

Hello Friend,

I am writing to you all to explain both my insistence that everyone should watch *The Great Global Warming Swindle* despite some errors in it and my negative view of the Global Warming Crisis (henceforth GWC).

First, let me state my “Green cred” as they say. As you know, our family are vegetarians, at least in part due to our concern for the environment. I have even stated that while the “Problem of Evil” causes me no great challenge to my Christian faith, the presence of cows does make me question God. After all they are toxic organism who do much damage to the environment, and yet God made them tasty. Hmm.

We recycle, we compost, we watch our energy use carefully. And we pay much attention to the news on the environment. Except for the DDT catastrophe, we are generally big fans of the EPA, and believe that the last 40 years have seen, thanks to fairly sensible regulations on emissions of different items, a great growth in our environmental health in our country and our world (a point that Paul Esterbrook, a longtime environmental alarmist made in the past decade with a book that got him booted from his social circles). Also, we are no fans of the oil industry. Some of you may know that Tanya’s mom and her husband (Tanya’s parents are divorced) are still waiting 18 years later for Exxon to pay the judgment leveled against it by the courts for the Valdez disaster – despite the fact that Exxon could easily make payment without adversely affecting its bottom line these past years (I do not blame the oil companies however for the recent oil boom, but speculators who are evaluated the price of oil 1.5 to 2X its actual true value). If the oil companies were to go the way of the buggy makers you would see no tears on my face. I would be called, given the title of a recent book, a Crunch Con, one of whose tenants are that we should be at least as suspicious and wary of big business as we are of big government. In short, we are as green as we can be at this point, and seek to be more so.

Also, for those of you who know me fairly well, I went through a “liberal” period in my life from about 1998 to 2004 (I voted for Nader in 2000) as my concern for the poor, the environment, and the world at large also burgeoned. While I have now moved to the Crunch Con area, my concern for the poor and the environment have not changed. One of the things that caused me to “move” back to this position is that I saw the Left interested in scaring people and not living up to what they say they value (human right, concern for the poor, etc – a move that has similarly been taking place in the life of the atheist commentator Christopher Hitchens, who like me supports the Iraq war, but that is another post).

All that said, many of my lefty friends wonder why I am a Global Warming skeptic. One of my friends (Doreen) mentioned the melting glaciers. This was part of my move in 1998 as well. I am a huge Hemingway fan, and when I heard about the loss of snow on Mount Kilimanjaro (Mt. K), I remembered my visit to Glacier Natl Park back in the 1989 and was told then of the retreating

of those magnificent glaciers. At that time I don't recall if the park ranger told me it was due to Global Warming or not, but I do remember him being very said that we were losing these "natural treasures." I read Al Gore's first book, the *Earth in the Balance* and was challenged. I read all that I could. I even blamed the cyclones that kill the Bangladeshi people every year on Global Warming (somehow I never realized this has been happening for centuries). So, when I started my PhD in England I decided to avail myself of their very good library of journals on environmental studies and talk to anyone I could among the science students there (a theologian going to faculty was out of the question for me). It was then that I noticed something I never expected. That maybe Global Warming wasn't really about what man was doing.

As a student of history – world history but of course American as well – I knew that the climate had changed over the past 2+ millennia. Here is a quick review:

Roman Optimum – 200BC to 350AD (roughly on all these dates)

The Medieval Cooling – 350 to 800AD

The Medieval Optimum – 800 to 1250AD

The Little Ice Age – 1250 to 1850AD

All of these, as we now know thanks to ice core records, were world wide, not merely regional. We also know that the two Optimums were period of great civilization advancement and population growth. One paper I read said that from all the evidence of governmental records and other records (don't know what that means), that there is not one record of a famine during the Medieval Optimum and that life expectancies advanced during this period – without I might add industrial or medical technology advances. I also discovered that the drop in temperature in the Little Ice Age was between 2.5 and 3.5 degrees (sorry, I cannot remember if that was C or F, and the best book on the topic, *The Little Ice Age*, whose author is a GWG person). Hmm, why did that climate change back then? That made me wonder. Just so you know the PaleoClimatologists generally are the most skeptical on Anthropogenic Global Warming (AGW).

What also made me wonder was why so many of the articles I read showed that the data didn't support the AGW position. At the end of most articles there was a catch phrase that I noticed repeatedly used, "The data does not yet show the presence of AGW, however data should continue to gathered to reevaluate the AGW thesis." What was that about. So one day I saw another individual in the same journals as myself and asked him. He was a grad student in one of the Environmental sciences. His response made me think: "Well, you know, if you want to get published and to get additional grants in the future, you have to say that, or else you get branded a skeptic and don't get published." What? So, I took him out for a pint (at least I had one, he had a soda of all things). He talked relatively openly to me, but yes, he kept checking to make sure we were not overheard. He happened to think that AGW was real, but not the total answer, but he told me that, since he was a Tory (one strike against him already in the academic world of U. Manchester), he basically towed the alarmist line because, well, that is what one does. I asked him if this is what he thought science was supposed to be. "Well, I don't know. I love science and I want to teach. Its not like I am crusader, and I guess this will work its way out one way or another." Now that got me thinking. He was helpful, but didn't seem to want to prolong the conversation (he told me he was an atheist, and I think he thought I was going to start preaching

at him). He did direct me to the best resources, told me how to use Athens searching to find the best articles, and for that I was thankful. What did I find?

Well, for one that Mt. K was cooling but that it was drier there now. The reason for the snow loss is mostly likely the deforestation of the area around it (due to the poor having to collect firewood for heating and cooking). I found that the Sahara was receding for the first time in a century, giving back its desert to grasslands. I found that yes, glaciers in some places are receding, as one would expect since the end of the Ice Age and the Little Ice Age, but that an almost equal number were growing and calving producing new glaciers, and that many of these are effected by regional weather phenomena and local climate change. I also found out that man does have an effect on climate – at a local level at least. That Phoenix used to be closer in climate to Prescott before the building boom post WWII, with its asphalt, irrigation and golf courses. That Atlanta didn't used to be "Hotlanta" but a very temperate climate before development. That ground temperature readings in many locations in the developing world do not allow for adequate comparisons because of the asphalt and building that change the climate locally from its grassland days. All of this made me wonder about the facts of AGW.

I also found out that the reason most skeptics avoid using temperature comparisons for after 1989 in determining average global temperature is that the number of official Weather Stations dropped (due to the defunding by ex-Communist regimes after 1989) from around 12,000 to around 5,000. Most of these as you might gather were in the northern climes. That to talk about a global average temperature is silly given that the earth's land mass is 148,940,000 sq. km and that this means that even at its height that was one weather station for every 12,411 sq km, with most of these located in populated areas (recently a statistician has pointed out the statistical absurdity of this, and there is talk about dropping that term altogether). That because of the loss of weather stations the talk of "The 1990s as the warmest decade on record" are simply wrong. I did learn that the two warmest years on record were 1934 and 1998, with 1998 being affected by the El Nino.

All this was coming to me at a time when, due to my studies on the Trinity, I was become more and more aware of the difficulty in researching a topic rooted in complexity. The earth is, to borrow a line from *The Hitchhiker Guide to the Galaxy*, big, really big, you have no idea how really big it is. In my research I discovered that the climate models not only do a worse job of predicting the past temperatures than do a random number generator (in science speak, the Monte Carlo analysis), but that they still do not take into account: rainfall, clouds, the sun, oceans and topography – you know, the stuff of climate. Basically they are heavily waited towards one thing – Green House Gases (GHG). I learned that the man who created one of the two models that Clinton White House used in their last US National Assessment on Climate, which was definitely an alarmist model, admitted, "In areas where coasts and mountains have a significant effect on weather, scenarios based on global models will fail to capture the regional detail needed for vulnerability assessments at a national level." Take out your atlas, look at the world and think about how many places that covers.

The fact is that the models, while not useless (models are always helpful), they are not accurate. The 4<sup>th</sup> UN IPCC (Intergovernmental Panel on Climate Change) report for Study Group 1

(whose focus is the actual hard data part) has not yet been released (only the summary that is written not by the scientist), but in the summary they acknowledge that they still have not been able to account for these factors.

I found out the truth behind the “Consensus” that Al Gore is talking about – how the researcher whose statements he relies on only looked at 929 of the more than 11,000 articles on the topic of Climate Change, that she didn’t read the articles (looked only at abstracts), that most didn’t talk about AGW, but Climate Change in general (and lets be clear, the three things there is consensus on is 1) the climate is changing, its always changing 2) that CO2 is a GHG and that 3) human kind is adding to the amount of GHG), and that of the 929 articles only 13 agreed with the AGW thesis. For a comparison, not done with the intention of proving this point but for fun one night a few of us geeky PhD students did an ATLA search (the religious database), and searched for Augustine and Homosexual and found 9 articles that stated Augustine was gay. So, 13 doesn’t exactly make a point to me about “consensus.”

I learned that the famous “Hockey Stick Graph” which Al Gore is still using did appear in the first draft of the 2001 IPCC report but was later removed like Trotsky from picture with Lenin after Stalin came to power. It was shown to have been a non-peer reviewed bit of bad research, based largely on tree ring samples (which if used for the period after 1890 when we have thermometer readings, continues to show a fairly flat line – oops). Yet, it is still used. I will admit, when it first came out, I decided that settled it – we were ruining the environment. Then I wondered what happened to the Medieval Optimum and Little Ice Age.

Lastly I learned the truth about GHG. Human kind is responsible for 5% of the Nitrous Oxide, 18% of the Methane (according to the recent EPA release, termite are responsible for between 11 and 18%), 3% of the CO2 and 66% of the CFC (which have been banned in the West and are being phased out worldwide, thank God!). One of the things I did not know about CO2 before I started studying is that the effect is not additive (every additional particle having the same effect as the previous) or exponential (which I heard someone say somewhere), but logarithmic. According to the US Government reports, CO2 makes up 0.0368% of the atmosphere. The effect of each additional particle of CO2 is therefore lesser than the previous. Here is how one article described it:

The arithmetic of absorption of infrared radiation also works to decrease the linearity. Absorption of light follows a logarithmic curve (Figure 1) as the amount of absorbing substance increases. It is generally accepted that the concentration of carbon dioxide in the atmosphere is already high enough to absorb almost all the infrared radiation in the main carbon dioxide absorption bands over a distance of only a few km. Thus, even if the atmosphere were heavily laden with carbon dioxide, it would still only cause an incremental increase in the amount of infrared absorption over current levels. This means that a situation like Venus could not happen here. The atmosphere of Venus is 90 times thicker than Earth's and is 96% carbon dioxide, making the atmospheric carbon dioxide concentration on Venus 300,000 times higher than on Earth. Even so, the high temperatures on Venus are only partially

caused by carbon dioxide; a major contributor is the thick bank of clouds containing sulfuric acid [7]. Although these clouds give Venus a high reflectivity in the visible region, the Galileo probe showed that the clouds appear black at infrared wavelengths of 2.3 microns due to strong infrared absorption [8]. The infrared absorption lines by carbon dioxide are also broadened by the high pressure on Venus [9].

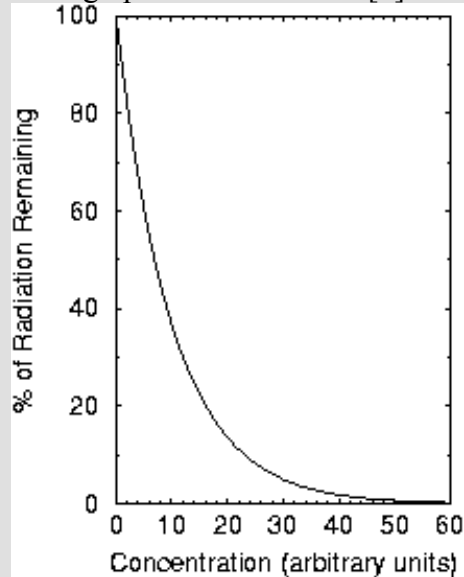


Fig.1. Transmitted light is a logarithmic function of concentration. This curve is the familiar Beer's Law.

Very little of the radiation from the sun at the wavelengths at which carbon dioxide absorbs reaches the surface of the Earth directly (see Figure 2) [10]. Similarly, very little of the radiation at these wavelengths that originates at the surface makes it all the way to space. Most of the infrared at these wavelengths is produced by black body radiation from objects that have been heated up by absorbing radiation at shorter wavelengths. This means that even if the carbon dioxide levels increase, it will have little effect on the total amount of infrared radiation that is absorbed from the sun. The main effect would be to trap radiation originating at the surface at lower levels in the atmosphere than before, where it would be slightly more difficult for the heat to be re-radiated back into space. This is the principle on which most of the global warming predictions are based.

*[note added 6/10/2006:]*

Many people do not understand this important concept. To put it more simply, shortwave radiation (such as light and short-wavelength infrared) is not absorbed by CO<sub>2</sub> and therefore reaches the earth's surface. At the surface, it is absorbed and then re-radiated at longer wavelengths (as "heat"). Some of this heat radiation is in the carbon dioxide absorption bands. This portion does not make it back to space, but is absorbed by water vapor, CO<sub>2</sub> and other gases on its way up. More CO<sub>2</sub> or water vapor will cause it to be absorbed at a slightly lower altitude than before. This absorbed energy will be re-emitted by the carbon dioxide molecules at even longer wavelengths (for example, around 30-40 microns). Even though the total amount of absorption is still nearly 100%, the whole process is dynamic. This means it takes a

certain amount of time, while other things, such as transitions from night to day, are also happening. Therefore, it is theoretically possible for increases in CO<sub>2</sub> to cause increases in surface temperature. The question is, is the amount of warming enough to be significant?

CO<sub>2</sub> is more evenly distributed than water, so if CO<sub>2</sub> caused warming it would have a proportionately greater effect in areas where there is little water vapor (such as deserts and in very cold regions), while in areas with a lot of water, the effect of CO<sub>2</sub> may be insignificant compared to the effect of water vapor.

Sorry to throw in technical jargon, but one of my friends (Mark) pointed out “we all learned in junior high science that green house gases are what makes our planet livable, so how can anyone say that not adding CO<sub>2</sub> to the atmosphere won’t warm the earth.” The answer is that no one says that. Everyone acknowledges that CO<sub>2</sub> will have an effect on the temperature of the earth. The question is can CO<sub>2</sub> (or GHGs alone) make the earth enter a temperature crisis? The answer is no, it cannot. That doesn’t mean that we should not try and manage our CO<sub>2</sub> and other GHG emissions. We should. At some level (I think its 6,000 part per billion) the earths atmosphere would become toxic. I would love to see us move away from emitting GHGs. But the only way we can do that at present is to de-industrialize. Wind and Solar cannot get us there, both because of their intermittent nature (requiring coal or other forms of back-up power) and because the world is using more power and will use more power in the future as the billions who are still trapped in poverty hopefully gain some level of prosperity.

One last note before I discuss the errors in *The Great Global Warming Swindle* (one day I will have to go through the errors in *An Inconvenient Truth*). There are real scientist who believe in the AGW thesis. They see the data one way. But a lot of the folks behind the Crisis of Global Warming are really communist and anti-capitalist who want to destroy the ideal of global capitalism. When the wall fell and communism was discredited they didn’t abandon their views, they glommed onto environmentalism. Global Warming is the tool for pushing their policy prescriptions. The money behind a lot of these global warming alarmist groups are people on the far left of the political spectrum. That doesn’t make them bad and evil or inherently wrong. It does mean that should very carefully review their data. The website [www.realclimate.org](http://www.realclimate.org) is one such site, and some of the scientist there are involved in climate science (not all of them, so watch it), but they are not unbiased. Science is rarely unbiased these days, alas. Likewise, some of the skeptics are funded by the oil and gas folks (see [www.junkscience.net](http://www.junkscience.net) for one such example). Doesn’t make them wrong, it does mean that we need to know they have their biases. I am deeply concerned about both the poor and the environment, and I don’t think we have to play “Lifeboat” and pick and choose. But, it does mean that destroying the world’s economy based on very bad models to address a problem that may be rooted in solar radiation (sorry Mark, the data you have read is not accurate, I assume you got it from realclimate.org, in fact solar radiation has increased and appears to heading for a decline in the coming decades) or some other factor – aggravated at the margins by human emissions – is not warranted. Many of the folks in the Global Warming Crisis movement are heavy into population control and would like a world with 1 to 1.5 billion people – something that I cannot get behind and that I find abhorrent. Watch for the links by the way between Global Warming folks and abortion supporters.

Okay, now about the problems in *The Great Global Warming Swindle*:

Okay, let's get a few basic facts out of the way. I actually have read Dr. Wunch's material before. The [www.realclimate.org](http://www.realclimate.org) site, like the *Great Warming Swindle*, is not an accurate presentation of his research. There are a couple of facts about CO2 levels and the oceans.

- Cooling oceans hold more CO2, warming oceans release CO2.
- CO2 does have an impact on the climate, though as everyone admits (if even only in their footnotes), the impact of the CO2 is logarithmic, not exponential. This means for every additional particle of CO2, it has a smaller impact on the climate.
- CO2 has sometimes preceded climate change, sometimes coincided, but mostly followed temperature change.
- This is important and makes sense because if the oceans release their CO2 primarily as a result of warming oceans, then what makes the oceans warmer?
- The *Swindle* video indicated that there is always an 800 year lag. This is not the case, but if I remembering right, it is the mean of the difference between temperature change and CO2, according to the ice core samples.
- While *Swindle* was wrong to both edit Wunch's comments and to state the FACT of 800 year lags, it was also wrong of Al Gore in *An Inconvenient Truth* to imply, using two separate graphs with each segment representing very long time periods, to imply, as he does, that they overlap.
- It is also wrong of realclimate.org and Dr. Wunch to imply that there is no significant issues relating to the "consensus" view that CO2 and temperature are 1-1 correlated. Dr. Wunch's articles make clear that this is not necessarily the case. He is, in this interview, back-tracking on his own research, because of his audeinece. ."
- Dr. Wunch comments in the film in fact do represent his own views, elsewhere stated. While they were used to support thesis he does not agree with, this is very common in scientific research – if you have proven thesis A then the next research team will build off of that and propose thesis B, even if you don't agree with thesis B.
- Here are Dr. Wunch's actual comments in the program:
- Professor Wunsch:  
25:43 The ocean is the major reservoir into which carbon dioxide goes when it comes out of the atmosphere or to from which it is re-emitted to the the atmosphere. If you heat the surface of the ocean, it tends to emit carbon dioxide. Similarly, if you cool the ocean surface, the ocean can dissolve more carbon dioxide.

Professor Wunsch:

26:44 - The ocean has a memory of past events ugh running out as far as 10,000 years. So for example, if somebody says oh I'm seeing changes in the North Atlantic, this must mean that the climate system is changing, it may only mean that something happened in a remote part of the ocean decades or hundreds of years ago who's effects are now beginning to show up in the North Atlantic.

Professor Wunsch:

49:22 - The models are so complicated, you can often adjust them in such a way that they do something very exciting.

Professor Wunsch:

50:46 - Even within the scientific community you see, it's a problem.

If I run a complicated model and I do something to it like I melt a lot of ice into the ocean and nothing happens, it's not likely to get printed. But if I run the same model, and I adjust it in such a way that something dramatic happens to the ocean circulation like the heat transport turns off, it will be published. People will say this is very exciting. It will even get picked up by the media. So there is a bias, there's a very powerful bias within the media, and within the science community itself, toward results which are very dramatizable. If Earth freezes over, that's a much more interesting story than saying well you know it fluctuates around, sometimes the mass flux goes up by 10%, sometimes it goes down by 20%, but eventually it comes back. Well you know, which would you do a story on? That's what it's about.

- The big issue for Dr. Wunsch is that he believes that his thesis has been made to prove that anthropogenic warming has not taken place. Here are his words from the Royal Science Society site:

Thus at bottom, it is very difficult to separate human induced change from natural change, certainly not with the confidence we all seek. In these circumstances, it is essential to remember that the inability to prove human-induced change is not the same thing as a demonstration of its absence. It is probably true that most scientists would assign a very high probability that human-induced change is already strongly present in the climate system, while at the same time agreeing that clear-cut proof is not now available and may not be available for a long-time to come, if ever. Public policy has to be made on the basis of probabilities, not firm proof.

Now, there are two other “questionable” elements of The Great Global Warming Swindle. The first has to deal with the statement regarding the mosquito outbreak of the 1930s in Arctic Russia. The fact is that this outbreak coincided with the warmest year on record from the global recording stations – 1933. A point that the video already made. This at least makes their point in the video suspect. Although most scientists focusing on insect-borne diseases think that warming is not the primary element in outbreaks.

The other issue, is the weather graph: Yep, they used a fraudulent graph. They should have better researched its actual origin. However, what does the actual weather data show us?

Well a lot and a little. In 1850 the world came out of its Little Ice Age. The Little Ice Age was a horrendous worldwide calamity. For a nice and easy to grasp discussion of it, read *The Little Ice*

*Age.* Please note, the preferred theory for the author is that the warming of the Medieval warm period caused cold water to melt into the oceans, which reduced the oceans temperatures and thus shut down the currents, thus bringing only cold air and water to the European areas, which influenced global temperatures. The evidence of this is somewhat questionable.

The period from 1940 to 1975 was colder – not Little Ice Age colder but colder. Watch where you get your data from by the way. Surface temperature readings are now highly scewed for historical purposes because of the impact of localized anthropogenic. The use of concrete and asphalt (roads, roofs and sidewalks) and the additions of swimming pools in place of grasslands.

This is one of the problems with surface level comparisons. A thermometer in Atlanta today is not the same as one in 1900. The second problem is what happened after the fall of the Iron Curtain. Russia and her satellite countries (both Eastern bloc and those around the world) suffered a cash crisis and the first thing that went was the weather stations they sponsored. The result – “The 1990s were the warmest decade in history.” Yes, if you take out a large number of stations, especially a number in the colder climes. That said, 1998 was the second warmest year on record in the northern hemisphere (1933 being the highest).

By the way, you (Mark) mention people denying the role of CO<sub>2</sub> in warming. I don't know of anyone who claims that this is not true. The question is whether or not the increase in the number of CO<sub>2</sub> particles is to blame for the current rise, and whether it is the human % is the key, and whether we can do anything to stop it.

Okay, I have said a lot. I could talk more about the fact that the debate is being shut down, which violates the view that “the truth shall set you free.” Ask yourself who has the most to fear from doing more research?

I could talk about the impact of warmer weather as a net positive. I could talk about the choice of the worse-possible scenarios for the discussion. I could talk about how big business see AGW as a way of providing a barrier to entry and thus protecting their profits. I could talk about a lot of things. But you get the point.

So, what do I suggest? I think that Al Gore might actual have given us a good idea. A carbon tax that replaces (doesn't add to) other taxes to help reward energy research and conservation is a good idea. Especially if it includes offsets for the poor (who are most affected through food and transportation costs by a carbon tax). I would love to see some of this money rolled into a world-wide research fund to find a healthy and plentiful form of energy – kind of a Manhattan Project of Apollo Project (the two best examples of government projects to find an answer) where the answer would be shared with the world and the patent held by the world's governments.

I want to save the environment and avoid killing millions and impoverishing billions more. Kyoto won't even deal with the so-called crisis, but it will impoverish us all. Lets stop scaring each other and start focusing on realistic solutions.

So, that is my point. Sorry for being so long. I would close by giving you two links, one from Richard Linzen's latest piece in Newsweek (he the ultimate skeptic and a true climate scientist), the other from the Left newspaper of record in the UK, the Sunday Times, where they point to the danger in all of this alarmism

Please feel to come back at me. Like all good researchers, I am open to being proven wrong. If we are causing catastrophic warming by our emissions, I want to know. At this point, I am firmly in the camp that the warming we are experiencing is neither catastrophic, uncommon, or primarily man-caused.

Your friend, Christopher Morton, Roving Theologian and amateur scientist.