

The Science and Environmental Policy Project

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Science or Dogma: In the 30 years between the 1979 Charney report to the National Academy of Sciences on an investigation of the possible effects of increased carbon dioxide on the earth's temperatures to the 2009 EPA's finding that carbon dioxide, and other greenhouse gases, endanger human health and welfare; government-funded Climate Studies have largely turned from empirical science to dogma – a belief system unsubstantiated by physical evidence.

The Charney report included some of the nation's best meteorologists and climate researchers and the report recognized that laboratory tests demonstrated that the direct influence on global temperatures from doubling carbon dioxide would be minor – possibly unmeasurable.

The report also identified educated guesses – estimates – that the CO₂ influence might be greatly enhanced by increases in water vapor – the dominant greenhouse gas. If correct, this positive feedback would greatly multiply any increase from CO₂. The report recognized that the warming would occur in the atmosphere, and that we did not have comprehensive measurements of atmospheric temperatures. Thus, the hypothesis of significant atmospheric warming from increased water vapor could not be tested.

In March 1990, *Science Magazine* published a paper by Roy Spencer and John Christy describing a method of using data collected from NOAA polar orbiting weather satellites to comprehensively calculate atmospheric temperatures for virtually the entire globe, except for the extreme poles. These data cover about 97 to 98 percent of the globe, including oceans, deserts, mountain ranges, jungles, etc. where there are few surface instruments. Initially, certain small errors in calculation were discovered, including orbital decay. These were acknowledged and corrected. This is how science advances.

These data, published monthly, are independently calculated by two other entities and are independently verified by four sets of weather balloon data using different instruments. The government-sponsored United Nation's Intergovernmental Panel on Climate Change (IPCC) the US Global Change Research Program (USGCRP), and the EPA largely ignore the atmospheric data, which is far more comprehensive and better tested than surface data.

Unfortunately, subsequent government-funded research went from properly testing the educated guesses (hypotheses) in the Charney Report to using them to create fear of global warming, now called climate change. Economically drastic programs and government policies have been justified based on these untested guesses.

From 1993 to 2016, the US government spent over \$40 Billion on what government entities classify Climate Science – and has produced no refinement to the 1979 Charney Report. Independent scientists and climate researchers have produced far better estimates of the influence of CO₂, based on empirical (scientific) observations. But, that research is not included in official government publications.

Public policies on energy and the environment should be based on the best available empirical science, not on incomplete studies, which have become dogma.

On March 29, the U.S. House Committee on Science Space & and Technology held a hearing titled “Climate Science: Assumptions, Policy Implications, and the Scientific Method” featuring climate scientists John Christy, Judith Curry, Michael Mann, and Roger Pielke Jr., who recently left the field, in part because of abusive tactics by certain members of Congress. Comparing the written testimony of John Christy with that of Michael Mann provides a stark illustration of the difference between empirical science and scientific dogma. The testimony of Judith Curry and Roger Pielke Jr. will be discussed in a subsequent TWTW. See links under Challenging the Orthodoxy, Defending the Orthodoxy, and Seeking a Common Ground.

John Christy’s Written Testimony: The Professor of Atmospheric Science at University of Alabama, Huntsville, began his written statement with a summary of what constitutes empirical science and how it applies to “official” science of the IPCC and its followers:

“‘Science’ is not a set of facts but a process or method that sets out a way for us to discover information and which attempts to determine the level of confidence we might have in that information. In the method, a “claim” or “hypothesis” is stated such that rigorous tests might be employed to test the claim to determine its credibility. If the claim fails a test, the claim is rejected or modified then tested again. When the “scientific method” is applied to the output from climate models of the IPCC AR5, specifically the bulk atmospheric temperature trends since 1979 (a key variable with a strong and obvious theoretical response to increasing GHGs in this period), I demonstrate that the consensus of the models fails the test to match the real-world observations by a significant margin. As such, the average of the models is considered to be untruthful in representing the recent decades of climate variation and change, and thus would be inappropriate for use in predicting future changes in the climate or for related policy decisions.

“The IPCC inadvertently provided information that supports this conclusion by (a) showing that the tropical trends of climate models with extra greenhouse gases failed to match actual trends and (b) showing that climate models without extra greenhouse gases agreed with actual trends. A report of which I was a co-author demonstrates that a statistical model that uses only natural influences on the climate also explains the variations and trends since 1979 without the need of extra greenhouse gases. While such a model (or any climate model) cannot “prove” the causes of variations, the fact that its result is not rejected by the scientific method indicates it should be considered when trying to understand why the climate does what it does. Deliberate consideration of the major influences by natural variability on the climate has been conspicuously absent in the current explanations of climate change by the well-funded climate science industry.”

Christy proceeded to substantiate his assertions with physical evidence – no polls, beliefs, models, assumptions, etc. His testimony is a follow-up on prior testimony, such as the one on February 2, 2016, which has been cited numerous times in TWTW.

Using the Canadian Climate Model, Christy gives a pictorial representation of the so-called “hot-spot” where the modelers suggest the atmospheric warming should occur, centered over the tropics at about 10km (33,000), 250 to 200 mb of pressure. Christy outlines the area from the surface to 50,000 feet (15km), making it clear where the pronounced atmospheric warming should occur, according to the modelers and the prevalent theory. By keeping his analysis below 50,000 feet, Christy avoids any confusion of the principle issue with stratospheric cooling, for which there is no generally accepted explanation.

Christy then shows that, in general, global climate models (CMIP5), from 32 institutions, greatly overestimate the atmospheric warming, where carbon dioxide (greenhouse gas) caused warming should occur. The number of simulations each institution contributes varies from one to eighteen. For the empirical data, Christy uses 3 different satellite datasets, 4 balloon datasets, and the average of 3 reanalysis datasets. The different types of datasets closely correspond, contrasting the average of the models which greatly overestimate the observations.

In addition, Christy sought the advice of an econometrician, Ross McKittrick, who applied statistical tests to determine if the trends in the model time series and the observation time series are statistically different. They are, with a confidence greater than 99%. Very simply, the models fail to describe what is occurring.

Very interestingly, Christy reveals that buried in the Supplementary Material of Chapter 10 of the Fifth IPCC Assessment Report (AR5, 2013), without comment, are graphs that show the models overestimate atmospheric warming trends, particularly over the tropics. Christy was a reviewer of AR5 and insisted that the graphs be in the main text, but he was ignored. This is another example of how highly politicized the UN reports have become.

Christy simplifies the graphic and shows that the models better describe atmospheric temperature trends when the influences of greenhouse gases (GHGs) are eliminated than when they are included (Fig 5 of Christy’s Testimony).

*“Incredibly, what Fig. 5 shows is that the bulk tropical atmospheric temperature change is modeled best when **no extra** GHGs are included – a direct contradiction to the IPCC conclusion that observed changes could only be modeled **if extra** GHGs were included.”* [Boldface in original]

Christy describes the simple statistical model by Wallace, Christy, and D’Aleo, which outperforms the global climate models used by the IPCC. Then, he advocates the need for a government funded “Red Team” to advocate opposing views as it is done in some government entities and private industry when critical issues are under consideration. [As a side note, the reports of the Nongovernmental International Panel on Climate Change (NIPCC) functioned as “red team” reports, but have been largely ignored or dismissed by “official” entities such as the EPA. See links under Challenging the Orthodoxy – NIPCC, Challenging the Orthodoxy, and Seeking a Common Ground

Michael Mann’s Written Testimony: The Distinguished Professor of Atmospheric Science at Penn State University states:

“at least 97% of scientists publishing in the field have all concluded, based on the evidence, that climate change is real, is human-caused, and is already having adverse impacts on us, our economy, and our planet.” John Cook et al 2016 Environ. Res. Lett. **11** 048002

The Cook paper is a classic on how to mislead the public with surveys, which included the authors of the survey determining the classifications for the scientists, without their consent. Mann addresses the criticism of Tom Karl and the recent work at NOAA, Ashville:

“This fake news story was built entirely on an interview with a single disgruntled former NOAA employee, John Bates, who had been demoted from a supervisory position at NOAA for his inability to work well with others.”

Yet, many others have shown how NOAA, Ashville has distorted the historic temperature record in recent years.

*“Bates’ allegations were also published on the blog of **climate science denier** Judith Curry (I use the term carefully—reserving it for those who deny the most basic findings of the scientific community, which includes the fact that human activity is substantially or entirely responsible for the large-scale warming we have seen over the past century— something Judith Curry disputes)”* [Boldface added.]

In the subsequent oral testimony, Mr. Mann denied he called anyone a denier.

The above illustrates the thrust of the testimony, which can be summed as accusations with little physical evidence.

Fittingly, Exhibit B of the testimony is the latest version of Mr. Mann’s hockey-stick, PAGES 2k “published by a team of 78 scientists around the world using the most widespread paleoclimate database to date.” The graph superimposes instrument data on proxy data, yet the proxy data stops about 1990, failing to show a divergence between the two datasets.

Statistician Steve McIntyre of Climate Audit has written a number of highly critical comments on PAGES 2k, which included reconstructions that were inverted to give the false impression of warming, where the actual proxy data showed cooling, and various statistical tricks. See links under seeking a common ground and <https://climateaudit.org/?s=pages+2k>

Remaining Issues: With the physical evidence presented by John Christy, it is past time to re-visit the Charney Report, the EPA Endangerment Finding, as well as organizational statements regarding the influence of human carbon dioxide emissions on temperatures. However, in the highly politically charged atmosphere of Washington, which includes many scientific organizations, it is doubtful major change will take place quickly.

A great deal of government money went to support research on global warming, climate change, and, in particular, to schemes to reduce the effects of global warming even if the causes were not known. Much of this money, and the vested interests of many organizations, are difficult to trace, and will take time. No doubt, those organizations that received much of this money will object to change.

Also, it is important to avoid dogma in the opposite direct, such as CO2 has no influence on temperatures. The IPCC ignored the influence of El Niños, their frequency, and intensity. An important question needs to be examined: are El Niños influenced by increased amounts of carbon dioxide? See links under Funding Issues and Article #1.

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