

## Will Economics Ever Become More...Ecological?

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“If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid”.

---[John Maynard Keynes](#)

I cite The Master because I don't think economists, working within “economics” in its present form can really address the crisis of limits we're facing—but I do think men and women who work as economists can. But only if they behave like dentists. Let me explain.

To review the last few years' weather reports, read public polls about fears of “global warming”, or listen to scientists yet again explain the effects of carbon-loading on the Earth's atmosphere—and ultimately the ability to sustain life—is, to say the least, quite unironically, chilling.

The UN lists five major consequences that are flowing from global warming: hotter temperatures; more severe storms; increased drought; warming, rising oceans; massive loss of species; major food shortages, especially for the poor; more pandemic health risks; poverty and forced displacement (and hence migration). And global warming is only one aspect of the crisis of biophysical limits we are apparently facing.

So when asked to suggest how “economics” might be reconfigured to reflect, operate and theorize within the limits of the biophysical world, to be honest, I paused and almost said “no”—because too many conflicted ideas and feelings enveloped me.

The question, as I see it, presumes—without saying so—what is widely (though not universally) held as true these days: that the earth environmentally is rushing toward human uninhabitability, and that the millions of co-resident species of all kinds with whom we share the earth, will suffer enormously as well, perhaps extinguished themselves.

There are certainly scientific analyses that don't embrace this sort of full apocalypticism—but nonetheless affirm varying degrees of it: some regions of the earth will become uninhabitable, they forecast; others will be left habitable only under radically-altered-and-insulated conditions; human life will thus likely survive but in radically reduced forms, in variety, condition and numbers. How many homo sapiens—and which homo sapiens, from which nations, races, genders, and classes—will be those survivors is at best gingerly addressed.

The cause for this bleak assault on “life”—a biological form of existence that to date has been discovered nowhere else in the universe—is, we now understand, us. We human beings seem to be literally manufacturing our own demise.

But that’s not quite right: it’s human beings through their organized use and misuse of the planet in just the last 200-300 years that bear the accusation. And, lest we forget, in those last 200-300 years it in truth has only really been some human beings in some societies who’ve been leading, organizing, and enforcing this use and misuse—and hence what’s likely to happen next. Before the 18<sup>th</sup> century, evidence for devastating human impact—at least on the planetary scale—was limited (though that’s hotly debated.)<sup>1</sup>

Those last 200-300 years are coincident of course with the rapid development of “capitalism”, a quite particular form and stage of human social development that appeared first in northwestern Europe, then metastasized globally as Europeans expanded their control over ever-greater regions quite distant from Europe.

But with “capitalism” as the term for this period came something else, something I want to reflect on. With capitalism came an ever-proliferating literature, one that sought to identify and explain the “capitalist” system’s key processes, and with it a class of thinkers/writers who by the early 20<sup>th</sup> c. were increasingly employed by the modern university, itself another noteworthy aspect of the capitalist era.

This architectural-conceptual apparatus—in the 18<sup>th</sup> and early 19<sup>th</sup> c. it was called “political economy”, then in the late 19<sup>th</sup> and early 20<sup>th</sup> c. “scientific economics”, and finally in our own era simply “economics”—grew like the amoebic creature called “capitalism” it sought to theorize. “Economics” as an ideational system and its progenitors, like capitalism, grew up in stages and particular locales—and in each stage, arguing about the great crises of the era, it sought to generate a “master narrative” of ideational solutions that, however original in form, always ended up largely defending the underlying property system, wealth and income distribution and the class relations attached.<sup>2</sup> Of course, these would-be master narratives—like the socio-political-economic world they struggled to describe—met with counter-narratives and quite often vivid, and often violent conflict and resistance. That history is too well-known to merit recapitulation here.

Fast forward.

Thirty years ago, an “end of history” narrative rather suddenly appeared, with “capitalism” (in its late 20<sup>th</sup>-c. Anglo-American form) and its master-economists’ narrative logic cast as not just ubiquitous (albeit unevenly and unsteadily) but successful worldwide. The claim rested on three giant steps the world clearly had taken after World War II.

The first was Europe’s “decolonization” of the South, which resulted in standardization of the nation-state: tribe, clan, kingdom and empire were no more. The second was (a frequently-coerced) “globalization” process—built on a wholly-new level of international trade, international

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<sup>1</sup> Robock and Graf, “Effects of Pre-industrial Human Activities on Climate”, *Chemosphere* Sept, 1994 <https://pubmed.ncbi.nlm.nih.gov/7953464/>

<sup>2</sup> For succinct treatment of this process of economic theory as crisis-response, see Heilbroner and Milberg, *The Crisis of Vision in Modern Economic Thought*.

investment and lending, and international bureaucratization. From this, a surprisingly-standardized globally-distributed “administrative/consultative class” emerged, closely transposed from extant G-7 state and corporate models onto the new states as well as the new corporations that followed. Third, late in the century had come “de-socialization”, first in the South, courtesy of the Washington Consensus, then in the West thanks to neoliberalism’s electoral and academic triumphs, then with the (unexpected) collapse of capitalism’s chief antagonist in Moscow and the eerie shape-shifting of Chinese socialism into some sort of mercuric state-capitalist hybrid.)

The triumphalism of course didn’t last—new wars, the Great Recession, COVID, and Donald Trump and his imitators in quick succession made sure of that. And as the planet has visibly heated up and the limits to the planet’s carrying-capacity become clearer, the term “end of history” now points not to the demise of colonialism or communism, but of capitalism and human civilization itself.

Back in the late 1960s, a tiny band of unconventional economists encountered an environmentalism in the midst of radical rethinking. Prompted by Carson’s *Silent Spring*, capitalism and its science were being accused of major crimes—against nature, our fellow species and humankind itself. Hiroshima had shattered confidence in the benignity of Progress, especially Progress through Markets and Corporate Science. Now that skepticism looked around through a wider lens and would soon birth “ecology” with its excoriating indictment of our fundamental relations with Earth.<sup>3</sup> Herman Daly and John Cobb’s pioneering works, Ken Boulding’s “spaceship earth” argument, and The Club of Rome’s Limits to Growth warnings led the way. Much has since transpired—nowhere more apparent than in “economics” and the crises today it seeks to address.

Sixty years on, let me name three principal strategies for theorizing a “new economics of ecological limits” that have evolved from that 1960s moment:

- 1) Neoclassical Environmentalism: The Neoclassical assumptions about rationality, markets, price-based efficiency, and growth as desiderata are retained but reweighed and recalibrated, with “externalities” made a catch-all for costs related to addressing environmental limits and administered price adjustments, mainly through taxes the key. Of the many in this tradition, Nobel Laureate William Nordhaus<sup>4</sup> idea to use a Global Carbon Tax to manipulate the discount rate applied to carbon’s “externalities” may be the best known.<sup>5</sup>
- 2) Ecological Keynesianism: government’s micromanagement role here adds science-defined goals for “harm reduction” to nature and humankind—and typically also

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<sup>3</sup> For pre-1960s attempts to construct an “environmental economics”—from Condorcet to Musgrave—see Agnar Sandmo, “The Early History of Environmental Economics”, *Review of Environmental Economics and Policy*, Winter 2015.

<sup>4</sup> See Jason Hickel, “The Nobel Prize for Climate Catastrophe”, *Foreign Policy*, 12/6/18 at <https://foreignpolicy.com/2018/12/06/the-nobel-prize-for-climate-catastrophe/>

<sup>5</sup> Although Nordhaus, like others in this camp, defend Neoclassical assumptions about Market Efficiency, prominent conservatives zealously attack him: see the Hoover Institution’s David Henderson’s “The Problem with Nordhaus”, *Defining Ideas*, 8/27/21 <https://www.hoover.org/research/problem-nordhaus>

stresses “public-private partnerships” to this end. Nicholas Stern’s famous review<sup>6</sup> illustrates the model in its mainstream form, emphasizing public subsidies and constraints (taxes and regulation) --plus extensive intergovernmental cooperation as well as public-private partnerships-- to move toward a “global green economy” in which, most importantly, fossil fuel use is radically curtailed. The much-discussed “Green New Deal” as taken up by the Biden administration, though in some ways more “progressive”, also fits in here.

- 3) Post-Marginalist “Biophysical Economics”: A form of “deep ecology” that’s fairly easy to envision intuitively, challenging to explain systemically, so far very hard to theorize, let alone operationalize. Seeks, but has not yet found exactly how to reframe neoclassical (and Keynesian) “economics” by adopting some analog to Newton’s laws (especially the Second Law and entropy). Often cited as forefathers are Georgescu-Roegen, Herman Daly, and Kenneth Boulding. Robert Constanza, a prominent professor of ecological economics at Univ. of Vermont, a) describes the field as trans-disciplinary (he includes “psychology, anthropology, archeology, and history” ; b) says its goals are “sustainable scale, fair distribution, and efficient allocation”.<sup>7</sup>

Among the three, I find myself torn, because I think each has points to recommend it. I say that though because of something fundamental here: I don’t think any economic paradigm has a leading role to play. Why do I say that? First because to me the looming planetary disaster is a “political disaster”, not a “natural disaster” --albeit on a scale without precedent. Second, I find I can’t imagine a “science-based solution” --let alone a new “economic theory” (if we mean an orderly macro-systemic set of interrelated axioms or principles that can be operationalized mathematically)-- that can forestall this disaster. Once again, to be clear, that’s because I see “political decisions”—actions taken by governments, particularly the large governments, that measurably alter patterns of behavior by individuals and firms, and in a democratic society are actions fairly consistently affirmed (or at least reasonably accepted) by the electorate.

That said, I do think that assembling a reconfigured narrative for what “economics” might be and do could be of help, albeit in a secondary and supportive way in this Mother-of-All-Political-Crises we’re facing.

In the story we often tell ourselves about “economics” and its impact on the world, we describe a direct (albeit complicated) link between economic theory (the work done almost exclusively by “theorists” who are usually workers in the economics departments of major universities) and the far vaster and varied activities of the billions who, as just one part of their lives, daily produce and consume objects and relationships, most of which can be monetized and exchanged.

That story seems almost entirely wrong, as I reflect on world history over the past three centuries.

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<sup>6</sup> See Nicholas Stern, *Blueprint for a Safer Planet*; for critique of Stern, see Bumpus and Liverman, “Accumulation by decarbonization and the governance of carbon offsets”, *Economic Geography*, Spring 2008.

<sup>7</sup> Robert Constanza, “What Is Ecological Economics?”, *Yale Insights*, 5/11/10 <https://insights.som.yale.edu/insights/what-is-ecological-economics>

First, the problem of consciousness: only a relative handful of human beings have ever studied academic economics over these past three centuries—a problem economists don't address because they analogize their work to natural scientists' study of the world. Geologists, biologists, and the like don't need rocks or trees or most living species to be conscious they are being studied.

But for an “economics” attentive to biophysical limits, crucial is a research agenda centered on consciousness, variously individual and variously collective, that takes account of our relations to the family, to neighbors and neighborhood, to the workplace, to media (as information and entertainment), and to the nation and beyond. Recognizing that individuals and groups they inhabit (and shape and are shaped by) are not only isolatable economic actors opens avenues for multi-disciplinary approaches that academic departmentalization and neoclassical reductionist axioms have imposed.<sup>8</sup> In this, I largely (but not entirely) agree, as a starting point, with the “Biophysical Ecology” camp I outlined above.

Second, a new “biophysical economics” needs to reclaim and reconstruct the neglected field of “political economy” as what I've elsewhere called the “political economy of nature”, and focus its work not for a meta-structure equivalent of the neoclassical kind but on the carefully-evidenced interplay between actual (versus theorized) national economies, their specific institutions and classes, the environment (from local to global), and human well-being. (Here I'd define “well-being” minimally by Amartya Sen's concept of “capabilities”, with its explicit invocation of moral precepts and advocacy for metrics of well-being, which are ideationally embedded in the Millennium Development Goals and their successor Sustainable Development Goals and the SDG's Agenda 30).<sup>9</sup>

As James Bryce describes it, such a “political economy of nature”

pays attention not only to the net magnitude of costs and benefits but also to their distribution. In the realm of positive analysis – descriptions of how the world works – this means exploring the multiple ways in which the distribution of wealth and power affects environmental outcomes. In the realm of normative analysis – prescriptions for how the world should work – political economists advocate a range of criteria including not only cost effectiveness but also safety, sustainability, and environmental justice.<sup>10</sup>

Note here Boyce's overt (and unembarrassed) specification of multiple goals and metrics for the political economy of nature. Rather than a single telos, frame or criterion such as “Pareto optimality” or “general equilibrium”, the political economy of nature's conceptual frame is (as Constanza advocates) multi-disciplinary—and, let me add explicitly, with an egalitarian and democratic bias (or presumption, if you prefer).

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<sup>8</sup> On economists' resistance to multi-disciplinary work, contempt for other social sciences and excessive reliance on mathematical formalism, see Fourcade et al., “The Superiority of Economists,” MaxPo discussion paper, 12/14 at [https://pure.mpg.de/rest/items/item\\_2071743\\_2/component/file\\_2071741/content](https://pure.mpg.de/rest/items/item_2071743_2/component/file_2071741/content)

<sup>9</sup> <https://www.un.org/sustainabledevelopment/development-agenda/> I'm keenly aware that the MDG's and SDG's advocacy of “growth” make them suspect to some in the “Biophysical Ecology” community—but welcome the debate because it clarifies the degree to which “political” anchors my idea of a new “political economy” work.

<sup>10</sup> James Boyce, “Political Economy of the Environment”, PERI working paper, U. Mass Amherst, 6/29/20

The presumption of neoclassical economics to be “scientific”, and thus somehow neutrally “objective” in deploying its “market” model (for which it assumes universal relevance), its rational actors, and its ability to reach an optimal equilibrium have suffered too many wounds to bear reconsidering. Mimicking that misconception of “science” by searching for a closed-system, axiom-driven, and math-powered foundation for the political economy of nature will bear only bitter fruit.

Better for those willing to take up work in a multi-disciplinary political economy of nature would be to take Keynes’ (in)famous injunction seriously—and think of the work ahead as akin to dentistry.

And what do I think those dentists should do?

- If determined to work in university, start petitioning for a “political economy” department separate from the extant “economics” department; tenure operates on the minds of “free market” advocates in predictable ways.
- Design courses and degree requirements after consulting already-existing political economy departments, many of which are still areas or fields in political science and government departments or public policy schools. (A Google search is the easy starting place.)
- Encourage in-depth study of economic inequality in all its manifestations—by race, gender, region, occupation, class, etc. (The Stone Foundation, for example, is now funding inequality research at Harvard, Stanford, Chicago, Brown, INSEAD and University College London, with plans to expand. <https://www.stonefdn.org/>)
- Track the work of the research centers that are pioneering study of biophysical limits and the relationship between inequality and, for example, climate for models for your own research. <https://wid.world/news-article/climate-inequality-report-2023-fair-taxes-for-a-sustainable-future-in-the-global-south/>
- Pay close attention to the new generation of young lawyers--and law school courses---that have shed the Chicago School’s libertarian “Law and Economics” frame when it comes to environmental regulation, monopoly and anti-trust, unions, corporate crime, etc. (Go for a start to the Law and Political Economy Project, at <https://lpeproject.org/>. See as well Yale’s Center for Environmental Justice, <https://environment.yale.edu/research/centers/environmental-justice>)
- Monitor think tanks that focus on government regulatory, spending, tax and trade policy, as a starting point for your incorporation of the governmental—one aspect of the “political”—in your work. Here the list of worthwhile groups blessedly is too long to enumerate, but the organizations are easily found online.
- Center in your work the idea of the individual not as the Neoclassical economic agent but as a richly-complex being—and as a citizen ideally in a democratic world that does not yet fully exist and as a much less destructive inhabitant on the one planet where the very idea of “life” seems to have found form. I personally find the legacy of John Dewey helpful here—in his idea of democracy as learned habits of mind and personal behaviors, not just

institutions, and in his theorizing about “education for democracy”.<sup>11</sup> There are a plenitude of others to name, and perhaps a project to be taken up would be to catalog and annotate those names .

A quick summation: I’ve not tried to conceptualize an “economics of biophysical limits” for a pragmatic reason. That such an ideational structure, somehow anchored in a “objective scientific discourse”, might be possible is true but uninteresting because I frame the challenge ahead in political terms with multiple interlocking yet sometimes competing aims such as “greater equality”, “justice”, “community”, “humility”. Those values—differently understood at different times by different peoples nonetheless recur stubbornly despite their ambiguities. They have the advantage of being better understood and embraced by more people than any imaginable “economics of biophysical limits”.

It may be that time is running out on us as a species—and certainly there is gathering evidence for that intuition. But I’m disinclined to the apocalyptic, and stubbornly appreciative of a rhetoric grounded in the aims I’ve just listed.

To the degree that would-be economists are willing to embrace the role Keynes suggested we should—that of the dentist, and not the physicist (or metaphysician), I think we can make a real contribution to slowing the currents of the river we’re now on.

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<sup>11</sup> <https://plato.stanford.edu/entries/dewey-political/>