

The Global Warming Debate Heats Up

IS THE PLANET WARMING UP? IF IT IS, DOES HUMAN ACTIVITY HAVE ANYTHING TO DO WITH IT? Can we do anything about it? Should we try? A few months ago, an article in *Contingencies* posed these questions. The purpose of the article was to show the reader how complicated scientific issues are debated, and that the voices we hear don't necessarily provide interested nonscientific parties with the best information for making difficult political and economic decisions.

Unfortunately, I believe the bias of that article left the reader with the impression that reports of the potentially disastrous environmental effect of greenhouse gas emissions were largely the product of junk science being put forth for personal gain. The article quoted several global warming skeptics who purported to help us see the bogymen conjured up by environmentalists for the substanceless creatures they were.

I subsequently wrote a letter to the editor in which I suggested that the article had misidentified the players in this drama. Good science is on the side of global warming. The ones throwing the spitballs are the skeptics, and their motives are clear.

Since I wrote that letter, evidence continues to compound. The planet is warming, and there are indications that our activities are a contributing factor. How do we address the issue? I don't know. Rational people will disagree on what costs are worth bearing in order to deal with the uncertain impact our actions have on the planet. But until we separate the junk from the science, an intelligent debate can't even begin.

The first big question appears to be resolved. Scientists generally concur that the planet is in the midst of a warming period. The *L.A. Times* reports that early this year a panel of climate experts commissioned by the National Academy of Sciences largely settled the issue by determining global warming over the last century is "undoubtedly real." The most tenacious skeptics now begin their arguments with, "even if the planet is warming..."

The rate of warming is an open question. Measurements indicate an increase of between 0.5 degrees F and 1.1 degrees F over the past century. How-

AARON NEWHOFF IS CHIEF ACTUARY AT BECHER & CARLSON COS., INSURANCE BROKERS IN WOODLAND HILLS, CALIF.



ever a recent study led by National Oceanic and Atmospheric Administration climatologist Tom Karl suggests that rate may be increasing rapidly. Karl calculates the rate since 1976 to be nearly 4 degrees per century. Karl admits that extrapolating trends from relatively short time periods contains uncertainty. But his work does support the findings of thousands of other scientists who believe global warming is a serious problem.

So the planet is warming. A few thousand years ago the planet cooled and we had an ice age. Our sun flickers and flares, volcanoes erupt unpredictably, making cycles of warming and cooling inevitable. Why fight it?

The real issue is the human contribution to the current trend, and what the impact on the planet might be if we don't limit greenhouse gas emissions. While our responsibility is less certain than the fact of global warming, a consensus appears to be building within the scientific community that it's significant. The U.N. Intergovernmental Panel on Climate Change (IPCC) concluded that "there is a discernible human influence on global climate."

A recent study by Thomas Crowley, a geologist at Texas A&M University, concluded that natural influences such as solar fluctuations and volcanic activity could account for only 25 percent of the warming since 1900, and that the remaining 75 percent derived from human activity.

University of Illinois atmospheric scientist Michael

Shlesinger has also published research confirming a human contribution. The Union of Concerned Scientists initiated the World Scientists' Call for Action in which more than 1,500 scientists, including 110 Nobel laureates, urged government leaders to "act immediately to prevent the potentially devastating consequences of human-induced global warming."

The skeptics, of course, see it differently. But before evaluating the validity of the skeptics' views, it may be useful to peek at who's pulling the strings in this puppet show. The same names generally pop up in any public debate of this issue. S. Fred Singer, Patrick Michaels, and Sherwood Idso are the most frequently quoted global warming skeptics.

Dr. Singer's Science and Environment Policy Project is partially funded by Exxon, and he has acknowledged that he received



funding from Shell, Unocal, and ARCO. Western Fuels, a consortium of coal interests, funded Dr. Michaels' *World Climate*

Review and provided a \$63,000 grant for Michaels' research. Western Fuels also spent \$250,000 to produce a video entitled "The Greening of Planet Earth," which was narrated by Dr. Idso and produced by a company headed by Idso's wife.

Financial ties to those with a vested interest in seeing that greenhouse gas emissions go unrestricted don't make these men liars. When Tiger Woods tells me that Buick makes a fine automobile, it's quite possible he's telling the truth. But I would certainly want to consider the fact that Buick paid him \$30 million to reach that conclusion before I ran out and bought one. However, even if we take the skeptics' arguments at face value, their claims seem to have more to do with scoring debating points than with pursuing genuine scientific dialogue.

A common ploy of the skeptics has been to characterize the study of global warming as the work of scientifically inept, radical environmentalists seeking to hijack public policy through scare tactics. Patrick Michaels has used this technique to strong effect, chastising the IPCC, first for being selected by governmental agents like Al Gore (it's amusing to see Dr. Michaels impugning the objectivity of the U.N. panel), and second for recognizing the uncertainty in predicting how global climate change may impact weather patterns. "... It's OK to blame a flood on global warming. It's also OK to blame a drought on global warming." Those wacky enviros, they just can't get their story straight!

Unfortunately for Dr. Michaels and others who would like science to give us simple and precise answers to questions about climate change, this isn't possible. Models contain uncertainty, and scientific results are often counterintuitive. What scientists can tell us is that the warming we're experiencing will likely lead to severe weather events.

Could they be wrong? Sure. Einstein was wrong about quantum mechanics. Are they a bunch of addlebrained hippies who want us all to join a commune and grow hemp? No. There's too much good

science and too many serious people studying the effects of global warming to dismiss it all with a wave of the hand.

Another argument proposed by the skeptics is that a little warming may be good for us. This idea is appealing on a simple-minded level. Warm day, I go golfing, cold day, my car won't start, ergo, warm is good. When the skeptics attempt to concoct a more substantive justification for letting the global warm-up proceed apace, however, the argument quickly falls apart. In the Western Fuels Association propaganda film "The Greening of Planet Earth," Dr. Sherwood Idso promises us unprecedented levels of agricultural abundance as a result of increased atmospheric CO₂.

Nonsense, says Dr. Daniel Hillel, professor emeritus of plant and soil sciences at the University of Massachusetts. While warming may increase crop yields in the far north, Dr. Hillel concludes that in de-

veloping countries at middle latitudes, "cereal and grain yields are expected to decline under climate change scenarios, across the full range of expected warming... Thus, countries with the lowest incomes may be the hardest hit."

Dr. Michael Oppenheimer, chief scientist of Environmental Defense, makes another important point. Even if someone, somewhere, benefits from a slight increase in global temperature, "the benefits will be ephemeral, because it's going to get warmer. In that situation, today's winners are very likely to be tomorrow's losers, which means nobody wins over the long term."

I'm not making any secret of the fact that I don't think much of the arguments or credibility of the most visible skeptics. Unfortunately for those of us who wish to see global warming put forward as an issue of serious and immediate concern, all skeptics can't be brushed aside

so lightly.

Dr. Richard Lindzen of MIT has impeccable credentials as an atmospheric scientist. He has flatly stated his opinion on the global warming issue: "We don't have any evidence that this is a serious problem." He's been very critical of the models that suggest CO₂ emissions will cause dramatic climate change, and his own work suggests that a doubling of atmospheric CO₂ will result only in a 1-degree F global temperature increase. While some of Lindzen's adversaries have questioned the precision he claims in his calculations, no one doubts that he's making a serious scientific contribution to the dialogue and that his is a voice that should be heard.

Certainly more work remains to be done. More data can be collected, models can be refined. But to a large extent, once the junk has been filtered and discarded, the scientific community has spoken with a unified voice. While significant uncertainty still exists regarding the ultimate consequences of our actions, and thoughtful dissent is still heard, *good science tells us that global warming is a real issue that society must face.*

Does that mean we should implement the Kyoto Protocols? Are those protocols too mild? Will they damage our economy too much? Policy-makers face difficult questions. But they must face those questions armed with the best scientific information that experts can give, not flimsy ad copy from hired pitchmen. The junkmen will always be there, bringing us candy and flowers and whispering the sweet nothings we long to hear. But if we look hard, we'll see past the smooth talkers and find Mr. Right. ●

