

Concerned Scientists Reply on Global Warming

The authors of the Jan. 27 Wall Street Journal op-ed, 'No Need to Panic about Global Warming,' respond to their critics.

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The authors of the following letter, listed below, are also the signatories of ["No Need to Panic About Global Warming,"](#) an op-ed that appeared in the Journal on January 27. This letter responds to criticisms of the op-ed made by Kevin Trenberth and 37 others in a letter published Feb. 1, and by Robert Byer of the American Physical Society in a letter published Feb. 6.

The interest generated by our Wall Street Journal op-ed of Jan. 27, "No Need to Panic about Global Warming," is gratifying but so extensive that we will limit our response to the letter to the editor the Journal published on Feb. 1, 2012 by Kevin Trenberth and 37 other signatories, and to the Feb. 6 letter by Robert Byer, President of the American Physical Society. (We, of course, thank the writers of supportive letters.)

We agree with Mr. Trenberth et al. that expertise is important in medical care, as it is in any matter of importance to humans or our environment. Consider then that by eliminating fossil fuels, the recipient of medical care (all of us) is being asked to submit to what amounts to an economic heart transplant. According to most patient bills of rights, the patient has a strong say in the treatment decision. Natural questions from the patient are whether a heart transplant is really needed, and how successful the diagnostic team has been in the past.

In this respect, an important gauge of scientific expertise is the ability to make successful predictions. When predictions fail, we say the theory is "falsified" and we should look for the reasons for the failure. Shown in the nearby graph is the measured annual temperature of the earth since 1989, just before the first report of the Intergovernmental Panel on Climate Change (IPCC). Also shown are the projections of the likely increase of temperature, as published in the Summaries of each of the four IPCC reports, the first in the year 1990 and the last in the year 2007.

These projections were based on IPCC computer models of how increased atmospheric CO₂ should warm the earth. Some of the models predict higher or lower rates of warming, but the projections shown in the graph and their extensions into the distant future are the basis of most studies of environmental effects and mitigation policy options. Year-to-year fluctuations and discrepancies are unimportant; longer-term trends are significant.

From the graph it appears that the projections exaggerate, substantially, the response of the earth's temperature to CO₂ which increased by about 11% from 1989 through 2011. Furthermore, when one examines the historical temperature record throughout the 20th century and into the 21st, the data strongly suggest a much lower CO₂ effect than almost all models calculate.

The Trenberth letter tells us that "computer models have recently shown that during periods when there is a smaller increase of surface temperatures, warming is occurring elsewhere in the climate system, typically in the deep ocean." The ARGO system of diving buoys is providing increasingly reliable data on the temperature of the upper layers of the ocean, where much of any heat from global warming must reside. But much like the surface temperature shown in the graph, the heat content of the upper layers of the world's oceans is not increasing nearly as fast as IPCC models predict, perhaps not increasing at all. Why should we now believe

exaggerating IPCC models that tell us of "missing heat" hiding in the one place where it cannot yet be reliably measured—the deep ocean?

Given this dubious track record of prediction, it is entirely reasonable to ask for a second opinion. We have offered ours. With apologies for any immodesty, we all have enjoyed distinguished careers in climate science or in key science and engineering disciplines (such as physics, aeronautics, geology, biology, forecasting) on which climate science is based.

Trenberth et al. tell us that the managements of major national academies of science have said that "the science is clear, the world is heating up and humans are primarily responsible." Apparently every generation of humanity needs to relearn that Mother Nature tells us what the science is, not authoritarian academy bureaucrats or computer models.

One reason to be on guard, as we explained in our original op-ed, is that motives other than objective science are at work in much of the scientific establishment. All of us are members of major academies and scientific societies, but we urge Journal readers not to depend on pompous academy pronouncements—on what we say—but to follow the motto of the Royal Society of Great Britain, one of the oldest learned societies in the world: nullius in verba—take nobody's word for it. As we said in our op-ed, everyone should look at certain stubborn facts that don't fit the theory espoused in the Trenberth letter, for example—the graph of surface temperature above, and similar data for the temperature of the lower atmosphere and the upper oceans.

What are we to make of the letter's claim: "Climate experts know that the long-term warming trend has not abated in the past decade. In fact, it was the warmest decade on record." We don't see any warming trend after the year 2000 in the graph. It is true that the years 2000-2010 were perhaps 0.2 C warmer than the preceding 10 years. But the record indicates that long before CO₂ concentrations of the atmosphere began to increase, the earth began to warm in fits and starts at the end of the Little Ice Age—hundreds of years ago. This long term-trend is quite likely to produce several warm years in a row. The question is how much of the warming comes from CO₂ and how much is due to other, both natural and anthropogenic, factors?

Heartland Institute President Joe Bast on why global warming activist Peter Gleick stole and forged documents from his organization.

There have been many times in the past when there were warmer decades. It may have been warmer in medieval times, when the Vikings settled Greenland, and when wine was exported from England. Many proxy indicators show that the Medieval Warming was global in extent. And there were even warmer periods a few thousand years ago during the Holocene Climate Optimum. The fact is that there are very powerful influences on the earth's climate that have nothing to do with human-generated CO₂. The graph strongly suggests that the IPCC has greatly underestimated the natural sources of warming (and cooling) and has greatly exaggerated the warming from CO₂.

The Trenberth letter states: "Research shows that more than 97% of scientists actively publishing in the field agree that climate change is real and human caused." However, the claim of 97% support is deceptive. The surveys contained trivial polling questions that even we would agree with. Thus, these surveys find that large majorities agree that temperatures have increased since 1800 and that human activities have some impact.

But what is being disputed is the size and nature of the human contribution to global warming. To claim, as the Trenberth letter apparently does, that disputing this constitutes "extreme views that are out of step with nearly every other climate expert" is peculiar indeed.

One might infer from the Trenberth letter that scientific facts are determined by majority vote. Some postmodern philosophers have made such claims. But scientific facts come from observations, experiments and careful analysis, not from the near-unanimous vote of some group of people.

The continued efforts of the climate establishment to eliminate "extreme views" can acquire a seriously threatening nature when efforts are directed at silencing scientific opposition. In our op-ed we mentioned the campaign circa 2003 to have Dr. Chris de Freitas removed not only from his position as editor of the journal *Climate Research*, but from his university job as well. Much of that campaign is documented in Climategate emails, where one of the signatories of the Trenberth et al. letter writes: "I believe that a boycott against publishing, reviewing for, or even citing articles from *Climate Research* [then edited by Dr. de Freitas] is certainly warranted, but perhaps the minimum action that should be taken."

Or consider the resignation last year of Wolfgang Wagner, editor-in-chief of the journal *Remote Sensing*. In a fulsome resignation editorial eerily reminiscent of past recantations by political and religious heretics, Mr. Wagner confessed to his "sin" of publishing a properly peer-reviewed paper by University of Alabama scientists Roy Spencer and William Braswell containing the finding that IPCC models exaggerate the warming caused by increasing CO₂.

The Trenberth letter tells us that decarbonization of the world's economy would "drive decades of economic growth." This is not a scientific statement nor is there evidence it is true. A premature global-scale transition from hydrocarbon fuels would require massive government intervention to support the deployment of more expensive energy technology. If there were economic advantages to investing in technology that depends on taxpayer support, companies like Beacon Power, Evergreen Solar, Solar Millenium, SpectraWatt, Solyndra, Ener1 and the Renewable Energy Development Corporation would be prospering instead of filing for bankruptcy in only the past few months.

The European experience with green technologies has also been discouraging. A study found that every new "green job" in Spain destroyed more than two existing jobs and diverted capital that would have created new jobs elsewhere in the economy. More recently, European governments have been cutting subsidies for expensive CO₂-emissionless energy technologies, not what one would expect if such subsidies were stimulating otherwise languid economies. And as we pointed out in our op-ed, it is unlikely that there will be any environmental benefit from the reduced CO₂ emissions associated with green technologies, which are based on the demonization of CO₂.

Turning to the letter of the president of the American Physical Society (APS), Robert Byer, we read, "The statement [on climate] does not declare, as the signatories of the letter [our op-ed] suggest, that the human contribution to climate change is incontrovertible." This seems to suggest that APS does not in fact consider the science on this key question to be settled.

Yet here is the critical paragraph from the statement that caused the resignation of Nobel laureate Ivar Giaever and many other long-time members of the APS: "The evidence is incontrovertible: Global warming is occurring. If no mitigating actions are taken, significant disruptions in the Earth's physical and ecological systems, social systems, security and human health are likely to occur. We must reduce emissions of greenhouse gases beginning now." No reasonable person can read this and avoid the conclusion that APS is declaring the human impact "incontrovertible." Otherwise there would be no logical link from "global warming" to the shrill call for mitigation.

The APS response to the concerns of its membership was better than that of any other scientific society, but it was not democratic. The management of APS took months to review the statement quoted above, and it

eventually declared that not a word needed to be changed, though some 750 words were added to try to explain what the original 157 words really meant. APS members were permitted to send in comments but the comments were never made public.

In spite of the obstinacy of some in APS management, APS members of good will are supporting the establishment of a politics-free, climate physics study group within the Society. If successful, it will facilitate much needed discussion, debate, and independent research in the physics of climate.

In summary, science progresses by testing predictions against real world data obtained from direct observations and rigorous experiments. The stakes in the global-warming debate are much too high to ignore this observational evidence and declare the science settled. Though there are many more scientists who are extremely well qualified and have reached the same conclusions we have, we stress again that science is not a democratic exercise and our conclusions must be based on observational evidence.

The computer-model predictions of alarming global warming have seriously exaggerated the warming by CO₂ and have underestimated other causes. Since CO₂ is not a pollutant but a substantial benefit to agriculture, and since its warming potential has been greatly exaggerated, it is time for the world to rethink its frenzied pursuit of decarbonization at any cost.

Claude Allegre, former director of the Institute for the Study of the Earth, University of Paris; J. Scott Armstrong, cofounder of the Journal of Forecasting and the International Journal of Forecasting; Jan Breslow, head of the Laboratory of Biochemical Genetics and Metabolism, Rockefeller University; Roger Cohen, fellow, American Physical Society; Edward David, member, National Academy of Engineering and National Academy of Sciences; William Happer, professor of physics, Princeton; Michael Kelly, professor of technology, University of Cambridge, U.K.; William Kininmonth, former head of climate research at the Australian Bureau of Meteorology; Richard Lindzen, professor of atmospheric sciences, MIT; James McGrath, professor of chemistry, Virginia Technical University; Rodney Nichols, former president and CEO of the New York Academy of Sciences; Burt Rutan, aerospace engineer, designer of Voyager and SpaceShipOne; Harrison H. Schmitt, Apollo 17 astronaut and former U.S. senator; Nir Shaviv, professor of astrophysics, Hebrew University, Jerusalem; Henk Tennekes, former director, Royal Dutch Meteorological Service; Antoninio Zichichi, president of the World Federation of Scientists, Geneva.