

Originally an IDS Integrated Research Project

Global Warming: An Unproven Hypothesis

Adam Giacobazzi

Done Originally for the Core:
Mr. Jones, Mrs. Rice, Mr. O'Neill, Mr. Constant
Honors Chemistry block 1, Core Math block 2, ILA block 3, Global Studies block 4
Last Updated: 9/9/06

Outline:

I. Although many claim that Earth is in danger of an imminent catastrophe of rising temperature brought on by increasing CO₂ levels, the global warming hypothesis is just an unproven theory tainted by junk science.

II. To understand the theory of global warming one must examine its ancestry.

A. A Swedish chemist, Svante Arrhenius, first suggested the theory of anthropogenic global warming in the late 1800's.

B. In the 1950's Global Warming was picked up on by modern scientists.

B. In the 1970's, the global warming theory was overshadowed by dire predictions of the global cooling theory.

C. The General Circulation Model revived the ebbing global warming theory.

III. The global warming theory is based on the greenhouse effect.

A. The greenhouse effect is the phenomenon in which some of the sun's radiation is reradiated in Earth's atmosphere to Earth instead of being radiated into space.

B. Although water vapor and other greenhouse gases account for 99% of Earth's greenhouse effect, attention in the media has been focused primarily on CO₂.

IV. The misinterpretation and misrepresentation of mean temperature data has fueled mistaken conclusions that Earth is growing significantly warmer.

V. Global climate models are a major but unreliable means of predicting global temperature change.

- A. Global climate models have sometimes employed dubious assumptions.
- B. Climate models that show Earth to be warming are based on land-based temperature data.
- C. Space-based temperature data are more reliable than land-based data, and they show that Earth was cooling from 1979 to 1998.
- D. Global climate models have overlooked the influences of Earth's vast oceans whose effect on climate is not well understood.
- E. No model exists that can predict today's temperatures using data from years past.

VI. Some global warming advocates use fear to advance their theory, but such fears are overblown.

- A. The threat of a warmer planet could mean flooding, virus epidemics, and other possible disasters.
- B. A warmer Earth could mean longer and more productive farming seasons, lower heating costs, longer lives for humans and other possible benefits.
- C. Our understanding of the cause of climate change is currently very limited.
- D. Science can not explain why Earth has been much warmer or cooler than present day averages in times before humans were industrialized.

VII. Advocates of global warming play a "numbers game" in which they tout the number of "experts" who support their view.

- A. Advocates publicize the numbers of people who have signed petitions of support.
- B. Opponents are not persuaded, pointing out deficiencies and logical problems with proponents' polls.
- C. Opponents can cite their own polls.

VIII. The claim for human-caused global warming is weak and unproven.

History of the Paper

Adam Summers Giacobazzi was born April 17th 1982 in Detroit, Michigan. Adam was raised in an open-minded environment where he was taught to apply reason when searching for truth and to maintain a healthy skepticism about received opinions. This open-mindedness has influenced him for the better in many ways, most profoundly in the way he thinks and expresses himself.

While in the tenth grade attending Traverse City Central High school in Michigan, Adam and his fellow classmates were each conscripted by the Traverse City public school system to write a research paper on a topic of current debate in science. The additional stipulations of which follow: The pro or con argument could be expounded so long as evidence was supplied to support it. Writing the assignment on a specific topic required prior approval before research could begin. Each student's paper would have to include an aspect of science, math, global studies, and, of course, English in an effort to integrate the language arts. Modern Language Association (MLA) parenthetical citations were to be used. The paper was to be at least ten pages in length. One draft was to be turned in weeks prior to the final due date in an effort to make sure that the papers construction met the criteria above. Students were encouraged to start early. Many, including Adam, had never faced such an undertaking before.

Adam picked the Global Warming Hypothesis as his topic not by chance, but because he knew a little about the topic beforehand and saw the global warming debate immersed in what seemed to be an ever-growing sea of contemporary junk science. It bothered him that anthropogenic global warming was often presented as a self-evident fact, without applying the necessary skepticism or considering the readily available evidence against the theory as is called for by the scientific method. It troubled him when classroom "learning" materials showed a bias in favor of the theory (or any other received opinion), instead of encouraging students to withhold judgment until they examined all of the evidence, or in this case, any of the evidence. Adam's intention was to write a paper that would stay true to the proper spirit and standards of scientific argument regardless of the popularity of the end result.

The evolution of the writing and revising of this paper is worthy of special note. Upon receiving approval for his topic, Adam immediately went to the school library. While trying to seek assistance from the head librarian, Liz Messing, he was told that he was on the wrong side of the argument by her, and that she had no evidence for the other side of the argument because there was no evidence for another side of the global warming issue. Adam took what "help" he could get at the library, nonetheless, because it is, after all, necessary to become acquainted with many points of view in order to find the truth of something. The Internet and common sense would have to serve as the only place to do research on the con argument at this "institution of learning." On the home front encouragement from family and encyclopedias on CD-ROM emboldened Adam to redouble his efforts. Before the draft was due Adam had eight pages of his ten-page essay done. It was at about this time that the complaints of other students reached some

kind of critical mass and, thus, the requirement of a 10 page or more paper was dropped to five.

Adam turned in his draft on the due date. Upon receiving his corrected paper the first thing he noticed was that there were approximately 20 staples in the upper left corner of his paper where there was only one before. Setting that oddity aside for a moment, he read what the Integrated Language Arts (ILA) teacher, John O'Neill, had to say. First off, Adam got a zero on the paper. O'Neill had nothing but scathing criticism for Adam's paper, stating that the tone was flippant and all wrong, that the arguments in it were unacceptable because they were expounded only by political operatives and that they consequently held no scientific merit. The Title *Global Warming: Junk Science at Work* was also deemed unacceptable. Internet sources in general were unacceptable to the man despite the MLA's acceptance of them at the time. After the first few pages of this lambasting, Adam expected to see red all over the remainder of his report as well. However, the last three pages of the paper went unmarked. Adam pondered what flippant meant for a moment, and then confronted O'Neill.

Just as the school librarian before him, O'Neill alleged that it was obvious to any "educated" person that Earth was warming due to human interference with the natural order of things. Adam countered with the fact that the assigned paper supposedly could be pro or con and that O'Neill had approved the topic. O'Neill told Adam that he needed sources from more "reputable" places like magazines such as *Nature* and *Discover*. O'Neill also intimated that if Adam were to mount a con argument against human-induced global warming that he would also then have to somehow invent another theory of how the climate of Earth works on his own. Adam asked why there were no marks on the last three pages. O'Neill stated the newly established guidelines for the research paper were in effect, so he would only read the first five pages. Adam asked about the additional staples in his paper. O'Neill smiled and said that the staples were from his daughter who was my age and that they were the result of her disdain for his paper as well.

Adam knew that what had just happened was wrong even if he didn't have the words to say so right then and there. *Global Warming: Junk Science at Work* had opened to rave reviews when shown in its earlier drafts to friends, family, and associates alike. Never was its fairness, scientific legitimacy or integrity questioned by reason of it being too forensic, lengthy, or anything else, for that matter. Even people who believed in anthropogenic global warming could not put it down because of its compelling interest. Taking solace from his father, a college English teacher, Adam affirmed his ideas that retroactive requirements such as changing the paper length from ten or more pages to a five-page limit conflicted with the very meaning behind the "start early" premise, and were quite dubious. Moreover, having his daughter read and damage the paper itself was a breach of ethics at some level. Adam knew just what he needed to do.

Memorial Day weekend came and this left Adam with ample time to counter the points O'Neill had stated in his "corrected version." Adam removed any of the allegedly flippant tone from the paper, but, at the same time, bolstered every challenged point with

additional research. The works cited page now fit on more than one page and was comprised of: Internet sites, encyclopedias, magazines and TV, including *Discover* and *Nature*. As a result of O'Neill stating that the paper had to be changed from con to pro or increase in scope further, the paper had grown in size from eight to eleven pages. Any grammatical ne'er-do-wells were attended to, making this paper good all around, except for the ex post facto space limitation. But, Adam took care of that too, Adam turned in the paper with a shrunk font and widened margins, fully ready to go to battle with O'Neill and the higher-ups, if need be.

To Adam's surprise O'Neill caved! O'Neill gave the paper an A; there were no comments on the copy turned back to Adam. This is the glorious history of *Global Warming: An Unproven Hypothesis*, as well as the reason why it is updated from time to time. Not for revenge against one teacher, but, as Adam put it, "Hopefully, as a token of my efforts to stand against those who would relegate other worthy points of view to the sidelines so they can indoctrinate or advance their own agendas irrespective of the truth."

It is especially important for a youth to win such battles as Adam's.

It could kill off species by the thousands by making millions of acres of land unusable, causing virus epidemics, or changing entire food chains. What is this would-be killer of which I speak? Nuclear weapons? Chemical weapons? Biological weapons? No! It's global warming, and according to some it's already happening.

This global warming hypothesis has all the hallmarks of special interest propaganda. With the thousands of articles based on hundreds of studies, it's hard for the public to even fathom that global warming isn't already upon them; nevertheless, logic and substantial evidence establishes the fact that global warming is just an unproven theory tainted by politics and fueled by junk science.

The press is full of doomsday claims by environmentalists and politicians alike, asserting that Earth is in danger of an imminent global catastrophe of rising temperatures brought on by increasing CO₂ levels. The Clinton administration was a leading exponent of this claim, with then vice president Al Gore at the forefront. During its tenure, the Clinton administration represented "the U.S.'s view," at the global warming treaty conference in Kyoto Japan in 1997 (Zipperer). Since the Earth Summit in 1992 all the industrialized nations of North America, Europe, and Japan agreed to keep CO₂ emissions at "1990 levels" (Pearce 32). However, at the Kyoto conference the Clinton administration offered to cut US emissions of CO₂ by an additional seven-percent. But the data the administration has have bent the facts to suit political ends, distorting the truth in the process (Zipperer).

To understand the theory of global warming one must look back to its inception. A Swedish chemist, Svante Arrhenius, first suggested the theory of global warming in the late 1800's. Arrhenius theorized that the rise in CO₂ emissions caused by increased coal burning during industrialization would warm Earth considerably. In his *Philosophical Transactions* in 1896, Arrhenius predicted that a doubling of CO₂ would increase the global mean temperature by 5° C. Arrhenius further states that CO₂'s temperature-altering effects are, overall, greater in the winter than in the summer, except in the case of the parts that lie between the equator (maximum) and the poles, and that global

warming's influence is, in general, somewhat greater for land than ocean. Because there is more water in the Southern Hemisphere (water plays a large role in Earth's climate), the effect was to be less there than in the Northern Hemisphere. An increase in any gas holding in more heat than is considered "normal" would, of course, diminish the difference in temperature between day and night by making nights warmer. This theory was pushed off to the side for a while, until some scientists in the Fifties thought they had proof of the enhanced greenhouse effect theory (Shanahan).

Anthropogenic global warming was given new life in the 1950s, strangely enough; the summers of the 1950s were hotter than usual. Roger Revelle, then director of The Scripps Institution of Oceanography, was a champion of the issue. However, in the 1960-70's temperatures were unseasonably cool; and by a stunning coincidence global warming lost its audience, the unenlightened public. The scientific majority wavered from stating unequivocally that the Western lifestyle was causing everything to heat up, and dooming the world. The public also took time off from thinking human-caused global warming would kill them all when they came to a new realization; the scientific majority now had decisive proof and, consequently, the public now realized that dust particles derived from industries and the Western way of life were now cooling Earth to an icy death! Move over, global warming, global cooling was now the discerning scientist's imminent catastrophe of choice for enveloping Earth. It is most interesting that a Western lifestyle can be blamed simultaneously for heating and cooling Earth. Could environmentalists have an ulterior motive, and do they blame the West for anything else? However, global cooling was only breastwork for environmentalists (Shanahan).

Like a phoenix rising from the ashes, global warming gained a second wind in the middle 1970s thanks to the General Circulation Model (the first computer-simulated climate model). This GCM was retooled in 1980, where it predicted an increase of 4° C with a doubling of CO₂ in Earth's atmosphere (Shanahan). Seasons were considered warmer than usual at this point and the public was back onboard the global warming train. However, climatologists cannot accurately predict within four degrees what the average temperature is going to be in 100 years (the predicted pinnacle of global warming)!

Climatologists cannot even accurately predict within four degrees what the average temperature's going to be in 100 days! As just one example, I present to you the recent date 5-9-98 which was ten degrees higher than Traverse City Michigan's previously recorded high temperature for that date, leaving, according to one television meteorologist, at least an eleven-degree difference between the average Traverse City temperature and this year's temperature (Barrons).

Let me clear up a few general misconceptions about global warming, but beware that the truth may shock and educate you! The theory of global warming is based upon the greenhouse effect. That is, the sun's energy, in the form of short-wavelength radiation, ventures into Earth's atmosphere; some of this energy is reflected back into space, some is absorbed as it heats the air, leaving about half to reach Earth's surface. The surface of Earth, in turn, heats up and gives off longer-wavelength radiation; this longer-wave radiation passes into the atmosphere but is not entirely radiated back into space. Much of it is absorbed by the atmosphere and some is reradiated to the surface once more. This process occurs because many gases in the troposphere, both manmade and naturally occurring, are transparent to the shorter-wave-energy sunlight, but reflect the longer-wave-energy radiation. These gases have been dubbed greenhouse gases for their greenhouse-esque effect ("Environmental Degradation"). However, it is worth noting that unlike a greenhouse there is no contiguous physical barrier involved and each greenhouse gas corresponds to blocking different and specific wavelengths of light.

Contrary to popular belief, the greenhouse effect has been occurring for more than a billion years of Earth's lifespan and is a good thing. Indeed, without the greenhouse effect, life as we know it would not have come into existence at all, as the mean temperature of Earth would be around negative eighteen degrees Celsius (0°F) ("Environmental Degradation").

The biggest greenhouse gas by far is, and this is a very little known fact, water vapor. Water vapor accounts for 98 percent of all reradiated energy by Earth's atmosphere. Humans have little hope--and little need--of curbing this gas. The other 2 percent comes

from a multitude of trace gases, involving carbon, the largest of which is none other than the allegedly bad Carbon Dioxide ("Environmental Degradation").

Humans are said to produce as much as 7 billion tons of CO₂ a year. Still, 7 billion tons of CO₂ is only 3.3 percent of Earth's total yearly yield! 200 billion tons of CO₂ are produced each year by natural causes ("Environmental Degradation"). Natural processes that produce CO₂ include but are not limited to: animals, plants, volcanoes, heck, even rocks spew out the stuff. Gases spewed by the 1991 eruption of Mount Pinatubo in the Philippines in a few days created more CO₂ than New York State does in a year (Global Warming: Focus on the Future).

Another greenhouse gas that those pesky humans contribute to, but don't produce the bulk of, is Methane. Methane (CH₄) is a hydrocarbon that is released into the atmosphere from: flooded areas such as rice paddies, the digestive tracts of herbivores, landfills, of course, leakage from natural gas pipelines and the sea floor (which is the mother of all Mother Earth's landfills, containing ten times as much Methane as can be found on land) (Zimmer 28). Methane is twenty times more efficient than CO₂ at refracting Earth's radiation (Gallessich).

Another greenhouse gas that nature and humans contribute to in that order is nitrous oxide (N₂O). Nitrous oxide is released into Earth's atmosphere via cars, industry and nature. Nitrous oxide is 270 times more efficient than CO₂ at refracting Earth's radiation ("Emissions").

Chlorofluorocarbons, or CFCs are an exception to the rule that nature produces more than humans do, as CFCs are yet to be found in nature ("Fluorocarbons" 461). CFCs are compounds of Chlorine, Fluorine, and Carbon. CFCs have been used in the production of polystyrene foam, as propellants in aerosols and as coolants in refrigerators and air conditioners (*Macmillan Encyclopedia of the Environment* 34). CFCs, although very small in Earthly volume, are 1,200 times more efficient than CO₂ at refracting Earth's radiation. The U.S. and other nations began phasing out the usage of CFCs in 1987 under

the Montreal Protocol. A total ban took effect in 1996, because CFCs were said to destroy Earth's "Ozone layer," causing an "Ozone Hole." CFCs do unequivocally rip apart ozone when the two are placed together in a lab, but CFC molecules are significantly heavier in atomic weight than most other atmospheric gasses, and few actually made it up into the "Ozone Layer" ("Global Warming: Focus on the Future"). Ten years after the world-wide total CFC ban and 19 years after the start of the CFC phase-out, the hole in the Ozone still exists ("Ozone Hole")! Since any CFCs that do get into the ozone layer remain there for a range of two to four years before the chlorine atoms are snatched away from the CFC to form HCl, we must conclude that the claim that CFCs were destroying the ozone layer was a bad theory based on faulty science ("Chlorofluorocarbons"). Curiously, a Western lifestyle and industry were thought at fault at the time by environmentalists and any hole in the ozone layer was thought dire. Now that the ozone hole cannot be pinned on a Western lifestyle virtually no public discourse on the topic or on the dire consequences of an ozone hole exists. What's worse is the fact that the CFC CCl_2F_2 better known as Freon-12 was replaced as a direct result of the CFC ban with HFC-134a in automobile air conditioners. HFC-134a has since been linked to cancer in humans! Also, when NASA used CFCs to make the foam on the space shuttle the foam never endangered the ship and crew like its non-CFC based successor (Milloy). Worse still is that the ban on CFCs is unlikely to ever be repealed, a testament to junk science at work.

Now let's take a closer look at the evidence for global warming. A 1996 article in *Nature* magazine cited mean temperature data from 1963 to 1987 from the Livermore National Laboratory. These are the data that the Clinton administration justified signing the Kyoto protocol. See **Figure 1**.

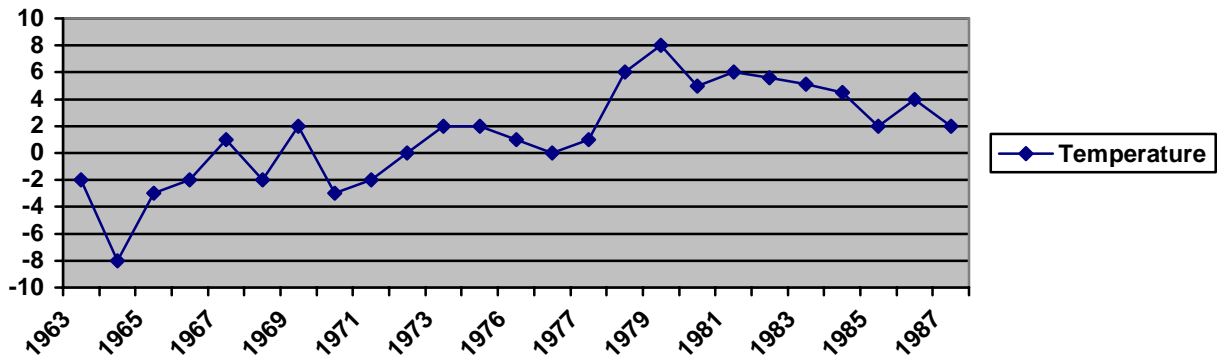


Figure 1.

Deviations from annual "mean" temperature (0) (1963-1987). Livermore National Laboratory (Samuel 61)

From the **Figure 1** data it looks crystal clear that there is an Earthly warming trend. These data, like so many before them, were quickly widely accepted by an unobjective press as the decisive proof of some kind of warming trend. However, these numbers come not from the whole globe, as the phrase "global warming" might seem to imply. The data don't even come from North America; rather, they are from a small portion of the Southern Hemisphere; oddly enough, this area is without sulfates. Sulfates counteract the greenhouse effect and cover much of Earth through both natural and human causes. In fact, the highest concentration of sulfates can be found in the mid-latitudes of the Northern Hemisphere, which is also where Earth has supposedly warmed the most (this, is without a doubt, the opposite of what should be found if the theory of global warming were to be correct) (Taylor). As if that wasn't enough truth-bending to discredit the data's purpose, consider this: when data from before 1963 and after 1987 at the very same laboratory are taken into account it is apparent that no trend in the data exists (Samuel 61). See **Figure 2**.

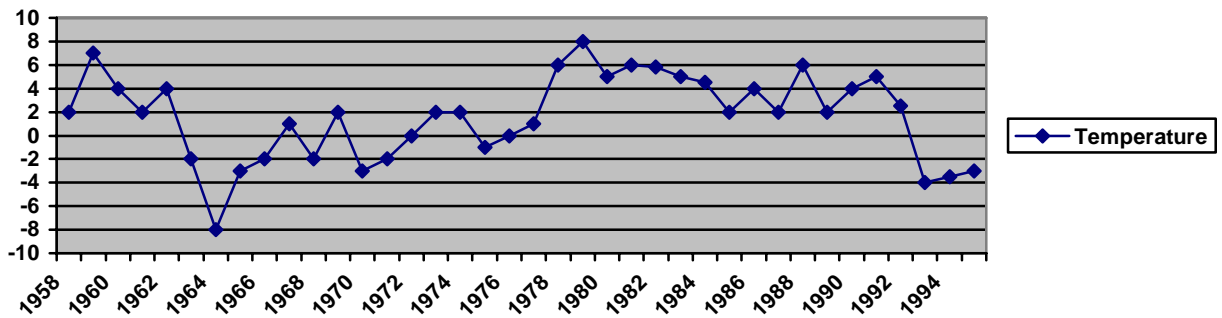


Figure 2.

Deviations from annual "mean" temperature (0) (1958-1995). Livermore National Laboratory (Samuel 61)

How did *Nature* researcher, writers, and editors all miss this? How did President Clinton and decision makers in his staff?

Climate models of Earth must be based, in part, on unproven theories, assumptions, and blind faith, as even the most powerful super-computer programs do not -- and cannot -- include reliably many of Earth's natural cooling mechanisms and orbital patterns, many of which we don't fully understand at this point. But that doesn't stop scientists from trying with what they've got. To that end; the first GCM in 1975, for example, did show a 4° C increase with a doubling of CO₂ in Earth's atmosphere, but, without additional CO₂, the same model predicted temperatures on Earth would drop 5° C, the same temperature Earth experienced during the last ice age! To correct this massive oversight, the creators, Sukryo Manabe and Richard Wetherald, retooled their model's next iteration by increasing the level of the sun's radiation by six percent, or the equivalent of transposing Earth 2 million miles closer to the sun than it is (very dubious and unscientific, to say the least). But that's not all: according to the 1975 GCM, the polar ice caps should be melting with today's temperatures, yet the only evil to come of this outlandish prediction is the ill-fated movie *Waterworld*. In the 1980 model this error was also somewhat corrected; the creators removed the whole catastrophic melting of the polar ice caps debacle, but, managed to leave in its sibling, accelerated warming due to a lack of ice caps! A note to

all you budding scientists out there: lacking causality is considered unscientific. The accelerated warming was a direct result of the polar ice caps non-existence in the previous model and should have been removed once its sole source for being had been (Shanahan).

Climate models that forecast Earth's future as warming, and the great bulk of them do, use land-based data compiled from hundreds of weather stations throughout the world. But there are more reliable data taken from balloons and orbiting satellites which paint a different picture. These satellites have been proven effective with no less than a .95 correlation coefficient with land-based readings, and are one hundred percent accurate in the lower atmosphere, which should have warmed comparably with the surface. Now, these satellites have existed since 1979, they're funded by the US government, and are part of NASA. Satellite thermograph data cannot be disputed, as the space between Earth and satellites is virtually free of matter (Taylor). For example, ground-based data show the Southern Hemisphere as being .3° C higher in 1998 than in 1988, but NASA satellite data show a decrease of .02° C over the same period. It boggles the mind why any climatologist seeking to make global predictions would still use the archaic land-based system of thousands of locations, each one subject to error, when a few satellites can do a better job by climate mapping the entire Earth uniformly. In fact, even land-based data contradict the global warming theory, because according to the theory the Northern Hemisphere is supposed to warm considerably more than the Southern, but, according to even land-based data, this is not the case (Shanahan).

Why do ground-based readings conflicting with the more reliable space-based readings at all? There are two basic reasons. The first reason for error is that the individual stations to some extent round up data from land stations before they are compiled. And, second, land stations are subject to the Urban Heat Island (UHI) effect. The UHI effect basically states that weather stations were generally put up on the furthest outskirts of cities way back when for the purpose of getting accurate readings. Since way back when, however, these cities have grown, surrounding the weather stations with their many heating devices, buildings and roads (which retain more heat than do dirt and plants). Voila, the

temperature readings of the once-rural stations are now subject to the temperature influences of a heated, wind-blocking city (Taylor). For example, according to Green Roofs.org a typical flat topped roof with gravel on a summer day can reach between 140-176°F whereas a roof topped with grass won't go above 77°F (“About Green Roofs”). Other causes for uncertainty in land-based temperature data include: Irrigation of rural land for crops (Christy); the color and design of the thermometer taking the readings (Christy); elevation of the station taking the readings; time of day readings are taken; site location movements; and change in thermometer design at a given site over time. These changes are not always compensated for. And when they said to be, any such data can only be an approximation of what might have been, consequently introducing more uncertainty.

It is known that clouds stop 31.3 watts per square meter of planet surface of long-wave radiation trying to escape to space, enhancing the greenhouse effect during the night. It is also known that clouds' shortwave stopping qualities during the day lessen the sun's effect by 44.5 watts per square meter of planet, thus acting as shade from the sun. So, how much of the sun's radiation would be blocked from ever reaching Earth's surface, by new cloud cover, caused by any new warming, enough to moderate Earth's temperature? More? This obvious Global Warming feedback mechanism is largely overlooked (Taylor).

The fact that data about the various temperatures of the oceans and poles are not included or underrepresented in some land-based temperature data for climate models is simply overlooked by most as well. This should be cause for scrutiny because it is the only kind of data that show Earth as warming, meaning that some predictions of a warmer Earth rely heavily on less than 22% of possible surface data. Yet, somehow the Global-Warming-due-to-human-intervention theory is still often spoken of as conclusive fact ("Carbon Cycle").

The ocean's natural cooling effect is also overlooked by older climate models and is still not understood today yet is said to be accounted for in newer models. The ocean also

keeps equilibrium with the CO₂ in the air; a hugely important but poorly understood planetary phenomenon. Has this been taken into account? Nay a thousand times. The ocean even interacts chemically with CO₂; H₂O combines with CO₂ to form a weak acid, carbonic acid (H₂CO₃), which reacts with other elements to form the carbonate family. This chemical reaction delays an untold amount of CO₂ from reentering into the air via the carbon cycle (also not included). Until the role of the oceans in the global carbon cycle is better understood it would be unwise to uncritically accept the human-caused global warming hypothesis ("Carbon Cycle").

People who take climate models at face value have taken a rather narrow perspective on the problem by focusing on only one of literally hundreds of variables, especially considering atmospheric CO₂ has stayed at a fraction of a percent of the total atmosphere for untold millions of years, including during many climate shifts.

Alabama State Climatologist John Christy and Climatologist Roy Spencer both of the University of Alabama at Huntsville decided to put these climate models to the scientific test. Using old data from the directly recorded climate record Christy and Spencer collected the results from 10 different computer climate models and used 55 different runs from various laboratories. Christy and Spencer found that all the models and runs predicted a temperature increases in the Southeastern US over the past 100 years. However after upon inspecting the actual data of the area, Christy and Spencer found a slight cooling over that period, showing that none of the models accurately predict the real world (Fox). This is in direct conflict with the scientific method:

1. Come up with a theory to explain something.
2. Test your theory.
3. Compare what actually happened with your theory.
4. Accept or reject your theory.
5. If accepted, others independently test and find the same results (Fox).

Furthermore, the solidarity of all the models to predict warming where there was none shows that at best current global climate models on the matter lack scientific rigor, and at worst, shows climate modelers make models that show bias in favor of a warmer outcome (Fox).

How can anyone trust computer models whose data are so unreliable by modern scientific standards? Because many global warming advocates prey on the hapless public using the ever-popular fallacy of reasoning known as the appeal to fear argument -- that is, using the threat of harm to advance acceptance of a conclusion. The possible ramifications of a warmer planet would reach into every venue of life on this planet both for good and bad. A warmer Earth might mean virus epidemics. One example of this would be the World Health Organization's horrific predictions of 50 million to 80 million cases of Malaria a year if global warming occurs ("Climate: Tempestuous" 68). This is, of course, assuming medical know-how becomes static over the course of the twenty-first century, and pesticides such as DDT, which completely wiped out malaria on all inhabited continents that it was used on, continue to not be used and new ones not developed.

A warmer planet could also mean expanding oceans due to the polar ice caps melting. Many scientists agree that if global warming happens the oceans could rise by as much as 19 centimeters (Schapiro 19). A rise in ocean height might flood coastal lands. This flooding business could lead to the submersion of many now-livable places. Take, for example, Hawaii's endangered Lay San Teal, a species of bird once comprised of only seven individuals. Now 2,500 live on an island not more than forty feet above sea level at its highest point. Much of the Lay San Teal's home as well as many other places could disappear if the extreme predictions of 19 cm turn out to be right (Luoma 106). In fact, the Alliance of Small Island States considers global warming a threat to not just their economy but to their physical survival (Schapiro 19). Then, again, the North Pole (where more warming is predicted to happen) is just ice sitting on water. This could be a prime example of the once often-heard "drink your ice-water before the ice melts and the drink overflows!" This is not the case, as the water supports the weight of the less dense ice, and therefore the drink level does not rise at all, Eureka! And, frankly, the 20-40 tons of

new water entering Earth's atmosphere every 3 seconds via space every day in the form of small comets poses more of a threat than icecaps melting. After all, small comets are the method by which virtually all water on Earth came to be in the first place, ice caps included! This bombardment of small comets shows no sign of letting up, and yet the Alliance of Small Island States as well as most do not even care acknowledge this actuality. The fact that they, or anyone else who does not mention real gains in water on Earth, but, who then speculate that humans cause the ocean to rise, is most interesting ("Small Comets").

Minute temperature changes could also change dominant plant-life, says one Colorado-based rocky mountain biological laboratory. How do they know? They assembled infrared heaters suspended over 180 square feet of alpine meadow for the purpose of raising temperatures about 2° C (what global warming will do to temperatures according to newer, even more revised data). What they found might be a doorway into our own future: the dominant vegetation, nutrients, and soil critters changed. So, high mountain grasslands, like those of the Tibetan Plateau might be at risk of change, even though this was definitely not a controlled environment (Luoma 106). Of course, since Earth changes over time this could be normal.

Lost in all the horrific hoopla, however, is that organisms of many kinds grow better in warmer conditions. I mean, that's why humans have built countless numbers of greenhouses, houses, huts, fireplaces etc... Since the global warming theory states that a reduction in the temperature difference between night and day will occur, it is worthy to note that numerous studies have correlated warmer temperatures with a reduction in cardiovascular, respiratory, and vector illnesses such as malaria, dengue, and yellow fever. And the total number of hospital visits irrespective of country is reduced in warmer temperatures (B).

Some scientists are sure that warmer temperatures would extend the growing season, i.e., winter will be forestalled and there would be more rainfall due to increased cloud cover. Elevated carbon dioxide concentrations have even been proven to increase the yields of

many crops by enhancing photosynthesis and by making water use more efficient, the well documented "Carbon fertilizer effect" ("Global Warming").

An additional problem with the anthropogenic global warming theory is that our understanding of global climate change is tiny when compared with the hundreds of millions of years in which such change has occurred ("Evidence Found of Ancient Climate Swings"). For example, why was Earth's climate much warmer around the year 1000, when the Vikings found Greenland to be warm and inviting for colonization and warm enough for growing crops! – hence the name **Greenland**? What caused the temperature drop that wiped out the Vikings? Why was the climate warm enough in Britain to support a thriving red wine industry in 50 B.C. when Julius Cæsar invaded the island (something the climate will not permit now)? What caused the "Little Ice Age" of the 16th century? Or 1816's "Year without a summer" (Heidorn)? In none of these cases could human activity have played a role. These unsolved mysteries suggest that a scientific understanding of climate change is very limited and that many other factors besides human activity must be dominantly responsible for noticeable climate changes on Earth.

Some unaccounted for factors, in no particular order, are: the variability of volcanic activity and dust storms on Earth; the variability of cloud cover on Earth; frequency, content, mass and locations of asteroids entering Earth's atmosphere; cosmic radiation variations (Davidson); planetary polar shifts; fluctuations in Earth's and sun's magnetic field strength; Solar flare activity; the eleven-year sunspot cycle; fluctuations in the solar wind; other fluctuations of the sun (expecting a flaming ball of hydrogen weighing in at over a quadrillion tons which contains thousands of simultaneous nuclear reactions at any given time, to give off the exact same amount of energy at all times while not imploding itself in the process is unrealistic and the temperature of the sun should never be assumed to be static "just because") ("Scientists See Sun, Not People, Behind Global Warming"); the variability of Earth's orbit around the sun, including the 22,000 year cycle in the equinoxes (Earth orbits the sun elliptically like a hula-hoop), the 26,000 year precessional period (Earth wobbles as it spins like a top), the 41,000 year period of obliquity (Earth's

tilt varies from 21-24.5°), and, the 70,000 year period of orbital inclination (Earth moves above and below the orbital plane of the solar system). The orbital path of the solar system around the Milky Way Galaxy, which is uncharted, likely has more variables to it than Earth's orbit, and could take Earth within range of many as yet unknown heat sources; the Milky Way itself traveling along its unknown path in its galactic cluster; and many other possible factors. There are even data from the Mars Global Surveyor's eight-year stint on that planet that show that when Earth is in a warmer period so is Mars! And that when Earth's polar ice caps recede so do the ones on Mars (Serjeant)! Other celestial bodies in this solar system that have experienced warming since 1998 are Jupiter (Gaudarzi), Pluto (Britt), and Triton ("Global Warming Detected on Triton."). "Scientists" who refuse to even address such data, but who then state their theory is beyond reproach, do not meet the very definition of one who uses the scientific method. Scaremonger is a more fitting term.

Proponents of the global warming theory often mention in support of their position the claim that X number of "scientists" have signed a statement supporting the anthropogenic global warming hypothesis. For example the Washington Post concluded a scientific consensus existed on the issue after a letter saying so was circulated and signed by 2,611 scientists. By so doing organizations such as the Washington Post hope to persuade us that there is an overwhelmingly large consensus of knowledgeable people who accept the theory. However, there are two major problems with this claim. The first is that the credibility of the claim is questionable. This particular claim, for instance, originates with a pro-global-warming environmental group called Ozone Action. More importantly, upon further inspection for bias the vast majority of the 2,611 "scientists" who signed the statement are not climatologists! In fact, only 10% of the signers have backgrounds in climatology (Ridenour), and the list of signers includes many people from totally unrelated fields such as architecture, gynecology, and Chinese folk medicine! The second problem with the "X number of scientists" argument is more fundamental. It is a problem of logic: scientific truth is never a matter of majority vote -- the truth isn't what someone says, it's what is. The fact that X number of people make a claim does not prove that the claim is reliable. In any controversy a majority of people can be wrong. If

anything, the history of science especially teaches us this. At one time, a majority of scientists accepted the idea that Earth was at the center of the solar system, that disease was caused by bad air, and that bleeding people was a good way to get their fevers down. Finally, opponents of the global warming theory could, and do supply their own polls and lists to support their claims. For example, a survey conducted by Gallup in 1992 reported that 82 percent of those polled either believed that global warming was not occurring or that there was not enough evidence to draw any firm conclusions. Another poll conducted in 1997 by American Viewpoint found that a large plurality of state climatologists believe that global warming is mostly a natural phenomenon by a margin of 44% to 17% ("Global Warming 'Consensus' Claim Doesn't Hold Water"). Also in 1997, 500 scientists and physicians signed an open letter to world leaders opposing the Kyoto climate change treaty, stating that they believe the scientific understanding of the global climate data is inadequate to justify drastic control policies ("500 Physicians, Scientists Oppose Climate Treaty"). And as of 1998, Frederick Seitz, former president of the National Academy of Sciences and of Rockefeller University, had collected the signatures of 15,000 scientists on a petition still circulating which states that increasing carbon dioxide levels in the atmosphere have produced no perceivable effects on global weather, climate or temperature (McDonald A24). Finally, for every alleged "big name" cited in favor of the global warming theory, such as Leonardo DiCaprio, skeptics can produce their own "big name." For example, Arthur C. Clarke has stated that the evidence to suggest 'discernible human influence' on global climate is sketchy and incomplete at best. Can anyone say political football?

So, let's recap. 98% of the Earth-wide Greenhouse Effect is caused by water vapor. Human contribution to the other 2% is a triviality when compared to nature's production of carbon dioxide and methane. And yet, a climatological theory based on computer programs running climatological theories themselves which, leaving gaps in the data larger than the data themselves, predicts changes in worldwide climate similar, if not identical, in magnitude to temperatures Earth has experienced earlier in human history repeatedly for as yet unexplained reasons and is alleged again and again as horrendous human-caused fact!?

Stated as fact, global warming scares many people, but once one examines and scrutinizes an argument one is much more likely to see truth. I have walked in both the light and the dark, and I am more knowledgeable for it. I know that the CO₂ is only one of hundreds of variables shaping Earth's climate, most of which are more significant and not of human origin. And even according to the most environmentally sound data the brunt of the increase of a ".5° C over the last 100 years" occurred before 1941. Now humans are pumping out more CO₂ than ever before, yet Earth's average temperature is considered only .1°C above "normal". What this all boils down to is that people can't control the planet to the extent many think they can. I feel better knowing that I can say with confidence that humans are subject to vast natural forces, and are not always masters of their own destiny.

The bottom line: the claim that Earth is warming as a result of humans is unproven and shockingly weak. In reality, Earth is warming ever so slightly, and even when Earth's temperature is back on the decline, as it has been in recurring natural cycles for millions of years, it is unlikely to be the result of human activity, as humans have not the capacity to create such a devastating change to the only place they can call home.

Works Cited

- "500 Physicians, Scientists Oppose Climate Treaty." National Center for Public Policy Research. 25 May 1998. <<http://www.globalwarming.org/kyoto/12-3.htm>>.
- "About Green Roofs." 31 May 2005. Green Roofs for Healthy Cities. 12 August 2006. <http://www.greenroofs.net/index.php?option=com_content&task=view&id=26&Itemid=40>.
- B, Sherwood. D, Craig. and E, Keith. "Enhanced or Impaired? Human Health in a CO₂ Enriched Warmer World." November 2003. Center for the Study of Carbon Dioxide and Global Change. 1 August 2006. <<http://www.co2science.org/scripts/CO2ScienceB2C/education/reports/health/toc.jsp>>.
- Barrons, Dave. WWTW-TV. Channel 9&10. Traverse City, Michigan. 9 May 1998.
- Britt, Roy Robert. "Global Warming on Pluto Puzzles Scientists." 9 October 2002. Space.com. 10 May 2005. <http://www.space.com/scienceastronomy/pluto_warming_021009.html>.
- "Carbon Cycle." *Collier's Encyclopedia 1998*. Oakhurst, CA: Sierra On-Line, 1998.
- "Climate: Tempestuous." The Economist 20 July 1996:68.
- "Chlorofluorocarbons." The Columbia Encyclopedia, Sixth Edition. 1 May 2006. <<http://www.bartleby.com/65/ch/chlorofl.html>>.
- Christy, John. Spence, Roy. "Washington Roundtable on Science & Public Policy: Satellite Temperature Data." 17 April 2006. George C. Marshall Institute. 17 July 2006. <<http://www.marshall.org/pdf/materials/415.pdf>>.
- Davidson, Key. "Are Earth ice ages created by stars?" San Francisco Chronicle. 2 August 2005. <http://seattlepi.nwsource.com/national/234872_ice02.html>.
- "Environmental Degradation." *Collier's Encyclopedia 1998*. Oakhurst, CA: Sierra On-Line, 1998.
- "Emissions." 23 April 2006. U.S. Environmental Protection Agency. 12 August 2006. <<http://yosemite.epa.gov/oar/globalwarming.nsf/content/Emissions.html>>.
- "Evidence Found of Ancient Climate Swings." CNN Sci-Tech. 20 May 1998. <<http://www.cnn.com/TECH/science/9804/24/climate.swing/index.html>>.

- "Fluorocarbons." *Desk Encyclopedia* 1989. New York, NY: Penguin Books USA: 461.
- Fox, Michael R. "Continuing Decline in Scientific Debates." 5 June 2006. Hawaii Reporter. 17 July 2006. <<http://www.hawaiireporter.com/story.aspx?17eb12d0-de3f-4426-979d-f12c49cea627>>.
- Gallessich, Gail. "Gas escaping from ocean floor may drive global warming" 19 July 2006. Eureka Alert. 20 July 2006. <http://www.eurekaalert.org/pub_releases/2006-07/uoc--gef071906.php>
- Gaudarzi, Sara. "New storm on Jupiter hints at climate change." 4 May 2006. USA Today. 10 May 2006. <http://www.usatoday.com/tech/science/space/2006-05-04-jupiter-jr-spot_x.htm?POE=TECISVA>.
- "Global Warming 'Consensus' Claim Doesn't Hold Water." National Center for Public Policy Research. 25 May 1998. <<http://www.nationalcenter.org/TP38.html>>.
- "Global Warming Detected on Triton." 28 June 1998. Science a GoGo. 10 May 2006. <http://www.scienceagogo.com/news/19980526052143data_trunc_sys.shtml>.
- "Global Warming: Focus on the Future." 15 March 1998. <<http://www.envirolink.org/orgs/edf/>>.
- "Global Warming." Environmental Defense Fund. 15 March 1998. <<http://www.edf.org/>>.
- Heidorn, Keith C. "Eighteen Hundred and Froze To Death." 7 April 2004. The Weather Doctor. 8 September 2006. <<http://www.islandnet.com/~see/weather/history/1816.htm>>.
- "Hot Talk, Cold Science: Global Warming's Unfinished Debate." The Science & Environmental Policy Project. 25 May 1998. <<http://www.sepp.org/books/hotcold.html>>.
- Luoma, Jon. "Ways Global Warming Will Disrupt Ecosystems." *Audubon* July-August 1996:106.
- Macmillan Encyclopedia of the Environment*. vol. 3 New York: Simon and Schuster and Prentice Hall International, 1997: 25-35.
- McDonald, Kim A. "National Academy of Sciences Irked by Climate Petition in Form of Published Paper." *The Chronicle of Higher Education* 1 May 1998: A24.
- Milloy, Steven. "Did PC Science Cause Shuttle Disaster?" Fox News 7 February 2003. 1 May 2006. <<http://www.foxnews.com/story/0,2933,77832,00.html>>.

- "The Ozone Hole." 2 December 2005. The Ozone Hole. 1 May 2006.
<<http://www.theozonehole.com/ozonehole2005.htm>>.
- Pearce, Fred. "Fading Hopes for Cleaner Air." World Press Review July 1997:32.
- Ridenour, David. "The Myth of Scientific Consensus on Global Warming." December 1997. National Policy Analysis. 12 August 2006.
<<http://www.nationalcenter.org/NPA177.html>>.
- Samuel, Peter. "Making the World Safe." National Review 2 September 1996:60.
- Schapiro, Mark. "Baywatch: Industrialism is Eroding the World's Beaches." The Nation 6 October, 1997:19.
- "Scientists See Sun, Not People, Behind Global Warming." CNN Sci-Tech. 20 May 1998. <http://www.cnn.com/TECH/science/9805/05/solar_warming.reut/>.
- Serjeant, Jill. "Mars getting warmer, may have quakes." 20 September 2005. Reuters 21 September 2005.
<http://today.reuters.com/news/newsarticle.aspx?type=scienceNews&summit=AutosSummit05 &storyid=2005-09-21T013927Z_01_KWA105917_RTRUKOC_0_US-SPACE-MARS.xml> .
- Shanahan, John. "A Guide to the Global Warming Theory." The Heritage Foundation. 20 March 1998. <<http://www.townhall.com/heritage/>>.
- "Small Comets." 2 Sep. 2003. 27 May 2004. <<http://smallcomets.physics.uiowa.edu/>>.
- Taylor, Jerry. "Global Warming: the Anatomy of a Debate." The Cato Institute. 28 March 1998. <<http://www.cato.org/speeches/sp-jt011698.html>>.
- Zimmer, Carl. "Their Game is Mud." Discover May 1997:28.
- Zipperer, Rich "Global warming information page." 28 March 1998.
<<http://www.globalwarming.org/kyoto/concede.htm>>.