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Environment

Hijacking the Anthropocene

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"When I use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean - neither more nor less." Lewis Carroll, *Through the Looking Glass*

What can lobbyists do when science contradicts their political messages? Some simply deny the science, as many conservatives do with climate change. Others pretend to embrace the science, while ignoring or purging the disagreeable content. That's what the Breakthrough Institute (BTI) is doing with one of the most widely discussed issues in 21st century science, the proposal to define a new geological epoch, the Anthropocene.

BTI has been described as "the leading big money, anti-green, pro-nuclear think tank in the United States, dedicated to propagandizing capitalist technological-investment 'solutions' to climate change." [1] Founded in 2003 by lobbyist Michael Shellenberger and pollster Ted Nordhaus, its philosophy is based on what's known in academic circles as ecological modernization theory - described by Richard York and Eugene Rosa as the view that "industrialization, technological development, economic growth, and capitalism are not only potentially compatible with ecological sustainability but also may be key drivers of environmental reform." [2]

In BTI's simplified pop version, to which they've assigned catchier label ecomodernism, there is no "may" about it - their literature consistently couples a professed concern for the environment with rejection of actual pro-environmental policies, on the grounds that new technology, growth and capitalism are the only solution to all environmental concerns.

Most notably, BTI opposes efforts to limit greenhouse gas emissions, claiming that investment in nuclear reactors and shale gas will produce all the energy we need, and global warming will wither away as a side-effect. "The best way to move forward on climate policy," write Shellenberger and Nordhaus, "is to not focus on climate at all." [3]

As Australian environmentalist Clive Hamilton comments, BTI's founders "do not deny global warming; instead they skate over the top of it, insisting that whatever limits and tipping points the Earth system might throw up, human technology and ingenuity will transcend them." [4]

In 2004, Shellenberger and Nordhaus wrote a notorious pamphlet, *The Death of Environmentalism*. That title wasn't an announcement - it was a goal. They declared their conviction "that modern environmentalism ... must die so that something new can live." [5] Their organization has worked to achieve that death ever since.

Bill Blackwater has exposed the "self-contradictions, simplistic fantasy, and the sheer insubstantiality" of BTI's thought, and John Bellamy Foster has shown that ecological modernization theory involves "a dangerous and irresponsible case of technological hubris [and] a fateful concession to capitalism's almost unlimited destructive powers." [6] In this article I examine one specific feature of BTI's current activity: its attempt to hijack the Anthropocene, to misrepresent one of the most important scientific developments of our time so that it seems to serve Breakthrough's anti-environmental agenda.

Scientists define the Anthropocene

For scientists, the arrival of a new geological epoch signifies that there has been a qualitative change in the Earth System. For 12,000 years we have been in the Holocene epoch, but we now face conditions that are as different from that as the Holocene was from the ice age Pleistocene that preceded it. Paul Crutzen, the Nobel Prize winner who first suggested that such a change had occurred, and Will Steffen, former director of the International Geophysical-Biophysical Program, write:

"The Earth System has recently moved well outside the range of natural variability exhibited over at least the last half million years. The nature of changes now occurring simultaneously in the Earth System, their magnitudes and rates of change, are unprecedented and unsustainable." [7]

The name Anthropocene, from the Greek anthropos, meaning human being, was proposed to emphasize that the new epoch is driven by a radical change in humanity's relationship with the rest of the Earth System - that "global-scale social and economic processes are now becoming significant features in the functioning of the system." [8]

The shift began with the growing use of fossil fuels in the Industrial Revolution, and went into overdrive in the "Great Acceleration" of economic activity, pollution and environmental destruction in the second half of the 20th century. Now human activity is "overwhelming the great forces of nature," to the point that if "the institutions and economic system that have driven the Great Acceleration continue to dominate human affairs ... [then] collapse of modern, globalized society under uncontrollable environmental change is one possible outcome." [9]

Foster describes the Anthropocene as "both a description of a new burden falling on humanity and a recognition of an immense crisis - a potential terminal event in geological evolution that could destroy the world as we know it." [10] [John Bellamy Foster, Brett Clark and Richard York. The Ecological Rift: Capitalism's War on the Earth. New York, Monthly Review Press, 2010), 18.]

Similarly, the editors of Nature say it "reflects a grim reality on the ground, and it provides a powerful framework for considering global change and how to manage it." [10]

By contrast, Nordhaus and Shellenberger want us to believe that everything's going to be just fine. They tell the world that "by 2100, nearly all of us will be prosperous enough to live healthy, free and creative lives." All we need to do is "once and for all embrace human power, technology, and the larger process of modernization." [11]

Foolish environmentalists may "warn that degrading nonhuman natures will undermine the basis for human civilization but history has shown the opposite: the degradation of nonhuman environments has made us rich." Environmental problems are merely unfortunate side-effects of developments that are fundamentally positive for humanity: "the solution to the unintended consequences of modernity is, and always has been, more modernity." [12]

Hijacking a word, misrepresenting science

Given the huge difference in views, it would have been appropriate and honest for BTI to declare how and why it disagrees with the scientists who have identified profound changes in the Earth System and are proposing to declare a new epoch.

Instead, when the word Anthropocene started appearing frequently in academic journals and mainstream media, Nordhaus and Shellenberger jumped on the bandwagon and tried to steer it in a direction more congenial to their views. In contrast to scientists they deem to be depressing, pessimistic, and catastrophist, they declared that the Anthropocene isn't a crisis, it's an opportunity to build a global technological utopia, in which humanity embraces nuclear power and shale gas, and we all enjoy US-style consumerism forever.

What they offer is a homeopathically diluted Anthropocene, in which the only remaining trace of Earth System science is the fact that the Earth is dominated by human activity - and even that, BTI insists, is neither a recent development or a matter for concern.

Nordhaus and Shellenberger gave the game away in an article they wrote for Orion magazine and then reprinted in a BTI-published e-book. After agreeing that humans are "rapidly transforming nonhuman nature at a pace not seen for many hundreds of millions of years," they wrote:

"But the difference between the new ecological crises and the ways in which humans and even prehumans have shaped nonhuman nature for tens of thousands of years is one of scope and scale, not kind." [\[13\]](#)

Read that again. If it's true, then there is no case for declaring a new epoch. There has been no qualitative change, so we are still in the Holocene, still doing what humans have always done, since long before the ice sheets retreated.

Landscape ecologist Erle Ellis, a Breakthrough Institute Senior Fellow, has been arguing for the "scope and scale, not kind" view in the Anthropocene Working Group, the international committee that is evaluating the proposal for a new geological epoch. He supports an early Anthropocene - the view that the Anthropocene began not recently but thousands of years ago, when humans first made large-scale changes to landscapes and ecosystems.

Official endorsement of an early date would strengthen the Nordhaus/Shellenberger claim that there is no qualitative break between current and past human impacts on the Earth. As Clive Hamilton and Jacques Grinevald write, the early Anthropocene option justifies a business-as-usual understanding of the present.

"It 'gradualizes' the new epoch so that it is no longer a rupture due principally to the burning of fossil fuels but a creeping phenomenon due to the incremental spread of human influence over the landscape. This misconstrues the suddenness, severity, duration and irreversibility of the Anthropocene leading to a serious underestimation and mischaracterization of the kind of human response necessary to slow its onset and ameliorate its impacts." [\[14\]](#)

BTI's website describes Ellis as "a leading theorist of what scientists increasingly describe as the Anthropocene," [\[15\]](#) but doesn't mention that his early Anthropocene position, while compatible with BTI's philosophy, has little support among the other scientists involved.

In January 2015, over two-thirds of the Anthropocene Working Group's 38 members endorsed 1945 as the beginning of the Anthropocene, both because the Great Acceleration is an historical turning point, and because it can be located in geological strata by the presence of radiation from nuclear fallout. The early Anthropocene argument, they write, unduly emphasizes just one aspect of the case for a new epoch:

"The significance of the Anthropocene lies not so much in seeing within it the 'first traces of our species' (i.e. an anthropocentric perspective upon geology), but in the scale, significance and longevity of change (that happens to be currently human-driven) to the Earth system." [\[16\]](#)

The AWG hasn't formally decided yet, but Ellis, who evidently believes he has lost the debate, recently told an editor of the journal *Nature* that he opposes making any official decision. "We should set a time, perhaps 1,000 years from now, in which we would officially investigate this.... Making a decision before that would be premature." [17] That would allow BTI to continue misusing the word, but he seems to have little support: a recent article in *Science*, proposing to "avoid the confinement imposed by a single formal designation" has only four signatures, and of them, only Ellis is a member of the AWG. [18]

Oxymoron alert

Breakthrough has invited influential environmental writers to a luxury California resort in June, all expenses paid, for a two-day seminar on "The Good Anthropocene." [19] So don't be surprised if articles using that oxymoron appear in the mainstream media this summer. Phrases like "unprecedented and unsustainable" will not be emphasized, if they appear at all.

The seminar's message was revealed in April, in *An Ecomodernist Manifesto*, signed by Nordhaus and Shellenberger and 16 others, all closely associated with BTI. Subtitled *From the death of environmentalism to the birth of ecomodernism*, it is self-described as "an affirmative and optimistic vision for a future in which we can have universal human development, freedom, and more nature through continued technological and social modernization." [20]

The manifesto extends the oxymoron, promising "a good, or even great, Anthropocene" if only we will reject the "long-standing environmental ideal ... that human societies must harmonize with nature to avoid economic and ecological collapse."

Yes, you read that right. BTI's pseudo-Anthropocene requires deliberately expanding the metabolic rift between humanity and the rest of nature into a permanent chasm. After all, "humans have remade the world for millennia," so more of the same must be good.

A striking feature of all BTI propaganda is the gulf between the concrete problems they admit exist and what Bill Blackwater calls "the daydream quality of their positive solutions." [21] That is clearly on display in their *Ecomodernist Manifesto*, which proposes to solve the pressing problem of climate change with "next-generation solar, advanced nuclear fission and nuclear fusion" - technologies that don't exist and won't soon arrive. In the meantime, BTI proposes reliance on hydroelectric dams, which can cause major environmental problems, and on carbon capture and storage, which doesn't exist in any practical form.

Clearly, BTI's "Good Anthropocene" won't arrive before the climate and other essential elements of the Earth System reach tipping points. As Blackwater says, BTI's purported realism is actually "the very height of fantasy," a contemporary form of what C. Wright Mills used to call "crackpot realism."

It's time to defog

The pundits, politicians and CEOs whose interests are served by the Breakthrough Institute don't want to be identified with the science deniers of the far right, but neither do they want the radical measures that responding to the real Anthropocene requires. BTI's fantasy of a Good Anthropocene builds the illusion that both objectives are easily achieved. Don't worry, be happy - technological ingenuity will save capitalism from itself.

BTI could have avoided mentioning the Anthropocene, but that would have left a widely discussed concept unchallenged, posing the possibility that public understanding of the state of the Earth System will grow, strengthening the environmentalism that BTI wants to kill. It's far more effective to appropriate the word, to sow confusion by promoting a caricature that has nothing to do with the actual Anthropocene and everything to do with preserving the status quo.

There can be no question about which side the left is on in this conflict. We may not endorse every element of the Anthropocene project, but we must not allow Earth System science to be hijacked and misused by enemies of the environment.

As Dipesh Chakrabarty writes, the scientists whose work BTI is trying to undermine "are not necessarily anticapitalist scholars, and yet clearly they are not for business-as-usual capitalism either." [22] Many are adopting more radical views as they study what's happening to the Earth System. It's our responsibility to help them blow away Breakthrough's fog of confusion, and work with them to stop capitalism's drive to ecological disaster.

[Climate and Capitalism](#)

[1] "Notes from the Editors" Monthly Review 66, No. 2 (June 2011).

[2] Richard York and Eugene A. Rosa. "Key Challenges to Ecological Modernization Theory." Organization & Environment 16 No. 3, September 2003

[3] "Statement on 'Climate Pragmatism' from BTI Founders Michael Shellenberger and Ted Nordhaus." Breakthrough Institute, July 27, 2011.

[4] Clive Hamilton. "The New Environmentalism Will Lead Us to Disaster." Scientific American Forum, June 19, 2014.

[5] Michael Shellenberger and Ted Nordhaus. The Death of Environmentalism: Global Warming Politics in a Post-Environmental World. Oakland, Breakthrough Institute, 2004.10

[6] Bill Blackwater. "The Denialism of Progressive Environmentalists." Monthly Review 64, No. 2 (June 2012). John Bellamy Foster. "The Planetary Rift and the New Human Exemptionalism." Organization & Environment 25 No. 3 (September 2012)

[7] Paul J. Crutzen and Will Steffen. "How Long Have We Been In The Anthropocene Era? An Editorial Comment." Climatic Change 61 No. 3 (2003)

[8] Will Steffen et al. "The Anthropocene: From Global Change to Planetary Stewardship." Ambio 40, No. 7. October 2011.

[9] Will Steffen, Paul J. Crutzen and John R. McNeill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" Ambio 36, No. 8, December 2007.

[10] Editorial. "The Human Epoch." Nature 473, No. 7347, May 19 2011.

[11] Ted Nordhaus and Michael Shellenberger, "Introduction," in Ted Nordhaus and Michael Shellenberger, editors, Love Your Monsters: Postenvironmentalism and the Anthropocene. (Breakthrough Institute, Oakland, 2011). Kindle e-book.

[12] Nordhaus and Shellenberger, "Evolve." in Love Your Monsters

[13] Nordhaus and Shellenberger, "Evolve." in Love Your Monsters

[14] Clive Hamilton and Jacques Grinevald. "Was the Anthropocene Anticipated?" The Anthropocene Review 2 No. 1. (April 2015)

[15] "Erle Ellis, Associate Professor, University of Maryland, Baltimore County." Breakthrough Institute, n.d.

[16] Jan Zalasiewicz, et al., "When Did the Anthropocene begin? A Mid-Twentieth Century Boundary Level is Stratigraphically Optimal." Quaternary International, In Press, January 2015

[17] Quoted in Richard Monastersky. "Anthropocene: The human age." Nature 519, No. 7542. (March 11, 2015)

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[18] William F. Ruddiman et al. "Defining the Epoch We Live In." *Science* 348, No. 6230 (April 3 2015)

[19] In "Ecomodernists Envision Utopia but What about War?" *Scientific American* blogger John Horgan says his expenses are being paid.

[20] Ted Nordhaus, Michael Shellenberger et al. "An Ecomodernist Manifesto." (April 2015)

[21] Bill Blackwater. "The Denialism of Progressive Environmentalists." *Monthly Review* 64, No. 2 (June 2012)

[22] Dipesh Chakrabarty. "The Climate of History: Four Theses." *Critical Inquiry* 35 No. 2 (Winter 2009).