Global Warming Swindle?

Cockburn vs. Monbiot: What's Going On Here?

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If you happen to subscribe to Alexander Cockburn's important periodical, *Counterpunch*, or to *The Nation*, you were probably surprised, even shocked (as I was), to read these words a year ago.

> In a couple of hundred years, historians will be comparing the frenzies over our supposed human contribution to global warming to the tumults at the end latter end of the tenth century as the Christian millenium approached. Then, as now, the doomsters identified human sinfulness as the propulsive factor in the planet's rapid downward slide.[1]

Cockburn went on to assert that "there is still zero empirical evidence that anthropogenic production of CO2 is making any measurable contribution to the world's present warming trend," and that "the human carbon footprint is of zero consequence."

Not surprisingly, this provocative piece generated a "heated" response. George Monbiot, another important figure on the Left, whose book *Heat: How to Stop the Planet from Burning*, had just been published by South End Press was quick to reply, demanding the Cockburn supply references in support of his claims. (The extended debate between Cockburn and Monbiot, together with ancillary contributions are conveniently posted on ZNet under "Debating Global Warming," www.zmag.org/debatesglobalwarming.html.)

> I am not qualified to comment on the scientific claims made in Alexander Cockburn's article. But nor is Cockburn qualified to make them . . . . Cockburn's article cannot be taken seriously until we have seen his list of references, and affirmed that they key claims he makes have already been published in peer-reviewed journals.[2]

Cockburn ignored Monbiot for awhile, but continued to write on the topic. A month after the appearance of his first global warming column, he had this to say:

> We should never be more vigilant than at the moment a new dogma is being installed. The claque endorsing what is now dignified as "the mainstream theory" of global warming stretches all the way from radical greens through Al Gore to George W. Bush, who signed on at the end of May. The left has been swept along, entranced by the allure of weather as revolutionary agent, naively conceiving of global warming as a crisis that

> will force radical social changes on capitalism . . . Alas for their illusions. Capitalism is ingesting global warming as happily as a python swallowing a piglet. . . . [3]

This article, responding to Monbiot's criticism, contained a list of references, but they did not satisfy Monbiot, who insisted on accepting only articles that were in "peer-reviewed" scientific journals. The exchanges between them became ever more pointed. By the time Cockburn had called Monbiot "the honorary chairman of the King Canute Action Committee, committed to beating back non-existent anthropogenic global warming by tactics which would have zero impact anyway,"[4] Monbiot had given up:

> I have now learned that it is pointless to seek to argue with Cockburn. . . . I sign off with sadness. I have followed Alexander Cockburn's writing for many years and I have admired it. . . . But I can no longer trust it. . . . I feel this as a loss. I am sure I am not the only one."[5]

What are we to make of all this? Of course it is not pleasant to see two eloquent Left journalists going head-to-head, trading insults, but that is not the real issue. In fairness to Monbiot, it should be noted that Cockburn does most of the insulting, but insults are the sideshow. The question is, who is right here? Climate change is a huge issue. How are we to think about it?

Who are the Good Guys? Who Are the Bad Guys?

Like most on the Left, I've been inclined to distrust the climate skeptics--to put it mildly. There is no disputing the fact that there has been an on-going campaign, well-funded by ExxonMobil and a host of other oil, gas, coal, automobile and chemical corporations and their trade organizations to sow doubt. *Newsweek* reported recently that a conservative think tank long funded by ExxonMobil has offered scientists $10,000 to write articles undercutting the latest report of the Intergovernmental Panel on Climate Change (Begley, 2007 p21). The Republican Party has been overwhelmingly hostile to efforts to address the issue. Many of the prominent "climate skeptics" are politically right-wing, quick to brand environmentalists such as ourselves "watermelons": green on the outside, red on the inside. So when I decided to teach a segment on the environment for a graduate class on "globalization and ethics" this spring, I had not the slightest doubt that there were good guys and bad guys out there, and I knew which was which.

Then I happened to preview the 2007 British documentary, "The Great Global Warming Swindle," directed by Martin Durkin. It was disturbing--so much so that I wondered if I ought to show it to my students. (In fact I did.) It was sensationalistic, anti-Left . . . and yet it featured some well-credentialed scientists saying things I hadn't heard before. I went back to the Cockburn article--and then to the ZNet debate. There I found an extremely interesting article by Left historian David Noble, whose work I've long admired.[6] In "The Corporate Climate Coup" Noble recounts the rise of the skeptic lobby. In 1988 the International Panel on Climate Change (IPCC) met in Toronto for the first

time, bringing together some 300 scientists and policymakers from 48 countries. The following year, some fifty corporations and trade organizations, aided by the public relations giant Burson-Marsteller, formed the Global Change Coalition (GCC) to raise doubts about the scientific claims supporting the claim that global warming is C02-related, and to forestall any political action to reduce greenhouse-gas emissions.

But, as Noble points out, the story doesn't end there. The signatories of the UN Framework Convention on Climate Change, which had been formulated by representatives of 155 nations at the Rio Earth Summit in 1992, met in 1997, in Kyoto. There they formulated the Kyoto Protocol, an effort to reduce greenhouse gas emissions by utilizing market mechanisms, specifically, "cap and trade" protocols. (Countries are given individual targets, but those emitting too much can purchase extra emission rights from those emitting less than their allotment.) At this point, many corporations defected from the GCC, among them DuPont, BP, Shell, Ford, Daimler-Chrysler and Texaco. (Among the holdouts were ExxonMobil, Chevron and General Motors. In 2000 the GCC went out of business, but other corporate front organizations were created to continue the GCCs mission of promoting doubt and denial.)

Many of the drop-out corporations coalesced around Pew Center for Global Climate Change, which, in turn, set up the Business Environment Leadership Council, which strongly supports "market-based mechanisms" and "reasonable policies" to reduce greenhouse emissions. By 2000 corporate attitudes regarding global warming had shifted markedly. At the World Economic Forum in Davos, Switzerland that year, world business leaders would declare "climate change the greatest obstacle facing the world."

Shortly thereafter Dupont, BP, Shell, Suncor, Alcan and others joined with the Environmental Defense Fund (EDF) to form the Partnership for Climate Action (PCA), whose directors include principals from the Carlyle Group, Berkshire Partners and Morgan Stanley. The Pew Center and the Partnership for Climate Action then created a lobbying arm, U.S. Climate Action Partnership (USCAP), which was soon joined by representatives from GE, Alcoa, Caterpillar, Duke Energy and many more. Other corporate-sponsored environmental organizations have since sprung up, among them the Global Center on Climate Change (set up by Lehman Brothers), and the Alliance for Climate Protection (chaired by Al Gore).

For me the Noble article was a jolt. I thought again about the *Newsweek* piece reporting ExxonMobil's funding of global warming skepticism. The cover of that issue featured a flaming sun, within whose perimeter were the words: "Global Warming is a Hoax*" The asterisk directs the reader to the cover comment, "Or so claim well-funded naysayers who still reject the overwhelming evidence of climate change." Wait a minute, I thought. This is *Newsweek*, not the *Nation* or the *New Left Review*. Something strange is going on here: corporations taken to task for funding global warming skepticism by a widely-circulated *mainstream* publication? (Didn't Marx say something about ruling ideas being the ideas of the ruling class?)

I then thought about the conference I'd recently attended at the University of Tennessee on "Energy and Responsibility." There I'd presented a paper, "Is 'Sustainable Capitalism' an Oxymoron?" which gave an affirmative answer to the title question, making my paper the most radical of the conference. The conference participants were mostly mainstream scientists and other academics. So far as I could tell, there were no "climate skeptics" present. I asked around. (Since I had recently previewed "The Great Global Warming Swindle," the question was much on my mind.) No one seemed to doubt that anthropogenic global warming was real, and needed our urgent attention. I then noticed that the conference was sponsored in part by Alcoa and by the Oak Ridge National Laboratory. I realized, in listening to the speakers, that many, among them keynoters Robert Socolow (Princeton University) and Dale Bryk (National Resource Defense Council) were proponents of nuclear energy. It also became clear from various presentations that there are huge sums of money at stake with cap-and-trade carbon-emissions schemes, and that intense lobbying is now going on to insure that cap-and-trade legislation, which may well be adopted soon, benefits specific corporate interests.

In short--it's not nearly so easy to tell the good guys from the bad guys as I had thought. Powerful corporate interests have weighed in on both sides of the debate. The case is not clear cut. When I looked at the arguments afresh, it became apparent to me that the arguments themselves, for and against various claims regarding global warming, are a lot more complicated than I'd realized. I began to scrutinize them more carefully.

What Are the Issues?

What are the issues exactly? Let me mention several.

- Is global warming real?

  This is actually a non-issue. There is little dispute about the *fact* of global warming. All sides seem to agree that global temperatures are significantly higher now than at any time in the past several hundred years. The *fact* of global warming is not what the debate is about. (This fact is not much in dispute *now*. For years the corporate-funded anti-global-warming lobby did dispute this claim, but, given the mounting evidence, they have retreated on this front.)

- Are global temperatures the highest ever?

  There is some controversy here. Some maintain that there was a Medieval Warming Period, roughly 600-1100 A.D., that saw temperatures comparable to those we are experiencing now. Others think this was a "local" phenomenon, confined to northern Europe. This question isn't so easy to decide. Think about the science for a moment. How do we know what the temperature of the earth was a thousand years ago? For that matter, how do we know what the "temperature of the earth" was last year? What does that concept even mean? (Where were the measurements taken? When were the measurements taken? During what season? During what time of day? How were they averaged?) There is some debate about the accuracy of recent figures, but far

more, of course, about estimating global temperatures centuries ago.[7] (Tree rings are often used as surrogates, but tree growth is affected by a variety of factors. Moreover, there is tremendous global variation. That is to say, when sampling from around the globe, temperatures appear to have risen in some places, fallen in others. How, compelled to use a variety of surrogates, do we construct a meaningful global average? How do we estimate, not merely general trends, but specific "average" temperatures?)

Why is the debate about the Medieval Warming Period significant? Well, if climate change is cyclical, and if the Medieval Warming Period wasn't so bad--which it appears not to have been (indeed, it appears to have been a *good* period, at least for Europe)--then maybe we have little to worry about.

- Has global warming stopped?

That question headlined an article published on the *New Statesman* website, December 19, 2007. The article's author, David Whitehouse, is an astrophysicist and BBC Science journalist.

> The fact is that the global temperature of 2007 is statistically the same as 2006 as well as every year since 2001. Global warming has, temporarily or permanently, ceased. Temperatures across the world have not increased as they should according to the fundamental theory behind global warming--the greenhouse effect. Something else is happening, and it is vital that we find out what or else we may spend hundreds of billions of pounds needlessly.

He continues,

> The period 1980-98 was one of rapid warming--a temperature increase of about 0.5 degrees C (CO2 rose from 340ppm to 370ppm) But since then the global temperature has been flat (whilst CO2 has relentlessly risen from 370ppm to 390ppm). . . . For the past decade the world has not warmed. Global warming has stopped. It's not a viewpoint or a skeptic's inaccuracy. It's an observational fact.

Responding to what he deems to be possibly the most controversial articles ever appearing on his publication's website, *New Statesman* environmental correspondent Mark Lynas disagrees. "I'll be blunt. Whitehouse got it wrong--completely wrong. The article is based on an elementary error--a confusion between year-on-year variability and the long-term average." He argues that an eight-year trend is too short to draw the conclusion Whitehouse draws. If we look at the NASA data for the past 25 years, we can find various eight-year periods where global warming seemed to have stopped, but the overall trend line, he says, is clearly and sharply up (Lynas 2008).

Who's right here? If we think about it, we realize that neither argument is decisive. If global warming has been going on for decades, but has reached a peak, the trend lines will still point up--as they will if global warming hasn't peaked. (If I come to a flat patch while pedaling up a long hill, the long term trend line will be pointing up whether I've come to the top or have just hit a temporary level stretch.) If CO2 increase is the driving force of global warming, then we are likely at a flat spot caused by (as yet unidentified) countervailing forces. If CO2 is not the primary culprit, we may be--or may not be--at a peak.

- Will global warming be disastrous?

  The Stern Review (a major, much-discussed, report commissioned by British government) argues that if nothing is done to reduce CO2 emissions, we risk "major disruption to economic and social activity, later in this century and the next, on a scale similar to those associated with the great wars and economic depression of the first half of the 20th century" (Stern, 2007 p xv).

  Needless to say, *a lot* of assumptions have to be made to predict the state of the world "later in this century and the next," consequent to our adopting (or not adopting) various courses of action now--to say nothing of putting price tags on the various components. The uncertainties are enormous. Nobel laureate Thomas Schelling lists some of the major ones.

  - How will the average warming translate into changing climates everywhere: precipitation, evaporation and cloud cover, . . . the frequency and severity of storms, of protracted drought?

  - What will the impacts of such changes be on productivity, especially in agriculture, fisheries, and forests, and on comfort and health?

  - How well can people, businesses, governments, and communities adapt to the climate changes?

  - What are the likely costs of various mitigation strategies? [8]

  Projections concerning costs of future climate disruption, such as those of the Stern Review, are based on computer modeling. One such model has been utilized by Yale economist William Nordhaus, and forms the basis of his just-published book, *A Question of Balance: Weighing the Options on Global Warming Policies* (Yale University Press, 2008). Nordhaus admits that the probabilities used in computer modeling "are not 'objective' or 'frequentist' probabilities such as might be observed from long time series on stock-market returns or mortality rates. Rather they are 'subjective' or 'judgmental' probabilities . . . held by individuals and are based on formal or informal reasoning about phenomena, rather than solely on observed events."

> We cannot, for example, estimate the economic impact of a global rise in temperature of a 3°C rise in global temperature from historical data, because nothing resembling that sort of change has occurred in the historical record of human society. There is not single method for determining judgmental probabilities; researchers rely on a variety of techniques, including personal judgments, betting markets, surveys of experts, and comparisons of results from alternative models or theories (Nordhaus, 2008 p125).

That is to say, lots of guesswork going on--and not just regarding cost estimates.

Although he himself presents some rather strong conclusions--he argues that most of climate change damage will occur rather far into the future, and so we should not spend nearly so much now as the Stern Review or Al Gore recommends--Nordhaus admits to some reservations about his methodology:

> The structure, equations, data and parameters of the model all have major uncertain elements. Virtually none of the major components is completely understood. Moreover, because the model embodies long-term projection of poorly understood phenomena, the results should be understood has having growing error bounds the further the projections move into the future (Nordhaus, 2008 p193).

Will the consequences of global warming be, on balance, terrible? Based on current "best estimates," Nordhaus thinks they might be--but not for a long time. (Those rising sea levels are not going to happen anytime soon.[9]) His model predicts a global temperature increase, if no mitigating actions are taken, of 1.09°C between 2005 and 2050. He sets this against the increase of 0.73°C from 1900 to the 2005--not a huge difference. (Does anyone think the global warming that was going on played a significant role in any of the great wars, little wars, political turmoil or economic dislocations of the past century?) Even if nothing is done, we won't see a 3° rise until 2100, a 5°C rise until 2200 (Nordhaus, 2008 p106).

As noted, these relatively benign projections are based on computer modeling, as are the more dire predictions of the Stern Review, but with slightly different input assumptions.[10] Left physicist Denis Rancourt, avoiding computer modeling altogether, is even more sanguine than Nordhaus:

> Whereas there is evidence of negative consequences to populations from sustained regional cooling (e.g., Europe's Little Ice Age, 1300-1850 A.D. . . .) there is no known case of a sustained global warming having negatively impacted an entire population. . . . As a general rule, all life on earth does better when it's hotter: compare ecological diversity and biotic density at the poles and at the equator.
>
> Humans have already adapted to dramatically different regional climates occurring in every corner of the planet, and the alleged future global

changes are very small compared to these existing conditions. There are more displaced refugees from wars and from economic aggression than there will ever be displaced inhabitants from rapid climate induced habitat transformation (Rancourt, 2007).

- Is GW caused by *us*?

This is the big question, the one most furiously debated. That there has been global warming is not much disputed, but is this global warming anthropogenic? Has it been caused by our emitting greenhouse gases, principally CO2, into the atmosphere--or is planetary warming and cooling driven by solar activity or by shifts in the earth's axis or orbit or by some other, as yet unrecognized, natural process?

Clearly non-human activity has caused climate change in the past. Our planet has experienced a number of "ice ages" in its history, the most recent major one having ended 10,000 years ago. There was also the "Little Ice Age" beginning around 1350 A.D. and lasting until the late 18th century. No one thinks that any of these, or the warming periods in between, had anything to do with human activity. Proponents of "AGW" (anthropogenic global warming) argue that variations in solar activity or earth the earth's orbit or tilt are insufficient to explain the current warming trend. Skeptics counter that the science here is not developed enough to be conclusive.

Opponents advance a number of positive arguments in support of their position. They point out that there was significant cooling of the earth following World War Two and into the 1970s even though CO2 production was rising steadily. Proponents reply that there was also much sulfur dioxide emitted then, which has a cooling effect, but that SO2 emissions have since declined dramatically. Opponents contest the latter claim, pointing to much increased Chinese emissions.

Opponents point out that temperatures did *not* decline during the Great Depression, even though CO2 emissions declined precipitously. Proponents counter that decline as of too brief a duration to show up in the data, given that CO2 stays long in the atmosphere, and hence a vast amount has accumulated. Opponents claim that ice core data show a rise in CO2 concentrations *lagging* warming, thus indicating causality in the opposite direction from what the AGW hypothesis predicts. Proponents point to feedback mechanisms: a rise in CO2 causes warming, which causes ever more CO2, so what appears to be a lag is in fact a cause.

Everyone agrees that there are complex feedback mechanisms at work in climate change, some positive, some negative. Indeed, physicist John Farley (a strong supporter of the AGW thesis) has titled a segment of his recent essay, "It's All About the Feedback."[11] Farley is convinced that the feedback mechanisms are, on balance, positive. Others are not so sure. A hugely important factor is water vapor. Higher temperatures put more water vapor (itself a greenhouse gas) into the atmosphere, but this often increases cloud formation--which both blocks sunlight (negative feedback) and traps heat (positive feedback). Unfortunately, as all climatologists admit, we

know very little about the intricacies of cloud formation and dispersion. One prominent scientist who thinks the balance of evidence points to a conclusion different from Farley's is Roy Spencer, former Senior Scientist for Climate Studies at NASA's Marshall Space Flight Center:

> I believe that precipitation systems act as a thermostat, reducing the Earth's greenhouse effect (and thus causing enhanced cooling) when temperatures get too high, and warming when temperatures get too low. It is amazing to think that the ways in which tiny water droplets and ice particles combine in clouds to form rain and snow could determine the course of global warming, but this might well be the case. . . .
>
> I predict that further research will reveal some other causes for most of the warming we have experienced since the 1970s--for instance a change in some feature of the sun's activity, or a small change in cloudiness resulting from a small change in the general circulation of the atmosphere. . . . Fortunately we now have several NASA satellites in Earth orbit that are gathering information that will be immensely valuable for determining how the Earth's climate adjusts during natural temperature fluctuations.[12]

I can't resist contrasting Spencer's tentative conclusion with Farley's:

> The verdict is in. Modern global warming stemming to a considerable extent from anthropogenic causes is real and constitutes a serious threat to life on the planet as we know it. It is time to stop debating its reality and to do something about it, while there is still time (Farley, 2008 p88).

- Can we stop global warming? If so, how?

Here we encounter a range of opinions. Many think our climate can be stabilized, but only if we act now, decisively, and on a grand scale. George Monbiot calls for a reduction of greenhouse gases by 90% by 2050, a target also endorsed by Al Gore. Earth Policy Institute president Lester Brown argues that

> Saving civilization will take a massive mobilization, and at wartime speed. The closest analogy is the belated U.S. mobilization during World War II. But unlike that chapter in history, in which one country totally restructured its economy, the Plan B mobilization requires decisive action on a global scale.[13]

Others think that necessary changes can be made without too much disruption of business as usual. The Stern Review claims that "tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich and poor countries" (Stern, 2007 p xv). Still, it recommends major action now, if not on the scale proposed by Brown.

As noted earlier, William Nordhaus is sharply critical of the Stern Review. He argues that Stern's case for large and immediate action rests on a very low time discount rate and a specific utility function. He notes that in the Stern model most of the estimated damage occurs far in the future, and hence is highly sensitive to a selection of the time discount rate. If a significantly higher rate were plugged into the model, we would be asked to spend far less now than the Stern Review recommends.[14] He finds Stern's preferred proposal (and the Al Gore's as well) much too extreme, much too expensive. He argues that the optimal policy--in the absence of technological breakthroughs--is not too far removed from business as usual, although our best hope lies with new technologies, possibly "genetically-modified carbon-eating trees" that would pull far more CO2 from the atmosphere than trees do now. We should take some mitigating action now, but we should focus our attention on technological research, since this promises the greatest gain at the least expense (Nordhaus, 2008 pp195-199).

Rancourt takes a different approach. Instead of trying to cut CO2 emissions, which may or may not have anything to do with the very real environmental problems we face, we should deal with those problems directly. The best way to stop, he says, is to stop:

> All in all, the best way to not pollute and destroy the environment is not to pollute and destroy the environment. The best way not to exploit others in not to exploit others. . . . I am talking about taking back control from undemocratically run corporations and illegitimate concentrations of power. . . .
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> If we want to help island dwellers threatened by a predicted sea level rise, then let's help those island dwellers. If we are worried about victims of weather events, then let's help those victims. The poorest Hurricane Katrina victims are still waiting.
>
> It's not about limited resources. According to the UN Human Development Report, 1999, "the amount of money spent on pet food in the U.S. and Europe each year equals the additional amount needed to provide basic food and health care to all the people in poor countries, with a sizable amount left over." It's about exploitation, oppression, racism, power, and greed. Economic, human, and animal justice brings economic sustainability, which is always based on renewable practices. Recognizing the basic rights of native people automatically moderates resource extraction and preserves natural habitats (Rancourt, 2007).

What Is the Truth? What Is To Be Done?

These are the issues--not all of them, but a fair sampling. What's the truth here? To be honest, I've gone back and forth. At first it hadn't even occurred to me to seriously question the IPCC reports. Then, as I looked more closely at the controversy, I began to

find myself persuaded by the skeptics. Then, as reports kept coming in about dire effects of climate change and the urgent need for actions, I began to question my own questioning--and to feel a bit sheepish about it. Being on the Left makes one inherently suspicious of "received wisdom" and "overwhelming consensuses," but even more suspicious of causes bankrolled by right-wing think tanks and foundations.

Then, just before the Global Studies Association conference at which the first version of this paper was presented, an issue of the *New York Review of Books* arrived, which included the article, "The Question of Global Warming," by Freeman Dyson, emeritus professor of physics at Princeton's Institute for Advanced Studies--not a Leftist, but not a right-winger either. I expected a critique of the global warming skeptics. (I expected to be made more uncomfortable than I already was about the paper I was about to present.) That's not what Dyson delivered.

Dyson reviews two books, one of them Nordhaus's *A Question of Balance*, the other a collection of essays, *Global Warming: Looking Beyond Kyoto*, edited by (of all people) the former president of Mexico, Ernesto Zedillo, and published by the Yale Center for the Study of Globalization. The latter includes an essay by a prominent skeptic, MIT's Richard Lindzen, and a fierce rejoinder by Stefan Rahmstorf, professor of phyics at Potsdam University in Germany. Dyson is not impressed by the exchange.

> These two chapters give the reader a sad picture of climate science. Ramsdorf represents the majority of scientists who believe fervently that global warming is a grave danger. Lindzen represents the small minority who are skeptical. Their conversation is a dialogue of the deaf. The majority respond to the minority with open contempt.

"But," he continues, "in the history of science it has often happened that the majority was wrong and refused to listen to a minority that later turned out to be right. It may--or may not--be that the present is such a time." He concludes by reminding us that

> many of the skeptics are passionate environmentalists. They are horrified to see the obsession with global warming distracting public attention from what they see as more serious and more immediate dangers to the planet, including the problems of nuclear weaponry, environmental degradation and social injustice. Whether they turn out to be right or wrong, they deserve to be heard (Dyson, 2008).

My own conclusions:

The reader will doubtless have sensed that I have tilted back toward skepticism. The evidence for AGW is not nearly so rock-solid as supporters of this thesis often (usually) claim, nor are the consequences of global warming necessarily as dire as commonly thought. The time for debate is *not* over. Skepticism is reasonable.

But--it is important that I emphasize this point--to say that skepticism is reasonable is *not* to say that the AGW thesis is false, or that the consequences of global warming won't be dire. The temptation is almost irresistible, psychologically, when confronted with an issue such as this to slip from skepticism to denial. Cockburn, for example, goes from raising serious questions about AGW to the assertion that "the human carbon footprint is of zero consequence." Many proponents of the AGW thesis appear to be far more confident that they are right than the evidence warrants--but *this does not mean that they are wrong.* However annoying their dogmatic attitudes might be, proponents could be right that a) we are causing global warming, b) the consequences of business as usual will be disastrous, and c) there are things we can do to cut CO2 emissions enough to stabilize the climate and avert the worst of the global-warming consequences. None of these propositions can be dismissed out of hand. All must be taken seriously.

We must also keep in mind that major corporations, and their sponsored think-tanks, have weighed in on both sides of the issue. Thus proposals to address global warming need to be examined carefully. (BP's CEO John Browne has set out an ambitious proposal that includes "building nukes by the hundreds" that will--it is claimed--stabilize CO2 at an even lower level by 2050 than Stern's preferred proposal (Linden, 2007).) There will be intense political pressure brought to bear to adopt those proposals most favorable powerful interests and most costly to weaker and more vulnerable nations and people. We need to be careful not to be panicked into supporting whatever seems politically feasible, so long as it promises a reduction on C02 emissions.

The "precautionary principle" urges that we take action to reduce CO2 emissions--but we must be very careful as to who will bear the costs of our actions now. (Coal is a relatively plentiful natural resource. Coal-fired power plants release much CO2 into the atmosphere. Huge numbers of the global poor live in homes without electricity, many of them cooking over wood fires. Indoor smoke is a major cause of eye and lung diseases, often fatal, particularly among children. There are tradeoffs here.[15])

There is one obvious conclusion to draw. We should support those policies and life-style changes that would be good *whether or not* anthropogenic global warming is a serious threat. Ecological sustainability is about much more than climate change. It is also about species extinction, degradation of our oceans, desertification, deforestation, air pollution, water shortages, declining soil fertility, and more, all of which are profoundly serious issues whether or not our CO2 emissions are causing global warming. Social justice is about much more than rising sea levels. It is also about poverty, inequality, economic instability, racism, sexism, homophobia, militarism, etc. Let's keep our priorities straight and our eyes on the prize: a just, sustainable world order.

Notes

[1] Alexander Cockburn, "Papal Indulgences to Carbon Credits: Is Global Warming a Sin", *Counterpunch* April 28, 2007; *The Nation*, May 14, 2007.

[2] George Monbiot, "Response to Cockburn," ZNet, May 3, 2007.

[3] Alexander Cockburn, "Sources and Authorities: Dissidents Against Dogmas,"*Counterpunch*, June 9/10, 2007; *The Nation*, June 27, 2007. Prior to this article, he had published "Who Are the Merchants of Fear?" *Counterpunch,* May 12, 2007; *The Nation,* May 28, 2007 and "Explosion of the Fearmongers: The Greenhousers Strike Back," *Counterpunch*, May 26/27, 2007.

[4] Alexander Cockburn, "'Peer Review' and Global Warming," *Counterpunch*, June 16/17, 2007.

[5] George Monbiot, "The Conspiracy Widens," ZNet, June 13, 2007.

[6] David Noble, "The Corporate Climate Coup," ZNet, May 8, 2007. The material in this and the next two paragraphs are drawn from this article.

[7] For an informative discussion of measurement issues see Denis Rancourt, "Global Warming: Truth or Dare?" ZNet, February 27, 2007. Rancourt is a professor of physics at the University of Ottowa. He's a Left critic of the anthropogenic global warming thesis, who maintains the website, Activist Climate Guy.

[8] Thomas Schelling, "Climate Change: The Uncertainties, the Certainties, and What They Imply for Action," *Economists' Voice,* www.bepress.com/ev, July 2007. (Schelling was awarded a Nobel Prize in Economics in 2005.)

[9] The IPCC reports that "the disintegration of West Antarctic Ice Sheet or melting of the Greenland Ice Sheet could raise global sea level up to three meters each over the next 1000 years." Intergovernmental Panel on Climate Change, *Climate Change 2001: Synthesis Report* (Cambridge: Cambridge University Press, 2001), p. 225. The reader will doubtless have heard of the possible six meter (or more) sea level rise; it is less widely reported that this rise is projected to take place over the next millenium. Notice--the prediction is not for 2050 or 2100 or 2200, but for 3000. (Not all climate scientists are so sanguine. James Hansen, head of NASA's Goddard Institute for Space Studies, thinks that if all the ice melts, sea levels could rise 75 (!) meters. He now regards it as "implausible" the view of many scientists that the shrinkage of the ice sheets would take thousands of years. He thinks will see a sea level rise of a couple of meters this century. (Reported in *The Guardian UK*, March 7, 2008.) But even here, notice, that terrifying 75 meter projection is for centuries hence. His this-century prediction is "a couple of meters.)

[10] For a general critique of econometric computer modeling, see Stephen DeCanio, *Economic Models of Climate Change: A Critique* (New York: Palgrave, 2003).

[11] John Farley, "The Scientific Case for Antropogenic Global Warming," *Monthly Review* (July-August 2008): 76. This article is largely concerned with refuting Cockburn's specific arguments (by one who has published in Cockburn's *Counterpunch*).

[12] Roy Spencer, "Global Warming and nature's Thermostat," www.weatherquestions.com (updated April 7, 2008). It should be noted that Spencer proclaims prominently on p. 1 that he "has never been funded by Exxon Mobil" appends a "full disclosure" to his article. Spencer has recently published *Climate Confusion: How Global Warming Hysteria Leads to Bad science, Pandering Politicians and Misguided Policies that Hurt the Poor* (New York: Encounter Books, 2008).

[13] Lester Brown, *Plan B 3.0: Mobilizing to Save Civilization* (New York: Norton, 2008), p. 265. Monbiot's proposals are set out in *Heat: How to Stop the Planet from Burning* (Boston: South End Press, 2007).

[14] Nordhaus, William, "Review of *Stern Review on the Economics of Climate Change*," *Journal of Economic Literature* (September 2007): 686-702. The "time discount rate" is a peculiar concept, beloved by economists, perplexing to many philosophers. Do we--or should we--as human beings, value the present significantly more than the future? If we do, by how much? Does it matter how far into the future we are projecting? Economists translate this question into: How much should we spend now to avert $X in damage at time t in the future? John Rawls argues that that "time preference," even if a psychological fact, should not be taken into account in determining our obligations to future generations. (*A Theory of Justice* (Cambridge, MA: Harvard University Press, 1999), pp. 259-62.) Most economists (though not Nicholas Stern) disagree. (Stern does not reject time-preference altogether, but the Stern Review uses a time-discount rate much lower than most economists find reasonable.)

Since time preference is supposed to account for long-range interest rates, most economists argue that it is irrational to spend $X now to avert $X damage a year, or decade, or century from now, since that money could have been put into the bank and allowed to grow, allowing for cleanup later with money left over. Now, compound interest is a curious thing, making the *rate* of time preference a highly sensitive variable. If we assume a 1% time preference, our $X will double in 72 years, so it makes sense to spend up to 1/2 $X now to avert $X damage 72 years from now. If we assume a 4% time preference, our $X will double every 18 years, so we shouldn't spend any more than 1/16 $X now to avert that $X damage. That is to say, to avoid $16 billion in damages 72 years from now, Stern would have us spend $8 billion now, whereas Nordhaus would spend only $1 billion. A curious result, but even more curious if we extend the time horizon. If the $16b damage occurs three times further out, (216 = 3x72 years from now, Stern would have us spend $2 billion, since that $2b would double three times, i.e., increase 8-fold, in 216 years, whereas Nordhaus would have us spend only $4 *million*--1/500th as much as Stern would spend--since at 4% that $4 million will double twelve times, increasing more than 4000-fold. Such is the magic of compound interest!

Magic it is--or at least magical thinking. Built into the assumption that real interest rates will remain substantially positive over the next 250 years is the assumption that global output will increase by essentially that rate. That is to say, Nordhaus assumes that we will be 4000 times richer in two-and-a-half centuries than we are now, consuming 4000 times as much as we do now. (One is reminded of Kenneth Boulding's remark that anyone who thinks that exponential growth can go on forever in a finite world is either a madman or an economist." (Quoted by Mancur Olsen in his introduction to Mancur

Olsen and Hans-Martin Landsberg (eds.), *The No Growth Society* (New York: Norton, 1973), p. 3.))

[15] Should coal-fired power plants be banned? On the one hand, there's Nordhaus, who thinks not--but his view derives from a questionable time-discount argument. (See note 14 above.) On the other hand, one senses an element of China-bashing in the strident calls that this be done--repeated references to all those coal-fired plants coming on line in China, posing a threat to humanity. But coal is one of the few natural resources that China has in abundance. Dyson claims that the practical consequence of such a ban would be to impoverish several generations of Chinese citizens to make their descendants only slightly richer (2008 p44). Of course, coal-fired plants have negative effects that are independent of CO2--health hazards posed by particulate release. And we should be sensitive to the fact that electricity-generation that really helps the poor is not the same as electricity generation and a lot of pious talk about helping the poor. Should coal fired plants be banned? Not so easy a question to answer.

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