

OMNI

ANTHROPOCENE NEWSLETTER #2

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COMPILED BY DICK BENNETT FOR A CULTURE OF
PEACE, JUSTICE, AND ECOLOGY

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OMNI ANTHROPOCENE NEWSLETTER #1, January 23, 2016.

<http://jamesrichardbennett.blogspot.com/2016/08/anthropocene-newsletter-1.html>

Part I: The dominant economic system is leading our civilization to great disasters, and will produce planetary catastrophe if radical correctives are not enacted soon. Part II: We must change the economic system thoroughly, and we can, not by partial, stopgap reforms, but by changing to a system providing protection of the earth for future generations and substantive equality for all.

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OUTER SPACE AS A GATED COMMUNITY

by Gerald Sloan

Forsythia and japonica are in full bloom
but a fifty-degree plunge in temperature
is in the forecast, "unseasonal" a criminal
euphemism for what we've done to nature,
our species terminally unaware of vegetable

intelligence or what to make of a "100-year
drought" or flood which happen annually.
Time to reinvent the lexicon for a planet
whose fossil fuel will render us expendable
while the ruling class is raptured in a bubble.

PART ONE: WHY ANTHROPOCENE?

What's at Stake: How Could We Have Known?

Our children ask us,

what did you do while the planet was plundered?

Our grandchildren ask,

what did you do when the earth was unraveled?

Our great-grandchildren ask,

what did you do

when the seasons started failing?

when the mammals, reptiles, birds were all dying?

(from Dellinger, *hieroglyphic stairway*)

Was it like a burning building full of people,

the roof already ablaze,

their clothing and hair scorched?

Yet the people asked questions,

and seemed in no hurry to put out the fire.

(from Brecht, “The Buddha’s Parable of the Burning House”)

A few saw the fire, studied it, and reported it.

But ears were stopped and hands were tied.

Some understood the cause, and sought a new building.

But they were hospitalized as mad, or jailed as un-American.

Still, our children ask us,

what did you do when you knew?

And we replied: how could we have known?

HOW COULD WE HAVE KNOWN?

**A CHRONOLOGICAL SAMPLE OF BOOKS AND ARTICLES
REVEALING THE TIME OUR LEADERS AND THE PUBLIC HAVE
HAD TO LEARN ABOUT GLOBAL WARMING AND THE PRESENT
URGENCY OF GLOBAL WARMING AS CLIMATE CATASTROPHE.**

Compiled by Dick Bennett. The following chronology of knowledge about increasing CO2 and temperature, and advancing climate change is taken from OMNI’s ANTHROPOCENE, CLIMATE CATASTROPHE, MITIGATION, ADAPTATION NEWSLETTER #2, August 31, 2016 (rev. Nov. 29, 2016, and additions recently). Dick Bennett

1926 (the Russians were early)

Vladimir Vernadsky, *The Biosphere*, early Soviet use of key concept of integrated living organisms and nonliving environment (not trans. into English until 1998). In the same time period Aleksei Pavlov referred to the Anthropocene and anthropogenic era as the new mainly human driven geological period.

1945-50 a major spike of warming “marking a Great Acceleration in human impacts on the environment,” particularly in “fallout radionuclides from nuclear weapons testing.”

1962

Rachel Carson, *Silent Spring*. If undermined, the living processes of Earth will “return in time” to haunt us.

1963

Rachel Carson, “Our Polluted Environment” introduced the concept of **ecosystem**—an integrated ecological perspective—to the US public, and “the need to take it into account in all of our actions” (Foster, “The Anthropocene Crisis,” 11).

1973

First English appearance of word *Anthropocene* in an article by Shantser in the *Great Soviet Encyclopedia*.

1980

E. P. Thompson. “Notes on Exterminism, the Last Stage of Civilization.” *New Left Review* (May-June).

1982

Barry Commoner. *The Closing Circle*. Aware of the rift in the metabolism of the biosphere, warns of “the vast changes in the human relation to the planet, beginning with the atomic age and the rise of modern... synthetic chemistry

William Catton. *Overshoot: The Ecological Basis of Revolutionary Change*. There must be limits to our tremendous appetite for population growth, energy, natural resources, and consumer goods.

1988

United Nations Intergovernmental Panel on Climate Change

Established. IPCC is a scientific body under the auspices of the United Nations (UN). It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It was first established in 1988 by two United Nations organizations, the [World Meteorological Organization](#) (WMO) and the [United](#)

Nations Environment Programme (UNEP), and later endorsed by the United Nations General Assembly through Resolution 43/53.

1990

The IPCC published its first assessment report in 1990, a supplementary report in 1992, 2nd assessment report in 1995, **third assessment report (TAR)** in 2001, **fourth assessment report (AR4)** in 2007, and **fifth assessment report (AR5)** in 2014. The IPCC inspired an outpouring of research and publications.

Colin Hocking, et al. *Global Warming and the Greenhouse Effect*. A textbook for grades 7 to 10. The earliest textbook for youths on climate change of which I am aware.

1991

Edburg and Yablokov, *Tomorrow Will Be Too Late*.

1992

Al Gore. *Earth in the Balance*. (One of the earliest books inspired by the IPCC reports.) Before the expression “**Green Apollo** program” gained usage, Gore “and numerous others” had urged such a program (Hertsgaard 272). “Gore had urged the U.S. government to initiate a **green Marshall Plan**.”

1995

UN IPCC 2nd Second Assessment Report (SAR)

https://www.ipcc.ch/ipccreports/sar/wg_II/ipcc_sar_wg_II_full_report.pdf

1998

Mark Hertsgaard in *Earth Odyssey* foretold massive dangers ahead and “proposed a **Global Green Deal**, modeled on the New Deal” of FDR (from his *Hot*).

Thomas Casten. *Turning Off the Heat: Why America Must Double Energy Efficiency to Save Money and Reduce Global Warming*. Notable for having been published so early, and in fact he had started his warnings about CO₂ in 1975.

2001

UN IPCC Third Assessment Report (TAR)

<http://www.ipcc.ch/ipccreports/tar/>

2002

Paul Crutzen's essay "Geology of Mankind" in *Nature* suggests assigning term "Anthropocene" to the present based upon the alteration of the atmosphere by fossil fuel combustion and deforestation. The idea was formally studied and accepted by the stratigraphy committee of the Geological Society of London, which passed the idea up to the International Commission on Stratigraphy. Their decision was expected in 2016. (Kolbert, *The Sixth Extinction*, 108-110).

2004

Ross Gelbspan. *Boiling Point: How Politicians, Big Oil and Coal, Journalists, and Activists Are Fueling the Climate Crisis—and What We Can Do to Avert Disaster*. Note the date—Gelbspan's book the earliest strong book-length warning of the climate cover-up that I know of.

2005

Jared Diamond. *Collapse: How Societies Choose to Fail or Succeed*. Diamond says that a society can either see environmental problems or not. If they recognize the problem they can act to solve it or they can ignore it or they can take ineffective action (from Malcolm Cleveland)

Mark Lynas. *High Tide: News from a Warming World*. From a review by [Nicholas Lezard](#) in *The Guardian*, 25 March 2005. "It really ought to be read by everyone. . . .a passionate argument, with much evidence, for us to do something about the catastrophe facing the planet as a result of our dependency on fossil fuels." "If there's one message above all that I want people to take from these pages," Lynas writes, "it's this: that all the impacts described here are just the first whispers of the hurricane of future climate change which is now bearing down on us."

James Bovard. *Attention Deficit Democracy*. Why the public ignores political and corporate frauds and swallows pervasive lies, why they are indifferent to facts and increasingly incapable of judging when their rights and liberties are being destroyed.

2007

UN IPCC Fourth Assessment Report (AR4)

https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm

George Monbiot. *Heat: How to Stop the Planet from Burning*. Climate change "is the greatest danger the world now faces" (212). Monbiot favorably cites an article by Colin Forrest that makes the case that if CO2 concentrations in the atmosphere remain what they were in 2005, the average temperature would reach 2 degrees centigrade above

pre-industrial levels. “Beyond this point, in other words, climate change is out of our hands” (xi). The “only means” to stop this rise “is for the rich nations to cut their greenhouse gas emissions by 90 percent by 2030” (xii). Monbiot tells why he thinks this is feasible.

Collectif Argos. *Climate Refugees*. (Orig. Fr. Ed. 2007). Predicts that by 2050, there will be 150 million climate **refugees** resulting from permafrost melt, island nations submerged, desertification, floods, glacial melt, hurricanes.

Howard Odum. *Environment, Power, and Society*. Discusses the biosphere, the earth as a system, the metabolism of the earth’s thin outer shell threatened by the overgrowth by capitalism.

2008

Mark Lynas. *Six Degrees: Our Future on a Hotter Planet*. Lynas cites the Katrina hurricane flooding of New Orleans as “what the 21st century may have in store for many more of us, in a thousand locations across the world, as climate change accelerates” (14). “With up to 6 degrees Celsius, or 10.6 degrees Fahrenheit, of global warming in the cards over the next hundred years,” according to the IPCC, “will we all...be reduced to eking out a living from shattered remains of civilization...?” (15). Lynas is optimistic humans can muster the scientific/technical knowledge and the political will, but “we need to cut emissions [to 400 ppm to “keep us within the two degrees safety target”] and do so within a decade” (300) (i.e. 2017).

James Gustave Speth. *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability*. “There is a bridge at the edge of the world. But. . .there is not much time” (13).

2009

James Hansen. *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity*. “...we are running out of time” (xi). “It’s crucial that we immediately recognize the need to reduce atmospheric carbon dioxide to at most 350 ppm....” (xi). “...a change of direction is urgent. This is our last chance” (xii). “Our planet...is in imminent danger of crashing” (277) yet our politicians hesitate to act. “...the biggest obstacle to solving global warming is the role of money in politics, the undue sway of special interests.” (x).

German Advisory Council on Global Change (WBGU), led by Hans Schellnhuber, chief climate adviser to the government of Germany, argued that 2 degrees centigrade temperature rise must be the limit, which would “require bringing down atmospheric concentrations [of CO₂] fast.” “Greenhouse gas emissions had to fall at incredible speed.” Hertsgaard, *Hot*, 249. Schellnhuber “put a new name on a set of ideas and policies that Al Gore and numerous others had already proposed” (272).

Al Gore. *Our Choice: A Plan to Solve the Climate Crisis.*

Gore stresses urgency in every chapter. For example, Chap. 14: “In communicating the urgency of the climate crisis....” (315). Referring to the market economy, “change is urgently needed....” (Chap. 15, 320). Chap. 16, “We urgently need solutions to remove the political obstacles that block us from confronting the mortal threat of the climate crisis to the future of civilization.” [This is a magnificent textbook, illuminating and stimulating in both text and graphics. –D]

Larry Schweiger. *Last Chance.*

“Decades of complacency and inattention...eight years of ...Bush administration coupled with procrastination and partisan politics of a divided Congress have set the stage for enormous and permanent climatic consequences....we must do much more much faster than we previously believed...to divert a worldwide catastrophe” (8-9). “We cannot take baby steps when much bolder action is required” (6). Schweiger writes elsewhere of his hope in the new President Obama, which was not realized. [Schweiger was president and CEO of the National Wildlife Federation.]

2010

Robert Jensen. “In the Face of This Truth” *YES MAGAZINE*. **It’s time to talk honestly about collapse—no matter how others may respond.**

[Thomas Hardy’s poem “In Tenebris II” speaks to this argument, to paraphrase: every solid outlook, philosophy, ethic is based upon knowledge of, a full look at the worst. Oddly (probably the result of being given only two pages to make his case) Jensen doesn’t discuss major causes of “the exceptional truth” of our unsustainable world—for example, the connected capitalist economic and permanent war systems. *Yes!* is usually upbeat, so this essay is important to remind us that a beneficially positive spirit—Yes!—does not include denial, escape, credulity, or wishful thinking. –Dick]

Bill McKibben. *Eaarth: Making a Life on a Tough New Planet.* After listing some of the massive changes to the earth in recent decades: “These should come as body blows, as mortar barrages, as sickening thuds. The Holocene is staggered, the only world that humans have known is suddenly reeling. I am not describing what will happen if we don’t take action, or warning of some future threat. This is the *current* inventory” (5). “We need now to understand the world we’ve created, and consider—urgently—how to live in it. . . .But hope has to be real. It can’t be a hope that the scientists will turn out to be wrong , or

that President Barack Obama [or some other magic] can somehow fix everything....Maturity is not the opposite of hope; it's what makes hope possible" (xiv).

Peter Ward. *The Flooded Earth: Our Future in a World Without Ice Caps.*

Introduction, "Miami Beached": "What might make [the increase in sea level] unique is the rate at which it is happening. There is every reason to believe that we are on the cusp of the most rapid rate of sea level rise in Earth history...."(10).

Chap. 3, "The Flood of Humans": The correlation between increasing population and rising seas. "The rise in our numbers, more than any other reason, will ensure the rise of the sea—which not only will happen but also might be vastly underestimated unless we take immediate action" (90).

Chap. 5, "Greenland, Antarctica, and Sea Level." Describes from polar melting to rising seas.

Gwynne Dyer. *Climate Wars: The Fight for Survival as the World Overheats.*

Warming will increase militarism and wars. Without drastic reduction in CO2 the planet will heat 4 degrees by 2060.

2011

Naomi Oreskes, Erik M. M. Conway. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming.* 2011.

Film based on book appeared in 2015.

Merchants of Doubt was one of the most talked-about climate change books of recent years, for reasons easy to understand: It tells story of how a loose-knit group of high-level scientists and scientific advisers, with deep connections in politics and industry, ran effective campaigns to mislead the public and deny well-established scientific knowledge over four decades.

Lester Brown. *World on the Edge: How to Prevent Environmental and Economic Collapse.* Brown's long-developed "**Plan B**" urges "massive mobilization—at wartime speed." We did it during WWII.

Mark Hertsgaard, *Hot: Living Through the Next Fifty Years on Earth.*

The "first era of global warming ("the battle to prevent dangerous climate change") began on June 23, 1988—the day James Hansen told the U.S. Senate that man-made global warming had begun." By the turn of the century "the second era," "the race to survive it had begun." "On the one hand, we must reverse global warming [lower the global temperature], and quickly—before the climate system passes tipping points," and we must "prepare our societies for the serious climate impacts that are already in the pipeline" (24-25). Hertsgaard in *Hot* urged "a crash program," a "**Green Apollo**" (272) "for the rapid deployment of green technologies and practices" (273).

2012

Three World Bank's reports begin, published as *Turn Down the Heat* (2014), based on IPCC and Hansen's methods regarding average and extreme temperatures. Business as usual will push average to 4 degrees or over.

[Fred Guterl](#). *The Fate of the Species: Why the Human Race May Cause Its Own Extinction and How We Can Stop It*. "A fine scientific explanation of our abuse of the natural world that, despite the subtitle, does not explain how to stop it." *KIRKUS REVIEW*

2013

[Tomgram: Dahr Jamail, The Climate Change Scorecard](#), December 17, 2013. "What, in other words, is the worst that we could possibly face in the decades to come? The answer: a nightmare scenario. So buckle your seat belt. There's a tumultuous ride ahead." *Tom*

Are We Falling Off the Climate Precipice?

Scientists Consider Extinction by [Dahr Jamail](#).

"I grew up planning for my future, wondering which college I would attend, what to study, and later on, where to work, which articles to write, what my next book might be, how to pay a mortgage, and which mountaineering trip I might like to take next.

Now, I wonder about the future of our planet. During a recent visit with my eight-year-old niece and 10- and 12-year-old nephews, I stopped myself from asking them what they wanted to do when they grew up, or any of the future-oriented questions I used to ask myself. I did so because the reality of their generation may be that questions like where they will work could be replaced by: Where will they get their fresh water? What food will be available? And what parts of their country and the rest of the world will still be habitable?" [Click here to read more of this dispatch.](#)

2014

[IPCC Fifth Assessment Report - Synthesis Report -](#)

The National Climate Assessment 2014

[Landmark Report Warns Time is Running Out to Save US from Climate Catastrophe](#)

Joe Romm, News Investigation, NationofChange, May 7, 2014: The National Climate Assessment is the definitive statement of current and future impacts of carbon pollution on the United States. And the picture it paints is stark: Inaction will devastate much of the arable land of the nation's breadbasket—and ruin a livable climate for most Americans. "Americans face choices," explains the Congressionally-mandated report by 300 leading climate scientists and experts, which was reviewed by the National Academy of Sciences. We're already seeing serious climate impacts—such as more extreme heat waves, droughts and deluges

—and additional impacts are “now unavoidable.”

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Naomi Klein. *This Changes Everything: Capitalism vs. the Climate.*

“Faced with a crisis that threatens our survival as a species, our entire culture is continuing to do the very thing that caused the crisis, only with an extra dose of elbow grease behind it. . . .from conventional sources of fossil fuels to even dirtier and more dangerous versions....” (2). We must “change the systems that are making the crisis inevitable” (4). It will require a “**Marshall Plan for the Earth**,” which will cost “billions if not trillions of dollars,” but we can do it if we have the will (5), if we the people quit “looking away” and declare “a crisis worthy of Marshall Plan levels” (6). “...revolutionary levels of transformation to the market system” are “now our best hope of avoiding climate chaos” (56, 449). She places her faith in “Blockadia”— in which global “climate and environmental-justice activists, indigenous peoples, workers, socialists, and other groups throw up barriers to resist the system” (Foster, “Trump and CC”).

George Marshall, *Don't Even Think About It: Why Our Brains Are Wired to Ignore Climate Change.*

In his conclusion, “Four Degrees: Why this Book Is Important” (pp. 239-42) Marshall recounts how for a “many years” scientists focused on the catastrophic dangers of allowing global average temperature to rise 2 degrees Centigrade above the beginning of the Industrial Revolution. Here Marshall discusses the increasing conclusion “that four degrees is the actual future we face” (239). These scientists refer not to change, a misleading euphemism, but to *catastrophe*, Praised by Naomi Klein for having “the courage to look unblinkingly at this existential crisis.”

2015

Nicholas Stern, *Why Are We Waiting?*

“delay is dangerous. . . .I hope we can help bring about the acceleration in action that is vital to the management of climate change.” Stern’s book is for “understanding why we have been moving too slowly....” (xviii). [A high-level, sophisticated study that weighs seemingly all important factors of the economics of climate change. Lord Stern is the Patel Professor of Economics and Government at the London School of Economics, President of the British Academy, and other distinguished positions.. —Dick]

Peter Seidel. *There Is Still Time to Look at the Big Picture...and Act.*

In his Preface he writes about his earlier (1998) book, *Invisible Walls: Why We Ignore the Damage We Inflict on Our Planet...and Ourselves*. “Since then, environmental damage has only grown worse . . . It is clear that if we continue on our current course our future will be grim indeed.” But “facing the dismal facts might get us to think and change.” In his Recap p. 171, first of all “We need to: recognize that we are now on a path leading to catastrophe.”

2016

Ian Angus. *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System*. The “central theme of Ian Angus’s marvelous new book” is the “dialectical interrelation between the acceleration into the Anthropocene and the acceleration of a radical environmentalist imperative in response.” The “main achievement” of the book is the bringing together of “two aspects of the Anthropocene”: variously viewed as the geological and the historical, the natural and social, the climate and capitalism—in one single, integrated view” that “the world, under ‘business as usual,’ is being catapulted into a new ecological phase—one less conducive to maintaining biological diversity and a stable human civilization.” (from “Foreword” by J. B. Foster).

John Bellamy Foster. “The Anthropocene Crisis.” (*Monthly Review*, Sept. 2016). From his Foreword to Ian Angus, *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System*. Foster provides a short history of the increasing awareness of the recently accelerated global warming that has produced (possibly to be named) the Anthropocene epoch, given expanded treatment in “Angus’s marvelous new book.” Foster ends his essay by quoting Bertolt Brecht’s poem “The Buddha’s Parable of the Burning House,” in which Buddha exhorted the inhabitants to leave at once, but they did not, but instead asked foolish questions.

Dolack, “No Planet for Optimists.” *Z Magazine* (May 2016), 4-5. A dire conclusion based upon recent studies:

Hansen, et al., in *Atmospheric Chemistry and Physics*: “swift action is necessary in the face of a ‘global emergency’” because of “a future catastrophic rise in the oceans.”

Science: planet “already committed...to a six-meter rise in sea level,” which is likely to inundate 444,000 square miles of land “where more than 375 million people live today.”

Even if the goals committed to by the Paris Climate summit in December 2015 were achieved (1.5 degrees Celsius above pre-industrial levels), temperature globally would rise “nearly 3 degrees Celsius by 2100.” “We have a global emergency” and must drastically reduce fossil fuel CO2 emissions quickly.

What to do? Because our economic system requires constant growth, “There is no alternative to a massive change in industrial activity.”

Report in *Science*, 26 August 2016, page 852:

<http://science.sciencemag.org/content/353/6302/852>.

Here is an update on an important topic in *Facing the Anthropocene*. The 35th International Geological Congress met in South Africa during August 2016. Their decision was pretty much what the book predicted: These geologists are suggesting that a new geological “epoch” should be established, named “Anthropocene,” that it should begin in 1945-1955, and that it’s geological “marker” should include the “black carbon” deposited by coal plants and other fossil fuel plants. –Art Hobson

Art Hobson, “Fires of the Anthropocene: Human Inaction Setting Stage for Dire Consequences.” *NADG* (May 24, 2016).

2017

John Bellamy Foster, "Trump and Climate Catastrophe." *Monthly Review* (Feb. 2017). "...capitalism's threat to planetary boundaries cannot be solved by stopgap reforms, however radical, that leave the system's fundamental features intact while simply transcending its relation to fossil fuels."

Art Hobson, "On Course to Crash." *NADG* (Feb. 21, 2017).

EXTINCTIONS

TD was sent to OMNI350 Book Forum committee 11-30-16

TERMITE DREAMS

By Gerry Sloan

A slight deviation in climate
could trigger the Anthropocene,
i. e. the next great mass extinction.
In my dream the termites have come
to reclaim the corpses of hardwoods

from houses, bridges and buildings,
their appetites voracious, fattened
by decades rife with extermination.
Then will come the climate refugees
clamoring their desperate demands.

DICK'S ESSAY ON KOLBERT'S *THE SIXTH EXTINCTION* AND DAWSON'S *EXTINCTION: A Radical History* 2-3-17

Entering the Anthropocene Era, *The Anthropogenic Conquest* and Sixth Great Extinction

At the conclusion of chapter one about the sudden global kill-off of amphibians, and the author's account of a night search in Panama by scientists for some surviving frogs, most others killed by the "unstoppable" chytrid fungus, Kolbert reflects about the three frogs they

returned with. “It occurred to me that the frogs and their progeny, if they had any, and their progeny’s progeny, if they had any, would never again touch the floor of the rainforest but would live out their days in disinfected glass tanks.” And then that night she experienced “vivid, troubled dreams, the only scene from which I could later recall was of a bright yellow frog smoking a cigarette through a holder” (22). The entire chapter is a masterpiece of science reporting, weaving anecdote with multiple contexts ranging in millions of years, until this final metaphor condenses the latest extinction in a flash.

The amphibians, who are “among the planet’s great survivors,” “crawling out of the water some 400 million years ago,” have been decimated throughout the planet in only a decade by a new fungus in the chytrid family. How was the comic nightmare smoking frog brought down by a “cigarette” fungus so quickly? By way of speed of human commerce and globalization (18-19), she argues, the planes and ships that race from country to country and hemisphere to hemisphere. So why the “cigarette”? A few pages earlier Kolbert had quoted a frog researcher: “one species has unwittingly achieved the ability to directly affect its own fate and that of most of the other species on this planet” (8)

PART II What Can Be Done?

The chytrid fungus can be killed with bleach, but, well, that’s as preposterous than trying to clean oil from every dying bird and fish in the Gulf of Mexico after the pipeline spill. So will all other species go the way of the Neanderthals, who “lived in Europe for more than a hundred thousand years” and would be living there still, along with the mammoths, the aurochs, and the woolly rhinos had not *homo sapiens* appeared?

Here she becomes stuck in her entirely true understanding of “human nature.” On p. 2 she states for the first of many times her vision of the human Godzilla that spread throughout the world, until it “reproduce[d] at an unprecedented rate. In a single century the population doubles; then it doubles again, and then again. Vast forests are razed. Humans do this deliberately, in order to feed themselves. Less deliberately, they shift organisms from one continent to another, reassembling the biosphere.” During this time humans, having discovered coal, “begin to change the composition of the atmosphere. This in turn alters the climate and the chemistry of the oceans.” Some plants and animals adapt, but millions [she’s referring to species here] “find themselves marooned. Extinction rates soar....”

Scientific research in the hands of an exceptional writer has produced this dazzling book on massive anthropogenic extinctions. Science has given us the understanding. Now what can science do to prevent further disastrous consequences? Her final chapter begins with the frozen zoos at San Diego, Cincinnati, and other zoos. A reassuring experience? Kolbert writes: “I try to calculate how many little plastic vials and vats of liquid nitrogen would be required to store all the frogs threatened by chitrid and the corals threatened by acidification and the pachyderms threatened by poaching, and the multitudinous species threatened by warming and invasives and fragmentation, and soon I give up; there are too many numbers to keep in my head” (261). I suggest we all read this aloud loudly, more than once, experimenting with various voices to convey such hopelessness.

But then she breaks the text to signify a deep breath or shift in perspective and to ask the question: “Does it have to end this way?” Science, scientists have taught us how we are “imperiling other species.” In addition to being destructive, however, humans, scientists “can

also be forward –thinking and altruistic”—think of John Muir, Rachel Carson, and countless others. In 1974 Congress passed the Endangered Species Act, and soon afterward the California Condor was brought back from the brink, and a tremendous effort is under way to save the whooping crane. So, “wouldn’t it better, practically and ethically, to focus on what can be done and *is* being done to save species, rather than to speculate gloomily about a future in which the biosphere is reduced to little plastic vials? ‘People have to have hope.’” (263). I doubt anybody will disagree.

But what will be the foundation of that hope stronger than a handful of successful restorations and a roomful of wishful thinking? That the altruistic people will eventually win out over the selfish?

A few pages from the end she recognizes her “real subject has been the pattern” underlying the individual species extinctions, “call it the Holocene extinction, or the Anthropocene extinction, or, if you prefer the sound of it, the Sixth Extinction” (265). Mainly the surface of the earth experienced gradual or uniformitarian changes, but occasionally—5 times—sudden, catastrophic changes occurred, caused by glaciation, warming, asteroid impact, volcanic eruption, and now by human beings (266). What is the pattern by knowledge of which we can resist? The pattern not merely of *change* but “the *rate of change*”—“when the world changes faster than species can adapt.” How can we slow that rate of change?

Apparently, she argues, it’s not “whether people care or don’t care...people change the world.” But can she be more specific, if we are to grapple with global catastrophe?

It is older than “modernity” (goodbye Neanderthals), but “modernity is its fullest expression.” But what is modernity? Well, it’s “the qualities that made us human to begin with: our restlessness, our creativity, or ability to cooperate to solve problems.” It’s our “use of signs and symbols to represent the natural world”; this is or was our hope. Yet they “pushed [us] beyond the limits of that world.” That is, the so-called *homo sapiens* species is inherently “dangerous to other species.” To slow the rate of change, we must change human nature.

Here Kolbert makes her final textual break, but this time not in a new direction, but to affirm again the human causation of the 6th Extinction by the exhibit in the floor of the American Museum of Natural History’s Hall of Biodiversity, and to ask the question, “what happens to us?” Will we too be undone by our species’ nature? (I am about a page from the end of the book.) And her answer is, very likely. By disrupting “the earth’s biological and geochemical systems—cutting down tropical rainforests, altering the composition of the atmosphere, acidifying the oceans—we’re putting our own survival in danger.”

But won’t human intelligence and its science discover some miracle technological remedies? Some people say, “Don’t worry,” our ingenuity for construction will counter our ingenuity for destruction. But Kolbert dismisses all technological fixes in one paragraph (268).

What is most important, she concludes in her final paragraph, is to be aware of this “amazing moment” of our decision to open or close our “evolutionary pathways.” I urge you to read her final paragraph on giant rats. See Part III below under Resistance.

Art Hobson, “On the Course to Crash. Study Firms Up Serious Concerns for Planet Earth.” *NADG* (February 21, 2017). “If we lack the will to really change our habits, this disaster (“sea levels...80 feet higher”) will soon become irrevocable.”

RESISTANCE: we're not burning or drowning YET

Part III: From Kolbert to Dawson, Blame Not Human Nature but the Economic System:

Change the System Not the Climate

Kolbert's is a geologist's or archaeologist's perspective. Like all other life-forms ours will disappear too, and all we have created. Her final chapter demonstrates how conflicted she is with such knowledge, how ambivalent, how upset.

But she has skipped over a huge reality that might offer stronger hope than she recognizes. If human nature is dangerous to other species and to itself, human nature embracing the US form of capitalism is extremely dangerous, for it nourishes the worst in our nature. Here's why we must seek to displace that capitalism: the sudden anthropogenic rise to dominance of the economic system of capitalism can be reversed. Some countries have significantly altered it to make it less dangerous to life. But Kolbert does not explore this alternative.

Naomi Klein in *This Changes Everything* is similar. She recognizes the origins of climate change in the economic system of neo-liberal capitalism, but she does not perceive a way to change the system and institutions. “...the real reason we are failing to rise to the climate moment is because the actions required directly challenge our reigning economic paradigm”

(neo-liberal, deregulated capitalism). “Only when we identify these chains do we have a chance of breaking free” (63). Combined, Kolbert and Klein offer a compendium of the *harms of capitalism*. And Klein sets forth many remedies, especially resistance by *blockades*. But neither exposes the structure or workings of that economic system that would enable us to abolish it brick by brick.

What of capitalism itself? What are its mechanisms susceptible to analysis, exposure, and change? What are its chains which we might remove link by link?

Many books offer such analysis. After all, Marx was writing over 100 years ago. Recently several books that examine climate change and or extinctions have been published. The best of which I am familiar is by Ian Angus, *Facing the Anthropocene*, which analyzes warming and extinctions. But I’ll discuss for a moment the latest on extinctions, a primer of only some 100 pages by Ashley Dawson, *Extinctions: A Radical History*.

Dawson praises Kolbert’s “terrifying tour” of the planet. But he also deals out severe criticism. Not human nature, which is a hopeless and despairing argument, but human-created capitalism is the “engine of the extinction crisis,” and “it is easier to imagine the end of capitalism than it is to articulate any other genuine solution” to the crisis (98). Kolbert attributes ecocide to humanity as a whole. But it was capitalism that “unleashed waves of enclosure, imperialism, warfare, and ecocide over the last five hundred years that have benefitted a very small segment of humanity while displacing, immiserating, enslaving, and destroying countless number of **people, animals, and plants**. Everyone is not equally responsible for the destruction of nature, as Kolbert [266] suggests. Such a sweeping

indictment of an undifferentiated humanity is both historically inaccurate and politically disempowering. Such a perspective offers us not understanding of the structural forces that generate exploitation and ecocide, no sense of how such forces may push the vulnerable to behave in ways that are antithetical to their long-term interest, and no conception of how people in the relatively affluent global North might act in solidarity with those whom Frantz Fanon called ‘the wretched of the earth.’ Such a perspective is truly hopeless” (98-99).

In contrast, Dawson’s *Extinction* from beginning to end engages in resistance, beginning where Kolbert ends. Particularly, he seeks the **structural causes** of the crisis. Christian Parenti’s concepts of “tropics of chaos” and “catastrophic convergence” are useful (11-12), and the “global attack on the commons,” the “world’s common wealth,” the “destruction of global diversity” by privatization (Hardt and Negri, *Commonwealth*) are crucial (13). (OMNI350 has at least touched upon both.) A core energy of capitalism—growth—is explained as “stripping the world of its diversity and fecundity”: expansion for profit produces increasing commodification, which becomes “this insatiable maw...consuming entire ecosystems.” And as Kolbert saw humans being undone by their own expansion disadvantageous to other species and to themselves, Dawson sees the human structure of capital accumulation as destroying “its own conditions of reproduction” as illustrated by the 6th Extinction (13-14).

Dawson’s “primer on extinction” prepares us for “this planetary crisis” by integrating study of science, environmentalism, and radical politics. “Indeed, extinction cannot be understood in isolation from a critique of capitalism and imperialism” (15). So he begins with “the notion of the Anthropocene,” the “present catastrophe” (chap. 2), followed by analysis of extinctions

as “products of capitalism” (chap. 3), ending with this statement: “Capitalism, it is clear, cannot solve the environmental crises it is causing” (62). Chapter 4, “Anti-Extinction,” critically surveys such efforts as “rewilding” and “deextinction,” ending with the commodification even of “disaster biocapitalism.” Chapter 5, “Radical Conservation,” pp. 83-94, describes an anti-capitalism conservation movement. I think this chapter can stand alone as a manifesto, you can read it in 15 minutes, and the 6th chapter, the Conclusion, does not add much.

References For Kolbert and Dawson

DAWSON, Ashley. *EXTINCTIONS: A Radical History*. 2016.

KOLBERT, Elizabeth. *THE SIXTH EXTINCTION*. Henry Holt, 2014.

Both books provide end notes and bibliography that combined provide an excellent library of books and articles on extinction in the Anthropocene Era.

Related Readings

Angus, Ian. *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System*. Monthly Review P, 2016. The best book I know that combines both the science and the politics of the climate catastrophe. Part One gives an excellent summary in 6 chapters of the science of cc. Part Two in five chapters is about “Fossil Capitalism.” Part Three, “The Alternative,” two chapters: chapter 12: “Ecosocialism and Human Solidarity,” chapter 13: “The Movement We Need.”

Angus, Ian. *A Redder Shade of Green: Intersections of Science and Socialism*. Monthly Review P, 2017.

Baran, Paul A. *The Political Economy of Growth*. Monthly Review P, 1957. The creation and use of economic surplus.

Baran, Paul A. and Paul Sweezy. *Monopoly Capital: An Essay on the American Economic and Social Order*.

Monthly Review P, 1966. Giant corporations.

Burkett and Foster. *Marx and the Earth*. 2017.

Klein, Naomi. *This Changes Everything: Capitalism versus the Climate*. 2014. Strong emphasis upon indigenous peoples' resistance and their blockades.

Lowy, Michael. *Ecosocialism: A Radical Alternative to Capitalist Catastrophe*. 2015. Chapter One: What Is Ecosocialism. Chapter Two: Ecosocialism and Democratic Planning. Chapter Three: Ecology and Advertising. Chapters Four and Five on Indigenous Peoples. Four important, inspiring Appendices.

Magdoff, Fred and Chris Williams. *Creating an Ecological Society: toward a Revolutionary Transformation*.

Monthly Review P, 2017.

O'Connor, James. *Natural Causes: Essays in Ecological Marxism*. Guilford P, 1997.

Saito, Kohei. *Karl Marx's Ecosocialism: Capital, Nature, and the Unfinished "Critique of Political Economy."*

Monthly Review P, 2017.

Praise *Extinction: A Radical History* by ASHLEY DAWSON

"Ashley Dawson's slim and forceful book ... makes a case for being the most accessible and politically engaged examination of the current mass extinction ... a welcome contribution to the growing literature on this slow-motion calamity." —Matthew Schneider-Mayerson, Assistant Professor of Environmental Studies, Yale University, in the *Los Angeles Review of Books*

"Dawson's searing report on species loss will sober up anyone who has drunk the Kool-Aid of green capitalism. For a bonus, readers will learn a lot from his far-sighted, prehistoric survey of extinction." —Andrew Ross, author of *Creditocracy and the Case for Debt Refusal*

"Dawson has summed up the threat to our fellow species on Earth with clarity, urgency and the finest reasoning available within the environmental justice literature. He explains how capital's appropriation of nature cannot be 'offset,' nor solutions found in financialization. Fusing social and ecological challenges to power is the only way forward, and here is a long-awaited, elegant and comprehensive

expression of why the time is right to make these links.”

—Patrick Bond, Professor of Political Economy, University of the Witwatersrand, Johannesburg, and author of *Politics of Climate Justice: Paralysis Above, Movement Below*

“A succinct and moving account of the co-evolution of capitalism, imperialism, and climate change. Dawson demonstrates not only how capitalism created climate change but also why the former must be challenged in order to halt the latter. Offering not only critique but also solutions, this rousing book is a great tool for anti-capitalists, climate change activists, and those still making sense of the intrinsic connections between the two.”

—Jasbir Puar, Associate Professor, Graduate Program Director Women's and Gender Studies, Rutgers University, author of *Terrorist Assemblages*

“Historically grounded, densely researched, fluidly written, Ashley Dawson’s book on extinction is a powerful and painful exploration of human civilization's environmental irrationalities. Yet **Dawson does not see annihilation as inevitable and he even points towards an alternate path.**”

—Christian Parenti, author of *Tropic of Chaos: Climate Change and the New Geography of Violence*

ABOUT THE BOOK

Some thousands of years ago, the world was home to an immense variety of large mammals. From woolly mammoths and saber-toothed tigers to giant ground sloths and armadillos the size of automobiles, these spectacular creatures roamed freely. Then human beings arrived. Devouring their way down the food chain as they spread across the planet, they began a process of voracious extinction that has continued to the present.

Headlines today are made by the existential threat confronting remaining large animals such as rhinos and pandas. But the devastation summoned by humans extends to humbler realms of creatures including beetles, bats and butterflies. Researchers generally agree that the current extinction rate is nothing short of catastrophic. Currently the earth is losing about a hundred species every day.

This **relentless extinction**, Ashley Dawson contends in a primer that combines vast scope with elegant precision, is the product of a **global attack on the commons**, the great trove of air, water, plants and creatures, as well as collectively created cultural forms such as language, that have been regarded traditionally as the inheritance of humanity as a whole.

This attack has its genesis in the need for capital to expand relentlessly into all spheres of life.

Extinction, Dawson argues, cannot be understood in isolation from a critique of our economic system. To achieve this we need to transgress the boundaries between science, environmentalism and radical politics. *Extinction: A Radical History* performs this task with both brio and brilliance.

Publication July 2016 • 132 pages

Paperback ISBN 978-1-682190-40-1 • E-book 978-1-682190-41-8

ABOUT THE AUTHOR

READ AN EXCERPT
IN THE MEDIA

IAN ANGUS. *FACING THE ANTHROPOCENE*

By Dick Bennett, 11-30-16

The book is very clearly written, yet cannot be speed read because so many passages invite underlining or an asterisk or exclamation point or a marginal note or a letter or phone call.

Consider Chapter 6, “A New (and Deadly) Climate Regime” (of increasingly extreme CO2 and heat-related events). (Well the opening pages on “Standard Deviation and Sigma Events” regarding average global temperatures and extreme weather 90- are not easy.) Angus opens with the opinion of **James Hansen**, maybe the most important climatologist today (as this book illustrates), that the Paris Agreement to limit average global temperature to 2 degrees Centigrade above preindustrial levels is “a fraud” because the agreement is voluntary. That drew my first of several exclamation marks! Does that matter? Yes, from 2 to 4 degrees is “a huge jump” (and he explains, as he does all claims throughout). He concludes his first section with his equally exclamatory statement: “Unless radical changes are made, the Anthropocene will be marked not just by [increasing overall] warmth but by a new climate regime [of increasingly extreme heat events], very different from the 11,700 years of Holocene stability. This is not just speculation: the transition is well under way” (90) (as his book demonstrates, and see his excellent bibliography and my refs. at end).

Because the remaining pages of the chapter elaborate this opening clearly, I’ll not continue to abstract them but will move to suggestions for action, which his book calls for page after page.

What can we do?

Replace “climate change” with “climate *catastrophe*.”

Celebrate James Hansen (and all genuine climatologists, our climate Cassandras) and his *Storms of My Grandchildren*, an essential study in the politics of science.

Gather Angus’s evidence of *anthropogenic* climate catastrophe.

Improve his Index (e.g. regarding anthropogenic).

Cite evidence of influence of climate on weather.

List the probable consequences of energy “business as usual.”

Publicize the World Bank’s 2012-1014 reports *Turn Down the Heat*.

List ways Fayetteville, AR, will be affected by heat waves and precipitation extremes here and around the world. E.g., in a 4 degree World “about 50 percent of the global population,” particularly in Africa, Central America, and parts of South America, will

frequently experience unusual (Sigma-e) heat waves by 2040—this will be the new summer norm.” Trump’s Wall around Washington County, or welcome the stranger?

Tell Fayetteville’s Mayor, Council, Emergency Management, and other relevant officials about the book. Demand leadership from EM. And Springdale, Rogers, Bentonville, Bella Vista.

Buy a copy of the book for a friend or student. Locally: Nightbird, B&N, and UA’s Bookstore has ordered copies.

Chapter 6 ends Part One with a quotation from Naomi **Klein’s** *This Changes Everything* p. 88: **“there is still time to avoid catastrophic warming, but not within the rules of capitalism as they are currently constructed.”** Enter Part TWO, “FOSSIL CAPITALISM.”

REFERENCES

Bennett, Dick. Anthropocene, Climate Catastrophe Newsletters. #1: <http://jamesrichardbennett.blogspot.com/2016/08/anthropocene-newsletter-1.html> .
#2: <http://jamesrichardbennett.blogspot.com/2016/11/anthropocene-climate-catastrophe.html>

Cassandra: Apollo gave her the power of **prophecy**, but when she refused him, he inflicted a curse that nobody would ever believe her prophecies.

Angus, Chapter 10, “Accelerating Into the Anthropocene,” 152-174

152, four key drives of the long Anthropocene boom

See the Great Acceleration graphs in chapter 2 (44).

1945 to 1973 the

Golden Age of Capitalism mostly in the northern countries, prosperity for some, but also “the other America” of the poor. Interstate highway system. The petroleum/auto complex a fundamental feature of boom, enormous consumption, accompanied by “deadly cost”: “the greatest misallocation of resources in the history of the world” (157, Kunstler). Military has become largest gas hog. 1974-5 first recession since 1930s to strike all imperialist countries simultaneously. Worker pay levelling. Enviro. Regulation under corp. attack. Globalization. Outsourcing manufacturing to low-wage countries increasing. Dangerous greenhouse gas emissions from ships increasing. Plastic. Chemical fertilizers. Fossil capitalism, Big Carbon rules, “underlies all the changes that have driven the Earth System into the Anthropocene. Can US capitalism de-fossilize. Yes and No (173).

Chapter 11, “We Are Not All in This Together”

Roy vs. Gore, US a class society of unequal groups.

The Ordinary Person’s Guide to Empire BY [ARUNDHATI ROY](#).

REVIEW OF ELIZABETH JACKSON. <https://politicsandculture.org/2009/10/02/elizabeth-jackson-an-ordinary-person%E2%80%99s-guide-to-empire/>

In 21st C. fossil capitalism not just inequality exists in abundance, a fundamental feather of capitalism, but “gross inequality.” “In 2015, the richest 1 percent of the world’s population owned as much as the remaining 99 percent combined.”

“The Victims of Climate Change”

Malnutrition, hunger, lack of shelter. “Unmitigated climate change will lock the world’s poorest countries and ...citizens in a downward spiral.”

“Exclusion and Extermination”

Not only does fossil capitalism create cc, but both are connected to racism. Extreme weather shocks often involves “savagely sorting” of people and “exterminism”: characteristics of society that result in harm or elimination of population, not only nuclear arms but “systemic ecological destruction.” Including “calculated neglect.”

“Environmental Militarism”

Failure of rich nations to assist poor nations, but instead, especially the US, to fund “militarized adaptation” against new “environmental security threat.” In many and increasing instances it becomes a war of the rich in their “armed lifeboats” gainst the poor, including “armed force against starving people,” labeled “barbarism” by Barry Commoner.

“Environmental Apartheid” (184).

Business as usual in the Anthropocene, the rich shielding themselves from the effects of warming, including the poor; e.g. Superstorm Sandy.

Conclusion on capitalist accumulation, surplus population, increasing global divide of rich and poor. If “fossil capitalism remains dominant, the Anthropocene will be a new dark age of barbarous rule by a few and barbaric suffering for most” (187).

MITIGATION AND ADAPTATION: CLASS MARKERS? by Dick Bennett

That prevention by mitigation might be the public’s choice seems reasonable, and adaptation for the elite who can afford it. The idea from Mike Davis was mentioned in Ian Angus’s *Facing the Anthropocene* (185). Climate change will have “dramatically unequal impacts across regions and social classes.” For the poor the results will be dire. Mitigation--

preventing increasing of CO₂, warming, weather extremes—is a global problem that will require several Marshall Plans perhaps aided by several Manhattan and Apollo programs. Think of the cost of shifting from the fossil fuel energy regime to that of sustainable fuel, as one example. Their results will affect all people relatively equally.

But adaptation, at least at present in most of the world, is mainly an individual or local matter. Achievements will depend upon how much money individuals, a neighborhood, or town has or lacks. Poor people build on flood plains because the land is cheaper. Think of levees and walls around wealthier, higher neighborhoods as with Katrina. Manhattan, NYC, our wealthiest city, is starting a wall around its southern tip. But every coastal city will need walls—or move! Either way, poor people often don't have or have enough expensive flood insurance. >From individual homeowners, to neighborhoods, to states and nations, the extreme weather of climate change inflicts the greatest damage upon those who possess the fewest resources for adaptation.

That's unjust, you exclaim. We must prepare to protect our vulnerable citizens. We do have examples of such care. We have FEMA. But those precedents will not be—are not now—sufficient, and the floods and fires are increasing in number, intensity, and cost. But we can improve them; it is *possible*. But probable? We can change our tax structure and Wall Street investment system to benefit the people instead of the few? Given the Congress and President and libertarian ideology presently in power, is this government likely to plan and prepare to finance the protection of the people of the US?

As the pressures increase, are the wealthiest more likely to be generous to the millions of people threatened by the consequences of climate change, or will they dig in, build up, and construct walls around—to keep out flood and fire, and refugees?

We should add a third extraordinary demand on the resources and finances of our nation and the nations of the world: rebuilding after the destruction of the homes, cities, nations by extreme events (from warming and climate change) neither mitigation nor adaptation were able to prevent.

And let's not forget natural disasters. A magnitude-7.8 earthquake struck the Himalayan nation of Nepal in April 2015, killing an estimated 8,969 people, destroying more than 600,000 houses and leaving some 2.8 million people in need of humanitarian assistance. If the Republican Party in power now is reluctant to help its own vulnerable and many desperate citizens adequately, how can we expect it to be concerned with enormous disasters around the world caused by nature and by humans.

PART THREE, THE ALTERNATIVE 189-91

“Ultimate insider” Gus Speth's reversal (chap. 2, p. 38). Features of US capitalism 190. Speth, Hansen, et al., planetary emergency, Anthropocene, 575 billion tons of carbon emitted since 1870. Solutions: from illth to wealth. Our children and grandchildren.

CHAPTER 12, “Ecosocialism and Human Solidarity”

Introduction: Hurricane Sandy and human altruism.

The Problem of Time. We don't have much time (194).

Destination: **ecological civilization**—altruism, equality. What must we do? (198-200).

Destination: Global Human Solidarity. Charter for Human Development [see the AFSC and FCNL mission statement]. Global North nations and ecological restoration. Obstacles (202).

Destination: Ecosocialism. Economy :to meet social needs.” Two essentials (202). The Belem Ecosocialist Declaration of 2008. System change not climate change (204-5). Radical transformations (207). What happened in Stalin's USSR? (208-211).

CHAPTER 13, “THE MOVEMENT WE NEED”

Introduction: Naomi Klein. Holocene over, Anthropocene has begun.

Ecological Counterpower (213). All of us who want a world without oppression must be engaged: We don't have time to change ourselves first; we change by changing the world (Luxemberg). Being radical (215).

A Majority Movement (215). A change in power and privilege. [Who must lose? *Dark Money*, *All the Presidents' Bankers*, *The Influence Machine*.] Tactics.

A Tale of Two Cities (216). Copenhagen vs. Cochabamba, the great divide. The Cochabamba People's Agreement. The “active participation of all oppressed people.”

The Movement We Need (217). Four characteristics of successful resistance in the Anthropocene (218-222). Marxism a method. We must reverse “capitalism's ecosuicidal drive.” Watchwords: Leave the oil in the soil; leave the coal in the hole; leave the tar sand in the land.” [First two were chanted at 71B/Joyce by the demonstrators against the Dakota pipeline Dec. 3, 2016.]

ILLTH: THE ANTHROPOCENE AND US **CAPITALISM, MILITARISM,** and **EMPIRE** 12-1-16 By Dick Bennett

Ian Angus's *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System* contains only a few pages about US militarism and the climate catastrophe rushing toward us. But what little it says is potent and dynamic. Here are the pages from chapters 8, 9,10, and 11 : 130-31, 136-42 (240), 160-163 (241), 181-84 (243), 204.

Here are four key passages:

WWII “wasn’t just a passive divider between Holocene and Anthropocene”; rather it “created the conditions that have shaped capitalism ever since, and started the Great Acceleration on its environmentally destructive course” (137). “Capitalism’s worst depression and most destructive war set the stage for the economic and social changes that have pushed the Earth System into a new and dangerous epoch”(138).

“Military Keynesianism—massive military spending to maintain or increase economic growth—has been a fundamental feature of the U.S. economy, no matter which political party was in office, for over half a century” (141).

“Today the U.S. military is the world’s largest user of petroleum, *and* the largest polluter, producing more hazardous waste than the five largest U.S. chemical companies combined, *and* the largest producer of greenhouse gases” (160).

“Any serious effort to stop global warming will have to overcome the resistance of the U.S. military. As Barry Sanders writes: ‘Today’s brand of warfare, especially, just relies too heavily on staggering amounts of oil; it produces too much greenhouse gas to ever willingly constrain itself with any kind of treaty’” (162-3).

Angus gives us his specific sources on chapter 8 in notes 11-15, on chap. 9 notes 1-16, and chap. 10 notes 24-13, 11 notes 13-21. Related sources elsewhere are numerous. My point is, as a reputable scholar he is transparent; we can determine the adequacy of his sources.

Here are some of the books and a few of the essays cited for these chapters; for more info. go to his Bibliography:

Buxton et al., “Security for Whom in a Time of Climate Crisis?”

Custers, Questioning Globalized Militarism

Du Boff, Accumulation and Power

Eckersley, “Environmental Security, Climate Change, and Globalizing Terrorism”
Foster, et al., “The U.S. Imperial Triangle and Military Spending”

Hayes, “Colonizing the Future”

Heartfield, Unpatriotic History of the Second World War

Hobsbawm, Age of Extremes

Hynes, “Pentagon Pollution, Part One”

Jansson, Sixteen-Trillion-Dollar Mistake

Klare, Blood and Oil

Lipsitz, Rainbow at Midnight

Mitchell, Carbon Democracy

Oakes, "Toward a Permanent War Economy?"

Parenti, Tropic of Chaos: Climate Change and the New Geography of Violence; "The Catastrophic Convergence: Militarism, Neoliberalism and Climate Change."

Podobnik, Global Energy Shifts

Sanders, The Green Zone: The Environmental Cost of Militarism

Semova et al., "US Department of Defense Is the Worst Polluter on the Planet."

Shah, Crude

Suvin, In Leviathan's Belly

Thorne, "Profiteering in the Second World War."

Yergin, The Prize: The Epic Quest for Oil, Money, and Power

Books Angus might also have cited:

-**Bertel**, Rosalie. *Planet Earth: The Latest Weapon of War.*

Collectif Argos. *Climate Refugees*

--**Dyer**, Gwynne. *Climate Wars: The Fight for Survival as the World Overheats.*

Most of these books are only partially about the subject, some very partially, so you can see how small is the scholarship, despite the enormous harms to the environment the US military has caused and is causing today. Except for Sanders' *Green Zone*, I haven't found a single book that concentrates upon the Pentagon and Environmental Destruction (might be a title) or on Pentagon and Global Warming or Climate Catastrophe. In my own field I can find large, book-length bibliographies on Shelley or Wordsworth, or Dickens or Thackeray. Why do you think this failure to study the metabolism of the US military, the US economic system, and appearance of the Anthropocene epoch is happening?

Here is my first newsletter on **US capitalism and climate change**. I am gathering readings for #2. <http://jamesrichardbennett.blogspot.com/2014/11/capitalism-and-climate-change.html>

I also have published online newsletters on the **military and cc**.

What might we do?

Write a poem, or song, or essay on ILLTH vs. Wealth (accumulation that causes harm, Angus 162)

Above all, encourage scholarship. Ask professors you know in any field why there's so few books and articles. At this moment, we all need to become scholars of the subject. Take a

subject within your power. For example, study the local National Guard unit. What is its budget? What corporations have profited from the unit? How much pollution/CO2 does it produce? During maneuvers, what if any effort is made to preserve the soil and species from the tanks and cannons? What happened to the ecosphere during foreign tours of duty? Anything you do will be an advance, given the general lack of attention!

Go beyond Angus's and my additions. Find some articles and books we have missed, and make them known.

Our planet is suffering the extinguishing of thousands of species in The Sixth Great Extinction, as the title of one book declares. What is the impact of the C-130s in Jacksonville on wildlife?

How much fuel is used by one C-130? With what effect upon the atmosphere? (US imperial reach depends upon the boxcar C-130).

The UofA celebrates its military students and vets. Interview a few about the military and environment

Put the pressure by exposing the planetary assault by our military.

--Williams, **Chris**. *Ecology and Socialism: Solutions to Capitalist Ecological Crisis*. Haymarket, 2010. (See: Speth, Magdoff, Foster, Dyer.)

Around the world, consciousness of the threat to our environment is growing. The majority of solutions on offer, from using efficient light bulbs to biking to work, focus on individual lifestyle changes, yet the scale of the crisis requires far deeper adjustments. *Ecology and Socialism* argues that time still remains to save humanity and the planet, but only by **building social movements for environmental justice that can demand qualitative changes in our economy, workplaces, and infrastructure.**

"Williams adds a new and vigorous voice to the growing awareness that, yes, it is our capitalist system that is ruining the natural foundation of our civilization and threatening the very idea of a future. I am particularly impressed by the way he develops a clear and powerful argument for an ecological socialism directly from the actual ground of struggle, whether against climate change, systematic poisoning from pollution, or the choking stream of garbage. *Ecology and Socialism* is a notable addition to the growing movement to save our planet from death-dealing capitalism."

—**Joel Kovel, author of *The Enemy of Nature***

"Finally, a book that bridges the best of the scholarly and activist literatures in socialist ecology! Sophisticated and compelling, eschewing academic jargons 'postmodern' and otherwise, *Ecology and Socialism* more than competently champions a Marxist approach to environmental crisis and the kind of economic democracy needed to achieve an ecologically friendly system of production and human development." —**Paul Burkett, author of *Marxism and Ecological Economics***

Marx and the Earth: An Anti-Critique

[Go to Online Edition](#)

John Bellamy Foster, University of Oregon, and Paul Burkett, Indiana State University, Terre Haute, 2017.

A decade and a half ago John Bellamy Foster and Paul Burkett introduced a new, revolutionary understanding of the ecological foundations of Marx's thought, demonstrating that Marx's concepts of the universal metabolism of nature, social metabolism, and metabolic rift prefigured much of modern systems ecology. Ecological relations were shown to be central to Marx's critique of capitalism, including his value analysis. Now in *Marx and the Earth* Foster and Burkett expand on this analysis in the process of responding to recent ecosocialist criticisms of Marx. The result is a full-fledged *anti-critique*—pointing to the crucial roles that dialectics, open-system thermodynamics, intrinsic value, and aesthetic understandings played in the original Marxian critique, holding out the possibility of a new red-green synthesis.

John Bellamy Foster. "Trump Against the Planet." *Monthly Review* (February 2017).

THE TWELVE VALUES, MECHANISMS, LIABILITIES, AND CORRECTIVES OF US CAPITALISM. A Topical Guide to Breaking the Chains of Capitalism by Dick Bennett

Klein, *This Changes Everything*. "The "real reason we are failing to rise to the climate moment is because the actions required directly challenge our reigning economic paradigm [de-regulated capitalism]. Only when we identify these chains do we have a chance of breaking free" (63).

Depreciation of Nature Leading to Exploitation

Liabilities: Human Ecocide against commons of water, air, flora, fauna, leading to self-destruction

Climate: Drive for profit led to extraction from commons until CO₂, warming, weather extremes, extinctions

Alternative: Attitude of equality of human, other species, air, soil; rejection of commodification as source of value,

Commodification

Liabilities: turning all the earth's resources into capital even though they are finite; selfishness, gluttony, competitiveness, shortsightedness, using up resources as fast as possible for growth and profit

Climate catastrophe: disastrous pillage of the planet

Alternative: generosity, cooperation, long-range planning, affirmative government

Growth

Liabilities: exceeding the planetary boundaries, exhaustion of resources, 6th Great Extinction

Climate catastrophe: all other causes are exacerbated by endless growth

Alternative: Quality of Life not GDP as measure of success, [Why the GDP Is Not A Good Measure of A Nation's Well Being ...](#)

Consumption

Liabilities: consumption as end itself, acquire even what you don't need, individual obesity, diabetes;

Climate catastrophe: exhaustion of resources, carnivorous major cause of methane

Alternative: Vegetarianism, Veganism

Capital Accumulation, Drive for personal profit, need for continuous growth

Liabilities: inequality, poverty, accentuation of class gaps; as illust. by the 6th Extinction, capital accumulation destroys itself

Relevance to climate catastrophe: unequal economic adaptation to cc, particular vulnerability of the poor to cc consequences

Alternative: labor theory of value, altruism, equality, cooperation, welfare of all

Monopoly, Consolidation, Purchase of or Merger with Competitors

Liabilities: Ceaseless efforts to eliminate competition, monopoly goal to ensure **profit**. NADG (9-13-16). "Merger to Create Largest Fertilizer Firm."

"Horizon Will buy Drugmaker for \$80M."

Climate Catastrophe: minimizing, marginalizing public influence in economic system, prices, quality

Alternative or corrective: strict anti-trust laws and enforcement; cooperation, co-ops, worker ownership

Massive Criminal Corporations

Liabilities: Too big to fail or prosecute and the public to pay; e.g., Exxon denial of climate change

Climate Catastrophe: destruction of the planet

Alternative, Corrective: Seize their assets to fund reduction of carbon emissions

Instability of Market System

Liabilities: Boom and Bust, periodic crises of over-accumulation compelling investors to seek foreign markets

Climate Catastrophe: Periodic implosion of people's savings and investments when money needed for mitigation and adaptation

Alternative, Corrective: close government watch of Wall Street

Advertising, Inducing Consumption, Creating Needs,

Liabilities: culture of deception, society of deceit, persistent subversion of truth and trust: (Valera promoting its "clean" gasoline)

Climate catastrophe: chief mechanism of exhaustion of resources by consumption

Alternative: strict government oversight of lying about products, critical thinking education K-12.

Hostility to Government Oversight

Liabilities: abandonment of affirmative government, the only power strong enough to control corporate abuses

Climate Catastrophe: dismantling of government regulatory agencies intended to assist and protect the people (Nader's *Unsafe at Any Speed*)

Alternative: return to concept of affirmative government of, by, and for the people

Hostility to Taxes

Liabilities: enfeebling even elimination of the institutions of civilization in health, education, and so on, that require financial support

Climate Catastrophe: all estimates of what will be needed for mitigation and adaptation reach trillions of dollars

Alternative: a just tax system that minimizes gaps between the rich and the poor (definition of just is fair)

GDP as Measurement of Economic Success

Liabilities: gives false assessment of real needs of society

Climate catastrophe: GDP measurement encourages growth

Alternative: Quality of Life as measure of national success

WARS and IMPERIALISM for RESOURCES, SPACE

Liabilities: ecocide/ecological warfare, extractionism rampant, enormous waste of nations' resources and treasuries; incalculable suffering by death and relocation of all species,

Climate Catastrophe: resource wars destroy entire nations; e.g. Syria 2016, incalculable cost of restoration

Alternative: conversion of military to civilian needs, abolition of nuclear weapons, prosecution of all war criminals or at the least public confession.

Sources:

Ian Angus, *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System*

Ashley Dawson, *Extinction: A Radical History*. 2017.

Michael Lowy, *Ecosocialism: A Radical Alternative to Capitalist Catastrophe*

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