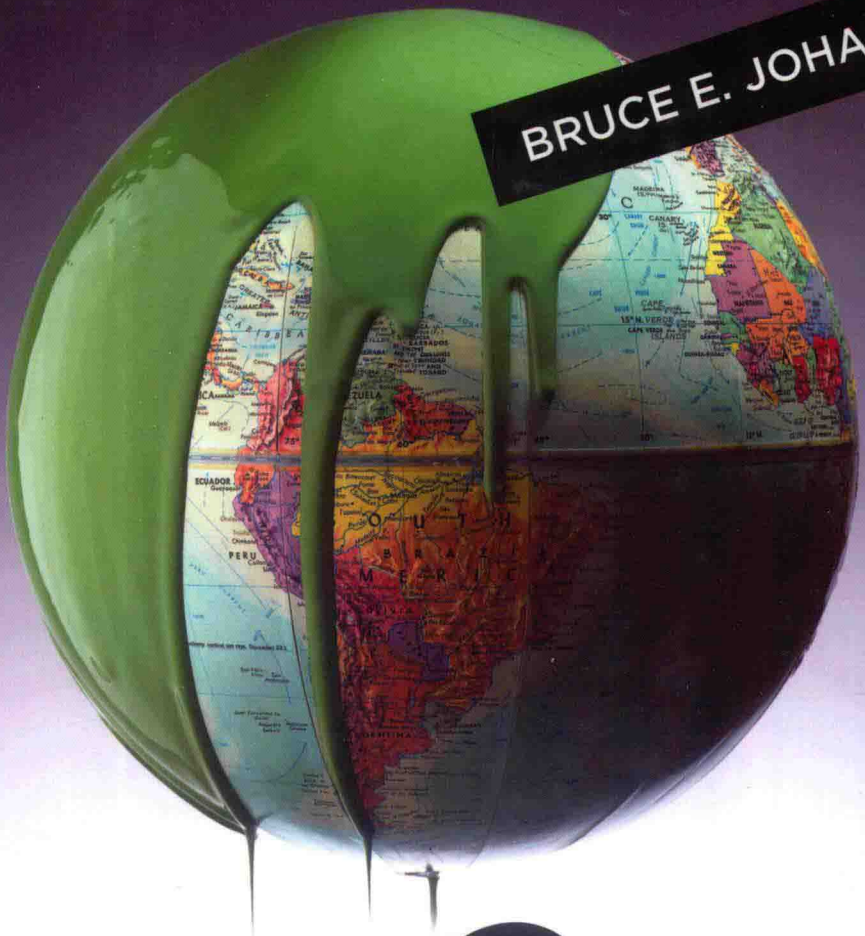
BRUCE E. JOHANSEN



ECO-HUSTLE!

GLOBAL WARMING, GREENWASHING, AND SUSTAINABILITY

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Bruce E. Johansen

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Introduction

Tim Rinne, editor of the Nebraskans for Peace's (NFP) *Nebraska Report*, told me once that the scariest thing about global warming is that we as a species essentially can ruin the earth as we know it by changing nothing. Continuing business as usual will do it, a state of affairs much more difficult to change than resistance to the nuclear arms race (where Tim cut his teeth as an activist). In the days when the Bomb was our premier worry (NFP began as Cat Lovers Against the Bomb), someone would have had to push that proverbial Red Button. With global warming, all we have to do is press our gas pedals and flip our light switches—keep doing what seems, to most of us, to be natural, necessary, and convenient.

In September 2013, in fact, Earth's climate scientists told us, in a report from the Intergovernmental Panel on Climate Change (IPCC), how long it will be until business as usual damns us to an infernal future. Their estimate was midcentury, the 2040s to be exact. By that time, we will have burned enough fossil fuels and spewed enough greenhouse gases into the atmosphere to open the door to hell. Of Earth's fossil fuels, said the IPCC, we have burned about 1 trillion tons, and we have a trillion tons to burn (of 3 trillion remaining) to open that door. These estimates are elastic, of course, especially on the supply side. The fossil-fuel industry keeps finding new ways (witness tar sands and fracking) to turn earthbound carbon dioxide and methane into heat-trapping gases.

So what are many of us doing at the door of hell? We're selling tickets to the show, or ignoring the problem. "Greenwash" combines "whitewash," "brainwash," and "hogwash," as "smog" combines "smoke"

and "fog." Greenwashing is environmental sleight of hand in advertising and technology—something that seems sustainable on the surface, but, on closer examination, really isn't. If carbon dioxide had a sense of humor, it would get a laugh out of the games people (and corporations) play in its name.

This is the bottom line: we begin to win the battle against global warming when the proportion of greenhouse gases in the atmosphere (principally, but not solely carbon dioxide and methane) begins to fall. This has not yet occurred at any time during the industrial age, or since coal was first burned to power the first steam engine. The level of carbon dioxide, which ranged between 180 and 280 parts per million (ppm) in a natural cycle for several hundred thousand years before that, is now over 400 ppm, and still rising.

There are some tantalizing hints that greenhouse-gas emissions are now declining in some places, for a handful of reasons, even if the curve, as a whole, is still rising. U.S. electricity use has been falling for several years due to increasing efficiency (despite rising use of electrical devices). Substitution of natural gas for coal also is reducing the greenhouse-gas overload in the United States. In fact, energy use in the United States has dropped since 2007, "and last year's [2012] total was below the 1999 level, even though the economy grew by more than 25 percent from 1999 to 2012, adjusted for inflation" (Cavanagh 2013). The amount of oil burned in the United States peaked in 2005, and had declined 13 percent from that level by 2012, according to Ralph Cavanagh, codirector of the energy program at the Natural Resources Defense Council (2013). "Surprisingly, oil consumption was lower in 2012 than in 1973 (when the nation's economy was only about a third of its current size). The main reason is that we are demanding better mileage from our vehicles and driving them less."

Worldwide, however (and especially in China and India, with their rapidly growing coal-fired industries), greenhouse-gas emissions are still rising. Energy efficiency has been improving, but not nearly quickly enough to bring down the atmosphere's level of greenhouse gases. UN secretary general Ban Ki-moo has said: "The heat is on. Now we must act." Continuing rapid emissions now "is kicking the climate can down the road, leaving climate change for our children and grandchildren," said Christopher B. Field, an American scientist heading a subgroup of the IPCC. "But it is kicking a can that gets to be bigger, heavier and harder to move with each kick" (Gillis 2013).

Even as humanity kicks the can down the road, the rhetorical temperature is rising. I recall President Obama's speeches on global warming, so full of his trademark hope and empathy, and so evocative of the need to preserve a habitable world for coming generations. Like most people,

I genuinely love a dose of heart-throbbing hope. I was much happier in my years-long relationship with global warming when I had more of it. I loved the way that Obama outflanked the Party of "NO!"—most of whom have never met a greenhouse gas they didn't like. Ten minutes after I enthused over Obama's rhetoric, however, the geophysical facts hit me in the gut. On June 25, 2013, the day Obama gave one of his speeches, Fairbanks, Alaska, hit 92. A few days later, Phoenix, Arizona, hit 119 and Las Vegas, Nevada, 117. Death Valley (it has that name for a reason) grazed 130, four degrees shy of the world record.

In the midst of all this, the carbon dioxide level reached 400 ppm. Anyone who has been following this issue knows the implications of a 400-ppm carbon dioxide level that will be painfully obvious in a scant few decades. You know that the full effects of that level will hit, via thermal inertia, in about 50 years. Today's heat and storms are what we get from the fossil fuels that were burned back when John F. Kennedy was president, gasoline was 35 cents a gallon, and most Chinese owned one lightbulb, if that. Today, the amount of fossil fuels we are burning worldwide is much higher (300% by some estimates), an amount that will shape the heat and storms with which our grandchildren grow old.

Every day that we diddle, every day that greenhouse gases tick upward, the odds lengthen against survival of a sustainable way of life without major suffering by our children and grandchildren. This is a legacy issue. This game, like football, basketball, or soccer, is being played on a clock—the geophysical clock—and we get no time-outs. What is more, we are deep into the fourth quarter and many points behind against the plodding but relentless offense of the greenhouse gases.

In this book, we will dissect some really bad ideas that have been concocted mainly to make someone a lot of money. Many of these ideas are attempts at technological fixery that do not reduce the amount of carbon dioxide, methane, and other greenhouse gases in the atmosphere. They move the gases around (and sometimes hide them) but do not reduce the total. We also will look at companies that get it right, seriously reducing their greenhouse-gas emissions, conserving energy, and enhancing profits, and at attempts to decarbonize war, and reconstruct standard accounting methods to deal in geophysical realities.

In Chapter 1, we begin with a survey of the science: "Why So Urgent? Thermal Inertia, Feedbacks, and Tomorrow's News." Why is eco-hustling so odious? It postpones real solutions to the problem of greenhouse-gas pollution. Why is it so urgent? Two words, from this survey of the science: thermal inertia. This cake is already being baked. Carbon dioxide and methane have no politics. They don't care whether we "believe" that global warming is a threat. They just hold heat.

On one level, global warming science not complicated: the earth's major thermometer, in the long run (everything else being equal), is the level of carbon dioxide in the atmosphere, now more than 400 ppm, higher than it has been in 3 million years. Subject to thermal inertia, which delays its full effects about 50 years in the atmosphere and 100 to 200 years in the oceans, the increase in this level over the last 200 years reflects the amount of carbon that is being extracted from the earth, burned as fuel, and released into the air. If a proposed solution does not permanently reduce the level of greenhouse gases, it is probably greenwash. Environmentally effective technology reduces emissions. Ineffective technology does not. Technologies that do not reduce atmospheric carbon dioxide in the long run include: ethanol, at least using corn, a low-energy source of fuel (Chapter 2); and carbon sequestration, especially in the oceans, which are already becoming acidified by carbon (Chapter 5). For the most part, geo-engineering (Chapter 6) includes a gallery of bad ideas, such as dosing the atmosphere with sulfur. Most of these merely hide CO_2, or move it around. Greenwash is a shell game, fossil-fuel foxtrot.

In Chapter 2, "Raining on the Corn-Ethanol Parade," we broach the climatic bottom line: we are not solving this problem until the proportion of greenhouse gases in the atmosphere begins to decline, something that has not happened since the human race graduated from peat moss and candles to coal and oil as power sources almost two centuries ago. As a longtime resident of the Cornhusker State, I hate to say this, but corn ethanol is not going to reduce carbon dioxide levels. As a good source of fuel, it's too low-energy. Nevertheless, corn ethanol has been promoted as "green" fuel. For a truly useful biofuel, try high-energy sugarcane. Brazil does it. Even so, burning plants is still converting earthbound carbon to atmospheric pollution, no matter whether the plant mass is of ancient provenance (such as fossil fuels) or more recent (corn or sugarcane). For the real thing, try wind or solar power, a bicycle, or a good pair of walking shoes. All of these things take greenhouse gases off the table.

In Chapter 3, "Cap and Hustle and Other Eco-Scams: Making a Buck while the Earth Burns," we explore a shell game, one more way of moving carbon around, instead of reducing it. Europe tried cap and trade, and eco-hustlers made a mockery of it. A more realistic system may be "cap and dividend," which levies a carbon tax on business activity that emits greenhouse gases, and returns proceeds to taxpayers through dividends to help them cope with increased prices, rewarding those who reduce their own usage of greenhouse gases. The same chapter examines other "green" hustles, such as eco-tourism. Hint: if it involves travel on jet aircraft, it's not Earth-friendly, no matter what the travel agents call it.

View the glaciers before they melt. Drill for oil in the Arctic as it melts. Plant exotic crops in Greenland. A number of companies are promoting global warming as a moneymaking opportunity.

Chapter 4, " 'Clean Coal,' and Other Oxymoronic Orwellianisms," explores an exercise in corporate mass advertising word association on the order of "war is peace" and "hunger is plenty." The technological fixes that go under that name do very little to reduce the atmosphere's carbon dioxide load. Meet British Petroleum as "Beyond Petroleum," Earth-friendly frackers, and the "gas lady."

Chapter 5, "Carbon Capture and Sequestration: A Bad Idea Whose Time Has Come—and Gone," brings us face-to-face with what may be one of the two grandest eco-hustles: carbon capture and sequestration (CCS). Don't like carbon dioxide? Hide it in rock formations or under the ocean. The problem is, out of sight is not out of the carbon cycle, and the oceans already are becoming too acidic for shelled animals due to rising levels of CO_2 in the atmosphere, which ocean water absorbs. These ideas are gigantic, expensive boondoggles, and they've been tried by some companies on very large government contracts. The results generally have not been pretty, or sustainable.

Chapter 6, "Geo-engineering: Sulfur as Savior?" is a meet-and-greet with what may become the biggest "green" hustle of them all. "Geo-engineering" involves a gallery of grand plans that assume the human race is a junkie that never will learn to live without its carbon dioxide "fix." From bombing the atmosphere with sulfur to building gigantic space mirrors to deflect sunlight—all of these ideas are expensive, short-term, and would do little, at great cost, except postpone the eventual reckoning. This "solution" is dangerous because it convinces some people that real reduction of greenhouse gases is impossible, or irrelevant. Scientists who support geo-engineering may be techno-junkies, or do so with a sense of desperation.

Chapter 7, "Greening the Pentagon? The Carbon Footprint of War," takes us to the war room of greenhouse-gas culture. Modern warfare, waged over long distances with jet-propelled aircraft, is immensely carbon-intensive. The U.S. Defense Department has recognized global warming as a provocation of international conflict as the Pentagon has taken some of the same steps as corporations to reduce its energy consumption (low-flush toilets, cutting off the lights in the war room when not in use, limited solar and wind power). The Department of Defense has yet to recognize, however, that war itself may be the ultimate eco-hustle. Can we decarbonize international relations by changing the role of the military?

Chapter 8, "Degrees of Denial: The Contrarians' Alternative Universe," examines the politics of climate change from the ramparts of

antiwarming campaigners, where humanity is believed to bear no blame for rising temperatures, and consequences, if any, are anticipated to be benign, even salubrious. In this alternative universe temperatures may be rising, but Earth's balming is said to be part of a natural cycle, and a corrective decline—even a quick ice age, perhaps—will soon prove the alarmists stoked by Al Gore and the IPCC massively wrong. "Burn carbon, be happy," they exclaim, even as nearly all of the world's climate scientists ring alarm bells.

Chapter 9, "Accounting, Insurance, and Taxation as if It Really Matters," raises issues that will become prominent when the dangers of global warming pass the stage of something that happens to the other guy and becomes everyday reality. This chapter presents a speculative look at an accounting system that defines environmental costs as real debits, not "externalities." It also looks at property values (including property taxes) in a world in which the real-estate market takes sea-level rise seriously.

Chapter 10, "Genuine Greening in the Corporate World," describes a sampling of initiatives by the private sector that reduce carbon footprints in a meaningful way. Many companies are installing solar and wind energy, and reducing their energy consumption. This chapter provides profiles. Some are young technology companies, such as Google. Others, such as Walmart, may come as surprises.

This work concludes with a few thoughts under the title "Can the System Solve the Problem?" The Bible's book of Genesis sent humankind out of Eden to multiply and subdue the earth. Out of this commandment grew mercantile capitalism. Can a system predicated on growth (which Edward Abbey called "the ideology of the cancer cell") adapt to a sustainable world in which having less "stuff" will be preferable? How can we adjust our desires to fit a new world in which more is not always better?

Let us ask the tough questions. When it comes to sustainability, what *really* works? What *really* matters? In the long run, can a capitalistic system change its character to embrace standards of performance not predicated on growth; ones that improve the quality of life rather than sheer production?

Let us explore the ideas that will make tomorrow work.

FURTHER READING

Cavanagh, Ralph. "How We Learned Not to Guzzle." *New York Times*, September 12, 2013. http://www.nytimes.com/2013/09/13/opinion/how-we-learned-not-to-guzzle.html.

Gillis, Justin. "Climate Panel Says Upper Limit on Emissions Is Nearing." *New York Times*, September 27, 2013. http://www.nytimes.com/2013/09/28/science/global-climate-change-report.html.

About the Author

BRUCE E. JOHANSEN is Jacob J. Isaacson Professor in Communication and Native American Studies at the University of Nebraska at Omaha. His published work includes Greenwood's *The Encyclopedia of Global Warming Science and Technology* and *Encyclopedia of the American Indian Movement*. He has contributed widely to the field of environmental studies, including volumes on toxic chemicals and global warming. A speaker at conferences all over the world, Johansen has published pieces in *The New York Times, The New Yorker*, *The Progressive*, the *Washington Post*, and others. His work has been cited in 351 scholarly journal articles and 383 books.

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Part I

Problems

Chapter 1

Why So Urgent? Thermal Inertia, Feedbacks, and Tomorrow's News

INTRODUCTION

Why is eco-hustling so odious? Because it postpones real solutions to the urgent problem of greenhouse-gas pollution. Why are so many scientists sounding dire warnings that a decade or two of business-as-usual fossil-fuel production and consumption will carry the earth over various "tipping points" beyond which human ability to influence climate change may become irrelevant? Don't we have plenty of time for such a slow-motion crisis to unfold? Two words that hardly ever come up in the public discourse over this issue demand attention: thermal inertia.

Global warming is a deceptively backhanded crisis in which thermal inertia delivers results a half century or more after our burning of fossil fuels provokes them. Our political and diplomatic debates react *after* we see results. Political inertia plus thermal inertia thus presents the human race and the planet we superintend with a challenge to fashion a new energy future *before* raw necessity—the hot wind in our faces—compels action. Global warming is dangerous because it is a sneaky, slow-motion emergency, demanding that we acknowledge a reality centuries in the future with a system of individual, legal, and diplomatic reaction that reacts in the past tense.

As part of Earth's natural cycle, the greenhouse effect is very necessary to life on Earth. Without it, the planet's average temperature would be –2°F. It is the added warming provoked by human combustion of fossil fuels that causes a problem. Like chocolate, a little is a good thing;

too much is toxic to the system. Fossil fuels provide us comfort and convenience, and altering their use in a fundamental way presents the challenge of the century—and, most probably, for several centuries to come. Unless we wean ourselves from fossil fuels, and do so quickly, the *real* problems will begin after the middle of the twenty-first century. Sir John Houghton, one of the world's leading experts on global warming, told the London *Independent*: "We are getting almost to the point of irreversible meltdown, and will pass it soon if we are not careful" (Lean 2004, 8).

"Failure to act now is the most risky and most expensive thing we could do," warned a statement issued on June 2, 2008, by 1,700 prominent scientists and economists under the aegis of the American Association for the Advancement of Science (AAAS). The strength of the science on climate change compelled the signers to warn of climate change's growing risks, including "sea level rise, heat waves, droughts, wildfires, snowmelt, floods and disease, as well as increased plant and animal species extinctions," said lead signatory James McCarthy, president of the AAAS ("Slash" 2008). The scientists and economists asserted that smart greenhouse-gas reduction strategies will ignite economic growth, generate new domestic jobs, protect public health, and strengthen energy security.

The evidence accumulates relentlessly. In one week late in 2013, reports indicated that mass loss from the Greenland's ice sheet had quadrupled in 20 years, and that warmer-than-average ocean waters had stoked supertyphoon Haiyan's intensity before it became the strongest tropical cyclone to hit land in recorded history. Regulators also voted to cancel the 2014 shrimping season in the Gulf of Maine because of overharvesting and warming waters. The value of the harvest had shrunk from more than $10 million in 2011 to $1.2 million during a shortened harvest in 2013. This drumbeat of news is not unusual (Straneo and Heimbach 2013, 36; Normile 2013, 1,027; "Maine: Shrimp" 2013, A-21).

THE ROLE OF THERMAL INERTIA

Knowledge of thermal inertia and feedbacks explains why an overwhelming consensus of climate scientists around the world has been ringing alarm bells for several years about Earth's changing climate—more specifically, the gradual but accelerating rise in levels of carbon, dioxide, methane, and other trace gases in the lower atmosphere through human combustion of fossil fuels. Carbon dioxide and methane levels in the atmosphere are more than 30 percent higher than at any time for which science has reliable proxy records—as of this writing, about 800,000 years, measured by Antarctic ice cores. We have begun to taste only the first fruits of this overload of greenhouse gases.