economies of Scale" — and Aesthetics. My suspicion that Phillips seriously underestimates the degree of waste production in existing capitalism is further confirmed by the fact that a book he co-authors, *The People's Republic of Walmart*, celebrates many of the most inefficient aspects of existing capitalism as exemplars of efficiency. In particular he admires Walmart's and Amazon's extended logistics networks, a sentiment he also celebrated in a direct tweet to me:

> I kinda love those worldwide supply chains. They are deeply humanising and constructing of a global culture. I cannot wait until all of subsaharan Africa is more integrated.[23]

The entire book is, essentially, a development of a theme stated in his article: "*Let's take over the machine, not turn it off!*"

> "You see, the logistical marvel that is Walmart, we do quite like. But it's so much more complicated than that."...
>
> "...We're just intrigued by how this epitome of capitalism is also, paradoxically, a vast planned economy."[24]
>
> * * *
>
> If only Walmart's operational efficiency, its logistical genius, its architecture of agile economic planning could be captured and transformed by those who aim toward a more egalitarian, liberatory society![25]
>
> * * *

23 Leigh Phillips, Twitter, August 30, 2019 <https://twitter.com/Leigh_Phillips/status/1167556120438878214>.
24 Leigh Phillips and Michal Rozworski, *The People's Republic of Walmart: How the World's Biggest Corporations Are Laying the Foundation for Socialism* (New York and London: Verso, 2019), p. 10. Pagination refers to pdf, not text; the pdf is a conversion from the epub downloaded at b-ok.
25 *Ibid.,* p. 11.

> Above all, our goal with this brief text is simply to flag a rarely recognized, yet obvious, fact that in some sense makes the "calculation debate" anachronistic: it is already the case that great swaths of the global economy exist outside the market and are planned. Walmart is a prime example. Thus the question as to whether planning can exist at large scales without crippling economic inefficiencies could be moot. The caveat is that such vast, centrally planned enterprises — and they are so vast that we should really call them centrally planned economies — are not planned in any democratic fashion.
>
> Although it may not sound sexy, our contention is this: When we say we want an equal society, what we're fighting for is democratic planning. There is no machine that can simply be taken over, run by new operators but otherwise left unchanged; but there is a foundation of planning that a more just society could surely take up and make its own.
>
> This is not so much a book about a future society, but one about our own. We plan. And it works.[26]
>
> * * *
>
> Business writers in awe of the company say that the logistical success is ultimately a product of the obsession of Sam Walton (reputedly an inveterate cheapskate) with cost savings, even minor ones, and his use of this advantage to lower prices, increase volume, and thus enable still further cost savings via expanding economies of scale. While such cost savings are a necessity for all companies, perhaps Walton's single-minded-ness in this regard played some role beyond the usual. What we can say is that the company made a turn toward modern logistics long before many other large firms, and that it has been a trailblazer in logistics innovations that drive down costs.[27]

At one point they even mention the Pentagon alongside Walmart and Amazon as positive examples of central planning.[28]

It's useful to contrast this with Seymour Melman's observations, in *The Permanent War Economy*,[29] on the tendency towards cost-maximization in bureaucracies like the Pentagon and regulated public utilities. Any entity

26 *Ibid.,* p. 15.
27 *Ibid.,* p. 23.
28 *Ibid.,* p. 14.
29 Seymour Melman, *The Permanent War Economy* (New York: Simon and Schuster, 1974).

that's guaranteed a profit under the terms of a procurement contract or regulation has every incentive in the world to maximize its cost, in order to maximize profits that are calculated on a cost-plus basis.

And this is true not only of entities that are formally guaranteed profits, but of entities whose oligopoly power enables them to engage in administered pricing (what Paul Goodman called the "great kingdom of cost-plus"). According to William Waddell and Norman Bodek, under the rules of the management accounting system developed by Donaldson Brown at Du Pont and General Motors (what Waddell and Bodek call "Sloanist" accounting), overhead and waste is treated as the creation of value — a lot like GDP, in fact. Inventory is counted as an asset "with the same liquidity as cash." Regardless of whether current output is needed to fill an order, the producing department sends it to inventory and is credited for it. Under the accounting practice of "overhead absorption," all overhead costs are fully incorporated into the internal transfer price price of the finished goods "sold" to inventory, at which point they count as an asset on the balance sheet. In other words, the expenditure of money on inputs is by definition the creation of value. The more bloated and bureaucratic the production process, the greater the total book value of all that inventory sitting in the warehouse. So the large corporations that dominate our economy have an incentive to maximize waste and overhead that's similar in kind, if not degree, to that prevailing in the Pentagon.[30]

These giant corporations celebrated by Phillips and Rozworski appear "efficient" only because they exist within an ecosystem which has been modified to suit their needs. The state provides subsidized material inputs and socializes risk, and it enforces monopolies and entry barriers and regulatory restraints on competition. Corporate bureaucracies survive because of cost externalization and economic rents.

And that's built into the basic structure of capitalism from its earliest days. From the beginning, capitalism has pursued a model of growth based on the extensive addition of new material inputs, rather than the more efficient use of existing inputs, because land and natural resources — thanks to enclosure and imperial looting — were artificially cheap. In Europe peasant land was stolen and consolidated via enclosure and given to the propertied classes. In settler societies like the United States, both Indigenous-occupied

30 William H. Waddell and Norman Bodek, *Rebirth of American Industry: A Study of Lean Management* (Vancouver, WA: PCS Press, 2005), pp. 75, 97, 240.

and vacant lands were preempted by states, which gave preferential access to capitalists. States subsidize the extraction of fossil fuels and fight wars for access to them, making energy inputs artificially cheap. They subsidize highway transportation and, by making long-distance shipping artificially cheap, make firm sizes and market areas far above the point of diminishing returns artificially viable.

This is why the much-vaunted "efficiency" of factory farming — vaunted by its court propagandists, that is — is in output per labor-hour, not per acre. Soil-intensive techniques like raised bed horticulture are actually *more* efficient, in terms of output per acre.

In the specific case of logistic chains, Walmart is efficient at minimizing costs *within* a distorted framework in which transportation inputs are artificially cheap. Walmart's logistics networks, and its network of offshore suppliers, are both enlarged at the expense of smaller-scale production for local markets, which would be more efficient if all costs were fully internalized. This means that the scale of Walmart's logistics networks is actually an example of the amount of waste production under capitalism.

Alfred Chandler,[31] by anyone's estimate one of the foremost enthusiasts of mass-production capitalism, not only admitted that the continental-scale corporate economy that emerged in the late 19th century was made possible only by the railroad land grants and railroad bonds which externalized the long-distance shipping costs on the public — he devoted the entirety of Part III of *The Visible Hand* to describing the process. The existence of a high-volume system of national trunk lines created a national market, on which first nationwide wholesale and retail networks and then industrial corporations producing for the national market parasitized.

And to spell it out more clearly, these giant firms producing for the national market were not a net increase in efficiency. Railroad subsidies encouraged firm size and market levels above the point of diminishing returns, by making long-distance shipping artificially cheap; concealing part of the total cost package, namely shipping costs, by shifting them from retail price to the taxpayer is not an efficiency. The mass production model into which the corporate economy evolved in the early 20th century was a reduction in efficiency compared to the alternative industrial model of electrically

31 Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge and London: The Belknap Press of Harvard University Press, 1977).

powered craft production, as I will argue in more detail below, and entailed enormous amounts of waste and externalized costs.

To the extent that Walmart's just-in-time model is intended to match supply to demand,[32] it is a sub-optimal application of lean principles. Walmart just replaces the warehouses full of inventory (under the Sloanist mass production model that Waddell and Bodek critique) with warehouses on wheels or on container ships. The ideal application of lean principles, in contrast, would be siting production as close as possible to demand, then scaling the flow of production to demand and scaling machinery to the flow of production — something like the high tech job shops of the Emilia-Romagna industrial district, with production oriented even more toward local consumption than is currently the case.

So while Phillips may consider those long logistic chains to be "deeply humanizing," what they actually are is deeply inefficient. There is nothing "agile" about using many times the transportation inputs that are actually necessary because you're producing stuff in one place to be shipped to retail shelves on the other side of the planet, when it would be produced much more efficiently where it's being consumed.

Phillips, meanwhile, is not above a little hand-waving of his own when it comes to so-called "economies of scale." There's a certain breed of apologist for centralism that misuses "economies of scale" the same way Young Earth creationists misuse the Second Law of Thermodynamics, and Phillips is clearly in this tradition.

> Many greens call for a retreat from scale, a return to the small and local. But this, too, misdiagnoses the source of the problem. Replacing all multinationals with a billion small businesses would not eliminate the market incentive to disrupt ecosystem services. Indeed, given small businesses' gross diseconomies of scale, disruption would only intensify.[33]

Phillips doesn't even specify the actual size of the "small businesses" whose "gross diseconomies of scale" he's talking about — just that a billion of them replace all the multinationals. He doesn't seem to realize that "economies of scale" are not some open-ended phenomenon. Productive

32 Phillips and Rozworski, *The People's Republic of Walmart.* pp. 24-25
33 *Ibid.,* p. 110.

economies of scale level off when a given set of production machinery is used to full capacity, which is often at a relatively modest level, and besides this productive economies of scale are offset by distribution costs.

Considering that there's a huge body of literature on just how far beyond optimal economy of scale large corporations are, and at what a modest level economies of scale reach the point of diminishing returns, it's safe to say he's grossly underestimating the efficiencies to be achieved through decentralization.[34]

But Phillips's views on economies of scale and comparative efficiency are apparently shaped as much by emotional considerations as by any recourse to actual industrial or technological history. One of the more egregious examples of his lazy conflation of everything from degrowth to neo-primitivism into a single "I don't like it" category is in *Austerity Ecology* where he writes of the "anti-consumerist, back-to-the-land, small-is-beautiful, civilisation-hating, progress-questioning ideology of degrowth, limits and retreat"[35] and "the counter-Enlightenment credo of that clutch of related concepts—degrowth, anti-consumerism, catastrophism, technophobia, localism and small-is-beautiful limits…."[36] Local food and composting toilets also come in for some derision.[37] And he seems to think "growth and progress" is one word, so often does he use that phrase. So Jason Hickel and Naomi Klein differ from John Zerzan and the Unabomber only in the *degree* to which they oppose the Enlightenment and human progress. They're united by their opposition to "economic growth," something which — again — Phillips doesn't actually define, but in an equally lazy act of conflation treats as a stand-in for "social progress," "modernism," "the Enlightenment," or "human flourishing."

In his largely emotive and aesthetic approach to distinguishing what's regressive from what's forward-thinking (and hence associated with the god-term "growth") Phillips has a lot in common with Nick Srnicek and Alex Williams, co-authors of *Inventing the Future*. The latter authors classify anything local, small-scale, horizontal, or decentralized under the heading of "folk politics," which is motivated by nostalgic romanticism and is the enemy of modernity and progress.

34 For a partial literature review see Chapter Two of my book *Organization Theory: A Libertarian Perspective* (Booksurge, 2008) <https://kevinacarson.org/pdf/ot.pdf>.
35 Phillips, *Austerity Ecology*, p. 13.
36 *Ibid.*, p. 22.
37 *Ibid.* p. 21.

> In terms of spatial immediacy, folk politics privileges the local as the site of authenticity (as in the 100-miles diet or local currencies), habitually chooses the small over the large (as in the veneration of small-scale communities or local businesses); favours projects that are un-scalable beyond a small community (for instance, general assemblies and direct democracy) and often rejects the project of hegemony, valuing withdrawal or exit rather than building a broad counter-hegemony. Likewise, folk politics prefers that actions be taken by participants themselves—in its emphasis on direct action, for example—and sees decision-making as something to be carried out by each individual rather than by any representative. The problems of scale and extension are either ignored or smoothed over in folk-political thinking.
>
> Understood in these ways, we can detect traces of folk politics in organizations and movements like Occupy, Spain's 15M, student occupations…, most forms of horizontalism, the Zapatistas, and contemporary anarchist-tinged politics….[38]

The mostly aesthetic basis for their aversion to small scale and decentralism is underlined by their quote in the earlier *Accelerate Manifesto* from Lenin's denunciation of left-communism as an "infantile disorder," in which he (and indirectly they) appeal to Jurassic concepts of industrial technology, and Weberian-Taylorist standards of bureaucratic organization, that became obsolete before Srnicek and Williams were born:

> Socialism is inconceivable without large-scale capitalist engineering based on the latest discoveries of modern science. It is inconceivable without planned state organisation which keeps tens of millions of people to the strictest observance of a unified standard in production and distribution. We Marxists have always spoken of this, and it is not worth while wasting two seconds talking to people who do not understand even this (anarchists and a good half of the Left Socialist-Revolutionaries).[39]

They didn't quote Engels "On Authority," but I'm sure they would have if it

38 Nick Srnicek and Alex Williams, *Inventing the Future: Postcapitalism and a World Without Work* (London and New York: Verso, 2015, 2016).

39 Srnicek and Williams, "#ACCELERATE MANIFESTO for an Accelerationist Politics," *Critical Legal Thinking*, May 14, 2013 <http://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/>.

had occurred to them.

Ultimately their, and Phillips's, ideas of growth and progress have something of a cargo cult quality to them. They're based more on the associated whizbang Jetsons imagery of "modernism" they conjure up, and on their aesthetic juxtaposition to things that are "green" or "local" or "organic," than on any objective content or defining features. Phillips's mockery of Naomi Klein for her "fear of the big-and-international and fetishisation of the small-and-local"[40] takes mirror-imaging to the level of an art form, considering his fetishisation of the big-and-international and utter contempt for the small-and-local. Likewise his condescension toward virtually every conceivable form of the small-and-local, from local food initiatives to locally sourced building materials and vernacular design, in his treatment of the Transition Towns initiatives for community resilience:

> urban food production, garden shares, promoting cycling, tree planting, developing community renewable energy companies and establishing alternative local currencies. They teach each other practical skills such as building straw bale houses and cob huts with local materials...[41]

Apparently it matters less whether something is actually more efficient than whether it sounds like something a person who wears "organic carrot pants" or whatever would like.

The cargo cult quality of his ideas of "modernism" and "technological progress" reminds me of the initial reaction of Connie, a 20th century character in Marge Piercy's *Woman on the Edge of Time*, to seeing the post-capitalist society of the 22nd century. It's a society where drudgery like washing dishes and sewing quilts has been selectively automated, everyone is connected to an Internet via mobile device, and plant pathologies have been engineered out of existence. But because it also has villages of vernacular buildings constructed from salvaged materials, raised bed gardens, and chickens wandering loose, rather than domed cities and mile-high towers, she sees it as a squalid, "podunk future."

At one point in our Twitter conversation Phillips told me I'd confirmed his impression that degrowth "owes has more in common with the likes of

40 Phillips, *Austerity Ecology*, p. 74.
41 *Ibid.*, p. 78.

Kropotkin than Marx."[42] And it's an accusation I'm willing to embrace.

That's not to say I reject all Marxist treatments of technological and industrial history as such; I find much that is useful in Marx and some of his followers, even though I am an anarchist. There are any number of possible "Marxisms." That of Phillips, as with other accelerationists of the Left, seems to be the kind of self-parody vulgar Marxism formulated by Engels and Kautsky that became the official Marxism of the Second International. It's a linear view of technological determinism based primarily on the passage on the "monumental forces of production" developed by capitalism in the *Manifesto*, that famous paragraph on the forces and relations of production in the Preface to *Contribution to a Critique of Political Economy*, and Engels's vision in *Anti-Dühring* of the capitalists consolidating their increasingly centralized and managerialist economy into a smaller and smaller number of centrally planned trusts until the workers finally take it over and put it under new management.

This version of Marxism is reflected in the accelerationist tendency (exemplified in Srnicek's and Williams's *Inventing the Future* as well as Phillips's work) to treat "technological progress" as a linear effect of capitalist growth, and to take at face value capitalism's claims to superior efficiency. There is one track of technological progress, capitalism has developed enormous productive forces by pursuing this track, and it will keep following this track until the abundance it has unleashed in response to the accumulation imperative becomes incompatible with capitalist relations of production and the forces of production burst out of their capitalist integument. It's a sort of Marxian version of the Whig theory of history.

In any case it's questionable how orthodox a Marxist Marx himself was by the standards of Phillips's Marxism. At the time Engels and his friends in the German Social Democratic Party were cobbling their vulgar official Marxism together, Marx was busy studying the Russian *Mir* as a possible building block for socialism — not the sort of thing that fits entirely well into the framework of by-the-numbers "historical materialism."

And there's considerable irony in a self-proclaimed Marxist equating the size of the money economy to "progress" as such. Phillips's lionization of GDP

42 Phillips, Twitter, August 30, 2019 <https://twitter.com/Leigh_Phillips/status/1167561505887277057>.

and “growth” would have been anathema to Marx, who saw exchange-value and abstract labor time as inseparable from the totalizing nature of the sphere of capital and its imperatives of accumulation and self-expansion.[43] And make no mistake: the very concepts of GDP and growth are rooted in this totalization. Phillips’s favored paradigm of “growth” in GDP and “economic activity” is also by definition a celebration of the very aspects of capitalism that Marx viewed communism as transcending.

There are also excellent Marxist historians of industrial technology like Stephen Marglin, Harry Braverman, and David Noble who recognize the degree to which capitalism has selected technologies that maximize efficiency in the control of labor and extraction of a surplus rather than any generic “efficiency” in the use of material inputs. There are also quite plausible — I would say probable — versions of Marx developed by autonomists like Harry Cleaver, Toni Negri,[44] John Holloway, and Massimo De Angelis, focused on working class self-valorization and the development of commons-based alternatives within the interstices of capitalism, that don’t look much like the top-down and monolithic agendas promoted by left-accelerationists.

Any viable post-capitalist economics will necessarily also include a large element of Kropotkin — and of Mumford, Borsodi, and Bookchin as well. These thinkers are all useful correctives to the vulgar Marxist imperative. In particular, Mumford’s account of technological history shows that conflicts between technical efficiency and class or institutional considerations are not only relevant to that future date at which the forces of production finally burst out of their capitalist integument. Rather, capitalism has from its beginning continuously chosen between alternative possible paths of technological progress based on their conduciveness to control and extraction, even when the path not taken was arguably more efficient.

One such case was the choice between industrial models for incorporating electrical power into manufacturing in the Second Industrial Revolution — a choice in which capitalism selected the less efficient model, and rejected

43 See, e.g., Peter Hudis, *Marx's Concept of the Alternative to Capitalism* (Leiden and Boston: Brill, 2012).

44 Of course Negri and his wing of autonomism, with their view of capitalism as a totalizing system without an “outside,” have their own affinities with left-accelerationism. Negri noted as much himself in his review of *Manifesto for an Accelerationist Politics*. "Reflections on the 'Manifesto for an Accelerationist Politics,'" *e-flux journal* #53 (March 2013) <https://www.e-flux.com/journal/53/59877/reflections-on-the-manifesto-for-an-accelerationist-politics/>.

the Kropotkinian model which (Phillips's barely concealed snickering at its alleged backwardness notwithstanding) was, from the standpoint of technical efficiency, the ideal approach for integrating electrically powered machinery into production. I quote at length from my Introduction to the Center for a Stateless Society edition of the Colin Ward abridgement of Kropotkin's *Fields, Factories and Workshops*,[45] because I stated it there as well as anywhere:

> To see the significance of the technological revolution Kropotkin explored in this book, we need to step back and take a look at what came before. In the age of steam and water power – what Lewis Mumford called the Paleotechnic Era – large centralized factories resulted from the need to conserve on power from prime movers. Steam engines were governed by fairly steep economies of scale, so that the unit cost of generating power got smaller the bigger the engine was. So it made sense to build a large steam engine and run as much production machinery off it as possible. That meant mills full of machines all lined up in rows, powered by pullies running from a common drive shaft.
>
> Electrically powered machinery offered the potential to end all this. With the invention of the electric motor, it was possible to build a separate prime mover into each machine, and to locate the machines where the output was needed. So instead of a giant factory at a centralized location, producing in large quantities for long-distance distribution, it would be possible to introduce a decentralized economy of lean production for local markets. Individual machines could be scaled to production flow, production flow could be scaled to demand, and the entire production process could be sited as closely as possible to the point of final consumption. This would mean small-scale shops with electrically powered, general-purpose machinery integrated into craft production, turning out a wide variety of products and frequently switching between production lines, on a demand-pull basis for local markets. Lean, agile and low-overhead.
>
> This is essentially the economy Kropotkin described in *Fields, Factories and Workshops*: Local communities with small-scale manufacturing shops, the blurring between town and country as manufacturing and soil-intensive horticulture were integrated into

45 "Fields, Factories and Workshops Tomorrow," Center for a Stateless Society, August 14, 2014 <https://c4ss.org/content/25051>; full text of book here: <https://c4ss.org/wp-content/uploads/2014/08/FactoriesPDF.pdf>.

> village economies, and the blurring between intellectual and manual labor as production shifted from deskilled proletarians as appendages of machines to machines run by skilled craft workers.

The technological revolution that made this industrial model possible was essentially the same as what Lewis Mumford called the Neotechnic Phase. Kropotkin, Mumford wrote,

> … grasped the fact that the flexibility and adaptability of electric communication and electric power, along with the possibilities of intensive biodynamic farming, had laid the foundations for a more decentralized urban development in small units, responsive to direct human contact, and enjoying both urban and rural advantages.
>
> Kropotkin realised that the new means of rapid transit and communication, coupled with the transmission of electrical power in a network, rather than a one-dimensional line, made the small community on a par in essential technical facilities with the over-congested city. By the same token, rural occupations once isolated and below the economic and cultural level of the city could have the advantage of scientific intelligence, group organisation, and animated activities…; and with this the hard and fast division between urban and rural, between industrial worker and farm worker, would break down too.

But a funny thing happened on the way to the Neotechnic Revolution. As I suggested above, capital chose a far less efficient approach:

> the state tipped the balance with policies like the railroad land grants, industrial patents, tariffs and imperialism that made large-scale mass production artificially competitive against more efficient small-scale production. The result was not only the industrial gigantism of the 20th century, but a whole host of state measures aimed at remedying the problems of excess production capacity, surplus investment capital and inadequate demand that plagued the overbuilt corporate economy. These measures included enormous infrastructure projects like the civil aviation and Interstate Highway systems as capital sinks, as well as the Military-Industrial Complex and the state-subsidized car culture.
>
> Mumford called it the “cultural pseudomorph,” after the tendency

> of minerals in the fossilization process to leach into the remains of a buried organism and take on its preexisting shape: instead of the new technology taking its ideal form and fully realizing its potential, it was instead coopted into the preexisting Paleotechnic institutional framework of the Dark Satanic Mills. So instead of small-scale craft production with general-purpose machinery, serving local markets, we had a mass-production economy of extremely expensive, capital-intensive product-specific machinery, which had to be run at full capacity day and night to amortize the capital outlays and minimize unit costs. To paraphrase Marx: "Utilize capacity, utilize capacity, utilize capacity; this is the law and the prophets."
>
> This meant production had to be undertaken entirely independently of, and without regard to, preexisting demand; and then the social system had to be organized around finding ways to compel people to consume the stuff produced whether they wanted it or not, lest the system become glutted with rising inventories and the wheels of industry cease to spin. So it was a society of mass consumption propaganda, planned obsolescence, and endless state-subsidized infrastructure projects and imperial wars to soak up excess capital, destroy surplus production capacity and remedy overproduction with overseas dumping.

(This choice between alternative industrial models, and what tipped the balance, is the subject of an excellent work of industrial history, *The Second Industrial Divide* by Piore and Sabel.[46])

Ralph Borsodi's book *The Distribution Age* analyzed the ways in which the marketing, shipping, warehousing, and other distribution costs associated with mass production's supply-push distribution model more than offset the limited economies of scale at the actual point of production.[47]

Mass production, in order to minimize unit costs of extremely expensive product-specific machinery, must run at full speed and then engineer society around guaranteeing the output will be consumed whether it's needed or not, so full capacity will be utilized. But this lack of coordination between demand and output is only one of many irrationalities in the overall production and distribution stream. There is a similar lack of

46 Michael J. Piore and Charles F. Sabel. *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).
47 Ralph Borsodi. *The Distribution Age.*

coordination between all the sub-components within the production and distribution process. For example, instead of machinery being scaled to flow, the ROI of individual machines is optimized even when it can only be used to full capacity at the expense of disrupting the overall flow of the production process.[48]

Even with the development in recent decades of cheap, small-scale CNC tools beyond Kropotkin's wildest dreams, the political and economic power of legacy corporations has enabled them to coopt technologies best suited to local manufacturing ecologies and enclose them within global logistic chains — a Rube Goldberg diversion worthy of the movie *Brazil*.

A great deal of the offshored industrial production at the other end of the extended supply chains celebrated in *People's Republic of Walmart* is actually carried out in comparatively small job shops that would be more efficiently collocated with local market areas. The technology at the actual point of production, in such cases, is modest in scale and best suited for local or regional production. But it's enclosed within a corporate institutional framework of extended logistic chains through the framework of copyright, patent, and trademark law which gives corporations a legal monopoly on disposal of an outsourced product. The only reason the facilities in China aren't all producing identical goods directly for the local market, and selling at a price without the trademark and patent markups, is the enclosure of decentralized production technology within a centralized corporate legal framework. And the only reason the production facilities making goods for people in Iowa are sited in China instead of in Iowa is that the labor there is cheaper.

From the standpoint of genuine efficiency, the ideal is to site production as close as feasible to the point of consumption, scale production flow to demand, and scale machinery to production flow. This is essentially the same approach Kropotkin envisioned as the proper way to take advantage of the decentralizing potential of electrical power.

And many specialists in lean, just-in-time production in recent years have

48 Paul Hawken, Amory Lovins and L. Hunter Lovins, *Natural Capitalism: Creating the Next Industrial Revolution* (Boston, New York, London: Little, Brown and Company 1999), pp. 127-130; I discussed, both much more comprehensively and in much greater detail, the full range of costs associated with designing an entire society around guaranteeing the consumption of waste production in Chapter Two of *The Homebrew Industrial Revolution: A Low-Overhead Manifesto* (Booksurge, 2010), available online at <https://kevinacarson.org/pdf/hir.pdf>.

agreed with Kropotkin. Lean production guru James Womack observed that "oceans and lean production are not compatible." Simply shifting inventories from giant warehouses of finished product or intermediate goods to warehouses disguised as trucks and container ships isn't really reducing overall inventory stocks at all. It's just sweeping the batch-and-queue bloat of Sloanism under the rug. The outsourced component manufacturers "are located on the wrong side of the world from both their engineering operations and their customers... [in order] to reduce the cost per hour of labor." To properly apply lean principles it is necessary "to locate both design and physical production in the appropriate place to serve the customer."[49]

In his Foreword to Waddell's and Bodek's *The Rebirth of American Industry* (something of a bible for American devotees of the Toyota Production System), H. Thomas Johnson (an expert in lean accounting) writes:

> Some people see lean as a pathway to restoring the large manufacturing giants the United States economy has been famous for in the past half century.... The cheap fossil fuel sources that have always supported such production operations cannot be taken for granted any longer. One proposal that has great merit is that of rebuilding our economy around smaller scale, locally-focused organizations that provide just as high a standard living [sic] as people now enjoy, but with far less energy and resource consumption. Helping to create the sustainable local living economy may be the most exciting frontier yet for architects of lean operations.[50]

So except in a few cases like geographically situated mineral resources, microprocessor production, and the like that require long-distance shipping for genuine technical reasons, most of what goes on in the logistic chains Phillips loves so much is just waste production. And that's a lot of waste production. To put it simply, Walmart's and Amazon's increasingly automated inventory systems and just-in-time global logistic chains achieve "efficiency" only in a relative sense. To borrow a phrase from Peter Drucker, they're the most efficient way of doing a very inefficient thing that ought not to be done at all.

Capitalism is founded on waste production. We cannot transition to post-

49 James Womack and Daniel T. Jones, Lean Thinking: Banish Waste and Create Wealth in Your Corporation (Simon & Schuster, 1996), p. 43.

50 H. Thomas Johnson, Foreword, William H. Waddell and Norman Bodek, *Rebirth of American Industry: A Study of Lean Management* (Vancouver, WA: PCS Press, 2005), xxi.

capitalism by pursuing a course *through* the present technological and institutional trajectory of capitalism because post-capitalism is not simply a more just and efficient use of the production paradigm created by capitalism, as envisioned by vulgar Marxists and accelerationists. The basic material presuppositions of capitalism are directly at odds with those of the kind of society we want to create.

Capitalism is not in crisis because, as per the orthodox Marxist model, its productivity so great that it undermines capitalist relations of production. It is in crisis because it has chosen models of technological development and organizing production that are *unproductive* in terms of how efficiently they use inputs. Capitalism is a system founded on extensive growth — that is, on the addition of ever larger quantities of resource inputs, inputs which are artificially cheap and abundant because of the enclosure of land and natural resources. Now that we are in the age of Peak Oil, and approaching the age of Peak Coal, Peak Gas, and analogous limits to a wide range of other material inputs, capitalism is experiencing a crisis of extensive development.

Post-capitalist transition is not simply a matter of celebrating mass production factories and global logistic chains as the “colossal forces of production” Marx wrote of, and saying “Thank you, capitalists, but we’ll take over from here.” Those mass production factories and global logistic chains are the prime examples of the kinds of *inefficiency created by a system that treated material inputs as artificially cheap and abundant and pursued growth by throwing more of them on the pile instead of using existing inputs more efficiently.*

Post-capitalist transition is not taking over the existing production and distribution infrastructures of capitalism and placing them under new management. It is, rather, being brought about by fundamentally different actors within the interstices of capitalism — actors who are capable of the kinds of intensive development, making more efficient use of fewer inputs, of doing more with less, that capitalism is incapable of because waste is built into its DNA.

In other words, the actual truth is arguably the direct opposite of Phillips’s framing. Far from reduced scale and relocalization being being some kind of tree-hugging, neo-primitivist or Luddite hippie crap based on the rejection of progress, the truth is that decentralism and small-scale production at the

point of consumption is actually promoted by the bleeding edge of technological innovation in tabletop CNC machinery; the future lies with local industrial ecologies of high-tech garage factories and makerspaces. It's Phillips who holds a 20th century dinosaur age view of industrial technology, straight out of the pages of Schumpeter, Galbraith and Chandler.

The left-accelerationists make us spectators in our own history. Phillips, like Engels and other vulgar Marxists of the Second and Third Internationals, make capital itself into the subject of history; the capitalists are the primary agent building the "forces of production," with the rest of us relegated to waiting till the capitalists finish the job and then taking over the completed project.

Over against this framing of the current era as a total system driven by the internal laws of capital, we posit an open-ended process in which we actively contest capitalism's self-reproduction and expansion with our own counter-power and counter-institutions. In reality, the main job of building post-capitalist society is — to repeat — being undertaken right now in the interstices of existing society. The combination of capitalism's chronic crisis tendencies, unemployment, and underemployment, with the availability of new, technically advanced means of small-scale production suitable for integration into the commons, is creating the perfect storm for building a more efficient and sophisticated economy of our own. And the agency in this process lies with us, in a hundred thousand community gardens, fab labs and land trusts from Chiapas to Barcelona to Jackson — not with Walmart and Amazon.

DEGROWTH REJOINDERS

Definitional Issues. In the first of a series of rejoinders to Phillips published in *openDemocracy*, three degrowth advocates wrote:

> To sustain the natural basis of our life, we must slow down. We have to reduce the amount of extraction, pollution, and waste throughout our economy. This implies less production, less consumption, and probably also less work.[51]

51 Joël Foramitti, Marula Tsagkari and Christos Zografos, "Why degrowth is the only responsible way forward," *Open Democracy*, September 19, 2019 <https://www.opendemocracy.net/en/oureconomy/why-degrowth-only-responsible-way-forward>.

The last sentence is an example of rhetoric on the pro-degrowth side that is less than helpful. Reducing “consumption” is itself so vague as to be almost meaningless, because of the embedded assumptions by the respective parties about the connection between material standard of living and quanta of material consumed. “Less consumption” is compatible with reduced consumption of use-value, to be sure, but that implication is by no means necessary. It is no less compatible with simply reducing consumers’ ecological footprints. If waste production is a thing, so is waste consumption. For example: Is reduced car ownership a reduction in meaningful consumption if it results from cheap, convenient public transit freeing us from the need to work an extra twenty hours a month to make car payments and buy gas and insurance?

> The responsibility to do so must lie mainly on the rich, who currently enjoy a disproportionate share of our resources. But we should also do things *differently*, as much of today's economic activity is of little benefit to human wellbeing.

This clarifies somewhat, by adding actual substance to the vagueness of “less consumption.” In light of this clarification, “less consumption” is fully compatible with the same level of direct material enjoyment of use-values, produced with fewer resource inputs — something to be achieved by increased efficiency and the elimination of waste production, not the imposition of austerity at the individual level.

Techno-skepticism. If Phillips’s aesthetic stumbling block centers on the decentralized and vernacular, some degrowthers — as exemplified by Foramitti *et al* — evidently have a corresponding aesthetic issue with technology and the very concept of progress.

> We claim that Phillips employs an inordinate optimism about technological possibilities, and discuss how his views are framed by a rather narrow and liberal conception of freedom and progress. We argue that an increase in social value does not depend on economic growth, allowing for further human flourishing within limits.
>
> Phillips acknowledges that we need to stay within planetary boundaries. But as an *ecomodernist*, he believes that all environmental problems can be solved by a shift in technology. All we

need to do is become more efficient.[52]

This techno-skepticism is expressed in more extreme terms in a degrowth response to the 2015 *Ecomodernist Manifesto*, which repeatedly conflates growth with technology as components of the same hostile ideology:

> While ecomodernists, as we shall see, tend to promote the necessity of endless economic growth and the role that new technologies will play in creating a sustainable global society, the backers of degrowth see the transition to sustainability (or a steady-state economy) occurring through less impactful economic activities and a voluntary contraction of material throughput of the economy— at least, in the more developed and wealthier parts of the globe— to reduce humanity's aggregate demands on the biosphere. From a degrowth perspective, technology is not viewed as a magical savior since many technologies often accelerate environmental decline.
>
> After careful analysis, those in the degrowth camp have come to the conclusion that the only way for humanity to live within its biophysical limits and mitigate the effects of climate change is to reduce economic activity, to downscale consumerist lifestyles, to move beyond conventional energy sources, to give up on the fantasy of "decoupling" economic and population growth from environmental impacts, and to rethink the technologies that have gotten us into our current predicament. There has been no known society that has simultaneously expanded economic activity and reduced absolute energy consumption. All efforts to 3 decouple growth of gross domestic product (GDP) from environmental destruction through technological innovations and renewable energies have failed to achieve the absolute reductions necessary for a livable planet.[53]

The same passage accuses the *Ecomodernist Manifesto* of rehashing "the belief that yet more growth and yet more technology will save us…."[54]

And their attitude towards nuclear energy is predictable: "One of the most unfortunate results of this technophilism and Biggering-Is-Better attitude is

52 *Ibid.*
53 Caradonna, J., Borowy, … Heinberg, R. (2015). *A call to look past an Ecomodernist Manifesto: A degrowth critique*, <http://www.resilience.org/wp-content/uploads/articles/General/2015/05_May/A-Degrowth-Response-to-An-Ecomodernist-Manifesto.pdf> p. 2-3.
54 *Ibid.*, p. 4.

the ecomodernists' adoration of nuclear power."[55]

This is not to imply that I support an expansion of the existing model of fission power at all, let alone uncritically; it relies on massive up-front subsidies and takes years of delay and high capital spending before it comes online, and that's not even taking into account the safety and waste disposal issues. But I am quite open-minded, and even guardedly enthusiastic, about the potential for next-generation technologies like thorium salt reactors; if anything, they are an improvement precisely because they are smaller and easier to integrate into local and regional economies. And I suspect Cardonna et al would oppose them at least in part for reasons that are a mirror image of Phillips's contempt for the sorts of economic models favored by people in "organic carrot pants."

I consider this framing of technology by some on the degrowth side unfortunate. First, "technology" is not a generic entity that can be measured only quantitatively. And the waste and inefficiency of capitalism are both structural *and* technological. There have been alternative possible lines of technological development, as I already discussed above, and capitalism has chosen between those alternatives for structural and power reasons that are more efficient in maintaining control and extracting surpluses but suboptimal at maximizing consumption of concrete use-values with a minimum of material inputs.

Rightly understood, technological development and what Phillips calls "decoupling" — albeit from production of use-value, not GDP — are on the same side as degrowth, not at odds with it. If anything Phillips is misguided in viewing "efficiency" and "technological progress" as a generic good achieved by capitalist development, which should be taken over for socialist purposes when capitalism has developed it to a sufficient point. Capitalism has always chosen less efficient alternatives, and failed to take advantage of opportunities for decoupling, because the latter are incompatible with its structural imperatives (namely growth by extensive addition of artificially cheap inputs from enclosed resources, and externalizing inefficiency costs on society). A properly restructured economy, decentralized to optimal levels, would pursue ephemeralization and decoupling to something approximating their theoretical maximum.

In a book written over a decade ago, Paul Hawken, Amory and Hunter

55 *Ibid.*, p. 10.

Lovins, *et al* outlined the technical possibilities for reducing the energy inputs required for current levels of consumption by factors of six, eight, ten or more, primarily through the recursive energy savings resulting from whole systems design. The book had the unfortunate title of *Natural Capitalism*, but the engineering approaches it advocated have actually been adopted to a relatively minor extent precisely because they are at odds with the structural imperatives of capitalism.

To the extent that Peak Fossil Fuel and other Peak Resource crises, the fiscal crisis of the state, and other crises of the subsidized inputs capitalism requires force capital to adopt some portion of these solutions unwillingly, it is part of the general terminal crisis phase of capitalism and transition to a post-capitalist system, in which capitalist institutions are either replaced by interstitial alternatives or the surviving capitalist firms are forced to become less extractive and take on a different character based on their relationship to the larger transitioning system of which they are a part. And a post-capitalist system will be situated to take full advantage of the possibilities of new technology for decoupling use-value consumption from material inputs.

So “technological advances” as a source of reduced material extraction means, not just a continuation of the current trajectory of technological progress being pursued under capitalism, but a rediscovery of the technological paths not taken in the past. It means, specifically — as I already discussed above — the adoption of many of the structural approaches described by Lewis Mumford under the heading of the Eotechnic era, the neglected potential of the Neotechnic, and the decentralizing potential of electrical power under alternative models of the Second Industrial Revolution as envisioned by Kropotkin and Borsodi.

Although Phillips accuses Hickel of “hand-waving” about the amount of waste production that could be eliminated from the economy without material discomfort, if anything I suspect the authors of this piece of *underestimating* the potential efficiency gains from economic restructuring/rationalization and choices of technology for optimal efficiency.

> Some demand reduction could be achieved through efficiency improvements. But these might be less effective than they appear. As long as we keep pursuing growth, such improvements will be used for further expansion.

Again, the use of the term “growth” here, with no concrete definition, detracts from the debate rather than furthering it. To the extent that it explicitly calls for limiting consumption of energy and resource inputs to sustainable levels, Phillips’s “decoupling” is compatible with what I consider the proper definition of degrowth. To the extent that degrowthers define it in some way other than in terms of these objectives, it would be helpful to state it in so many words. Is it reducing GDP? Is it reducing the number of specific categories of consumer goods per capita? Is it keeping the number in existence per capita at any given time the same, but reducing the replacement rate via increased durability? Is it reducing the number in existence with no reduction in individual use-value, through sharing of idle capacity? The word “growth” is used as a god-term or devil-term by the two sides to this debate, mostly either with no definition or without consistent recourse to previously stated definitions, which makes it not so much a debate as two groups of people talking past each other while conjuring up rival imagery.

> As stated above, the only IPCC scenario without technological speculation requires a reduction of demand.

Same problem with “demand” as with growth and consumption. What does it mean? Total resource inputs extracted per capita? Some measure of use-value consumed per capita? In conventional terms it means the total money value of goods and services consumed but — again — that’s a meaningless and irrational metric because it treats waste as consumption.

Back to Definitions. The most helpful thing I’ve seen, in regard to recasting the debate in concrete terms rather than evocative imagery, is an article linked by the three coauthors,[56] which states ten concrete proposals for achieving degrowth. The proposals are almost entirely concerned with restructuring the economy so as to eliminate irrationality, waste production, and waste consumption. Although the article states little to nothing about the effects on individual consumption of use-value, the proposals are likely to result in major reductions both in the consumption of energy and other material inputs, and in the GDP. In other words, a maximum of concrete discussion of how to achieve the central goals of actual degrowth, and a

56 Giorgos Kallis, “Prosperity without growth: 10 policy proposals for the new left,” *The Ecologist* February 28, 2015 <https://theecologist.org/2015/feb/28/prosperity-without-growth-10-policy-proposals-new-left>.

minimum of empty rhetoric centered on the imagery conjured up by the words “growth” and “consumption.”

The coauthors refer to “[a] decline in economic activity,” which by itself is unsatisfactory for the same reasons that so many of the other terms are unsatisfactory. But in an adjoining paragraph they clarify that some, most, or all of the decline in “economic activity” will amount to “unnecessary waste,” which is quite helpful. And they directly address Phillips’s example of refrigerators, pointing out the large share of total refrigerator usage that goes towards waste. This includes massive amounts of food thrown away, energy lost through doorless supermarket refrigerator display cases, and refrigeration of food shipped long-distance that would be more efficiently grown locally. I would add that, with a significant shift towards intensive forms of community agriculture — which are more efficient than factory farming in terms of both output per acre and resource consumption — a considerably larger share of fresh produce would be consumed on a just-in-time basis either from on-premises kitchen gardens or neighborhood farmers’ markets.

Even more helpful, Hickel himself drops a hint that he views degrowth as involving a reduction in GDP, insofar as he denies that resource consumption can be decoupled from the GDP.[57] And elsewhere he implicitly equates “growth” to “GDP growth.”[58]

On the other hand Hickel makes the puzzling statement that “if we were to cap global GDP at its present level then the only way to eradicate poverty would be through redistribution: reduce the income share of the richest and shift it to the poorest.”[59] This implies that per capita GDP is a meaningful measure of access to concrete use-values, which it is not (for reasons which I will discuss in detail in the final section). If what he actually means by “redistribution” is redistributing consumption of energy rather than raw resource inputs, rather than actual use-values, he should specify this. And again, I think he seriously underestimates the extent to which poverty can be reduced by better use of existing inputs.

57 Hickel, “Ecomodernism and the Sacred Shibboleth,” *Jason Hickel Blog*, May 15, 2018 <https://www.jasonhickel.org/blog/2018/5/15/ecomodernism-and-the-sacred-shibboleth>.
58 Hickel, “Why Branko Milanovic is Wrong About De-Growth,” *Jason Hickel Blog*, November 19, 2017 <https://www.jasonhickel.org/blog/2017/11/19/why-branko-milanovic-is-wrong-about-de-growth>.
59 Hickel, “Why Branko Milanovic is Wrong About De-Growth.”

To be frank, GDP is such an irrational and meaningless accounting metric that nobody should be invested in keeping it around, or concerned at the prospect of seeing it reduced. GDP is nothing but a measure of the total monetary value of all inputs consumed. Hickel is right in pointing to the nature of "growth" as *money* growth, a process that is inherent in capitalism itself because of the imperatives of accumulation, self-valorization and extended reproduction.

In a subsequent rejoinder in the same publication a week later, three other authors raised some critical questions about the concept of "growth" itself — a welcome development which has been sadly uncommon for either side in the debate.

> Degrowth is a contested idea. However, it is *not* the same as recession (negative GDP growth) and imposed austerity, as are experienced when the capitalist growth machine stalls. Because 'degrowth' can evoke misleading images of decay and regression, some thinkers and advocates for a radical reimagining and reshaping of the economic system speak instead of 'post-growth' models. Yes there needs to be *radical reduction in demand* for forms of consumption and production that cannot be sustained ecologically. But this must come from a *reorientation of economic purpose* from away from maximisation of market value.
>
> Degrowth and post-growth advocates contend that we need to focus on the *ends of human wellbeing and ecological health*. Economic tools and policies are a means to those ends. The growth economy as we know it is fixated on *growth as an end*, not just as a means. Its defenders, like Leigh Phillips, fail to ask the fundamental questions posed by degrowth and post-growth advocates. When we speak of economic growth in a world of limits, we have to ask always, growth of *what, where, for whom, with what impacts*, and *for how long*?[60]

This passage explicitly ties "growth" as the term is commonly used to the quantitative values of GDP and market value, points to the fact that the capitalist growth model has pursued increases in these values as ends in themselves divorced from any connection to material use-value or quality of

60 Ian Christie, Ben Gallant and Simon Mair, "Growing pain: the delusion of boundless economic growth," *Open Democracy*, September 26, 2019 <https://www.opendemocracy.net/en/oureconomy/growing-pain-delusion-boundless-economic-growth/>.

life, and proposes shifting the terms of discussion on “growth” to the question of what material values are being increased for whom.

OVERVIEW OF THE DEBATE

Reading through the rhetorical obfuscation and ambivalent word choices on both sides, I find one substantive common denominator in what degrowth advocates actually propose. Degrowth is, ultimately, a fundamental shift in economic models and accounting systems. It is a shift away from an economic model based on extensive addition of material inputs which are artificially abundant and cheap because of enclosure, and from an accounting model that treats the consumption of inputs and the collection of tribute as the creation of value.

But we should probably find a better term than “degrowth” because “growth” itself is a word that conjures up all kinds of visions and associations to different people, and those associations tend to overwhelm whatever substantive content it possesses. Is your goal reduced resource extraction, less energy use, a smaller ecological footprint? Then say so. Do you want to eliminate waste production and non-productive economic activity? Then say so.

The fighting over emotional imagery associated with the words “growth” and “degrowth” makes it difficult even to distinguish legitimate areas of disagreement from swatting at verbal phantasms. Although there are real areas of substantive disagreement, at least as much of the dispute can be traced to something of a “two cultures” problem.

On the ecomodernist side, at least as exemplified by Phillips, this derives from a version of “Marxism” that amounts to the vulgar Marxist aesthetic sensibilities I described earlier. But Phillips’s affinity for gigantism and centralization, and his aversion to the local and vernacular, is in no way integral to the core ecomodernist philosophy. On the degrowth side, it reflects an excessive skepticism regarding the potential of technology and a tendency to dismiss enthusiasm for the potential ecological benefits of technological progress as morally equivalent to the neoliberal sales pitches of Newt Gingrich and Dotcom-era techbros. But whatever genuine technophobia exists on the part of some subset of degrowthers, likewise, is not integral to the ideology as such.

Both degrowthers and ecomodernists mostly seem to agree on the substantive goal of reducing resource consumption, which is the core goal of the degrowth movement itself. And degrowthers mostly agree that the first line of attack in reaching that goal is eliminating waste production and increasing efficiency.

At any rate, to the extent that both sides do agree on the imperative of reducing resource consumption to levels compatible with carrying capacity, they should explicitly acknowledge the fact — at which point everybody involved will be a "degrowth" advocate, in the most important sense. At that point, the prospective effect on GDP, whether standard of living can be decoupled from resource consumption, etc., become secondary issues.

Most of the actual debate is over stuff like this and the mental imagery the words "growth" and "degrowth" evokes (hence all the blather about "austerity" and "Malthusianism," and the equation of "decoupling" to neoliberal technofixes, respectively).

Insofar as there's a real debate in operational terms — and this debate fades in and out of the background noise like a radio station with a weak signal — it's over whether eliminating waste production by itself is enough to reduce energy use and resource extractions by the desired amount without reducing the material standard of living.

And the degrowth movement's hostility to the idea of decoupling is unfortunate and involves — like much of the rest of the debate — considerable ambiguity. It's entirely reasonable to doubt that resource consumption can be decoupled from GDP, given the nature of GDP itself as an accounting metric that makes no distinction between waste production/consumption and production/consumption that directly contributes to use-value. And to the extent that both sides are debating whether GDP can be decoupled from resource extraction, it is an unfortunate diversion.

But it's vital to consider the feasibility of decoupling resource consumption from *standard of living*, through technological advancement. The two kinds of decoupling are entirely different things. And the progress of the debate, through conceptual clarity and isolation of the areas of disagreement, is hindered by the ambiguous use of terms like "decoupling" and "growth," and the emotive imagery associated with them by those who see them as

god-terms or devil-terms, respectively.

What all sides are agreed upon — or *should* be agreed upon — is that, first, total energy and resource consumption should be limited to the amount compatible with sustainable yield and with zero net carbon emissions. Second, that structural rationalization and technological advances in efficiency should be combined to maximize the standard of living consistent with those levels of resource input. And third, that whatever level of material consumption is ecologically sustainable should be justly distributed and coupled with the abolition of privilege.

These things are not only compatible with, but necessary conditions for, both “degrowth” properly understood and “ecomodernism” properly understood. And whether this results in “growth” or “degrowth” in terms of some irrational metric like GDP is beside the point.

Ultimately the real question is whether technological progress and an improved standard of living are compatible with eliminating fossil fuel use and reducing resource extraction to sustainable levels.

Simply put, either a given agenda will reduce the total consumption of fossil fuel energy and other material inputs or it won’t. If it does it’s degrowth, regardless of what accounting metric you use or whether that metric rises or falls. Phillips argues that we can maintain or improve the prevailing standard of living, while decoupling the production of that living standard from the consumption of material inputs with the help of technical innovation. In other words, he’s arguing for degrowth. And the people he criticizes are, in essence, arguing for the same thing. The actual “debate,” if there is one, comes down more to a rhetorical sleight of hand by which “degrowth” is associated with “Malthusianism,” “austerity,” or outright neo-primitivism than to disagreements in material terms. If there’s a disagreement in material terms, it’s over secondary questions like whether degrowth in resource consumption can be decoupled from growth as measured by GDP, whether GDP is even a significant measure of anything *but* waste and resource consumption, or whether there’s sufficient waste production at present to reduce resource consumption without affecting real standards of living.

So we are all agreed, or should be agreed, both that 1) resource extraction should be limited to sustainable levels, and 2) we should pursue both

economic rationalization and technological development in order to use the specified level of resource inputs to generate the maximum possible quality of life. In this sense, we are all degrowthers and we are all ecomodernists.