

# Goracle Bushings on Faith-Based Science

BY GERALD E. MARSH

*"... We are about to waste an enormous amount of money and effort on carbon mitigation without lowering CO<sub>2</sub> emissions one whit. [Al Gore] and his fellow travelers will carry the day."*

AL GORE WON an Academy Award for his skillfully done film, "An Inconvenient Truth." It was well-deserved. Had he given as good a performance during his campaign for president, he would have won in a landslide. As environmental drama, it only can be compared with Michael Crichton's novel, *State of Fear*. Both have elements of scientific and political fact, and both are excellent fiction. Gore's admiring fans call him "The Goracle"—a fitting title because, although he cloaks himself in the mantle of science, his belief in human-induced global warming is faith-based. However, while a growing number of people receive their certainty from the Almighty, Gore's faith is based on hubris.

The Nobel Committee recently bestowed the Peace Prize upon Gore and the United Nations Intergovernmental Panel on Climate Change (IPCC). Unlike the other Nobel prizes, which are awarded for scientific excellence, the Peace Prize traditionally is given with a not-very-subtle political goal—to prod various governments in directions that the Committee deems desirable. In this case, in step with conventional wisdom, the Nobel Committee clearly has elected to endorse the idea that human activity is causing global warming.

Another faith-based actor on the environmental stage is John Houghton. In 1988, when the IPCC was formed, Houghton became the chair for scientific assessment, and held that post for the first three IPCC reports—spanning a period of some 14 years. Those reports formed the scientific basis for the Kyoto Protocol, an international agreement to reduce carbon dioxide emissions. Houghton also is the founder and president of the John Ray Initiative, a nonprofit organization that educates Christians about the environment. He believes he is on a mission of "creation care," maintaining that "Christians believe that we have been put into the world to look after it and to care for the whole of creation. That's a message presented very early on in the Bible. Adam and Eve were put into a garden and they were told

to look after that garden. That garden is Earth."

Does Houghton's idea of "creation care" jibe with other Christian thought on this issue? Not according to the Rev. Louis P. Sheldon, the outspoken founder of the Traditional Values Coalition, an interdenominational public policy organization that claims to speak for more than 43,000 churches. On reading Houghton's above quote, he responded, "Nature is no more than the gift of God, given for human domination, development, and stewardship. Some would have us believe that humanity is here to serve the land and the animals. Environmentalism has become a New Age religion unto itself. God our Creator is alone deserving of worship. He is the one who created all life and placed humanity on the Earth as the highest order, allowing the lesser orders to serve us. Environmentalism wrongly focuses on our responsibility of stewardship and too often excludes any acknowledgement of God the Creator of all living matter."

In making this statement, Sheldon is arguing religion; he does not say his view is scientifically mandated, while Houghton maintains a religious righteousness about his interpretation of climate science. Houghton also implies that those who disagree with him either are in the pay of, or duped by, "vested interests, led very much by the Exxon Mobil oil company and some [U.S.] coal companies, [which have] set up a misinformation campaign aimed at persuading people that the science was flawed and that no action was required. In particular, they tried very hard to discredit the IPCC. That campaign was influential at all levels of American society."

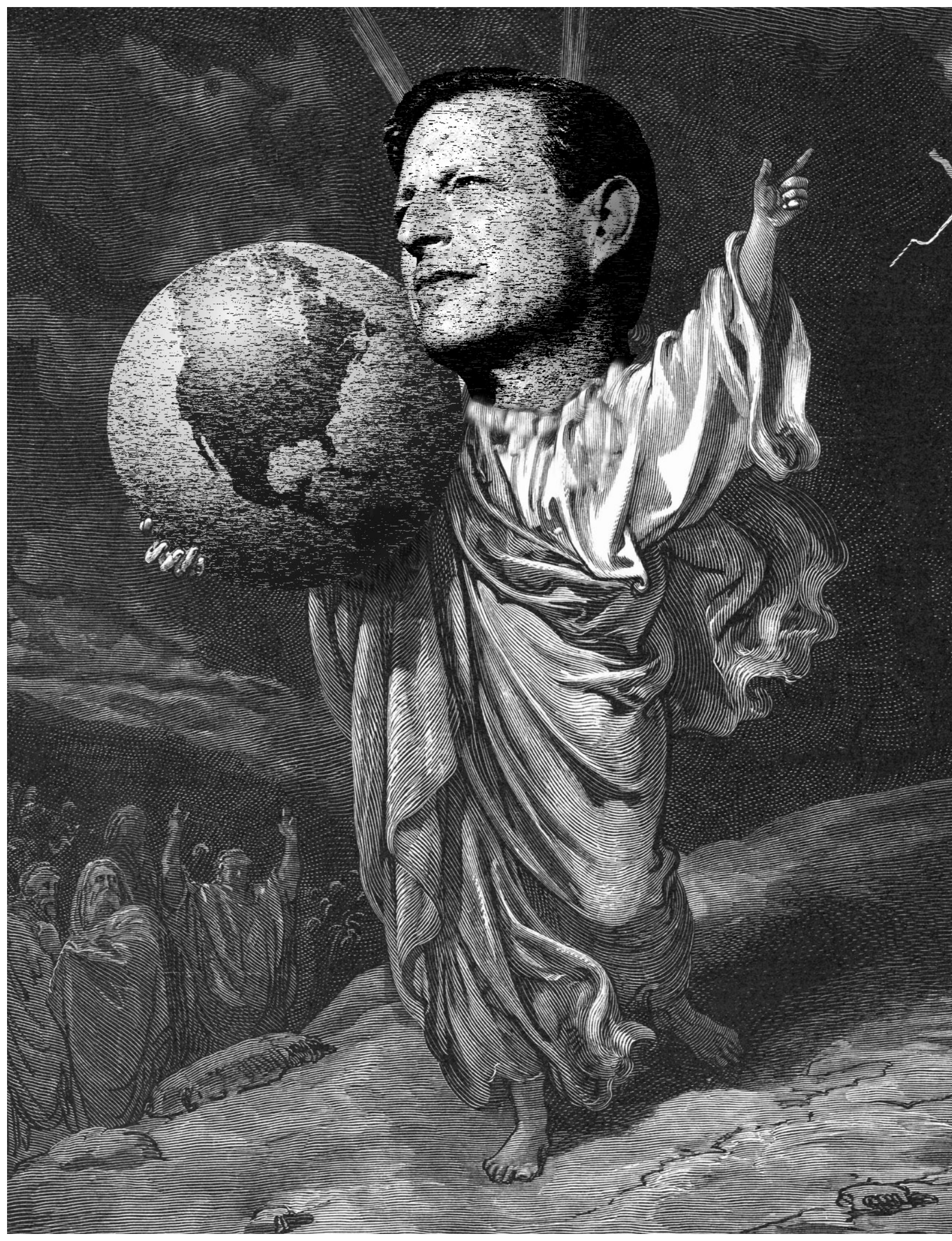
One can wonder how that campaign would compare with the \$100,000,000 or so a year that Gore's Alliance for Climate Protection is spending on lobbying and changing attitudes. One also might wonder whether those who wrote the IPCC "Summaries for Policymakers" that were published during Houghton's tenure ever had read the heavily caveated scientific papers that were included in the bodies of the IPCC reports. Given the gap between the

impression of certainty conveyed by the "Summaries," and the warnings in the scientific part of the reports, there is good reason to raise questions about the IPCC and its internal processes. The "Summaries," after all, represent a consensus of government representatives (many of whom also are their nations' Kyoto representatives), not of scientists. They are designed to convince world leaders to take action.

The faith-based approach to the issue of global warming has expanded far beyond Houghton and his "creation care" initiative. The enormous growth of climate change as a religious issue clearly is set forth in the 2005 report, "Americans and Climate Change: Closing the Gap between Science and Action," of the Yale School of Forestry & Environmental Studies Conference on Climate Change. It is authored by Daniel R. Abbasi, who is the department's associate dean as well as the director of the Environmental Attitudes and Behavior project at the Yale Center for Environmental Law & Policy. Moreover, he is an advisor to MSM Capital Partners, which invests in business platforms and low-carbon technologies to mitigate climate change. Given its recommendations, the list of participants is impressive and perhaps somewhat surprising. It includes Al Gore, Sen. John Kerry (D.-Mass.), a number of business and religious leaders, and the heads of major foundations.

One of the report's key recommendations is to "recast climate change as a moral and faith issue, not a scientific or environmental one. Catalyze a broader coalition of allies around this moral common ground. . . . Reach out to seminaries and other religious training institutions and encourage them to incorporate climate change into their curricula for new religious leaders. Provide education on climate change to current clergy via continuing education and other means."

This is not education based on the science of global climate change; it is inculcation of an article of faith. Faith belongs to religion, not science. To move faith into the scientific arena is to damage both.





Then there is Rev. Richard Cizik, vice president for governmental affairs in the National Association of Evangelicals—another participant in the Yale report on climate change. He claims that Christians have a biblical imperative to protect the environment, a duty that he, too, calls “creation care.” Some say that Cizik speaks for the majority of evangelicals. They point to the Ellison Research Poll of American evangelicals, released in February 2006, which found that 70% of respondents were concerned about global warming and its impact on future generations, and 63% believed that action should be taken to address the climate change problem. Pity the poll did not ask what their concern was based on.

There also is the Evangelical Climate Initiative, a statement signed by more than 100 senior evangelical Christian leaders, who say they believe that global warming is human-induced, and who support the biblical responsibility of “creation care.” A photo on the cover of the Oct. 28, 2007, *New York Times Magazine* shows a car with a bumper sticker that says it all: “Global Warming Is Sinful.”

Gore’s “beliefs” about global warming, however, basically are secular. They go back to his having been convinced early on that the most likely cause of rising carbon dioxide levels was the increased burning of fossil fuels in the latter half of the 20th century. In his proselytizing, he fails to acknowledge a fact of life that all scientists know well: correlation does not prove causation. Since the real scientific evidence is muddy at best, it is faith, not science, that underlies Gore’s belief that correlation does indeed prove causation in this case. Before he became the Goracle, Gore was dubbed the “Ozone Man” by Pres. George H.W. Bush in campaigning against Bill Clinton in 1992. He was referring to Gore’s apocalyptic vision that ozone depletion was helping to ravage the environment, as set forth in his then best-selling book, *Earth in the Balance: Ecology and the Human Spirit*.

The concern about ozone started in the 1960s, as people increasingly became alarmed that continued use of chlorofluorocarbon compounds, in air conditioners and elsewhere, could lead to an increased incidence of skin cancer by depleting the protective ozone layer in the upper atmosphere. Normally, the ozone layer filters out the hard ultraviolet (UVB) radiation from the sun. Because of supposed “ozone holes” at the Earth’s poles, great pressure from environmentalists and scientists led to the consummation in 1987 of the Montreal Protocol. Signers of that treaty agreed to eliminate the use of most of the environmentally offending compounds by the year 2000. Almost everyone considered the agreement a great success.

However, William Happer, a professor of physics brought in from Princeton University in 1991 by the Bush Administration, voiced some reservations about the science. He suggested setting up a network of instruments to monitor the discrepancy between model-predicted levels of hard ultraviolet and actual lev-

els measured at the Earth’s surface. Yet, this was not done, and the instrumentation remains sparse, as most instruments have not been in position long enough, over a wide enough area, to detect trends in the temperate zones where most people live.

When the Clinton Administration took power in January 1993, there were many messages from the Clinton transition team supporting Happer as a competent scientist, and he was kept on—but not for long. In May, he was dismissed from his position as director of energy research at the DOE because of his opposition to the views of Vice Pres. Gore and his environmental aides. As Happer said at the time, “I was told that science was not going to intrude on policy”—or, in the view of George Brown, Jr., the California Democrat who headed the House Committee on Science, Space and Technology, “Happer marches to a different drummer than Al Gore. Will is a pure scientist. Al Gore is a politician.”

### Was UVB scare a hoax?

Support for Happer’s concern about ozone-model predictions had surfaced in 1988, when *Science* published a research paper showing that, over a wide area of the U.S., “no increases of UVB have been detected at ground levels from 1974 to 1985.” In fact, this study showed a negative trend in UVB radiation at a time when stratospheric ozone levels were known to be decreasing. The study attributed the lack of increased UVB to “meteorological, climatic, and environmental factors in the troposphere.” In apparent contradiction, another study showed an increase between 1989-93 at a single site near Toronto. The authors of that study, however, cautioned that the observed changes “are large fractional increases in small values” and “may not represent a significant increase in terms of its biological impact.”

In the autumn of 2007, *Nature* reported that chemists at NASA’s Jet Propulsion Laboratory in Pasadena, Calif., measured the breakdown rate in the stratosphere of a molecule called dichlorine peroxide. This is a crucial reaction in a chemical model of ozone destruction that was developed some 20 years ago. NASA’s chemists found that the molecule breaks down almost 10 times more slowly than assumed. As put by *Nature*, “[The experimental data] threatens to shatter established theories of ozone chemistry. If the data [is] right, scientists will have to rethink their understanding of how ozone holes are formed and how that relates to climate change”—and, one might add, how that relates to the incidence of skin cancer.

One could, of course, view the elimination of the chemicals thought to lead to ozone loss as an insurance policy, but was the price too high? We still do not know. Models can help us understand the science behind natural phenomena, but their use as a basis for public policy is questionable. Measurements are better. Regardless of whether the recent measurements of the breakdown rate of dichlorine per-

oxide are confirmed, one might well ask why the measurements were not done before the Montreal Protocol was negotiated. The cost of doing that bit of science would have been far less than the changeover of all air conditioning to a different working gas.

The Ozone Man became the Goracle after his global-warming movie, “An Inconvenient Truth,” hit theaters in May 2006—a movie that is unconstrained by any need for scientific accuracy. It begins with a chart spread dramatically over the backdrop of the stage, showing temperature and carbon dioxide rising and falling in apparent lockstep over hundreds of thousands of years. Even scientifically and graphically challenged audiences clearly can see the strong correlation between carbon dioxide and climate. In high drama, Gore is levitated at the end of the chart to emphasize the carbon extreme that improvident human activity has driven us to.

We viewers are impressed but, more importantly, we clearly are guilty of all the bad things that follow in the film. Except . . . for a little niggling fact known only to the cognoscenti: if you plot the data on a time scale considerably finer than hundreds of thousands of years, you see that the carbon dioxide level does not rise until some 400-1,000 years after the temperature rises. Carbon dioxide was not driving temperature changes. Levels of this gas were rising because, as the oceans warmed, they dumped dissolved carbon dioxide into the atmosphere. By juxtaposing the synchronous march of temperature and carbon dioxide concentrations over the ages with the current rise in CO<sub>2</sub>, much of which may indeed be due to human activity, Gore leaves the unsupported impression that we will be responsible for catastrophic climate change in the future.

Similar misrepresentations riddle not only Gore’s film, but popular—and even scientific—literature as well. Another movie, “The Day After Tomorrow,” has the Earth plunging into a new ice age because of human-induced global warming. The idea is that warming causes fresh water to be dumped into the North Atlantic Ocean, leading to a shutdown of the Gulf Stream, which many maintain is responsible for Europe’s mild climate. Alas, the proposed mechanism cannot work during interglacial periods such as the one in which we now live, and even if the circulation did shut down, it would have only a minor impact on Europe’s climate. North of about 20° latitude, and contrary to what is found in many textbooks, the atmosphere is responsible for most of the heat transported to Europe. What an inconvenient truth.

The Earth has been far warmer in the past. Even as recently as 1,000 years ago, the climate was more benign than it is now. When Erik the Red colonized Greenland in the 10th century, there were forests and fertile soil. Farming was possible there until the Little Ice Age began in the 16th century. The climate started warming again in about 1850 and, with luck, that trend will continue for quite a while. Eventually, however, we inevitably will slip in-

to another ice age and, when the ice sheets come again, much of civilization will be wiped out. The warming that ended the Little Ice Age could not have been driven by human emissions of carbon dioxide, since most of those emissions did not occur until after 1950. Starting 100 years before that, the sea level has risen at a rate of a few inches per century, with no significant change in that rate to correlate with the post-1950 increase in CO<sub>2</sub>. Similarly, glaciers started to recede globally around 1850, and their rate of retreat has been pretty constant from then until now.

Although CO<sub>2</sub>'s greenhouse properties have been known for a long time, it only is within the last 20 years or so that it became a concern. From 1940 until the mid 1970s, global temperatures declined, and most climatologists thought we were slipping into a new ice age—unimpressed by the fact that carbon dioxide levels had been rising significantly for 35 years. The central fact about greenhouse gases to keep in mind is this: carbon dioxide is not the most important one. The oft-repeated mantra that it is simply is wrong, no matter how often you may read the contrary in *The New York Times* or other sources.

In reality, the most important greenhouse gas is water vapor, which is responsible for up to 90% of the greenhouse effect. Carbon dioxide is a minor greenhouse gas because there is very little of it in the atmosphere—of every 10,000 air molecules, fewer than four are CO<sub>2</sub>. The role of humanity in the recent small warming of the planet, some 0.7°C, is far from settled—the recent report from IPCC notwithstanding.

The Supreme Court has declared that carbon dioxide and other greenhouse gases are air pollutants under the Clean Air Act. That means it is classified as a pollutant, rationally or not, under a U.S. law that determines regulatory authority. Yet, that does not mean the media and the public should start thinking that carbon dioxide really is a pollutant, as it is a necessity. Without some carbon dioxide in the air, there would be no plants and, without plants, there would be no oxygen, and we would not exist.

The climate change issue is not only about the warming planet or saving the environment; it has a large psychological component. It is about faith and, more important, control and guilt. If global warming mostly is a natural change in climate, we are not responsible and, therefore, we can have no control over our future other than to adapt. The guilt comes from the romantic idea that the past was better and people were closer to nature; modern society and technology are viewed as a blight upon the Earth—and, given the way the environment often is ravaged for the sake of growth and resource extraction, there is enough truth in that claim to satisfy true believers. People also like having a cause to rally around, and it even is better if they can believe they have truth and God on their side.

So, how did we move from a debate on global climate change and the possibility that some of it is human induced to the certainty and

religious fervor of today? Some of the responsibility must be laid at the feet of the Oracle. Since he really does not understand the science behind climate change, or perhaps even care about it, his belief in human-induced global warming is as faith-based as that of the evangelicals—and he has enormous resources to promulgate his faith. The rest of the responsibility belongs to the press and those who have something to gain from fear-mongering: environmental organizations that see an issue ripe for fund-raising; politicians, especially Democratic liberals, looking for “panic” votes; scientists who find funding easier to obtain in a climate of fear and uncertainty; and businesses seeing an opportunity for investment and profit.

The real question is what to do when faced with uncertainty, when scientists disagree with each other about an issue that has become so politicized. The simplest response is to go along with the consensus, whatever that might be. If we continually are told by the media, including the likes of *The New York Times* with its excellent science reporters, that carbon dioxide is the most important greenhouse gas, must it not be true? If not, why do people keep saying it is?

## Climate model maladies

In essence, there has been a communication breakdown. Climate models treat water-vapor concentration as feedback that amplifies the effect of changes in the concentration of carbon dioxide and other trace greenhouse gases. So, for the people who design the models, carbon dioxide is the dominant variable, but that is too fine a point for the media to grasp, and once a few outlets published the simplistic misunderstanding, it propagated—and, the more something is repeated, the truer it becomes. Climatologists are well aware that carbon dioxide is not the “most important greenhouse gas,” but now that the media has entrenched the claim that it is, countering it has become impossible.

The distortions and fear surrounding climate change are not benign. Attempts to mitigate carbon dioxide emissions are likely to cost enormous amounts of money and, if successful, will condemn much of the developing world with its reliance on fossil fuels to continued poverty and misery.

So, what should be done? First, get serious. Current attempts to mitigate the use of carbon-based fuels in the developed world largely ignore the elephant in the room, nuclear energy. In the U.S., about 40% of the carbon dioxide emissions from the burning of fossil fuels comes from the generation of electricity. Serious people know that alternative sources of electricity like solar or wind power do not have a prayer of being able to displace this use of fossil fuels any time soon, if ever. The choice is between coal and nuclear. The sequestering of carbon dioxide does nothing to limit the real pollutants emitted by the combustion of coal, the ones that kill tens of thousands of people a year—one of those so-called

economic “externalities”; people subsidize the burning of coal with their health.

Nuclear power may be the only available environmentally friendly alternative to coal, but what about the waste? Everyone “knows” that the waste problem is intractable—another oft-repeated mantra that has no basis in fact, because the solution is simple. Burn the used fuel in recycling reactors. The radioactivity of the small quantity of the remaining real waste falls below that of the original uranium ore in less than 500 years. For this period, geological isolation is trivial. By recycling the “spent” fuel, and using the uranium “tailings” left over from the enrichment of uranium, we get 99% of the energy in the original mined uranium instead of the one percent or less that we obtain at present. With recycling reactors deployed, there is enough uranium to power civilization from here on out. Nuclear energy is just as inexhaustible as solar energy, but more available—and the technology is well established. Nuclear power is a cheap insurance policy in the climate of uncertainty about global warming.

What else could be done if there is a genuine desire to be serious about carbon emissions? Well, we could put in decent public transportation powered by nuclear-generated electricity—not only in the cities, but out to the suburbs and, to some extent, within them. Electrify all the rail lines. Stop the inefficient practice of heating homes and businesses individually, and put in central heating over relatively large areas, as many institutions do. Where possible, use the otherwise wasted heat from central generating plants. These measures easily could cut U.S. carbon dioxide emissions by well over 50%. Rest assured, though, they will not become a reality.

While nuclear is by far the safest and most environmentally benign way to get the energy needed now and in the future, that is not the perception of the media and the public, nor is the switch to nuclear power in the financial interests of energy companies that hold vast reserves of fossil fuels. Moreover, expanded and efficient public transportation is not in the interests of the automobile companies or of the vast vehicle-centered infrastructure that now constitutes a large part of the economy.

In short, making the necessary changes requires an energy policy, and history has shown that it is politically impossible to formulate and pass one, at least in this country. So, tighten your seat belts—we are about to waste an enormous amount of money and effort on carbon mitigation without lowering CO<sub>2</sub> emissions one whit. The Oracle and his fellow travelers will carry the day. ★

---

*Gerald E. Marsh is a retired physicist who served with the U.S. START delegation in Geneva and was a consultant to the Department of Defense on strategic nuclear technology and policy in the Reagan, Bush, and Clinton administrations. The Phantom Defense: America's Pursuit of the Star Wars Illusion is his most recent book.*