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## DEGROWTH: A DEFENCE

**D**EGROWTH, OR A ‘green new deal’? Robert Pollin’s contribution to the recent debate on environmental strategy in these pages counterposes the two paths that currently dominate radical discussion of this issue. That they do not exhaust it is clear from the other contributors: Herman Daly, the Grand Old Man of ecological economics, reiterates his call for a ‘steady state’ economy in his interview with Benjamin Kunkel. Troy Vettese, drawing on the example of the seventeenth century’s Little Ice Age, argues for a ‘natural geo-engineering project’ to lower global temperatures through reforestation, and against mooted artificial geo-engineering solutions, which propose to manipulate the Earth’s cloud cover, alter the chemical composition of the oceans or release a ‘solar shield’ of sunlight-reflecting sulphate particles into the upper atmosphere. At the same time, Mike Davis’s discussion of the painstaking archival research by Emmanuel Le Roy Ladurie into the evidence for the Little Ice Age in France illuminates the limits of our knowledge of climate history. What follows will focus on Pollin’s trenchant criticisms of degrowth and the version of ‘green growth’ he offers as an alternative.<sup>1</sup>

Pollin’s starting point is the urgent need for emissions reduction to stabilize global temperatures, as set out by the International Panel on Climate Change. Other environmental issues—biodiversity, clean air and water, liveable cities—as well as political questions—social and international equality, for example—are subordinated to the imperative of moderating climate change. ‘There are no certainties about what will transpire if we allow the average global temperature to continue rising. But as a basis for action, we only need to understand that there is a

non-trivial possibility that the continuation of life on Earth as we know it is at stake.<sup>2</sup> His programme calls for an extra 1.5–2 per cent of global GDP to be invested annually in a fast-growing programme of clean, non-nuclear, renewable-energy provision, while fossil-fuel industries will be shrunk by 35 per cent over the next twenty years, an annual 2.2 per cent. Taking aim at proponents of degrowth, he argues:

It is in fact absolutely imperative that some categories of economic activity should now grow massively—those associated with the production and distribution of clean energy. Concurrently, the global fossil-fuel industry needs to contract massively—that is, to ‘de-grow’ relentlessly over the next forty or fifty years until it has virtually shut down.<sup>3</sup>

This scenario is based on the ‘absolute decoupling’ of economic growth from fossil-fuel consumption—the former can expand while the latter contracts. Pollin claims this will drive down CO<sub>2</sub> emissions ‘by 40 per cent within twenty years, while also supporting rising living standards and expanding job opportunities’. He provides costings for the social support and retraining of fossil-fuel workers: for the US as a whole this amounts to \$600 million a year, or 0.2 per cent of the Federal budget. There are no costings for compensating the giant oil, gas and coal corporations; instead, Pollin notes in passing that these behemoths ‘will have to be defeated’. Although he concedes the moral case for rich countries to reduce their per capita emissions to the level of poorer ones, he considers it politically unrealistic for the US to do so. Under his programme, US emissions will fall from 16.5 to 5.8 tons per capita after twenty years, but they would still be three times the world average and three times higher than China’s per capita emissions, which would fall to 2.3 tons. To compensate, Pollin hopes the US will provide poorer countries with financial help for the transition.

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<sup>1</sup> Robert Pollin, ‘De-growth vs a Green New Deal’, NLR 112, July–Aug 2018; Herman Daly and Benjamin Kunkel, ‘Ecologies of Scale’, NLR 109, Jan–Feb 2018; Troy Vettese, ‘To Freeze the Thames’, NLR 111, May–June 2018; Mike Davis, ‘Taking the Temperature of History’, NLR 110, Mar–Apr 2018.

<sup>2</sup> Pollin, ‘De-growth vs a Green New Deal’, p. 5.

<sup>3</sup> Pollin, ‘De-growth vs a Green New Deal’, pp. 7–8. The ‘degrowth movement’ has been organized through the Research & Degrowth network, founded in 2001 by Joan Martinez-Alier (Universitat Autònoma de Barcelona) and Serge Latouche (University of Paris-Sud). Since 2008 it has held biennial international conferences in Paris (2008), Barcelona (2010), Montréal/Venice (2012), Leipzig (2014), Budapest (2016) and Malmö (2018). For an early analysis from this viewpoint, see J. Martinez-Alier, ‘Political Ecology, Distributional Conflicts and Economic Incommensurability’, NLR 1/211, May–June 1995.

Taking issue with Kunkel's opening flourish, that 'fidelity to GDP growth amounts to the religion of the modern world', Pollin counters that, under financialized neoliberalism, the real religion is not growth but maximizing profits 'in order to deliver maximum incomes and wealth for the rich'. While agreeing with the degrowth movement that much global-capitalist production is wasteful and that GDP is a flawed metric, he argues that degrowthers have not produced a viable set of policies to cut greenhouse-gas emissions enough to stabilize global temperatures. Most damningly, it would seem, Pollin charges that degrowth would create soaring levels of poverty and unemployment, while failing to arrest climate change. According to his calculations, a 10 per cent contraction of the global economy, following a degrowth agenda, would create a world-historic slump, with global unemployment rocketing and declining living standards for poor and working-class people, but would still miss IPCC targets.

### *Limits of decoupling*

How well do these claims stand up? Pollin's argument that the drive for profits, not GDP growth, is the real 'religion' of financialized neoliberalism fails to acknowledge that both neoliberalism and financialization are part of capitalism's response to the crisis of profitability that arose following the breakdown of the post-war settlement between capital and labour. The underlying problem is not 'neoliberalism' but the self-expanding system of capitalism, which turns everything into a commodity (real or fictitious), and so threatens the basis for the social and physical reproduction of human society at a variety of levels. Perhaps it is this misidentification of the villain(s)—targeting neoliberalism, not the capitalist mode of production—that helps Pollin to propose what is essentially a social-democratic approach of mitigated capitalism. At the same time, there is no doubt that the imaginary of GDP growth remains a powerful ideological force in its own right, mystifying the real economic processes at stake and instead focusing debate on the idea of expansion as an inherent good. It has a significant influence on decisions regarding production, distribution and consumption, and on the financial system that facilitates each of these elements.

Pollin is partially right to argue that the degrowth movement has not prioritized the formulation of detailed policy proposals on reducing greenhouse-gas emissions; its contributions have generally concentrated

on showing how GDP growth makes such reduction harder. However, there are degrowthers who have addressed this question. Kevin Anderson, certainly an ally of degrowth, has proposed a Marshall Plan to decarbonize energy supplies, as well as shifts in ‘behaviour and practices’ such as frequent flying.<sup>4</sup> Energy and resource caps feature in the work of ecological economist Blake Alcott, for example, and the ‘cap and share’ variant of this approach has been taken up by Brian Davey and the Irish NGO, FEASTA.<sup>5</sup> Again, Pollin is right to call for a specific sectoral analysis of what needs to happen to make the ‘dirty’ sectors contract and the clean sectors—the ‘replacement economy’—expand. Proponents of degrowth have never argued that *some* sectors should not grow, and shutting down fossil-fuel industries has been a strong strand in their work; it was, for example, the main extra-academic project of the Leipzig degrowth conference in 2014. Crucially, however, this sectoral adjustment needs to take place within an overall envelope that contracts, so that aggregate human activity remains within safe planetary limits and its ecological footprint does not exceed the available biocapacity. This is not just a matter of carbon; it involves water, air, forests, croplands and fishing grounds, as affected by the processes of production, consumption and trade.

Pollin’s argument is posited on the ‘absolute decoupling’ of economic activity from fossil fuels. He rightly emphasizes that the more modest goal of ‘relative decoupling’—‘through which fossil-fuel consumption and CO<sub>2</sub> emissions continue to increase, but at a slower rate than GDP growth’—is not a solution. He goes on to argue that it’s fine for economies to continue growing as rapidly as China and India have been doing, so long as the growth process is completely delinked from fossil fuels. However, Pollin doesn’t confront the difficulties involved in ensuring that this absolute decoupling will occur. It’s implausible that Chinese and Indian growth rates could have been so high *without* soaring fossil-fuel

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<sup>4</sup> See for example Kevin Anderson, ‘Manchester, Paris and 2°C: Laggard or Leader’, presentation available on the Greater Manchester Combined Authority website. In the assessment of Anderson and his co-author Alice Bows, ‘only the global economic slump has had any significant impact in reversing the trend of rising emissions’: ‘Beyond “Dangerous” Climate Change: Emission Scenarios for a New World’, *Philosophical Transactions of the Royal Society*, vol. 369, no. 1934, 2011.

<sup>5</sup> Blake Alcott, ‘Impact Caps: Why Population, Affluence and Technology Strategies Should Be Abandoned’, *Journal of Cleaner Production*, vol. 18, no. 6, 2010; Brian Davey, ed., *Sharing for Survival*, Dublin 2012.

consumption—not to mention the carbon emissions caused by changed land-use and the production of concrete and steel. Pollin appeals to a World Resources Institute study which claimed to show that in a number of advanced economies, including the US, Germany and the UK, GDP growth had indeed been decoupled from CO<sub>2</sub> emissions for the period 2000–14.<sup>6</sup> On closer inspection, however, there are serious problems of data quality in the WRI paper, including the use of different reporting protocols by different countries, missing data—emissions from international shipping and aviation are not counted in the national totals, for example—and the ‘construct validity’ of proxy measures: whether they actually measure what they purport to. The observed effects may reflect one-off or reversible changes—such as the impact of the 2008 economic crisis.<sup>7</sup>

In addition, these supposedly ‘decoupling’ countries have also been de-industrializing, switching to financialized-capitalist economies with large service sectors, and importing commodities manufactured elsewhere. This creates further problems on both sides of the ‘economic growth/carbon emissions’ equation. First, through outsourcing production, firms headquartered in the rich countries obtain goods produced at poor-country wage costs, but sold at rich-country consumer-market prices, the sales then figuring in the rich country’s GDP.<sup>8</sup> In other words, part of the GDP growth attributed to the supposedly ‘decoupling’ advanced economies is the result of labour processes in poorer countries. The GDP of rich countries is inflated through this neo-colonial value capture, but the emissions are counted in the emerging economies in which the commodities were produced. This would appear to qualify, if not invalidate, the decoupling claim. The problem is compounded by the fact that the GDP figures enter into both sides of the comparison, since as well as being one of the two variables considered, GDP is used to compute consumption-based emissions which are not directly measured. In any event, the rate of emissions reduction in the apparently decoupling countries would be nowhere near sufficient to avert climate catastrophe.

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<sup>6</sup> Nate Aden, ‘The Roads to Decoupling: 21 Countries Are Reducing Carbon Emissions While Growing GDP’, World Resources Institute blog, 5 April 2016.

<sup>7</sup> For a more detailed critique, see Mark Burton, ‘New Evidence on Decoupling Carbon Emissions from GDP Growth: What Does It Mean?’, Steady State Manchester blog, 15 April 2016.

<sup>8</sup> This is not the only mechanism by which the core countries’ income is inflated; transfer pricing by multinationals is another.

As Anderson and Bows have shown, the developed economies—known as ‘Annex 1’ parties in the Kyoto Accord—need to be cutting emissions at 8 to 10 per cent a year, whereas in the ‘decoupling’ countries emissions were falling at a mere 2 per cent.<sup>9</sup> Meanwhile, global emissions for the period 2000–14 actually increased by 45 per cent, with the world economy as a whole showing no signs of decoupling. Pollin therefore risks underestimating the rate of emissions reduction required to avoid catastrophic climate change.

Moreover, when the full picture of material flows through national economies is considered—the ‘physical throughput’ emphasized by Herman Daly—it turns out that there is no decoupling at all between resource use and GDP growth.<sup>10</sup> While Pollin is right to emphasize carbon emissions, it’s also clear that present levels of production-consumption (let alone their growth) require materials which are, to varying extents, becoming scarcer.<sup>11</sup> The cost of obtaining them has risen, putting a growing strain on the global economy—the dynamic that underpinned the *Limits to Growth* business-as-usual scenario, with its system crash in the mid twenty-first century. Their extraction entails the destruction of livelihoods and ecosystems across the world, and particularly in the global South. All this would seem to put degrowth firmly back on the agenda, since to achieve a radical reduction in emissions we need a global economy that is considerably smaller in material terms.<sup>12</sup>

The scale of the world economy exceeds the Earth’s biological and physical capacity to absorb the impacts and restore the resources used. The Global Footprint Network currently estimates humankind’s collective material footprint at 1.7 times the available biocapacity. Daly is correct to argue that population size is an important part of environmental

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<sup>9</sup> Anderson and Bows, ‘Beyond “Dangerous” Climate Change’.

<sup>10</sup> Thomas Wiedmann, Heinz Schandl et al., ‘The Material Footprint of Nations’, *Proceedings of the National Academy of Sciences*, vol. 112, no. 20, May 2015. See Daly and Kunkel, ‘Ecologies of Scale’, p. 89.

<sup>11</sup> Carlos de Castro, Margarita Mediavilla et al., ‘Global Wind Power Potential: Physical and Technological Limits’, *Energy Policy*, vol. 39, no. 10, October 2011; ‘Global Solar Electric Potential: A Review of Their Technical and Sustainable Limits’, *Renewable and Sustainable Energy Reviews*, vol. 28, December 2013.

<sup>12</sup> Post-extractivism—the movement against extractivism in the global South—has been closely allied with degrowth. See Alberto Acosta, ‘Post-Growth and Post-Extractivism: Two Sides of the Same Cultural Transformation’, *Alternautas*, March 2016; Alberto Acosta and Ulrich Brand, *Salidas del laberinto capitalista: Decrecimiento y postextractivismo*, Barcelona 2017.

impact.<sup>13</sup> However, while global emissions are still rising, the rate of population growth has slowed significantly—increasing from 4 billion to 7 billion between 1975 and 2010, but only projected to reach 8 billion by the mid-2020s and around 9 billion by 2050.<sup>14</sup> The main driver of the slow-down is the declining rate of fertility, already below replacement level in Europe, though higher in India and sub-Saharan Africa. Historically, rising living standards, urbanization and education, particularly for women, have been associated with falling fertility, while poorer and more unequal countries tend to have higher rates. If these conditions were tackled, and primary health care as well as modern contraception made freely available, the global population could stabilize and even begin to decline before 2050.

### *Green expansion?*

What of Pollin's proposal to stabilize the climate by investing an annual 2 per cent of global GDP in clean energy? His argument is that this switch to renewables can cut global emissions by 40 per cent within twenty years 'while also supporting rising living standards and expanding job opportunities'. So far, however, the expansion of renewables has come as an addition to fossil-fuel supplies, rather than as a replacement for them (see Table 1, overleaf). The countries that are most advanced in developing renewable energy, such as Denmark and Germany, have also expanded their consumption of fossil fuels, particularly coal; the same applies to the US, China, India, Canada and Australia. To replace oil, coal and gas with other sources of energy would take something like an 18-fold increase in renewables deployment, at current levels of energy consumption. If worldwide energy usage were to increase, as Pollin indicates, then the challenge would be even greater.

The contradiction of the 'green new deal' is that GDP growth makes reducing emissions far harder. Expanding the economy inevitably

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<sup>13</sup> 'Environmental impact is the product of the number of people times per capita resource use': 'Ecologies of Scale', p. 93.

<sup>14</sup> Projections beyond 2050 involve a high degree of uncertainty. In a 2014 paper Patrick Gerland and his colleagues estimate a global population between 9.6 and 12.3 billion in 2100. See Gerland et al., 'World Population Stabilization Unlikely this Century', *Science*, vol. 346, no. 6206, 10 October 2014; see also K. C. Samir and Wolfgang Lutz, 'The Human Core of the Shared Socioeconomic Pathways: Population Scenarios by Age, Sex and Level of Education for All Countries to 2100', *Global Environmental Change*, vol. 42, January 2017, pp. 181–92.

TABLE I: *Primary Energy Consumption by Fuel, Million Tonne Equivalents*

	1970	1980	1990	2000	2010	2020
Oil	2,253	2,986	3,153	3,580	4,021	4,564
Gas	890	1,291	1,767	2,182	2,874	3,534
Coal	1,483	1,813	2,246	2,385	3,636	3,697
Nuclear	18	161	453	584	626	674
Hydro	266	385	487	601	779	1,015
Renewables	2	7	35	59	234	794
Total	4,912	6,642	8,142	9,390	12,170	14,278

Source: BP Energy Outlook, 2018.

means more extraction, production, distribution and consumption, and each of these processes produces emissions. If Pollin's renewable-energy investment plan also succeeded in generating tens of millions of new jobs and raising living standards worldwide, as he hopes, that would mean a further increase in the consumption of carbon-intensive services and products—unless the relevant industries were thoroughly decarbonized, probably in conjunction with caps on energy use, extraction and land-use conversion.

In theory, contracting the world economy need not hurt the relatively poor, since high emissions are strongly correlated with concentrations of wealth and income: globally, the top 10 per cent of emitters contribute approximately 45 per cent of greenhouse-gas emissions, while the bottom 50 per cent contribute only 13 per cent.<sup>15</sup> Deep economic retrenchment can be managed equitably, as was demonstrated during the hardship of the Special Period in Cuba in the early 90s, when punitive US sanctions exacerbated the impact of the collapse of the Soviet Union. The possibility that contraction might take place in a properly democratic fashion was explored by André Gorz—acclaimed as a forerunner by the degrowth movement—who called for forms of workers' self-management as a

<sup>15</sup> Lucas Chancel and Thomas Piketty, 'Carbon and Inequality from Kyoto to Paris: Trends in the Global Inequality of Carbon Emissions (1998–2013) and Prospects for an Equitable Adaptation Fund', Paris School of Economics, November 2015, p. 50.

means to ‘restore the correlation between less work and less consumption, on one hand, and more autonomy and more existential security on the other’.<sup>16</sup> Pollin’s proposals for a ‘just transition’ to renewable energy that would also contribute to greater global equity are welcome; but so far work in this area, including Pollin’s, has tended to concentrate on the fossil-fuel industry.<sup>17</sup>

Finally, Pollin argues that a degrowth agenda to shrink global GDP by 10 per cent over the next twenty years would entail a slump four times deeper than the 2008 recession, with world unemployment soaring amid steep spending cuts, yet the net effect would be to push CO<sub>2</sub> emissions down by a mere 10 per cent—from 32 to 29 billion tons—nowhere near the necessary fall to 20 billion tons by 2040. This is correct. On its own, managed economic contraction—which isn’t the same as degrowth, but is a component of it—will not bring about the kind of emissions cuts we need. But as we have seen, maintaining aggregate expansion of the economy, tracked by GDP growth, will add to the hill that has to be climbed. Besides, even the elimination of fossil fuels may not be enough to ensure the future of life on Earth, given the increasing pressures on ecosystems and scarce resources. Capitalism’s relentless quest for new forms of profit-making, and for natural resources to exploit and extract, is not limited to oil, coal and gas.

Even if this is not on the cards in the immediate future, an ecologically sustainable world economy would have to be delinked from the drive for profits, and ordered instead around the principle of deploying human capabilities to meet human needs, within the limits of Earth’s biocapacity. In other words, it would be a socialist mode of production of some sort. This would need to involve the equitable control and reduction of the material scale of the global economy, together with targeted curtailment of emissions.<sup>18</sup> That means drastic action to cut industrial production (of goods that are not needed, that involve high energy consumption, that

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<sup>16</sup> André Gorz, ‘Political Ecology: Expertocracy versus Self-Limitation’, *NLR* 1/202, Nov–Dec 1993; see also *Ecology as Politics*, London 1987.

<sup>17</sup> See the examples of local outcomes for energy workers in Europe, China, Australia, Argentina and the US cited in Anabella Rosenberg, ‘Strengthening Just Transition Policies in International Climate Governance’, Stanley Foundation, Muscatine, IA 2017.

<sup>18</sup> Decreasing the scale of the global material economy is proposed here as a means to an end, emissions reduction—a necessary condition for strong sustainability. Arguably, this voluntary downscaling, one dimension of degrowth, may be a desirable end in itself.

do not last) as well as industrial construction (roads, airports, speculative skyscrapers and shopping malls), industrial agriculture (fossil-fuel dependent monocultures that destroy soils and water supplies, and require huge energy inputs to bring food to the table) and industrial distribution (sea, air and road transportation systems, all highly dependent on fossil-fuel combustion). The working week would be much shorter, and consumption in the developed world, and by elites in the developing world, severely circumscribed. Heating would be provided entirely by electricity generated from renewable sources. Transport would largely be public, powered by electricity or hydrogen fuel cells. Construction would no longer involve the use of cement or steel. Agriculture would be guided by the principles of agroecology: biodiversity and complexity as the foundation for soil quality, plant health and crop productivity; diversified farming practices, including crop rotation, polycultures, agroforestry, green manures, crop-livestock mixtures, cover crops and mulching.<sup>19</sup>

None of this suggests that it would be easy to steer the world economy towards its ecologically consistent size. Indeed, it perhaps hardly seems likely that this will happen. Yet that does not mean there is any escape from the fundamental problem that the global economy now far exceeds the capacity of Earth's systems to sustain its demands; expanding it further can only make matters worse. The mitigated capitalism of a 'green new deal' will be little help, because it leaves the overall system of commodification, and the motors of expansion, firmly in place. How degrowth might happen we don't know. A fortuitous combination of popular struggle and collapse of the capitalist system is perhaps the only route. That isn't to say that good governmental action, including investment in clean energy and demand-reduction measures, can't help. But for it to work, government policy would have to break from its normal mode of handmaiden to global capital. Unrealistic? Implausible? Probably, but no more than Pollin's imaginary of green accumulation to the rescue.

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<sup>19</sup> Third World Network, *Agroecology: Key Concepts, Principles and Practices*, Penang and Berkeley 2015.