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David Ray Griffin Examines 9/11 And Global Warming

In the factual logical manner that is his hallmark, David Griffin examines whether global warming is a false conspiracy theory like Washington's 9/11 conspiracy theory.

It is a long article, but it is in three parts. The article will help you to understand the politics of issues.

http://www.informationclearinghouse.info/article42827.htm

9/11 and Global Warming: Are They Both False Conspiracy Theories?

By David Ray Griffin

Introduction

September 11, 2015 "<u>Information Clearing House</u>" - Some people have argued that global warming is a conspiratorial lie, deceiving the public for pernicious reasons. The most well known of these people is Oklahoma Senator James Inhofe, who in 2012 published a book entitled <u>*The Greatest Hoax*</u>, which warns people against "the global warming conspiracy."

Some members of the 9/11 Truth Movement have endorsed this view. Believing that the Bush-Cheney administration conspired with others to claim falsely that America was attacked by Muslims on 9/11, they say that the government's false conspiracy theory about 9/11 should make us suspicious that other governmental claims may also be conspiracies to mislead the public.

Suspicions about governmental conspiracies are not baseless. Claims that the U.S. government has given a false account of this or that event are, however, generally rejected by the press. Since the time of *The Warren Commission Report*, which did not quiet suspicions that the assassination of President Kennedy had been an inside job, beliefs about huge government crimes have been derided by the CIA and the press as "conspiracy theories" in the pejorative sense of the term. People who give voice to such beliefs are ridiculed as "conspiracy theorists," a label that implies that the conspiracy claim is obviously false.

Nevertheless, as Lance deHaven-Smith has discussed in his 2013 book <u>*Conspiracy*</u> <u>*Theory in America*</u>, it is well known that the U.S. government has indeed orchestrated conspiracies with enormous consequences, such as the Gulf of Tonkin incident and the Iran-Contra affair, as well as, more recently, the claims that Iraq was involved in the 9/11 attacks and was prepared to use weapons of mass destruction.

So if people, believing that there is good evidence that 9/11 was an inside job, are aware of the U.S. government's involvement in these other conspiracies, there is no good reason to doubt that there are additional examples of conspiracies that have been engineered at the highest levels.

In particular, if it is assumed that 9/11 was indeed an inside job, would this assumption provide a good basis for suspecting that the theory of global warming has resulted from a deceitful conspiracy?

The phrase "theory of global warming" is used here as shorthand for a fourfold conviction:

- 1. Increases of the percentage of CO_2 and other greenhouse gases in the atmosphere are raising the planet's average temperature.
- 2. The main cause of these increases in atmospheric greenhouse gases is the burning of fossil fuels.
- 3. The global warming produced by these fossil-fuel emissions is starting to change the climate.
- 4. This climate change, if it continues, will become increasingly destructive.

Because this fourfold conviction is held by virtually all climate scientists around the world, the theory of global warming can also be called "the position of climate science." Individuals and organizations who dispute climate science in this sense are referred to as "climate-science deniers," "climate-change deniers" or "global-warming deniers."

Often the term "denialism" is used for the active argument against climate science, with those engaged in this argument called "denialists."

I ask the question about the relevance of 9/11 to climate science not only because many members of the 9/11 Truth Movement have supported global-warming denialism, but also because the success of this denialist movement has been disastrous.

As I have documented in a 2015 book, the denialist movement was formed and financed by the fossil-fuel industry, and the doubt it created has been used to delay legislation to restrict the use of fossil fuels – a delay that may result in the destruction of civilization. Climate deniers call this fear "alarmism." But there are times when alarm is appropriate and, my book argues, this is the supreme example.

Believing that it is a shame that many members of the 9/11 Truth Movement have been misled into supporting self-interested propaganda by the fossil-fuel industries, I ask whether this movement's basic conviction - that the official story about 9/11 is a lie - provides a basis for accepting climate-science denial.

The transition from the one to the other is typically made on the basis of two beliefs:

- 1. Climate scientists' claims about global warming are analogous to the government's claims about 9/11.
- 2. Just as evidence proves the falsity of the government's 9/11 account, evidence shows the falsity of the idea that the burning of fossil fuels is threatening civilization by warming the planet.

The first two parts of this article looks at these two beliefs in order; the third part argues that we do indeed have a climate emergency.

Part I: Are 9/11 and Global Warming Analogous?

Because the claims about global warming are analogous to the government's false claims about 9/11, some people believe, these claims are also probably false. But the Bush-Cheney administration's claims about 9/11 are not at all analogous to the widely accepted views about global warming.

9/11, Global Warming, and Science

A well-known member of the 9/11 Truth Movement, who writes under the name "Victronix," <u>has argued that</u> standard beliefs about 9/11 and global warming are not only very different, but also different in ways that prevent 9/11 beliefs from providing an analogy to scientists' belief about global warming. The idea that global warming is a lie, she pointed out, implies that "the vast majority of the scientific community is working in collusion to create a worldwide hoax - including Russia and China and the entire industrialized world - that a worldwide environmental crisis is unfolding." In other

words, thousands of scientists from many countries around the world, including countries that are strongly opposed to each other, all agreed to tell a huge lie.

By contrast, she said, 9/11 involved "a single national government (and collusion by other intelligence and government leaders who also benefit) with highly limited and controlled science whose evidence is completely controlled, destroyed or hidden." This "controlled science" is very different from the science supporting global warming belief: "Scientists all over the world can and are investigating and confirming the same findings over and over." Unlike the purported events used to claim that Muslims attacked America on 9/11, the science of global warming is based on "ongoing events whose evidence is available to everyone all over the world to examine simultaneously using the scientific method and simple tools to measure and analyze."

Making this point more succinctly, Australians <u>Will Grant and Rod Lamberts</u> wrote: "The idea of an international conspiracy across dozens of disciplines, hundreds of institutions and thousands of individuals is honestly laughable."

The different relations to science can also be stated in another way: The theory of global warming is analogous not to the U.S. government's account of the 9/11 attacks, but to the 9/11 Truth Movement's <u>rejection of the government's account</u>: Just as the 9/11 Truth Movement is supported by scientists from various fields, <u>including physics and chemistry</u> (as well as by students of <u>architecture and engineering</u>), the idea that fossil fuels are causing global warming and hence climate change is supported by most of the scientists who publish about climate change – indeed, at least <u>97.5% of them</u>.

So this is the appropriate analogy: The 9/11 Truth Movement, which is supported by scientific evidence, is disputed by the U.S. government, which the 9/11 Truth Movement regards as behind the 9/11 attacks. And the theory of global warming, which is based on scientific evidence, is disputed by the fossil-fuel industries, which climate scientists see as primarily responsible for global warming.

So in each case, the views of independent scientists are disputed by huge enterprises, which clearly have self-interested reasons for challenging thescientific evidence.

Accordingly, the idea that 9/11 skepticism is similar to global warming skepticism has the relationship backwards. When it is claimed that "they" are deceiving the public about global warming, just as "they" deceived the public about the 9/11 attacks, it is necessary to determine the identity of the "they." The best clue to the likely "they" in each case is to determine who would have benefitted from deception.

The 9/11 Truth Movement has considerable consensus on the question of who benefited from the official account of 9/11: The Bush-Cheney administration (which wanted <u>Afghanistan's minerals and natural gas</u> and also <u>planned to attack Iraq</u> for its oil); the biggest U.S. oil companies (the CEOs of which <u>were covertly members</u> of Dick Cheney's 2001 energy task force); Israel (as <u>stated</u> by the 9/11 Commission Report's executive director, Philip Zelikow); the U.S. military (the budget of which <u>went</u>

<u>way up</u>); and the U.S. intelligence agencies (whose budgets <u>doubled after 9/11</u>). But who are the "they" with regard to global warming?

Who Benefits from Climate Denial?

Victronix concluded her discussion of global warming by asking, "who benefits from the claims that human involvement is a hoax?" The answer to that question is, of course, fossil-fuel companies, which have spent <u>hundreds of millions</u> of dollars to promote denial of climate science.

For many years, the main promoter of climate-science denialism was ExxonMobil, the world's most successful corporation, earning roughly \$40 billion a year and paying its CEO over <u>\$30 million a year</u>.

Besides giving millions of dollars to scientists, lobbyists, and politicians to promote climate denial, ExxonMobil gave at least <u>\$25</u> million since 1998 to support some 100 climate-denying front groups. ExxonMobil thereby created the impression that climate denial had arisen spontaneously from scientists, politicians, and ordinary citizens. According to a 2009 article by Raw Story, a "group promoting climate skepticism has extensive ties to Exxon-Mobil" (it was on a website responding to this article that Victronix posted her comments).

The group in question, which is named the Nongovernmental International Panel on Climate Change, published a report entitled <u>Climate Science Reconsidered</u>. Arguing that global warming is not human-caused, this report said: "Nature, not human activity, rules the planet." In addition, reported the <u>highly praised book *Merchants of Doubt*</u>, the report said that global warming is "unequivocally good news," because rising CO₂ levels "increase plant growth and make plants more resistant to drought and pests."

This denialist report was released and promoted by the Heartland Institute, which between 1998 and 2009 had received at least <u>\$676,500 from ExxonMobil</u>. The lead author of this report was S. Fred Singer, who has had a notoriously bad scientific career, having previously been proven wrong in a series of issues in which he contested the scientific consensus. But his career path has been financially successful.

In 1998, Singer started an organization called the Science and Environmental Policy Project, in order to begin a book on global warming, and for which ExxonMobil gave him \$20,000 between 1998 and 2000.

As <u>Naomi Oreskes and Erik Conway</u> reported in *Merchants of Doubt*, Singer had previously helped the tobacco industry's effort to avoid regulations about environmental smoke, also called secondhand smoke. Singer used this project to promote what he called "sound science" and to denounce "junk science," by which he meant, specifically, the EPA's 1992 report that secondhand smoke causes cancer. Singer also became an advisor to The Advancement of Sound Science Coalition, which was funded by Philip Morris to attack the EPA's report, <u>even though Philip Morris</u> and hence Singer knew that the EPA report - which was based on scientific studies from around the world - was sound, not junk, science.

Singer had earlier earned money by joining the efforts of industries that wanted to prevent legislation to reduce acid rain. By 1983, there was an overwhelming scientific consensus that acid rain was produced by the sulfur released during the burning of fossil fuels, and the United States and Canada were set to sign an agreement to reduce the emissions of sulfur. But the Reagan Administration, which strongly opposed any such legislation, appointed Singer to an acid-rain task force, for which he was allowed to write a separate appendix, claiming that the science was still uncertain. As a result, the United States did not sign the agreement with Canada, and sulfur dioxide levels did not begin declining until 1990 when legislation based on the scientific consensus was finally passed.

Singer also, while serving as the chief scientist for Reagan's Department of Transportation, argued against the scientific consensus that a growing hole in the ozone layer was caused by chlorofluorocarbons (CFCs), which were used in spray cans, refrigerators, and air conditioners. The aerosol industry, seeking to prevent legislation, hired scientists to dispute the scientific consensus, and Singer joined in, arguing that an "ozone scare" had been created by "corrupt scientists." The scientists who had shown that the CFCs in the stratosphere destroyed ozone won a Nobel Prize, so Singer attacked the Nobel committee! But eventually, Singer's argument "was proved wrong, when CFCs were banned and the ozone hole began to repair itself."

Nevertheless, after having been wrong time and time again, Singer was asked by the Heartland Institute to be the lead author of its report, the Nongovernmental International Panel on Climate Change, which claims that the burning of fossil fuels is *not* creating dangerous global warming. Besides whatever money Singer made for writing this book, he has also served as a consultant by several other <u>organizations funded by ExxonMobil</u>, including Frontiers of Freedom (which ExxonMobil gave at least \$1,272,000) and the National Center for Policy Analysis (which ExxonMobil gave \$615,900).

id Singer actually believe his arguments about secondhand smoke, acid rain, the ozone layer, and fossil fuels? This seems unlikely, especially given information learned from leaked documents. For example, by 1965, <u>showed one document</u>, tobacco industry scientists were "unanimous in their opinion that [tobacco] smoke is . . . carcinogenic."

The same pattern appears to have occurred with regard to global warming. A document shows that in 1995, the oil industry's own <u>scientific advisors said</u>: "The scientific basis for the Greenhouse Effect and the potential impact of human emissions of greenhouse gases is well established and <u>cannot be denied</u>." Nevertheless, just as the cigarette companies continued to deny the existence of evidence showing that cigarettes cause cancer, ExxonMobil not only continued to deny that oil and gas emissions cause climate change but also paid tens of millions to hire others, such as Fred Singer, to support this denial.

In the meantime, Koch Industries, which is invested in various kinds of fossil fuels, including the <u>Canadian tar sands</u>, has begun providing even more financial support for global-warming denialism than ExxonMobil: Between 1997 and 2010, <u>Koch Industries gave over \$67 million</u> for this purpose. At that point, the Kochs no longer allowed their contributions to be traced. But these contributions may have become even higher, as suggested by stories in the *Guardian* and the *Washington Post*.

Two dark money trusts (which promise their contributors complete anonymity), named Donors Trust and Donors Capital Fund, between them doled out \$118 million to 102 groups, <u>reported the *Guardian*</u>. The purpose of the money was to help "build a vast network of thinktanks and activist groups working to a single purpose: to redefine climate change from neutral scientific fact to a highly polarising 'wedge issue." This funding stream, said *theGuardian*, "far outstripped the support from more visible opponents of climate action such as the oil industry or the conservative billionaire Koch brothers."

However, it is possible that much of this money actually came from the Kochs: A 2014 <u>Washington Post story</u> suggested that these two dark money trusts were simply part of a "Koch-Backed Political Network," which raised over \$400 million for right-wing political causes in 2012.

In any case, whether Charles and David Koch have given over \$100 million to support climate denialism, or "only" \$67 million, this is pocket change for them: By 2010, their company, Koch Industries, was worth \$35 billion; by 2013, they had brought their wealth <u>up to \$68 billion</u>. They evidently find the use of a little pocket change to promote climate denial, and hence to head off legislation to restrict fossil-fuel burning, a worthwhile investment.

Who Would Benefit from Fabricating Global Warming?

There is a clear answer, accordingly, to the question of who benefits from climate denial. But if climate science is a lie, who would benefit from spreading this lie?

The idea that the "government" – perhaps the U.S. government, or U.S. and European governments, or perhaps most of the world's governments - fabricated global warming would make this lie parallel to the 9/11 lie, with each being a government-created lie. But this would make no sense. Neither the U.S. government nor governments in general have wanted to reduce their burning of fossil fuels. The climate scientists of the IPCC – indeed, most climate scientists everywhere - have been pleading with governments to reduce their fossil-fuel use, but in almost all countries, the use has continued to rise.

Some people suggest that the "government" in question is the United Nations. But the U.N. is not a government and has no power to act apart from the willingness of the nations to follow its suggestions – or, in the case of the Security Council, of the nations constituting it. The U.N. did create the IPCC and supports its work, but it has no power to act on climate change other than calling meetings and publishing reports. And the IPCC did not create the idea that emissions from fossil fuels are causing global warming,

which in turn causes climate change. Rather, the IPCC was formed in response to a growing consensus among climate scientists about these connections.

So, if there is a culprit for a global warming hoax, it must be the scientists themselves. And that is, indeed, what many deniers claim. For example, a 2007 documentary film, "<u>The Great Global Warming Swindle</u>," argued that "the publicized scientific consensus is the product of a 'global warming activist industry' driven by a desire for research funding."

Some climate scientists do indeed apply for grants, and a few of them actually receive them. But there are five reasons to doubt that the desire by scientists for funding could explain their published statements about global warming:

- Although there is considerable fraud in science as has been extensively • documented - scientists who engage in fraud are a small minority. Although there are many reasons to criticize mainstream science, few scientists would consciously engage in fraud. Of course, scientists who work for corporations or government agencies must sometimes either falsify evidence or lose their jobs. Members of the 9/11 Truth Movement believe that this was the case with the scientists at NIST (the National Institute Standards of and Technology), which was tasked with writing the reports about the collapse of the Twin Towers and WTC 7. But this was an example of "controlled science," which, as Victronix said, "is very different from the [peer-reviewed] science supporting global warming."
- Even if a few important climate scientists had published false evidence for global warming, they would not have been able to persuade most of the rest of the world's thousands of climate scientists to support their false claims. The fact of fraud by individual scientists provides no evidence that thousands of scientists around the world could be persuaded to engage in fraud.
- The support for global warming comes from a wide <u>variety of types of</u> <u>evidence</u>. The idea that all of these different experiments and tests could have been coordinated to support the same bogus conclusions makes the mind boggle.
- If most scientists are primarily motivated by money, they would have gone into some other line of work. It is true that a few people, after going into science for noble reasons, have become devoted to making money to an unseemly degree. But getting government grants is seldom a road to riches. As <u>Grant and Lamberts said</u>: "Tell the TCCD [Typical Climate Change Denier] to go to any university car park and count the luxury vehicles parked near science buildings. They won't even need all their fingers to keep track."

• There are indeed scientists who have made significant amounts of money by writing about globl warming, but these are scientists who have argued*against* climate science. For example (in addition to Singer), take Patrick Michaels, who has written many books and articles with titles such as "Global Warming Myth" and *Climate of Extremes*. Michaels has served as a consultant for a large number of climate denial organizations funded by ExxonMobil. And in 2006, a furor was raised when it was revealed that a coal-burning electric association had, at its members' expense, <u>paid Michaels \$100,000</u> "to help confuse the issue of global warming."

Again, if there is an analogy between 9/11 and global warming, it is not between the official 9/11 story and the theory of global warming. It is between climate science and the 9/11 Truth Community's position. Just as large numbers of independent scientists have rejected the official 9/11 story, most climate scientists reject the idea that global warming is a hoax.

And just as a few scientists whose salaries are paid by the U.S. government have supported the official account of 9/11, Singer, Michaels, and some other scientists paid by the fossil-fuel industry have endorsed climate-change denial. In the one case, independent science is opposed by Big Government; in the other, independent science is opposed by Big Carbon. In both cases, the scientific evidence is overwhelmed by Big Money, whether this be governmental or fossil-fuel money.

The relation between climate denial and the 9/11 attacks has been described as even closer by a former U.S. Senate candidate from Vermont, Craig Hill. "[W]hat the 9/11 false-flag op and denying global warming have in common," wrote Jerry Mazza in a summary of Hill's thesis, "is oil, and gas . . . , and the desire to quench an unquenchable thirst for these fossil fuels." Moreover, <u>Hill said</u>, just as the perpetrators of 9/11 shrouded it in unscientific myth and lie, the oil companies have also "shrouded the evil effects of warming in unscientific myth and lie."

In other words, said Hill, both the Bush-Cheney administration and the climate deniers funded by ExxonMobil and the Kochs have foisted a false, unscientific theory on the world, especially the American people, for the sake of oil. (To be sure, Hill's statement would need to be qualified by the fact that, as mentioned earlier, oil did not provide the only motive for the 9/11 attacks.)

Part II: Does Scientific Evidence Disprove Global Warming?

In addition to suspecting global warming to be a hoax, some members of the 9/11 Truth Movement have endorsed the view, promulgated by climate denialists, that the true facts do not support the global warming theory. Instead, these denialists argue, the facts show the global warming theory to be a fabrication.

One of those members is Australian chemist Frank Legge. Besides warning Victronix that she should "be careful about using global warming in the argument," because it is "looking pretty shaky from a scientific point of view," he in 2008 wrote an article

called <u>"The Global Warming Emergency.</u>" Because this was so many years ago, I wrote Legge in November 2014 to ask if he still stands by that essay. He replied that if writing it now, he would update a few items, but "the general thrust would be exactly the same."

Legge said that the conclusion that there is a climate emergency would require a threefold argument: (1) Global warming is occurring, it is not trivial, and the claim that the temperature and sea level will continue to rise must be based on good science; (2) "the current and predicted temperature is unusual and dangerous"; and (3) "the warming is largely caused by man-made carbon dioxide."

1. Is Global Warming Significant and Destined to Rise?

Suggesting that global warming, if it is occurring at all, will be minor and short-lived, Legge based this suggestion on several claims, which he derived from climate-science deniers.

Satellite Data

In one of his arguments, Legge wrote: "The recent warming period is giving signs of coming to an end: satellite measurements of global atmospheric temperature have been declining this decade." In support of that argument, Legge referred to an argument by Roy Spencer, one of the handful of climate scientists who reject the consensus view. But citing Spencer's claim about satellite measurements hardly adds credibility to Legge's argument.

In the 1990s, Spencer and fellow climate denier John Christy argued that the satellite data showed no warming – that the <u>troposphere was not warming</u>in conjunction with surface warming.

Joe Romm, a physicist who founded Climate Progress - one of the most highly respected websites dealing with climate science - said that Spencer and Christy had "created one of the <u>most enduring denier myths</u>," namely, "that the satellite data didn't show the global warming that the surface temperature data did." A scientist on the <u>RealClimate website</u> wrote:

"Spencer and Christy sat by for most of a decade allowing — indeed encouraging — the use of their data set as an icon for global warming skeptics. They committed serial errors in the data analysis, but . . . did little or nothing to root out possible sources of errors, and left it to others to clean up the mess."

Spencer and Christy's treatment of this issue, along with some others, led Romm to write <u>an article asking</u>, "Should You Believe Anything John Christy and Roy Spencer Say?"

Urban Heat Island Effect

Besides supporting Spencer's argument for preferring satellite to other evidence, Legge said: "There is also ongoing debate about whether proper allowance has been made for the confounding effect of urban encroachment on temperature stations." Legge was here referring to the so-called <u>urban heat island (UHI) effect</u>, which can occur when weather stations are situated in urban areas, where the air tends to be warmer than rural areas. Fellow climate denier <u>Patrick Michaels has claimed</u> that at least half of the alleged global warming is due to this phenomenon.

Legge, however, cited the climate denialist who has made this case most strongly, former TV weatherman Anthony Watts, who has a website called "Watts Up With That." Watts had long argued that temperature recordings have been skewed by the fact that most recordings are made in urban areas. In 2010, <u>Watts wrote</u>: "UHI is easily observable. I've been telling readers about UHI since this blog started."

In 2010, when Watts made this comment, it seemed for various reasons that a project called the Berkeley Earth Surface Temperature (BEST) project, organized by UC Berkeley professor <u>Richard Muller</u>, was soon to verify Watts' claims. As Joe Romm explained:

- Muller had long been critical of climate science, believing that many scientists and their admirers, including Al Gore, had exaggerated the evidence. Moreover, the "Climategate" charges made him suspect that climate scientists had "concealed discordant data," about which heexamined the claims of denialist bloggers.
- Muller chose as a climate scientist Judith Curry, who, <u>according to Romm</u>, has "now taken the crown as the most debunked person on the science blogosphere" and who has, in fact, "abandon[ed] science."
- Climate denying billionaire Charles Koch was to fund the study, and Watts and other deniers were even allowed to <u>work with the BEST team</u>.

However, Muller chose good scientists to carry out the study, including lead scientist Robert Rohde, and the study did not work out as deniers expected. Based on data from some 40,000 weather stations around the world, the study's results, reported the BBC, were "remarkably similar to those produced by the world's three most important and established groups, whose work had been decried as unreliable and shoddy in climate sceptic circles" – namely, the reports by NASA, NOAA, and the "collaboration between the UK Met Office and UEA's Climatic Research Unit (CRU), from which the emails that formed the basis of the 'Climategate' furor were hacked." <u>Muller told the BBC</u>: "Our biggest surprise was that the new results agreed so closely with the warming values published previously by other teams in the US and the UK."

Writing in <u>the *Wall Street Journal*</u>, Muller said:

"When we began our study, we felt that skeptics had raised legitimate issues, and we didn't know what we'd find. Our results turned out to be close to those published by

prior groups. We think that means that those groups had truly been very careful in their work, despite their inability to convince some skeptics of that. . . . Global warming is real. Perhaps our results will help cool this portion of the climate debate."

Writing <u>in the *New York Times*</u>, Muller called himself "a converted skeptic." He now believes, he said, that the prior estimates of the rate of warming increase were correct and that "essentially all of this increase results from the human emission of greenhouse gases."

Before Muller's report had been published, <u>Watts had written</u>: "I'm prepared to accept whatever result they produce, even if it proves my premise wrong. I'm taking this bold step because the method has promise." However, after learning what the result actually was, Watts reneged. He first refused to accept Muller's report on the grounds that it had not yet been peer reviewed. "When the science and peer review is finished," <u>Watts predicted</u>, "the results are likely to look different."

However, when the report <u>was published</u> (in a peer-reviewed journal), the results, contained <u>in five papers</u>, were not different. In an interview, moreover, Muller emphasized the report's main point about UHI, saying "urban heat islands contribute essentially <u>zero to the warming</u>." This report, which challenged Watts' main claim to fame, was never accepted by him, in spite of his promise.

Sensitivity: Feedback as Negative

Climate scientists acknowledge that they have an imperfect understanding of "climate sensitivity," meaning the amount the planet will warm because of the various feedbacks affecting the climate. Sensitivity is usually discussed in terms of the temperature increase to be caused by a doubling of the preindustrial CO_2 concentration of 275 parts per mission (ppm) to 550 ppm. If the sensitivity is extremely low, then doubling the concentration of CO_2 would not raise the planet's temperature much. But if sensitivity is very high, the doubling will be catastrophic. The IPCC puts the likely temperature increase to range between 2 and 4.5°C, with 3°C being most likely, and James Hansen, whose ideas are taken very seriously by fellow climate scientists, believes the increase to be near the top of that range.

By contrast, <u>Roy Spencer argued</u> that the sensitivity is much lower – so low in fact, reported Legge, that the feedback will be negative, not positive, so that "there is no cause for alarm."

In 2011, <u>Spencer argued this case</u> in a paper that was severely criticized by climate scientists. For example, <u>Kevin Trenberth wrote</u>:

"[I]t is evident that this paper did not get an adequate peer review. It should not have been published [because] there is *no* merit whatsoever in this paper."

The fact that it *was* published led the journal's editor to resign, saying that Spencer's paper was "<u>fundamentally flawed</u> and therefore wrongly accepted" by the team of

reviewers, which he (the editor) had chosen.

2. Current and Predicted Warming: Not Unusual and Dangerous?

In line with Legge's claim that insofar as there is currently some global warming, it is minor and short-lived, he also argued that the warming is not unusual and dangerous.

Medieval Warm Period

He based this view primarily on the Medieval Warm Period, citing denialist stories claiming that during this period – which occurred between the 10th and 15th centuries, A.D. - the planet was warmer than today. Referring to the fact that the Vikings had farms in Greenland, Legge said that "it appears that the present temperature is not yet quite as high as during the Medieval warming."

However, a Skeptical <u>Science article reported</u>: "The Medieval Warm Period was not a global phenomenon. Warmer conditions were concentrated in certain regions." There were indeed areas that were warmer than they were in 1990. However, "Some regions were even colder than during the Little Ice Age. To claim the Medieval Warm Period [MWP] was warmer than today is to narrowly focus on a few regions that showed unusual warmth." When considered globally, "temperatures during the Medieval Period were less than today."

In addition, a 2012 report in the journal *Geology*, headed by a scientist at Columbia University's Lamont-Doherty Earth Observatory, said that "the MWP <u>wasn't all that</u> <u>warm after all</u> - and certainly not as warm as the climate is today." Even islands 400 miles north of Norway during the past 25 years, he said, have been " $3.6^{\circ}F$ and $4.5^{\circ}F$ higher . . . than the summers the Vikings enjoyed."

Present Warm Period

On the question of whether today's temperature is dangerous in the sense that it might lead to runaway global warming, Legge argued that this "seems unlikely... as it did not happen in the previous warm periods." However, that probability cannot be judged apart from the question of what has caused the recent warming, which Legge assumed to be just one more example of natural variability.

Legge's assumption does not fit the facts. One problem is that, after a long period of decline, there was an unprecedented increase in global temperature in the 20th century. A graph tracking the temperature over the past millenium shows the 20th century as a virtually vertical line, making the graph look somewhat <u>like a hockey stick</u> – a change that could not be considered natural. Ever since physicist Michael Mann used this graph in a 1998 paper, denialists have argued that it was based on errors - saying, for example, that the "hockey stick is broken." However, Mann's conclusions have been confirmed by several studies <u>using different sources</u>, including boreholes, corals, ice cores, stalagmites, <u>and tree rings</u>.

The attempt to explain the 20th-century increase as an example of natural variation is made even more difficult by a <u>2013 study in *Science*</u> of the global temperature for the past 11,300 years. This study showed that the planet, after the Medieval Warm Period, had been cooling for 5,000 years. But in the 20th century, this long period of cooling was abruptly ended, with the rate of warming since 1900 being 50 times greater than the rate of cooling in the previous 5000 years.

Climate deniers try to explain this 20th-century uptick in the global temperature by increased radiation from the sun, which was true of the Medieval Warm Period. However, the increase in solar radiation leveled off after 1950, so that since about 1970, greenhouse gases have clearly been the main contributor to warming. Since 1970, in fact, the sun and the climate temperature have been <u>moving in opposite</u> <u>directions</u>: While the sun has had a slight cooling trend, the climate has been getting warmer and warmer. As one scientist put it, "We should be cool, but we're not."

This contrast has been articulated by physicist Stefan Rahmstorf of the Potsdam Institute for Climate Impact Research. "Within a hundred years, the cooling of the previous 5000 years was undone," said Rahmstorf. "[W]ithout the increase in greenhouse gases caused by humans, the slow <u>cooling trend would have continued</u>."

3. The Role of Carbon Dioxide

In arguing his third claim - that CO_2 cannot explain whatever recent global warming there has been - Legge employed several of the common denialist points, all of which have been answered in the literature, most systematically at Skeptical Science.

CO2 Minor Compared with Water Vapor?

One of Legge's reasons for claiming that increased CO_2 cannot explain much is that "it plays a minor role compared with water vapour." His argument is that, because water vapor is the dominant greenhouse gas, constituting most of the greenhouse effect, CO_2 is insignificant.

However, although water vapor is indeed the dominant greenhouse gas, it is also the dominant *feedback agent*. And as CO_2 emissions make the temperature go up, evaporation increases, putting more water vapor in the atmosphere, which further increases the temperature. There is, accordingly, a positive feedback loop. The water vapor feedback doubles the warming that would be caused by rising CO_2 alone. As <u>Skeptical Science explained</u>:

"Without any feedbacks, a doubling of CO2 would warm the globe around 1°C. Taken on its own, water vapour feedback roughly doubles the amount of CO2 warming. When other feedbacks are included . . . , the total warming from a doubling of CO₂ emissions is around 3° C."

Another important factor is that, whereas the water vapor in the atmosphere is shortlived (it arises from evaporation and then falls as rain and snow), CO_2 stays there for about a century. So after CO_2 enters the atmosphere, it will increase the water vapor, with its powerful greenhouse effect, for a long time. Accordingly, one should not denigrate the importance of CO_2 by comparison with water vapor. Rather, they work together. It is the positive feedback relation between them that explains why the climate is so sensitive to additional CO_2 emissions.

CO2 Increase Followed Temperature Increase?

According to Legge, it is an "inconvenient fact" for Al Gore "that the temperature rises about 1000 years before the CO_2 level rises." Legge was referring to the fact that, based on Antarctic ice core data from the past 400,000 years, changes in CO_2 level followed temperature changes by <u>some 600 to 1000 years</u>. This fact has been used by climate deniers, such as U.S. Congressman Joe Barton of Texas, to argue that today's global warming could not possibly be explained by the increasing percentage of CO_2 in the atmosphere.

However, whereas the initial increase in temperature during this period was due to changes in the Earth's orbit around the sun, this increase led to a positive feedback process: The rise in ocean temperatures led to releases of CO_2 from the oceans into the atmosphere, which increased the planet's warming, which in turn led to the release of more CO_2 from the oceans, and so on. As <u>Skeptical Science explained</u>:

"This positive feedback is necessary to trigger the shifts between glacials and interglacials as the effect of orbital changes is too weak to cause such variation."

In fact, as Skeptical Science continued, "While the orbital cycles triggered the initial warming, overall, more than 90% of the glacial-interglacial warming occurred *after* that atmospheric CO_2 increase."

Global Temperature Pause?

In a third argument against the role of rising CO_2 , Legge said that "it is hard to see any correlation between the rising CO_2 level and temperature during the last decade." This statement reflects the apparent fact that, although CO_2 and the surface air temperature of the planet went hand in hand in the 1980s and '90s, the two seemed to diverge in the present century: While the CO_2 ppm continued to rise, the increase in the air temperature seemed to slow down. This appearance led to the conclusion that there has been an end to - or at least a pause in - global warming.

However, that conclusion was based on the equation of the planet's temperature with its surface air temperature. This is a very big mistake, becauseabout "<u>90 percent of the warming</u> of the planet is absorbed in heating the oceans." Accordingly, there has not really been a pause, but only – in Joe Romm's phrase, <u>a faux pause</u>. All that has happened is that a higher percentage of the warming than previously went into the deep ocean, evidently because of <u>changes in the trade winds</u>.

Global Warming's Evil Twin

About <u>half of the human-caused CO_2 produced since the beginning of the industrial age</u> has been absorbed by the ocean, and this absorption has resulted in <u>ocean acidification</u>, which Jane Lubchenco - who headed the National Oceanic and Atmospheric Administration (NOAA) - called global warming's "<u>equally evil twin</u>."

Ocean acidification results from the fact that about 30 percent of our CO₂ emissions have been absorbed by the ocean. This absorption keeps down the warming of the atmosphere that would otherwise be produced by these emissions. But this absorption also reduces the ocean's PH level, thereby making the water more acidic. Tests have shown that since the industrial revolution, there has been a <u>30% increase</u> in the ocean's acidity. This acidity increases when CO₂ mixes with water, resulting in <u>carbonic acid</u>. Just as carbonic acid eats out limestone caves, it does the same for animals with chalky skeletons, which make up a big percentage of sea life. Elevating the percentage of carbonic acid makes it increasingly difficult for these organisms - such as plankton, corals, crabs, clams, mussels, oysters, and snails - to calcify to <u>make their skeletons</u>.

The planet's CO_2 is now slightly above 400 ppm. If it reaches roughly 500 ppm, says one expert, "you put <u>calcification out of business</u> in the oceans." If this happens, phytoplankton and corals will die, which will mean the death of all sea animals, from plankton to fish to whales. And this will greatly increase the food problem, because the ocean serves as the primary source of food for <u>3.5 billion people</u>.

Part III

Climate Emergency

Once it is seen that the recent temperature increase is not due to natural variability, but instead to the increase in greenhouse gases, it is obvious that climate change is dangerous, not only because of the risk of seafood extinction and runaway global warming, which is likely to occur if global warming continues, but also because of various features of climate change, such as sea-level rise.

While admitting that the sea level had been rising, Legge said that "in the last few years [it] appears to be falling or at least to have leveled off."

However, if the percentage of CO_2 and other greenhouse gases in the atmosphere continues to rise, the sea level, which rose about 8 inches (20 centimeters) in the 20th century, will rise much faster in our century. Until recently, IPCC <u>scientists</u> <u>expect</u>ed it to rise 3 feet (roughly 1 meter) by 2100, with some scientists predicting more like <u>6 to 7 feet</u> (2 meters). But in 2015, leading climate scientist James Hansen and 16 fellow scientists released <u>a new study</u> saying that, if fossil fuels are not radically curtailed, the ocean could rise 10 feet (about 3 meters) before the end of the century.

The sea has already risen enough to force people - such as those in Bangladesh, the Sundarbans, and the Carteret islands – to move, because their lands flooded or at least became too salty to farm. Also, the same fate <u>threatens the coastal areas</u> of many countries, including Australia, China, Japan, and the United States. "If you live in South Florida and you're not building a boat," said a geology professor in Florida, "you're <u>not facing reality</u>."

In addition, although sea-level rise may be the most obvious danger created by global warming-caused climate change, there are dangers in every feature of climate change – as I have documented in the first part of my <u>Unprecedented</u>:

- The weather, which has recently become extreme, will continue to get more extreme.
- Heat waves will become hotter, eventually becoming so hot that humans and plants will not be able to survive.
- Droughts will last more often and longer, with some places becoming permanently dry; and the drier weather will result in more and worse wildfires.
- Storms of various types rain storms, snow storms, hurricanes, and tornadoes will become more deadly.
- Fresh water will become increasingly insufficient, due to various factors, including loss of snowpack and the melting of glaciers (which provide the major source of water for billions of people).
- Food will become increasingly insufficient, due to drought, excessive heat, sealevel rise, and fresh-water shortage (as well as loss of seafood because of ocean acidification).
- Sea-level rise and other features of climate disruption will increasingly create climate refugees and climate wars.

Contrary to Legge's supposition, therefore, we <u>do have a climate emergency</u>.

The <u>website for Skeptical Science</u> - which advocates "getting skeptical about global warming skepticism" – has rebutted (<u>under "Arguments</u>") over 175 denialist claims, beginning with the most popular ones, such as "climate's changed before," "it's the sun," "it's not bad," and "there is no consensus." In most cases, these claims can quickly be seen to be false with only a little study, so people who support them are either deceivers or deceived.

The deceivers are the fossil-fuel companies, along with their hirelings, who make these claims while knowing them to be false. As pointed out above, the oil companies have known this since 1995, just as tobacco companies have known cigarettes to be carcinogenic since 1965.

The deceived are those who believe these claims while being unaware, as journalist <u>Mark Hertsgaard said</u>, "that they are mouthing talking points originally developed by big money interests."

Many climate deniers identify with the Tea Party, which was originally portrayed in the press as if it were a spontaneous grassroots movement. In reality, however, it is an example of astroturfing, in which seemingly grassroots campaigns have been manufactured to mask the sponsor's identity. In this case, the Tea Party was created by the Koch brothers (whose father had been one of the founders of the John Birch Society), especially by David Koch through his organization, Americans for Prosperity. Although Americans for Prosperity claimed to be a grassroots organization, and

although David Koch tried to deny responsibility for it, the evidence shows it to be largely his creation - as indicated by the title of Jean Mayer's *New Yorker* article "<u>Covert</u> <u>Operations</u>," along with the title of a *New York Magazine* article, "<u>The Billionaire's</u> <u>Party</u>."

The covert operations of this billionaire's party are carried out only on behalf of causes that support Koch interests, which generally are not the interests of the members of the Tea Party. <u>Frank Rich wrote</u>:

"When David Koch ran to the right of Reagan as vice president on the 1980 Libertarian ticket . . . , his campaign called for the abolition not just of Social Security, federal regulatory agencies and welfare but also of the F.B.I., the C.I.A., <u>and public schools</u> — in other words, any government enterprise that would either inhibit his business profits or increase his taxes."

Although the Kochs call themselves libertarians, they are "libertarians who hate the free market" (as pointed out by an article discussing the Koch brothers as "<u>America's Greediest</u>").

In an essay entitled "The Tea Party Movement: Deluded and Inspired by Billionaires," <u>George Monbiot said</u> that the Tea Party is "mostly composed of passionate, well-meaning people who think they are fighting elite power, unaware that they have been organised by the very interests they believe they are confronting."

Likewise, Frank Rich wrote that the agendas of the Kochs often run counter to "the interests of those who serve as spear carriers in the political pageants hawked on Fox News," after which Rich added: "The Koch brothers must be <u>laughing all the way to the bank</u> knowing that working Americans are aiding and abetting their selfish interests." And the Koch brothers do, incidentally, keep going to the bank: From 2010 to 2013, as mentioned earlier, they raised the value of their company from \$35 billion to \$68 billion.

Conclusion

I wrote this article because members of the 9/11 Truth Movement should not let themselves be deceived by the fossil-fuel corporations and the front-organizations they have created. Holding that the Bush-Cheney administration gave the public a completely unscientific account of what happened on 9/11, the members of this movement should not accept the completely anti-scientific denial of global warming and climate change. Seeing the official story of 9/11 as a self-serving lie sold by Big Government, the members of the 9/11 Truth Movement should not fall for the self-serving lie told by Big Money.

David Ray Griffin is emeritus professor of philosophy of religion at Claremont Graduate University and Claremont School of Theology. His most recent book is <u>Unprecedented: Can Civilization Survive the CO_2 Crisis?</u> (Clarity Press, 2015).