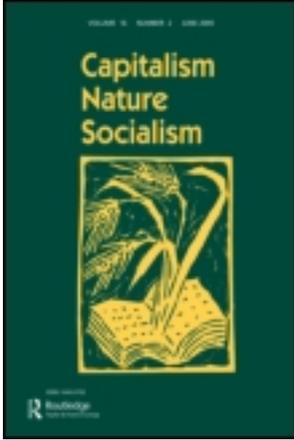


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## A Critique of Degrowth and its Politics

*David Schwartzman\**

The degrowth program is highly problematic because of its failure to analyze the qualitative aspects of economic growth and its emphasis on the local economy without recognizing the urgency to address global anthropogenic change from a transnational political perspective. In particular, a major challenge humanity now faces is to rapidly implement a prevention program to avoid catastrophic climate change. Demilitarization, solarization, and the creation of agroecologies are critical if we are to have any chance of success. This demands struggle on all spatial scales, from the neighborhood to the globe.

While degrowth proponent Mauro Bonaiuti (2012; this issue) provides an interesting discussion of the social limits of economic growth driven by capital reproduction, I find the paper's degrowth argument shallow and frankly incapable of providing a viable political agenda for confronting the converging economic and ecological crises of real existing fossil fuel nuclear capitalism in the face of the growing threat of catastrophic climate change ("C3"). Specifically, it fails to come to terms with *qualitative versus quantitative* aspects of economic growth and the critical difference between using the current energy supplies and a solarized infrastructure. The concept of economic growth should be deconstructed, with in-depth consideration of its qualitative versus quantitative aspects, particularly its differential ecological and health impacts. Growth of what are we speaking? Weapons of mass destruction, unnecessary commodities, SUVs versus bicycles, culture, information, pollution, pornography, or simply more hot air? What growth is sustainable in the context of biodiversity preservation and human health, and which is not? Bonaiuti fails to confront these questions and instead lumps all growth into a homogenous outcome of the physical and political economy.

Most of Bonaiuti's paper is occupied with an examination of the social limits of economic growth. However, it fails to account for the highly contradictory character of corporate-driven globalization. For example, now for the first time in history, a majority of humanity lives in urban areas. Population density in the global South has grown alongside great inequalities (Davis 2006). On the other hand, a vast new terrain of class struggle has emerged centered on the potentials of green urbanism in the context of the growing threat of C3 (Davis 2010). Davis' argument for a green (and red) approach to urban reconstruction is very welcome. Even now cities like

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New York are much more energy efficient than suburbia. And in China, now the greatest carbon emitter on the planet (not per capita, of course), almost half its population is urban (46 percent), with urbanization rapidly increasing. Davis points out that very significant reductions in carbon emissions could potentially occur with aggressive energy conversion in buildings and transportation centered in and around urban areas. So the urban question as a nexus of class struggle is now also a climate security challenge. This huge challenge is also a huge opportunity to create that other world that is possible—a green and red utopia—especially in metropolitan areas. Undoubtedly, this is a vision that will attract many more adherents than the “end of growth, we must all sacrifice” mantra of so many neo-Malthusian greens. Clean air and clean water, meaningful employment, and more free creative time for all on this planet should be the transnational red and green program. One more example of degrowth’s limited vision should suffice: economic growth created globalized information technology with its immense potential for a transnational movement, a development made possible by this revolution in communication.

Degrowth proponents’ argument with respect to growth in the physical economy and its ecological impacts explicitly rests on the “bioeconomic criticism” of Georgescu-Roegen. Apparently they either ignore or are unaware of the published critiques of Georgescu-Roegen and his followers (Schwartzman 1996, 2008, 2009a, 2009b, and references cited within), specifically regarding the fallacious basis of the so-called 4<sup>th</sup> law of thermodynamics reworded in Bonaiuti’s paper (2012). The Earth’s surface is open to energy transfer to and from space, but is effectively closed to mass transfer. Hence the finite supply of fossil fuel resources to drive the economy can conceivably be transcended in our open Earth system by sufficient creation of a high-efficiency collection of the solar flux to Earth. Global solar power will then pay its “entropic debt” to space as non-incremental waste heat, without driving us to tipping points of C3.

To be sure Gross Domestic Product is a metric of unsustainable growth because the ever-expanding scale of capital reproduction in the actually existing global capitalist economy is powered by fossil fuel/nuclear/biofuel/big hydropower energy. The imperative of converting the Military Industrial Fossil Fuel Nuclear Terror Complex (“MIC”) into a high-efficiency solar/agroecological economy will certainly entail real economic growth, as even measured by conventional indices, with a potential of employing virtually all the unemployed on this planet. Thus the call should be: Degrow MIC, grow the new green economy! Only once this project is completed, hopefully by 2050, will it be relevant to talk about a global steady-state economy, a new civilization I named Solar Communism (Schwartzman 1996).

### **How Much Energy Does Humanity Really Need?**

Answering this question is central to the issue of whether the global economy needs to grow or degrow. The human development index (HDI) is a UN-defined

measure of quality of life, a composite of life expectancy, educational level, and standard of living ([http://en.wikipedia.org/wiki/Human\\_Development\\_Index](http://en.wikipedia.org/wiki/Human_Development_Index)). While it may not be a perfect measure of quality of life, national HDI strongly correlates with life expectancy, arguably the best single metric of quality of life. Smil (2003, 2008) estimates a minimum requirement of 3.5 kilowatts per capita for high HDI. With this assumed minimum of 3.5 kW per capita multiplied by the present world population of 7 billion people, a global power capacity of 25 TW or 1.5 x the present capacity of 16 TW is inferred for a high HDI for everyone on this planet (1 Tera Watt (TW) =  $10^{12}$  watts). Hence, while the U.S. and several other countries need to reduce their energy consumption, given their wasteful use of energy, most of the global South suffers from energy poverty and requires a significant increase to achieve a “state of the art/science” quality of life (AtKisson 2009; Swedish Society for Nature Conservation 2010).

A shift to wind- and solar-generated electricity as an energy source could reduce the required power level by 30 percent once a global system is created. “For example, only 17 to 20 percent of the energy in gasoline is used to move a vehicle (the rest is wasted as heat), whereas 75 to 86 percent of the electricity delivered to an electric vehicle goes into motion” (Jacobson and Delucchi 2009, 60). A shift to solar power would likely increase the quality of life for the same level of present energy consumption by reducing/eliminating the negative externalities of fossil fuels and nuclear power (e.g., the impact of air and water pollution on health). On the other hand, in the transition to that “other world that is possible” additional energy will likely be required to clean up the “mess” left by the historic dependency on fossil fuels and nuclear power, and in addition to repair the physical infrastructure and create green cities globally. Future progress in increased energy efficiency, such as dematerialization of information technology, will likely reduce the required minimum per capita consumption.

The die-off school of Peak Oil (e.g., Heinberg 2009) promises a future of unimaginable misery for most of the world’s people who now suffer from energy poverty. The degrowth argument promises little more. Nevertheless, while degrowth may be a problematic recipe for global restructuring, it should not be dismissed as a useless response to the unsustainable reproduction of capital. A reduction in certain kinds of consumption is imperative—especially in the global North and for elites in the global South—since numerous countries such as the United States are such profligate energy and material wasters. Thus arguments for degrowth such as those found in Latouche (2009) should be taken seriously insofar as they address economic activities that increase consumption of fossil fuels, especially coal and tar sands, the two most intense carbon emitters. Struggles against big projects such as the Medupi South African coal-fired power plant (Bond 2010) are imperative. Likewise, the growing urban organic farming and solar cooperative movements are inspiring examples of how communities can create sustainable alternatives and manage them on a local level, starting in neighborhoods and urban centers. However, not all big projects should be opposed. Infrastructure must be repaired and replaced, and the

immense contamination of our anthroposphere by industrial and military activities must be cleaned up—our responsibility to future generations. Solarization is already occurring on many scales and should continue at a more rapid tempo in the future. This includes ramping up installation of photovoltaics and solar water heaters on homes and apartment complexes and constructing huge offshore wind turbine installations and concentrated solar power in deserts. Likewise, the struggle for social management should range from the neighborhood to the globe, in varied forms of cooperative and nationalized ownership, enlarging the commons by first constraining then doing away with the rule of capital on our planet once and for all. This should be a central objective of the ecosocialist agenda for class struggle in the 21<sup>st</sup> century.

### Degrowth, North and South

Serge Latouche has been a leading proponent of the degrowth movement in Europe. In a recent article he argues that degrowth is the “only political project capable of renewing the Left” (2010) as it provides a “radical critique of consumption and of development. . . *ipso facto* a critique of capitalism.” Further, he maintains that the degrowth project is “not about substituting a “good economy,” *good* growth or *good* development for a bad one and repainting it green, or social, or equitable, with a stronger or weaker dose of state regulation or hybridization through a logic of the gift and solidarity economy. It is about *exiting* the economy.” I find this argument highly problematic for a number of reasons. First, there is no recognition of the qualitative versus quantitative aspects of growth, nor of the material requirements for a high quality of life, in particular the minimum energy consumption per capita. Second, it is a program available for only a minority of the world’s people, even in the global North. Who has the option to “exit the economy?” At best, we can welcome his degrowth program as pointing to the creation of local food- and energy-producing cooperatives as complementing and supporting class struggles in the real economy; at worst, it calls for a withdrawal from class struggle, a reprise of the (failed) 1960s hippy commune culture.

In a paper that recognizes the reality of energy poverty in the global South, Martínez-Alier (2010) provides a more fruitful conception of degrowth. He calls for research “on the environmental, technological, demographic, social and socio-psychological aspects of socially sustainable economic degrowth leading to a steady-state economy. . . in alliance with the environmental justice movements of the South” (2010, 10) and a “moderate economic degrowth (implying a lower social metabolism). . . a plausible objective for the rich industrial economies. This would be supported by the EJOs [Environmental Justice Organizations] and their networks in the South which are fighting in ecological distribution conflicts” (2010, 12). While I have argued that a steady-state economy is only conceivable as an ultimate outcome of global ecosocialist transition (Schwartzman 2009b), Martínez-Alier is right to emphasize the need to degrow unsustainable consumption in the global North. Further, he recognizes that

There are enormous inequities in the world, both between North and South, but also in the South and in the North. Some people use per year 250 GJ (gigajoules) of energy [equivalent to 8.0 kilowatt/person], most of which from oil and gas, other people manage with less than 10 GJ [or 0.3 kilowatt/person], including their food energy and some wood or dried dung for cooking.

The degrowth program puts much emphasis on local autonomy and struggle (Latouche 2009). But simply acting on a local or even a national scale is not sufficient. There is growing urgency for a transnational ecosocialist movement, a simple recognition that transnational capital and its military arm are blocking an effective and enforceable climate treaty for rapid decarbonization of global energy sources.

### **The Threat of Catastrophic Climate Change, a Huge Opportunity**

Bonaiuti and Latouche critique the capitalist mode of production but are rather vague with respect to what should replace it. For example, Bonaiuti (2012) recommends “other forms of economic and social organization more suitable to the new situation.” If we take these alternatives to be roughly equivalent to ecosocialism, then ecosocialist political practice needs a robust theory to transcend capitalism. Ecosocialist theory needs to fully engage the natural, physical, and informational sciences, in particular, climatology, ecology, biogeochemistry, and thermodynamics. Unfortunately, degrowth proponents take little notice of these sciences, particularly the real thermodynamics of open systems. These sciences will inform the technologies of renewable energy, green production, and agroecologies, whose infrastructure are to replace the present unsustainable mode. Twenty-first century socialism will be ecosocialism, or it will simply remain the vision of political sects.

There are two main threats to human civilization and biodiversity as we know it: a nuclear war (even on a regional scale) and C3. The huge challenge of ending both threats is also an unprecedented opportunity for terminating the rule of capital on the planet. Implementing a prevention program in time will likely require an end to Empire and a sharp reduction in the MIC. While individual capitalist economies may solarize their energy infrastructure, the now dominant role of the MIC in global capitalist reproduction makes its termination both an essential requirement for and a likely direct path to global ecosocialist transition. Thus, I have argued that the main obstacle to C3 prevention is the military-industrial complex—the core of global capital reproduction—with its colossal waste of energy and material resources, as well as its role as the driver of the imperial agenda that is preventing global equity and the cooperation needed to confront the threat of C3. Effective C3 prevention cannot be “business as usual,” one company at a time turning green; rather, it will be a revolution in both the physical and political economies that will, if realized, far surpass in a compressed time frame the industrial and scientific technical revolutions of the last 200 years. C3 prevention will require radical and rapid increases in energy

efficiency and decarbonization of the energy infrastructure, and not simply the incremental addition of renewable energy on top of the ever-increasing consumption of fossil fuels (the Jevons Paradox, see Foster, et al. 2010). I have argued there are three main components of this revolution accompanying an ecosocialist transition out of capitalism: demilitarization, solarization, and agroecology.

Recognizing the uncertainties of climatic models, a rapid and radical conversion of global energy to solar power may be the only way to bring down the nearly 400 ppm of atmospheric carbon dioxide to below the safe limit of 350 ppm in time to have a real chance of preventing C3. This solar conversion would have to include solar-driven carbon sequestration and a shift to agroecologies that can store carbon in the soil. We have the responsibility to do all we can to prevent irreversible shifts in our climate that may result in the end of civilization and biodiversity as we know it. This challenge will likely require very large-scale solar power systems to be built now and not postponed into a future when there are even higher cumulative emissions of carbon into the atmosphere.

The results of a model study show how existing solar technologies—especially wind turbines, concentrated solar power, and photovoltaics—can rapidly replace the unsustainable energy sources, using less than half of the existing reserves of conventional petroleum to create a carbon-free energy infrastructure if this transition begins very soon, and before these reserves are depleted (Schwartzman and Schwartzman, 2011). As previously argued, an expansion of the power capacity of this infrastructure over the present unsustainable level will likely be required to insure equity between the North and the South. Contingent on the success of transnational ecosocialist political practice, this potential transition will entail sustainable economic growth on a global scale, radically increasing meaningful employment and the quality of life for all, especially in the global South.

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