THE SKY IS FALLING
OR
ON REVISING THE NINE TIMES RULE

PART III OF V

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In Part I many were possibly quite stunned to see just how regular, frequent and dramatic natural climate change is on Spaceship Earth. Four hundred foot sea level changes, abrupt climate change, at the end of 100,000 year long deep freezes (global warming events), the most regularly occurring thing we know of in all geology. Sixteen of these in the last 1.6 million years (The Pleistocene Epoch), and dozens more in the Pliocene which preceded it, but on a 41,000 year clock. In Part II, we confronted the fact (oops! I am loosing 88.9% of you here) that in order to do this with Greenhouse Gases (GHGs) you would need to increase populations of living creatures either steadily on those long slow slides into 100,000 year long ice ages then suddenly have them develop "gas" attacks right at the 100k year mark, or at the very bottom of the deep freeze have a population explosion AND a gas attack. This could also be accomplished with volcanoes on a Swiss movement, which could generate massive amounts of GHGs, but they also generate massive amounts of ash, which would make the freeze even deeper. Or you could pass through a space-based CO2 cloud which passes our way every 100k years now, instead of 41k years, like it did prior to the Pleistocene in the Pliocene.

Or it could be due to earth's rickety orbit, which matches up eerily well with those climate change events.

I mean, I really did have a problem with the whole Vostok temperature records. There just didn't seem to be any way to realistically have CO2 play a role unless, like us, it was a spectator. And so the hairy research eyeball went into overdrive to see just where the cracks in the climate change armor had been hidden. And I found them.

THE FOURTH HERESY

The oft quoted fact is that the earth is 33 degrees Celsius warmer due to the trace gases in our atmosphere. Now, since oxygen and nitrogen make up 99% of our air, that leaves only 1% of everything else. CO2 is just 0.04%. However in that 33 degree statement, the climatologists that cooked this dish up assign 20% of the GHG effect to CO2 and 80% to water. So let's look at that ratio for a moment. You are going to have to do some math so go get a calculator. If CO2 is responsible for 20% of GHG effect at a concentration of 0.04% in the earth's atmosphere, then dividing 20% by 0.04% we can readily calculate a thermal insulation effect to concentration ratio of 500. Making it, arguably, the best insulator known to man.

If, instead of 0.04% CO2, we used pure CO2, a concentration increase of 2,500 times, we would have the best insulator in the known universe, and since one can achieve an 8:1 compression with common air compressors, we can get an enormous amount of CO2 in compressed insulation applications, such as between the outer and inners shells of any kind of an oven. I mean, we are

talking infrared here aren't we? Isn't that what the ruckus is all about? Infrared absorption by CO2? Now, since no one has patented CO2 for thermal insulation purposes, either I just gave you the scoop of the energy crisis (we will call that the "Wall Street Conundrum", since no one has glommed onto this yet….), or maybe CO2 isn't all that crash-hot of an insulator after all. And you just do have to wonder why all those Anderson Windowalls use Argon and not CO2 between the sealed panes……

This 20% GHG factor appears to be the most egregious affect accredited to CO2 by climate change artists. It is deeply buried in the mathematics of the "black body" calculations which most people would not look at too hard given all the high-level math. But it is there, nicely hidden.

Climatologists have some of the most sophisticated computers on the planet, and some of the most sophisticated modeling software. Using these computers, that software and that 20% GHG factor, one can easily arrive at those global warming predictions a century or more out. So with all of those exotic computers how far out can we accurately predict earth's weather? A week, sometimes two (but rarely)? So, given we cannot predict the weather all that accurately more than a week out, we are supposed to believe predictions a century out? Did you hit your head?

If you really want to do the math on CO2 then read on. This is how it plays out using the US Government's own data on these gases.

Do some quick web searching, and it won't take you long to realize that the GHG of real concern is not CO2, it is water vapor. In its concentrated form this vapor is also known as clouds, and it is attributed 95% of GHG potential. CO2 actually has 2/3rds the thermal conductivity of Nitrogen and Oxygen, and if you do the math (data from http://cdiac.esd.ornl.gov/pns/current_ghg.html) you get the following tables charting the affect of anthropogenic CO2 on GHG potential. These are straightforward calculations done with publicly available raw data. Even a caveman could do this.

Table 1.
The Important Greenhouse Gases (except water vapor) U.S. Department of Energy, (October, 2000)

(all concentrations expressed in parts per billion)	Pre-industrial baseline	Natural additions	Man-made additions	Total (ppb) Concentration	Percent of Total
Carbon Dioxide (CO2)	288,000	68,520	11,880	368,400	**99.438%**
Methane (CH4)	848	577	320	1,745	**0.471%**
Nitrous Oxide (N2O)	285	12	15	312	**0.084%**
Misc. gases (CFC's, etc.)	25	0	2	27	**0.007%**
Total	289,158	69,109	12,217	370,484	100.00%

Carbon Dioxide Information Analysis Center (updated October, 2000)
http://cdiac.esd.ornl.gov/pns/current_ghg.html

Table 2
Atmospheric Greenhouse Gases (except water vapor) adjusted for heat retention characteristics, relative to CO2

This table adjusts values in **Table 1** to compare greenhouse gases equally with respect to CO2. (#'s are unit-less)	**Multiplier (GWP)**	Pre-industrial baseline(new)	Natural additions (new)	Man-made additions (new)	Tot. Relative Contribution	Percent of Total (new)
Carbon Dioxide (CO2)	1	288,000	68,520	11,880	368,400	**72.369%**
Methane (CH4)	21 **(2)**	17,808	12,117	6,720	36,645	**7.199%**
Nitrous Oxide (N2O)	310 **(2)**	88,350	3,599	4,771	96,720	**19.000%**
CFC's (and other misc. gases)	see data **(3)**	2,500	0	4,791	7,291	**1.432%**
Total		396,658	84,236	28,162	509,056	100.000%

NOTE: GWP (Global Warming Potential) is used to contrast different greenhouse gases relative to CO2.
http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BUM9T/$File/ghg_gwp.pdf (updated April, 2002) U.S. Environmental Protection Agency
http://www.c-f-c.com/gaslink/charts/warmingchart.htm

Table 3
Role of Atmospheric Greenhouse Gases (man-made and natural) as a % of Relative Contribution to the "Greenhouse Effect"

Based on concentrations (ppb) adjusted for heat retention characteristics	Percent of Total	Percent of Total -- adjusted for **water vapor**
Water vapor	-----	**95.000%**
Carbon Dioxide (CO2)	72.369%	**3.618%**
Methane (CH4)	7.100%	**0.360%**
Nitrous oxide (N2O)	19.000%	**0.950%**
CFC's (and other misc. gases)	1.432%	**0.072%**
Total	100.000%	**100.000%**

Table 4
Anthropogenic Contribution to the "Greenhouse Effect," expressed as % of Total (water vapor INCLUDED)

Based on concentrations (ppb) adjusted for heat retention characteristics	% of All Greenhouse Gases	% Natural	% Man-made
Water vapor	95.000%	94.999%	**0.001%**
Carbon Dioxide (CO2)	3.618%	3.502%	**0.117%**
Methane (CH4)	0.360%	0.294%	**0.066%**
Nitrous Oxide (N2O)	0.950%	0.903%	**0.047%**
Misc. gases (CFC's, etc.)	0.072%	0.025%	**0.047%**
Total	100.00%	99.72	**0.28%**

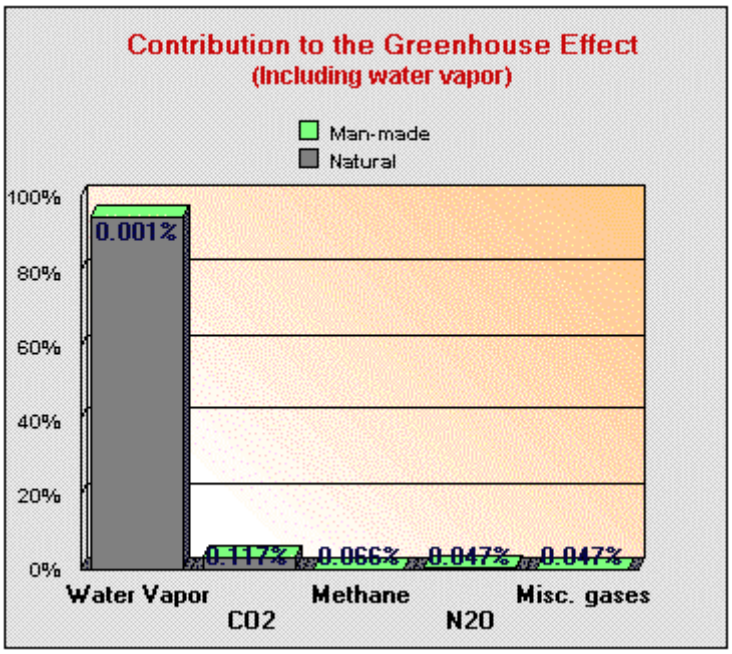

Figure 1. Anthropogenic Effects (in green) of Total (in grey)

CO2 is predicted to double in concentration from about 0.04% to 0.08% in the next 300 years. Should we be worried? Taking all concentration and thermal conductivity data and doing the math, if we take and double something (CO2) at a trace concentration which has two thirds the thermal conductance that the vast majority of the atmosphere has, this will increase the total atmospheric thermal conductivity by about 0.03%.

And this takes into account that the major components of the troposphere (N2, O2, and water vapor) absorb in the shorter wavelength end of the IR spectrum, around 5-6 nm or so. There are some big gaps in the spectrum around 10-12 nm, which is where CO2, CH4, and CFCs absorb but this spectrum is not yet saturated, although some bands for CO2 are saturated. Basically the IR absorption spectrum is fully saturated with N2 and O2 and usually with water vapor. The wavelengths open to allow IR radiation to escape are around 10-12 nm but these wavelengths are increasing blocked by increasing GHG emissions. So, if we assume no IR radiation can escape at all, then we would have a tiny concentration of CO2 absorbing all the heat it can, ending up with the numbers above.

So how significant *would* doubling of atmospheric CO2 be?

NASA indicates that the well known 11 year solar cycle (also known as the sunspot cycle) results in 0.1% variation in the amount of solar energy we receive from sunspot number maximum (hotter) to sunspot number minimum (cooler). Or a variance of about 1 part in a thousand. You noticed that, right? Remember the last time sunspots peaked and how hot that year was? Thought not. By the same token, you probably all have your calendars marked for when the next maximum is predicted to be? No, only a paltry number of us have a clue when that is progged to be. In carefully watching this raging debate, the 11 year sunspot cycle has not been discussed and no one notices it, and only those that are interested can tell you it will be about the year 2012. Let's see if that is a really hot year. In case you are having problems with this, in early 2008, we have no sunspots whatsoever. And it was the coldest January in about 100 years…….

So, now we have looked at some rather simple and complex data and learned that it would have been nigh on impossible for ice ages to have been terminated by GHGs, something that should have been obvious even to a caveman. We then looked at CO2 and find it not only didn't cause all those many ice ages to end, it in fact could not have. The mathematics being used today is easily shown to be quite shonky such that CO2 is unlikely to be able to be a true participant in global warming. And unless we use such voodoo mathematics, having something at four one hundredths of one percent is really on the wrong side of the decimal point. We need to be on the left of the decimal point to do real damage to the environment. And that got me to thinking what else we are doing that could effect climate change. And that is when I came face to face with the real problem, as if I did not already know.

And we will look at that in Part V, but first we will take one last trip through the ice ages in Part IV just to make sure we understand what climate change really means.

About the Author:

Mr. McClenney is a California Licensed Professional Geologist and Registered Environmental Assessor. He was also appointed the first Certified Environmental Auditor in Victoria, Australia in 1991, empowered to sign-off on contaminated site cleanups. He has been investigating and cleaning up hazardous waste sites for 22 years.