

sults of the rather heated discussions.

Scientists who attack the prevailing mythology about the effect, have been denied fair access to the media, and in some instances have even been threatened with loss of their ability to work professionally should they continue. For example, Kenneth Watt from the University of California at Davis, gave a three-minute interview to a CBS reporter debunking the greenhouse effect which was to be aired as part of a half-hour special. The reporter received a telephone call from CBS headquarters in New York and was ordered to erase the interview and destroy any other tapes of scientists refuting the official network policy on the "greenhouse effect."

What the scientists say

The actual nature of the present climatic events is still a subject of heated debate among these scientists, some arguing that there has been a very slight warming of the Earth for the last 100 years, while others present convincing evidence that there has been a cooling. The majority say the only honest answer is "we don't have any conclusive evidence either way." But uniformly, they condemn the present hysteria being peddled by the news media as lacking any scientific basis.

The hysteria exploded in June of last year, when extreme drought was destroying much of the year's crops. James Hansen of the Goddard Institute of Space Studies in New York told Senate hearings at the time that the drought was the result of the greenhouse effect, and that "we can state with 99% confidence that current temperatures represent a real warming trend rather than a chance fluctuation." Hansen and his collaborators have based their outrageous statements on a very scant temperature record and computer models of climate that are extremely coarse and unreliable.

The truth is exactly opposite. The severe U.S. drought and a pattern of associated global weather anomalies cannot be attributed to a gradual warming trend—which even according to its proponents would only have serious effects on global climate and economy 50 to 100 years hence.

The main tool used by the climatologists causing all the hysteria are climate models, yet meteorologists who work on weather prediction are quick to point out that "long-range" weather forecasts are only approximately accurate beyond a couple of days. The climate models do not use any more sophisticated physics than the forecasting models, which are more detailed in a regional basis, and more accurate than any global model. One reason for the climate models' inaccuracy is their failure to include ocean/atmospheric interactions, a key factor reducing the reliability of the global models used to predict a 30- to 50-year greenhouse effect. This is a problem in the *theory* of the models, but it is also a limitation imposed upon them by the computational deficiencies of the computers used.

We are publishing the following interviews which Maduro held over the last months, with several leading U.S.

meteorologists to lay the basis for a campaign to debunk this latest environmentalist hoax once and for all. What kind of a world will it be, if the environmentalists are allowed to destroy the whole of industry with the same impunity with which they were permitted to destroy the nuclear industry!

Interview: Patrick Michaels

'People hide their pet issues in this thing'

Dr. Michaels is Professor of Environmental Sciences at the University of Virginia and a member of the executive board of the American Association of State Climatologists.

Q: I am studying the greenhouse effect and deforestation in the Third World, and I have studied extensively what James Hansen, George Woodwell, and Steve Schneider are stating about the greenhouse effect, and I wanted to know what you think of this question.

Michaels: The problem we have is that if you look at the earth's temperature curve [over time], it's not so clear that it's doing what it should be doing. That's the problem. The current CO₂ [carbon dioxide] concentration is 350 ppm [parts per million], but there are other trace gases that are known to be thermally active [that is, tend to produce the greenhouse effect]: methane, fluorocarbons, NO₂, and you could express their rates of effect in terms of the equivalent amounts of CO₂.

Q: So it's not just the CO₂ heating the atmosphere?

Michaels: Right. What you come up with [when you combine the effects of CO₂, methane, and so on] is that the effective CO₂ concentration in the atmosphere is about 407 ppm. The pre-industrial background is somewhere around 270 ppm. Hence, there has been a substantial increase. Several people have calculated that the equilibrium warming that should occur from that increase should be somewhere in the range of just under 2°C. And of course that hasn't happened. Then the argument is made that it is held back by oceanic thermal lag, but Wigley calculated oceanic thermal lag using the most liberal model we know of, and it still hasn't warmed up as much as it should have. It has warmed up about half of what is predicted. That gives one cause to wonder.

Q: That's very interesting.

Michaels: No, it's a serious problem. Don't get me wrong. If you want to paint me as an anti-environmentalist, I'm not

going to stand for that. . . . The problem is that CO₂ is not the only thing going into the atmosphere. [But also] the problem is that there are other effects that we don't understand. . . . So when you make a model that says something is going to happen only because of the increase in thermally active trace gases, you may be missing something. My guess is the residual, or error, is from what is missing. We can't prove that—we don't have the data. So if you ask me what I thought was really going to happen, I would say that it is going to warm up about half as much as the trace gas models

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indicate. You have to decide whether that's a nuisance or whether it's not important enough to bother with. Has anyone told you that this is going to require the virtual restructuring of the American way of life, has that phrase come up yet?

Q: Quite a bit.

Michaels: Yes, well, any time somebody starts talking about that you ought to be very suspicious of his political judgment, don't you think?

Q: I have been looking at all of the bills before Congress motivated by the greenhouse effect.

Michaels: People hide their pet issues in this thing because it's so scary. I have a great quotation, by the way, from Senator Wirth [Timothy Wirth, D-Colo.], from the Aug. 13 issue of the *National Journal*. He says, "What we've got to do in energy conservation is try to ride the global warming shift. Even if the theory of global warming is wrong, we have to approach global warming as if it is real. We need energy conservation, so we will be doing the right thing anyway in terms of economic policy and environmental policy." Now, that's a very interesting quotation because what it says is we're going to scare the bejeezus out of people to get the policy we want, and it doesn't matter whether we're right or wrong. He's very candid. He should be given the candor trophy for making that statement.

Q: That's amazing. I've been looking at the bills and it is astonishing what kinds of things they're calling for.

Michaels: The reason we have to be scientifically very careful with this issue is because of those ramifications. There are lots of people who want to rebuild society in their utopian

image. And frankly, they don't have the data right.

Q: How did the present media hysteria on the greenhouse effect occur?

Michaels: When Jim [Hansen] caused all this uproar—Jim and I are friends, this is not a personality clash—when he got in front of Congress, what he did is he compared January through May temperatures to annual averages for the last 100 years. That's essentially like comparing apples and oranges because there is going to be greater variability in samples of less than a year compared to that of an entire year. It is my understanding that Jim goes on television to excite people by showing them a lot of probabilistic nonsense on climate changes.

Q: Do you think the earth has any mechanisms to counteract the increase in CO₂ in the atmosphere?

Michaels: Eventually, but not in the short term. Again, you're making the assumption that that is the only thing going in. That's a very simplistic assumption.

But coming back to Jim Hansen's climate record: There is a record of climate over the United States, called the Northern Climate Series, developed by Tom Karl, and it is the cleanest record that you have. He shows that there is less of a warming trend. He has corrected for both the urban effect and site change. Tom compares that record to Hansen's record over the last century, which is not explicitly controlled. It turns out that Hansen's record is four-tenths of a degree Celsius higher than Karl's in the U.S. That's not appreciably different from the amount of *global* warming that Hansen claims for the last 100 years. Does that scare you? Doesn't that bother you a little bit?

Q: Yes.

Michaels: It bothers a lot of people. . . . And this stuff *never, ever* gets out in public.

People who picketed places like Shoreham [nuclear plant in New York], were inadvertently contributing to the increase in the atmosphere of CO₂. One would wonder about the clarity of their environmental vision.

Q: Yes. If the greenhouse effect is real and it's here, they should be calling for more nuclear power plants.

Michaels: Of course! In the bill that Wirth wrote on the greenhouse effect, there is a statement about safe nuclear power. And the environmentalists just walked away from him when he said that. The greenhouse effect has the ability to split the environmentalist movement into two camps. . . .

Q: Well, it's a real question because if you're serious about dealing with this thing you are going to have to build nuclear power plants.

Michaels: No kidding! The argument that you are going to solve it with solar energy and windmills, it doesn't ring true

to me. I've heard that argument before. Remember the presidential inaugural that was supposed to be heated with a solar-heated reviewing stand and everybody froze their buns off? I think you remember that day.

Interview: Jeremy Namias

CO₂ effect has not been proven by evidence

Dr. Namias of the Scripps Institute of Oceanography, at La Jolla, California is known as the "dean" of American climatologists.

Q: I have interviewed a score of scientists on the greenhouse effect, and so far, not one of them has agreed with what is coming out of the news media about the supposedly cataclysmic consequences of the greenhouse effect. . . .

Namias: Don't put words in my mouth. I'll give you my convictions on this matter; in the first place I think that the publicity that has come about associating the drought of last summer with the greenhouse effect is absolutely wrong. That there is no indication that that had anything to do with the drought. The greenhouse effect, that is. It can be explained with normal things as has been done in studies of many droughts in the past and even droughts of similar nature in the plains and so forth.

Secondly, I don't believe that the greenhouse had any effect on the path and generation and movement of Hurricane Gilbert, which was a very severe hurricane if you remember. That can also be adequately explained on the basis of air-sea interactions and many other studies of hurricanes, so that I think that we can write off what is sometimes claimed that the greenhouse effect is here now. I don't believe it is here at all yet. However, I do believe that if we keep burning fossil fuels and the accumulation of other gases at the rate we have, and carbon dioxide increases the way it has been increasing, then I think it is likely there will be a tendency to a warmer Earth as has been predicted, and also I think that the polar, higher latitudes will be warmed more than other latitudes.

I don't know about the impacts of this on the ice caps. I am not qualified to predict when it will occur, and I am not ready to believe it is here now. I am inclined to believe that it may not take place for about 50 years. But that is due to certain delaying factors. I think that ultimately it would come about *if* the carbon dioxide increases and if we keep burning fossil fuels, and so forth, so I am willing to go along with

that part of it. Even so, the effects, what this will mean, whether there will be a lot more drought like we had, or there will be more hurricanes—that is up for grabs. In my opinion, the targeting of specific areas has not been adequately established scientifically.

Q: Pat Michaels at the University of Virginia says that to blame CO₂ is too simplistic, that you have other greenhouse gases. If you add them up, you get over 407 parts per million of CO₂ equivalent in the atmosphere, so that allegedly if the

Ultimately, the warmer Earth would come about if the carbon dioxide increases and if we keep burning fossil fuels.

models are correct, you should already have had a 2°C warming.

Namias: Well, we can't prove that there has been, you know. The fact that there have been some warm years in the 1980s, that could be due just to the way the ball bounces statistically. I don't think that those warmings indicate that the CO₂ effect is here. And there are some people, the British and so forth, who have made various studies, and the early part of the temperature record a century ago is very bad, so you can't just extrapolate those numbers.

Q: I see. Do you think that the range of temperature increase that Hansen gives is accurate?

Namias: Well, in the last 40 years of his record, there is more probability that it is in the right ballpark. There has been some question about some of his work about historical temperatures. As I said, the British have studied this a lot, and I heard Professor Wigley speak two weeks ago in Cambridge, Massachusetts. He's from the University of East Anglia [Great Britain], and he read a paper which dethrones some of Hansen's estimates, showing that the temperature increases were well within the natural range of variability.

Q: I think it is very interesting that even if you take into account an increase in carbon dioxide in the atmosphere, there is no evidence that CO₂ is warming up the atmosphere. If that is so, then my question is, what is warming up the atmosphere. Can it be the amount of forests that have been cut down over the century?

Namias: There is one factor, which is believed to be a small factor, which is that there is an observed warming in cities compared with the countryside. This calls into question comparisons with the Southern Hemisphere where there are fewer