

Chapter A.1 The Kyoto Premise and the catastrophic failure of rational, logical, and scientific thinking by essentially all scientists

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Versions of Chapter A.1:
 ?date? - initial concept paper, ?dates?
 23Dec10 – start of “current version”

I. Introduction

The vastly dominant global scientific consensus regarding global warming trends is succinctly described here as the

Kyoto Premise (KP): *the presumption that anthropogenic GreenHouse Gas (GHG) emissions [have, are, and/or will have] a catastrophic impact on the environment and mankind.*

To the author, it has from the start been clear that the Kyoto Premise was based on and continues to be supported by scientific analysis replete with embarrassingly simple and basic errors and omissions on the part of scientists. The hypothesis of this paper is that the Kyoto Premise is proof of a persistent and catastrophic failure of rational, logical and scientific thinking by the vast, vast majority of scientists who followed and promoted this view of climate science during the years of its “peak religious frenzy” (~1998 through perhaps 2007, perhaps most strongly from ~1999 through 2004). Furthermore, given that the Kyoto Premise provides a nearly ideal and complete sampling of the entire scientific population (as near as one could possibly hope for from the perspective of surveys and polls), this strongly implies that essentially all of today's scientists share this problem.

Given that the Kyoto Premise is among the largest non-military scientific initiatives in history, with enormous economic and societal implications, and given how only rare scientists have caught on to the conceptual flaws after following this issue over a period that is a sizable fraction of entire careers, it also raises serious questions about the credibility and reliability of the entire scientific community, and about the limited utility of "scientific consensus".

It is also clear that nonscientists have played a major, if not dominant, role in uncovering the fraud, delinquency and stupidity of GHG based climate science, and in directing the scientific focus and debate to more promising concepts.

II. A "Climate Change Checklist" and the dominant climate drivers

In a separate paper, "Climate change: Back to Reality for a lost generation of scientists", I provide a more detailed (but still simple, summary) description of what I think is a reasonable basis for climate change theory. Note that it does NOT provide:

1. **final answers** - as our understanding and modeling will to continue to evolve for some time;
2. **coherence** - as it is my strong opinion that it is far better to maintain "multiple conflicting hypothesis" than to "decide arbitrarily" which theories are correct. The second approach has led to D-cubed thinking by the vast majority of scientists, and is and will cause huge damage to people and the environment through massive misallocation of resources, and through actions that cause damage and do NO good! The first approach forces one to consider alternative thinking, and to beg, borrow and steal ideas as needed to improve our understanding. It is also very important to keep in mind that we might be wrong.
3. **completeness** - This section covers only a very small fraction of climate change science!

The purpose of this section is to provide a checklist of key concepts in Climate Change, which I think are helpful for keeping our minds focussed on the science that counts, and to avoid the robot-like adherence to the Kyoto Premise religion. There are many, many more climate factors to be considered of course, but in my opinion these points provide a solid basic description. As for important climate data, models etc, you will have to refer to my other paper, and of course there are many excellent references.

A. Basic Concepts for of Climate Change, GreenHouse Gas (GHG) effect, and Global Warming

- 1) The starting sin of most scientists seems to be their failure to distinguish between:
 - **Climate Change** - the study of climactic changes over all time scales and geographies;
 - **Global warming** - typically refers to a rise in the average global temperature since the end of the last "mini ice age" at approximately 1850, but most specifically where temperatures are headed in the next few decades.
 - **Kyoto Premise** - the presumption that much of the global warming trend is due to man-made GHGs. Sometimes other man-made factors are also thrown in, but for expediency the this paper will deal primarily with the GHG effect.
 - **Precautionary Principle** - It is strange to say that NO scientist that I have ever discussed this with, either government or academic, ever showed the slightest awareness of what the first simple and obvious implications and constraints of this principle are. Everyone knows what it means, but they really don't have a clue what it means. For sure, some specialists (especially loss prevention / safety engineers, who use very different terminology) understand the concept in a solid and profound manner. Apparently that understanding is very rare among scientists.
- 2) **The GreenHouse Gas (GHG) effect** is not well understood by most scientists, including most of those working in the area of climate change in the "dark years":
 - **Water vapor** is by far the dominant GHG (80 to 95% of the GHG effect according to various estimates). Of course, water in all of its forms (vapour, ocean water circulation, galciers and polar ice caps, seasonal snow cover) is extremely important to climate.
 - **Carbon dioxide and methane** share the remainder of the GHG effect with many other gases, and much of the atmospheric CO2 and methane is natural in origin. Furthermore, as evident in

climate records at all time scales beyond a year in length, CO₂ is clearly a strong function of temperature (but not uniquely a function of temperature).

- Water vapour concentration is far more variable than CO₂ concentrations, as a function of temperature.
- **CO₂ has little additional bandwidth to absorb** - A dirty little secret of the Kyotoists is that their beloved chemical has already absorbed most of the "incremental radiation" that it can. The law of diminishing returns is already well advanced for CO₂ absorption. (The Venus example as often cited is a very different beast - and will be discussed in another paper).
- **Convection is the main reason for "Greenhouse warming", not GHGs** - Incredibly, this knowledge "went submerged" from the sight of almost all scientists for the better part of a decade. Most still don't get it.

- 3) **Albedo** - the reflectance of incoming solar radiation. Albedo effects are HUGE for affected regions, and for the global climate. Moreover, and in contrast to ?typical climate models (recent GCMs)?, albedo is highly variable, and appears to be a dominant climate intermediate mechanism (see "Feedback mechanisms affecting the climate" below). So much (again) for the GCMs...

B. Primary drivers of the climate - throughout geologic history and today

- 1) **Solar power (irradiance) and its variability** - is THE main driver of Earth's climate because it is the source of almost all on the incoming energy that keeps the planet warm (geothermal energy from radioactive decay inside the Earth would be another heat source, but much smaller). Normal solar irradiance variability over the ~11 year Schwartz solar half-cycle is currently <0.1 %. But nasty surprises occur over longer time spans. However, it is likely that solar variability occurs at all time scales, and not just from seconds to hundreds of years as currently established, and of course on the scale of billions of years according to the "life evolution" of the sun. We'll likely learn more about the intermediate time scale indecades to come.
- 2) **Galactic rays and cloud formation on Earth** - Although still a relatively young and immature theory, it already appears that the best climate models are based on galactic rays as a key primary driver. In turn, the galactic rays are modulated by the motions of the solar system in the Milky Way, and by variations in the helio- and geo- magnetospheres. Intense criticism met the initial papers in this area have mostly fallen by the wayside, but that certainly mean that the theories are "the truth. Of course, criticism is is a key part of science, although the frequent personal attacks and death threats by extreme Kyotoists aren't criticisms. Hopefully that kind of behaviour will "die off or die down" with time.
- 3) **Milankovic cycles** - refer to changes in the Earth's orbital eccentricity around the sun and changes in the tilt and orientation of the Earth's axis.
- 4) **Volcanic eruptions** - Famous massive volcanic eruptions have caused two consecutive summers to "be lost", and in a separate paper "Mega life, Mega Death, and the invisible hand of the sun: Towards a quasi-predictive model of the rise and fall of civilisations" we are considering the potential longer-term effects through a "dirty snow" mechanism (Other scientists have looked at this well in the past as well).
- 5) **Other astronomical, geological, and biological drivers** - include meteorite impacts, continental drift and the changes in ocean currents, possible geothermal and geo-magnetic variability. But I won't go into detail here. My inclusion of biological drivers is anomalous, but refers to albedo effects of vegetation, and the changes in atmospheric gases due to life. It is my

guess that life is a primary moderator of the equilibrium atmospheric CO₂ concentration (as well as other gases like O₂!), and that this is highly temperature dependent. But I do not feel that the data and coherent analysis show that historical and known variations of CO₂ over the last million years affects climate, although eventually some paper may establish that (I doubt it).

- 6) **CO₂ is NOT a climate driver!!** - At best CO₂ is a minor, and more likely an insignificant climate feedback mechanism that is almost ! - In my opinion, so far there is no clear indication that it has any significant effect on climate! Other than measurements of absorptance spectra, all "Kyotoists" science arguments that I can think of to support their theme are actually better arguments that either:
- temperature drives CO₂; or
 - the climate changes are most likely due to water vapour variations, not CO₂.

C. Feedback mechanisms affecting the climate

1. **Cloud** (seasonal, but influenced by drivers at all timescales) - Even quite small cloud cover variations would have a substantial influence on climate - far greater than anything related to the GHG effect from CO₂!! That occurs through cloud albedo (reflection of incoming solar radiation), and through a GHG-like effect (entrapment of re-radiated energy from the Earth, especially at night. Moreover, we should expect BIG cloud changes to occur with wide swings in the climate. (Why anyone would assume constant cloud cover over long periods of time and large swings in climate is a bit of a mystery.)
2. **Ocean Circulation** (decades to thousands of years or more)
3. **Ice caps and Glaciers** - either clean or dirty (from tens to hundreds of thousands of years)
4. **Vegetative cover, or ocean albedo** - I won't be covering this any time soon (even in the paper "Climate change: Back to Reality for a lost generation of scientists", but I do feel that the effects of terrestrial and marine plant life is important to look at, primarily because of the albedo effects, but also possibly because of humidity (transpiration, soil moisture) and erosion (as in the Geocarb model, which emphasis the sequestration of CO₂, but for me it may be other erosion effects that are more important).
5. **GreenHouse Gases (GHGs)** - Although much of the "lost generation of scientists" believe that anthropogenic GHGs are the primary driver of climate in the recent 100 years, if not longer,

III. The Kyoto Premise and D-Cubed thinking:

Key arguments used to support the KP,
and the data and analysis that don't support them

The major arguments that have been used to support the Kyoto Premise are addressed below. These are taken not only from documents such as the UN-IPCC Assessment Reports, and some well-known research papers, but from the "projections" of the Kyoto Premise in the popular media, even if there is a significant difference between the scientific papers and media projections. The popular media portrayal is important, and it is related to the responsibility of scientists to ensure that media portrayals of their concepts are reasonable. If the media is not portraying their concepts reasonably, they should actively move to correct that problem. Failing that, the label of "Dysfunctional and/or Dishonest and/or Delinquent" (D-cubed) thinking really is merited.

However, that last comment does NOT necessarily apply to the scientist or team initially generating the results. We really need scientists to play with ideas, test many hypothesis and models, and try to build themes over a long time. It is even important to have scientists "believe" in their approaches in spite of data and analysis that may for a long time contradict their hopes. D-cubed thinking arises when parts of the scientific and policy communities "push" the results or philosophies as the unique and only truth, as solid and irrefutable. And worse, D-cubed thinking is clearly the disease of scientists and policy makers who thwart, ridicule, and suppress the efforts of alternative thinking scientists, especially when the alternatives clearly fit the data better. As an additionally warning, there are rarely situations when there are only "two sides" to a story. As I explain "somewhere else", dichotomies are rarely true for complex systems. They have two primary purposes - pedagogy for those new to a field, and marketing/ propaganda. Unfortunately, the latter usage dominates.

A. **"Climate Change equals Global Warming equals Man-Made GHG Drivers" D-Cubed thinking**

The failure of most scientists to differentiate between the initial, simple major concepts and where they are applicable is their first usual mistake, and one from which most scientists seemingly cannot recover. Everything "downstream" then becomes a morass of tangled data, analysis and thinking.

*The climate has been changing for over four billion years,
it is changing now,
and it will continue to change for billions of years into the future.*

*Moreover, natural changes in the climate far, far exceed,
both in magnitude and rapidity,
anything that we are talking about now. [Howell ?2003?]*

Just look at the graphs in the last section - temperatures change all the time. Sometimes they go up, and sometimes they go down. There are even theories that exceptionally stable long-term temperatures for "extended" periods (actually very short in geological terms) lead to over-optimized ecologies that have trouble surviving the ensuing changes. [ref?]

During the term of Richard Nixon as president of the US, the dominant climate theme was that we were all going to die as we plummeted into a new period of glaciation. The "science fashion" of global cooling seamlessly and senselessly mutated into a "global warming" science fashion, which within a decade or so became a "science cult", and now is probably a "science religion". That huge shifts in thinking follow modest, short term reversals in climate is a tribute to the intellectual instability of our scientific community, reminiscent of the emotional roller coaster ride of the financial markets. Perhaps the same "greed versus fear" mechanisms are at work here? Certainly the destabilising effects (damage and perversion of the markets or science) of populist politics and politically-correct thinking are evident in both cases.

I actually think that after the oncoming solar cycle 24, which should be a doozie, there is a far greater likelihood of either a solar "freezer" (like the Maunder Minimum of 1645-1715) or the "dispey-doodle" onset of glaciation, than of a massive global warming driven by man-made activity as the Kyotoist are proposing. Of course, the climate will do what the sun tells it to do over the short term (a few million years), barring exceptional activity or trends from other astronomical or geological drivers. And we are still not very good at understanding the sun, let alone predicting its behaviour.

In a strange mental twist, Kyotoists have even been successful at convincing the public that global cooling may result from global warming, and that they (the Kyotoists) are the ones to predict climactic variability. But the huge historical climate variations have always been one of the starting points for the "skeptics or deniers" (not surprisingly, many of whom are non-government geologists), and this known variability on all time scales was and is studiously ignored by the Kyotoists unless a selective form of it could support their junk science. This is like the thief who cries "au voleur"....

Another pragmatic adaptation of the Kyotoists has been to adopt as extreme a projection of rising temperatures as possible, presumably without being totally subject to ridicule. So while I say that natural changes "exceed anything that we are talking about now", I am referring to data over the last 150 years, and any kind of rational analysis. I am not talking about Kyotoists fudging their "secret models of obfuscation" to generate whatever number is convenient and useful at the time.

The "Climate Change equals Global Warming equals Man-Made GHG Driver" D-Cubed thinking is why I was careful to lay down a framework (however briefly) in Section II. Rather than duplicate a great deal of material, I believe that the preceding section on the "real, dominant climate drivers" debunks the KP junk science, and shows that it is a D-Cubed thinking to "push" the KP, in the sense of claims that the KP is definitive or even useful. Please refer to:

graph of climate since 1850
graph of Holocene climate with many proxies
graph of Phanerozoic
reference Veizer's articles

While failure at this level should cast doubt on the results of scientists in the points below, its quite possible that Kyotoists could have muddled through and still get their story straight. However, any of the failures listed in the sub-sections below are serious enough to completely reject the Kyoto Premise, and demand a complete review and revision of the science by new scientists, institutions, funding bodies, policy analysts, leadership, and processes. As I believe that there has been a catastrophic failure with all of the points below, my proposed action items in the final section should come as no surprise.

B. "CO₂ as THE major GHG" D-Cubed thinking

The UN-IPCC does not, as far as I remember, specifically state that CO₂ is the dominant GHG gas, but they certainly write their reports to leave that impression!

Where's ~~Waldo~~? the water vapour?

http://en.wikipedia.org/wiki/IPCC_list_of_greenhouse_gases

[edit] Gases relevant to radiative forcing only (per IPCC documentation)

Gas	Alternate Name	Formula	1998 Level	Increase since 1750	Radiative fo (Wm ²)
Carbon dioxide		(CO ₂)	365ppm	87 ppm	1.460
Methane		(CH ₄)	1,745ppb	1,045ppb	0.480
Nitrous oxide		(N ₂ O)	314ppb	44ppb	0.150

It's my impression that the GHG effect of CO₂ is pretty well "saturated", and that further concentration increases won't have much effect - certainly far less than the effect of varying water vapour concentrations (which itself may be limited), and cloud and ice cover (which are BIG, as far as I understand it). And that's not even counting the primary climate drivers.

I have only very limited information on water vapour's GHG effect, but that this information isn't a prominent comparison in any discussion about the GHG effect says something about the Kyotoist scientists.

There aren't very many reasons why atmospheric CO₂ variations would influence the Earth's temperature - the main reason given being the GHG effect. But as we'll see later, the Kyoto Premise doesn't seem to have any MAJOR [diligent AND honest AND competent] basis. CO₂ variability is more likely, at best, a very minor influence on climate, and I'm betting that it is insignificant (that's just a guess). But based on known physical, chemical, and biological processes, both water vapour and CO₂ are strong functions of temperature, but one would expect water vapour to be far more variable. (see the charts below) .

The Kyotoists have this all backwards.

Water vapour vs temperature chart -> -50 to +50 Celsius

Marine photosynthesis - is there any relation? (magnesium paper?)

CO₂ solubility in ocean water as a function of temperature and pH

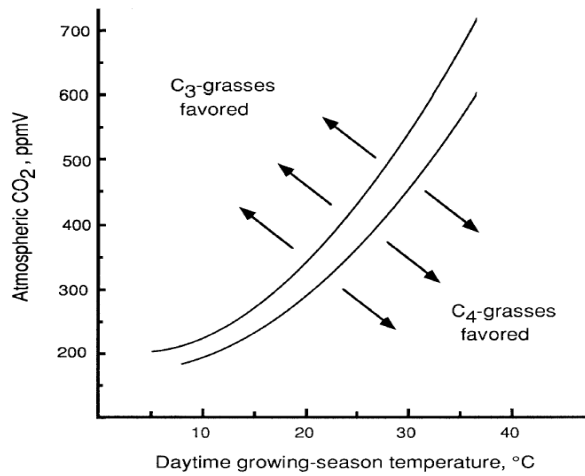


Figure 2. Crossover model of C_3/C_4 photosynthesis based on quantum yield of C_3 and C_4 plants. Modified from Cerling *et al.* (1997) and Ehleringer *et al.* (1997).

To really give yourself a shock, just try to search the internet for the GHG factor, or simple model for the radiative forcing, by water vapour! How can any [honest AND competent AND diligent] scientific source publish GHG factors and models WITHOUT including water vapour, especially if they are promoting the importance of CO₂ for the GHG effect (as opposed to merely monitoring GHG emissions as required by law, which do not include water vapour)?

David Archibald "The Past and Future of Climate" May, 2007 A presentation to The Lavoisier Group's 2007 Workshop Rehabilitating Carbon Dioxide' held in Melbourne on 29-30 June 2007

"... Anthropogenic warming is real, it is also miniscule. Using the MODTRAN facility maintained by the University of Chicago, the relationship between atmospheric carbon dioxide content and increase in average global atmospheric temperature is shown in this graph.

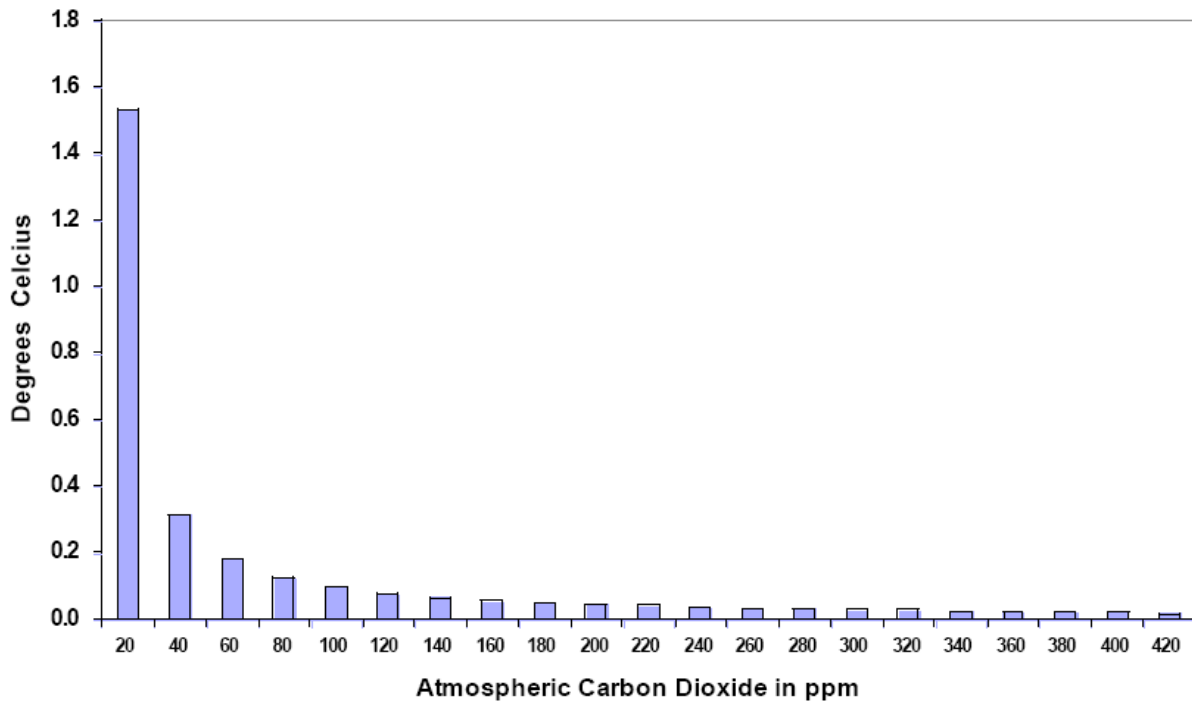
The effect of carbon dioxide on temperature is logarithmic and thus climate sensitivity decreases with increasing concentration. The first 20 ppm of carbon dioxide has a greater temperature effect than the next 400 ppm. The rate of annual increase in atmospheric carbon dioxide over the last 30 years has averaged 1.7 ppm.

From the current level of 380 ppm, it is projected to rise to 420 ppm by 2030. The projected 40 ppm increase reduces emission from the stratosphere to space from 279.6 watts/m² to 279.2 watts/m².

Using the temperature response demonstrated by Idso (1998) of 0.1°C per watt/m², this difference of 0.4 watts/m² equates to an increase in atmospheric temperature of 0.04°C. Increasing the carbon dioxide content by a further 200 ppm to 620 ppm, projected by 2150, results in a further 0.16°C increase in atmospheric temperature.

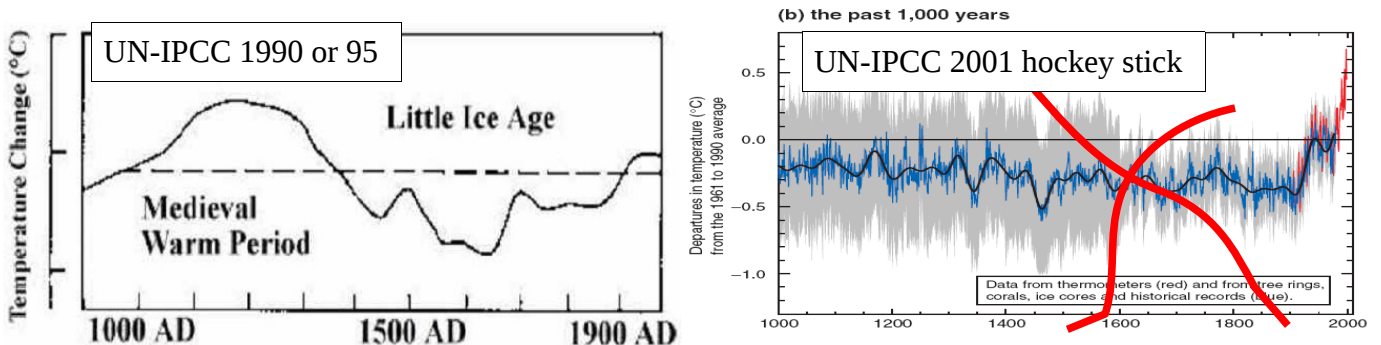
Since the beginning of the Industrial Revolution, increased atmospheric carbon dioxide has increased the temperature of the atmosphere by 0.1°...."

The Warming Effect of Atmospheric Carbon Dioxide

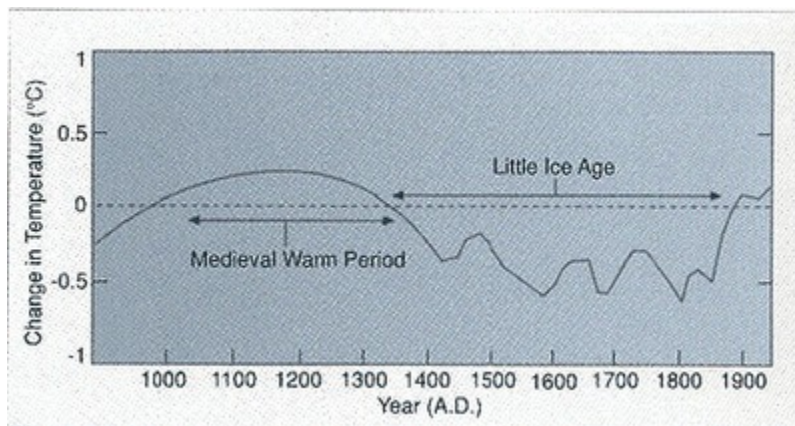
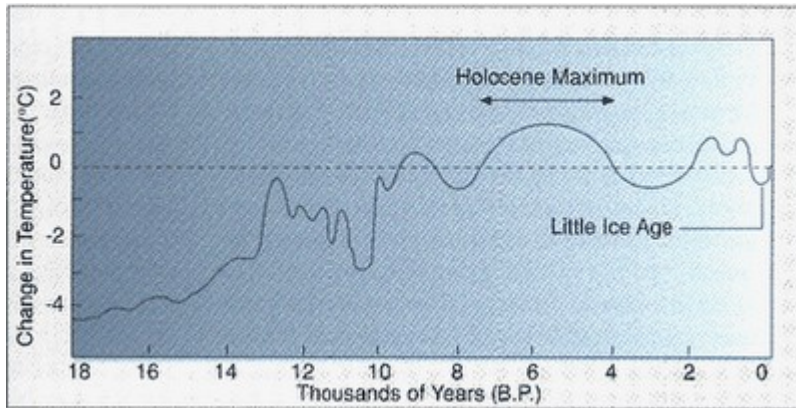


C. "Hockey stick temperatures over the last millennium" D-Cubed thinking

The "hockey stick" graph of temperatures over the last millennium was produced in a series of papers (notably "MBH-98" [ref]), and it is featured prominently in the UN-IPCC Third Assessment Report (SAR), and seems to have been one of the most important psychological drivers of a huge swell in acceptance of, and commitment to, the Kyoto premise.



From Sandy Mutch's website (in turn from Wikipedia): <http://armageddon-sandy.blogspot.com/>



(McIntyre's graph)

Note the NEITHER of the above graphs is "reliable", as:

- the earlier graph is somewhat of an approximation (perhaps idealised a bit);
- the hockey stick is clearly a D-Cubed thinking (it may have started as a good scientific effort, but it certainly did not end there!); and
- McIntyre & McItrick? specifically stated that their graph (superimposed beside the hockey stick) is only one interpretation, and is based on the data used by the hockey stick authors.

However, I consider the earlier graph to be useful and reflective on at least some reality. As I remember it, initial complaints about the hockey stick graph came from other experts in the area (several critics commented that the hockey stick was totally different than anything they had ever seen in that area of science), and also from historians. Perhaps the historians were a bit emotional about it,

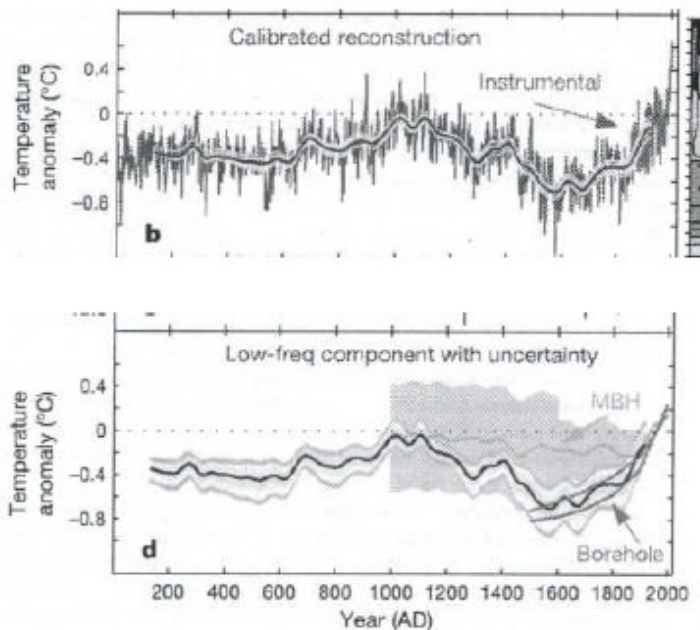
but its not hard to understand their nervousness - just think back at the nature of people throughout history who have burned books and asked that history be re-written - especially in the 20th century!!

Note that the hockey stick "splices" modern data onto proxy-derived earlier data. This splicing together of different data sources is a common fudge in the UN-IPCC. In cases like climate studies you are forced to do this because of the availability of datasets. But warnings and appropriate adjustments to the data are necessary, and one can easily change the adjustments to suit the message desired.

?Ironically, the "hockey stick" graph apparently does NOT appear in the ?summary part of Assessment Report 4 of May07, which surprises me.? Having the graph rejected scientifically should not have been a concern of the UN-IPCC - they've not cared before. Furthermore, I was kind of looking forward to the UN-IPCC out-doing itself in the scale of its lies. It really was a question of whether they would steal the title of "all time great liars" from the communists.

A more reliable temperature series (one of several) is from Khandekar's review of Jan07 This graph is originally from:

A Moberg et al "Highly variable northern hemisphere temperatures reconstructed from low- and high-resolution proxy data" Nature Vol. 433 (2005) p. 613-617

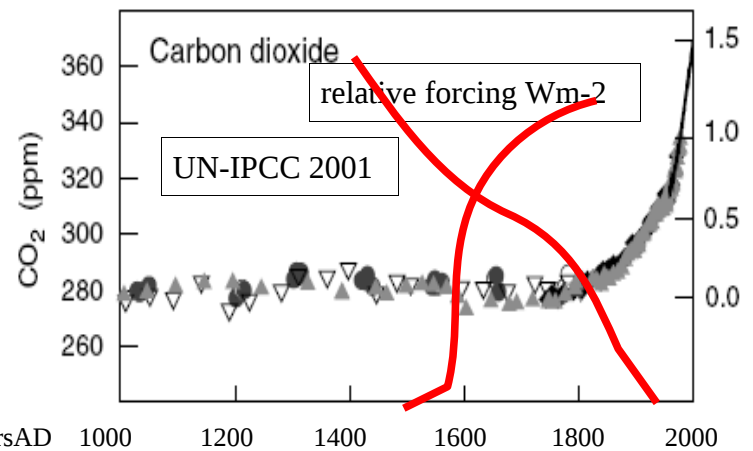
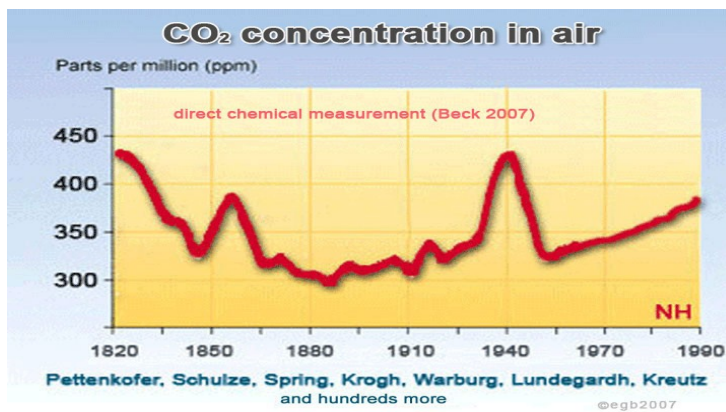


Here the significance of the Medieval Warm Period a thousand years ago, and its similarity to today's temperatures is readily apparent. Keep in mind that the historical proxy data probably does not represent short term spikes and variability as well as today's day-to-day measurements!

D. "Disappearing CO2 concentrations" D-Cubed thinking

As clearly shown by the following graphs, the public has been persistently mis-informed about CO2

concentrations in the atmosphere over the last millennium. Today's concentrations are probably LOWER than can be seen prominently in pre-industrial times.



Note that a ?1958 review by Callendar rejected most of the older chemical measurements that Ernst Beck refers to.? Was this reasonable? What was used as the proxy for chemical measurements (I hope not just the ice core CO2 data!!). These are questions for which I do not trust the UN-IPCC and many of the Kyotoists.

Again, keep in mind that the point here ISN'T that the "true" answer is Beck's graph. Nor is my statement that the ice core CO2 research itself a D-Cubed thinking. The issue is that it's completely inappropriate to mismatch datasets, ignore important contradictory data, and present a D-cubed analysis as being the incontestable truth. And far worse is to mis-apply it as another proof of the Kyoto Premise itself!

Another "great disappearance" of CO2 data may be the rejection as outliers of high CO2 concentrations from the Vostok and EPICA ice core data sets. While I haven't looked at original data to analyse this, an oblique reference in the EPICA 25Nov05 paper is anomalous, and leads me to suspect that fear of contamination has led to the rejection of valid, high [CO2] from the ice cores. If so, that would be a very serious breach of the integrity of the data, analysis and conclusions in the paper (the conclusions are somewhat disjoint from the data anyways - witness the timelag anomaly, as CO2 concentrations LAG temperature!!).

E. "Data splicing mismatch" D-Cubed thinking

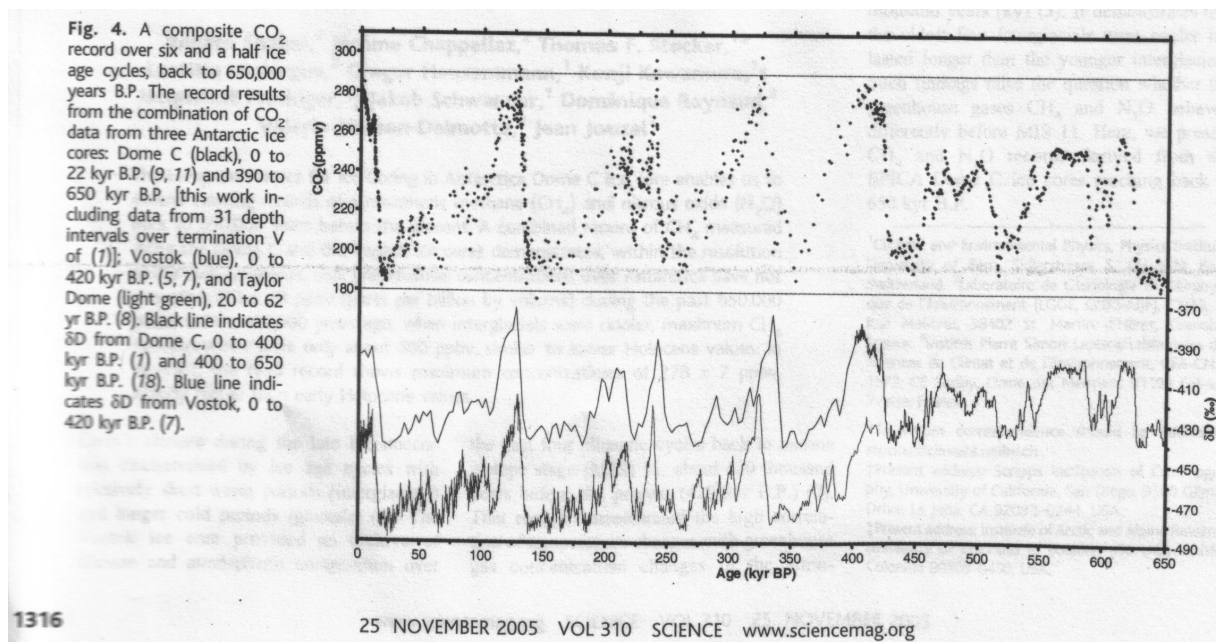
- 1) While Beck's "recent revelation" of the work of hundreds of researchers from 1800 to ?1900? is shocking, we didn't actually need the data to already smell a rat. Why are ice core results "spliced onto" modern direct atmospheric measurements, when everyone knows there tends to be an 800 year lag (say 85 to 3000 years) in the ice core CO2 measurements as compared to the oxygen 18 isotope measurements? In other words, "diffusion" or other mechanisms are used to explain the difference, and it is clearly possible that a kind of "temporal averaging" takes place, making direct comparisons inappropriate!
- 2) The same problem is suspected for ice core data. If I remember correctly, the 25Nov05 Science

journal article on the EPICA ice cores mentioned that anomalous data points were thrown out. Were some of these points as high, or higher than today's? Do they disappear in the 5 ky or whatever? data filtering? It is a horrible misrepresentation to compare 100 or 1000 year averages to day-by-day results!! Just think of what the average for the last 1000 years would look like.

There are probably many other examples, but what more do you really need? Point made and hopefully taken.

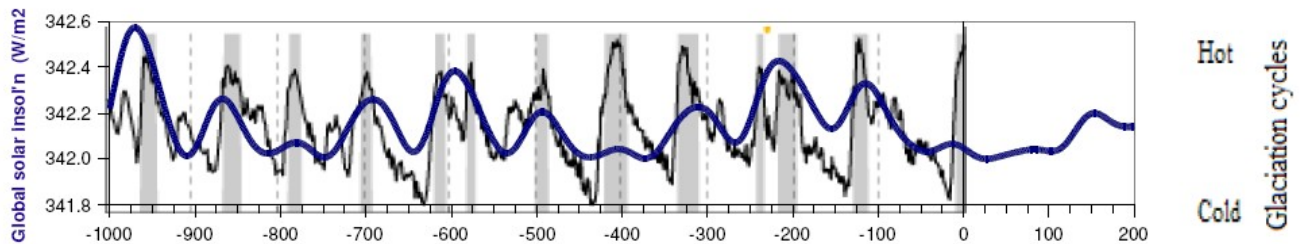
F. "CO₂ drives temperatures in the ice core data" D-Cubed thinking (One of Al Gores' favourites)

As with other "D-Cubed thinking" in this section, it is reasonable to hypothesize that CO₂ drives temperature in ice core data, and then work away to see if that can be proven. However, it is totally inappropriate to claim that that is what the data unequivocally suggests unless the statements are qualified by pointing out that a much more reasonable hypothesis is that the ice core results show that CO₂ is merely a function of temperature. (The hypothesis of feedback leveraging is a reasonable line of pursuit, as long as it is clearly stated that no analysis yet clearly supports that hypothesis.) Simple visual inspection of the temperature and CO₂ ice core time series shows that temperature leads CO₂ even after the authors have "shifted" the CO₂ to better agree with the timing of temperature series. Because temperature changes typically PRECEDE CO₂ changes it must be the driver (ignoring other variables, and measurement artifacts). It appears to me from the form of the two time series that temperature has "dynamics" that can explain the CO₂ behaviour, but not CO₂ cannot explain the temperature. That would also be a strong causation argument that temperature causes the changes in CO₂ and not the other way around. However, I have not yet analysed that last hunch.



The "CO2 drives" hypothesis fails in the light of past climate where CO2 concentrations were 5 to 50 times higher, even during times of glaciation. The hypothesis even fails to provide any "mechanism for why CO2 would change, whereas Milankovic theory for glaciations not only provides a great explanation, it also fits the data rather well. (see Didier Paillard's model).

Reference: Laskar et al www.Wikipedia.com www.BillHowell.ca

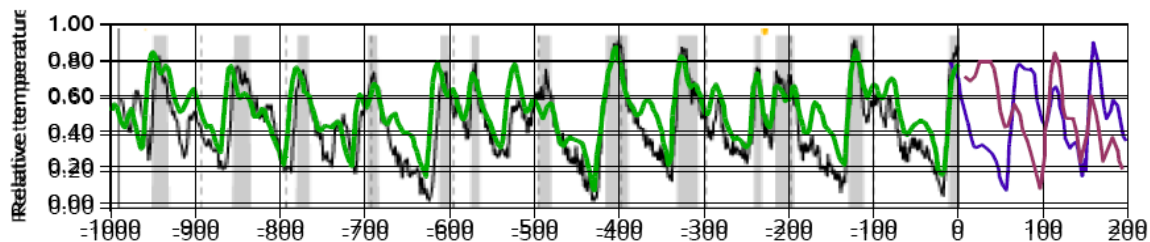


As far as I know, since Milankovic's papers in the '1930's', the best theory for glaciations is based on astronomical Milankovic cycles (a non-conventional view is shown above that utilises the global average solar insolation. Solar insolation at 65 North is typically used, and it looks even better.) There are definitely shortcomings in the theory, even in the more modern and robust equivalent as developed by Paillard, Parrenin 2004. In spite of being a very simple model with only a handful of parameters, their "threshold" model describes the last one million years of glaciation extremely well:

Reference: Frédéric Parrenin, Didier Paillard 2003

<http://glaciog.ujf-grenoble.fr/~parrenin/publications/download/articles/parrenin-paillard-EPSL2003.pdf>

Forecasts: Didier Paillard (2001)



Black curve: glaciation data, Green curve: best fit,

Burgundy: Paillard 0.75 forecast, Blue: Paillard 0.50 factor

Note: Paillard used a different temperature series based on marine delta 18O, whereas that shown is from ice core data (great generalization).

Data values hand entered from literature graph (approximate only).

The fits between data (black curve) and model (green curve) in the above figure is superb, especially for such a simple and robust model!! Note that the authors believe that CO2 can explain much of the thresholding behaviour, but they (like so many others) have failed to consider water vapour or any other mechanisms for that matter?, and the primary basis for the model remains astronomical in origin, which clearly has nothing to do with CO2. Furthermore, their CO2 explanation is very indirect (deep

Antarctic ocean circulation changes) and speculative. It is my guess that CO2 will prove to be insignificant once far more solid estimates and models for water vapour are incorporated. Again, they may ultimately prove to be right, but they cannot claim that their model strongly supports the "CO2 drives temperature" hypothesis over better theories (such as the Milankovic cycle, radiative forcing, and galactic rays modulated by the helio- and geo-magnetospheres).

CO2 levels over the last 1,000 years as commonly presented (ice core data) do NOT correlate with global temperatures, although I suspect that the ice core data commonly used may be subject to gas diffusion or other averaging effects. More recently, Beck [ref] and Jaworowski [ref] have shown that the ice core data does not represent actual atmospheric CO2 concentrations, which are far higher and quite variable over the last 200 years. This is what you would expect, as discussed in the "Data mismatch D-Cubed thinking" subsection.

But once again, the public has been misled for a long time into thinking that the ice core data is a strong proof of the "CO2 drives temperature" D-Cubed thinking. Luckily many non-scientists in the public are better judges than the majority of scientists, and many are not ready to swallow all of these stories.

G. *"Doubling of CO2 gives a 5 Celsius temperature rise" D-Cubed thinking*

H. *"CO2 increases since 1850 is due to industrial activity" D-Cubed thinking*

I. *"General Circulation Model (GCM) of climate" D-Cubed thinking*

This is one of the worst areas of scientific abuse and obfuscation. Here I am referring to the long series of climate models and their descendants, the ones based on "known physical processes" and validated by a huge international community.

Even though the GCM models

J. *"Ignore the correlations and use uncorrelated theories" D-cubed thinking*

Scientists seem to be so afraid of the traps and pitfalls of associations and correlations, that they almost seem to run away from them, and thereby are quick to based theories on UNCORRELATED theories. The Kyoto Premise is an awesome example of this - ongoing denial of solar and galactic hypothesis, and yet a religious believe in CO2 as the driver of recent climate when it correlates relatively poorly, and the data shows that it is an effect, not a cause!

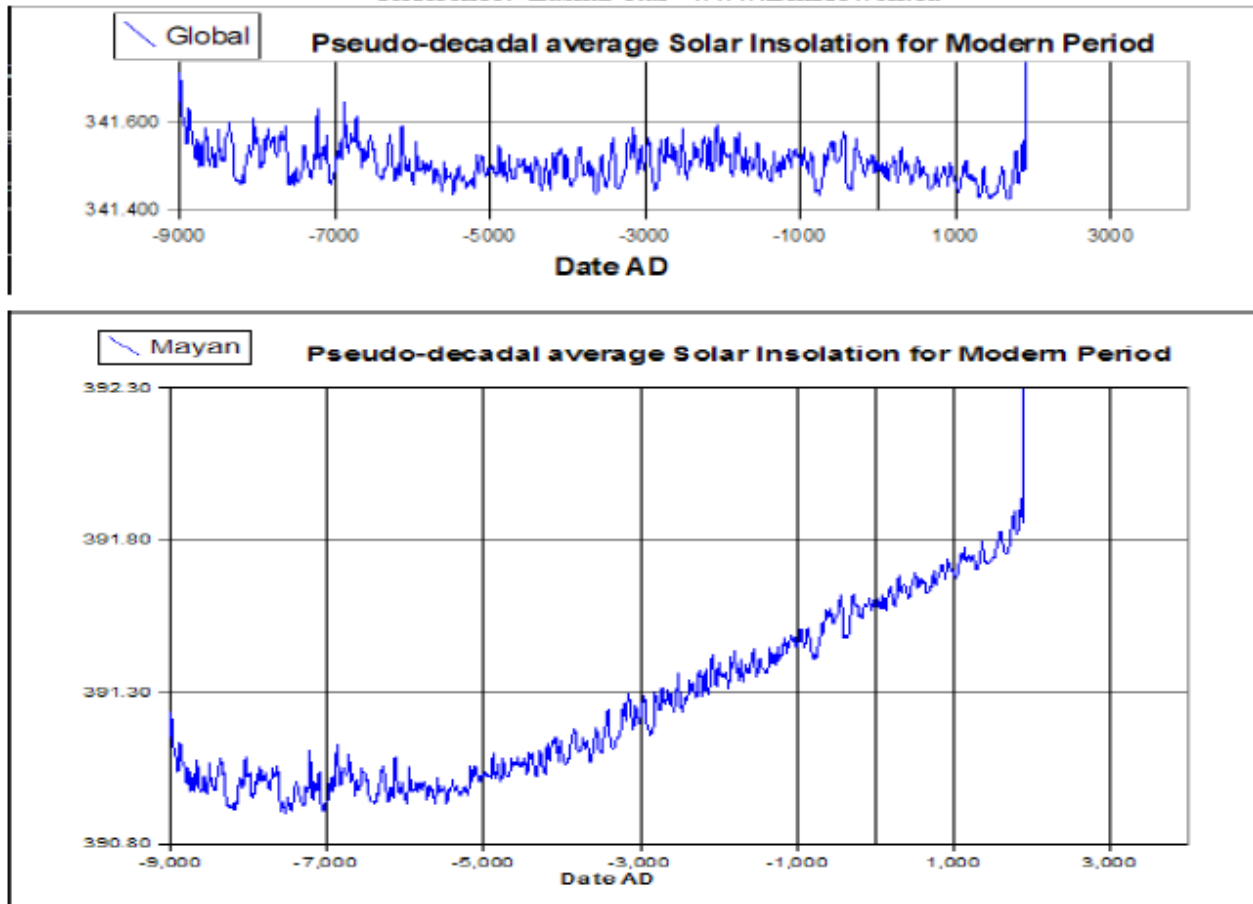
[Howell - other examples later...]

K. "We've never had it so bad" D-Cubed thinking

I am currently working on some really wacky ideas related that I have titled "Mega Life, Mega Death, and the invisible hand of the sun". The ideas are in a very early stage, and the heart of the analysis is only just starting. Still, through courses and extensive reading, I am struck by the huge impacts that have devastated many societies and civilisations in the past, and how large a role climate change (and other factors) has played. The following graphs are of solar activity, not temperature. (Ignore the vertical rise at the end of the data series, which is an anomaly).

Figure 12: Holocene period - global and regional insolation

Reference: Laskar et al www.BillHowell.ca



But in looking through current historical analysis of the rise and fall of civilisations and periods of great difficulty (Jared Diamond's "Collapse" for example), I am struck by the apparent lack of imagination of many modern scientists, who see the role of the climate, but do not seem to appreciate how really bad climate can get in a very short period of time. Historical shifts in climate have been

huge compared to the benign Modern Warm Period, and for many regions of major population, global cooling has far more severe consequences than global warming. (Although it can work the other way for other regions. My apologies to the Sudan and other regions faced with massive droughts, as my words are an "average" that ignore the plight of many). Moreover, these changes have been presumably driven by natural forces, Ruddiman's theory on anthropogenic CO₂ over the last 8,000 years notwithstanding. But even the historical climate shifts are miniscule compared to the extreme glaciation-associated changes.

This is definitely the impression that I also get from modern scientists in the Kyoto Premise camp - a lack of imagination in putting our current situation into the historical context of even the last 400 years. To some extent this is related to the next D-Cubed thinking on the list.

L. "Global warming is all bad" D-Cubed thinking

It's awe-inspiring how the communications surrounding the Kyoto Premise have blinded scientists and policy makers to the enormous BENEFITS of global warming, especially during modern times. Higher temperatures and CO₂ are awesome for much of the world's agricultural production (clearly not for areas undergoing desertification). It's hilarious to see Canadians completely blind to the opportunities of a warmer North!

It's just not worth spending much time on this obvious and catastrophic D-Cubed thinking.

M. "We are the holders of the truth so stop questioning us" D-cubed thinking

It seems that over history and across civilisations there are always privileged groups to make this claim, only to be shown to be frauds when it counted. From priests and pharaohs, to kings, barons, landowners, merchants, monopolists, communists,

N. "Let's burn the history books" D-cubed thinking

X. Is there ANY major basis of the Kyoto Premise that ISN'T D-Cubed thinking?

There is no doubt that the UN-IPCC reports cite a great deal of good research, and there is also no doubt that I am aware of only a small portion of what is out there. However, I am not aware of any significant "selling point" for believing the Kyoto Premise that isn't D-cubed in the sense used here:

It is entirely necessary for scientists to search for answers, try out sometimes crazy themes and publish results. But when a theme, concept or so-called theory is pushed as a truth, when countervailing science is suppressed and scientists of different opinion are systematically attacked, that IS D-cubed thinking in all its forms (Dishonest AND Delinquent AND Dysfunctional).

Surely there is something. Perhaps the greenhouse gas factors and underlying experiments hold something, or the current versions of GCMs have something well beyond what they had in the past. Unfortunately they have undermined their own credibility so badly that I won't believe in them until both my own review is satisfied, plus I see that traditional GCM critics are clearly comfortable that we aren't being fed another story.

Keep in mind that any of the D-cubed thinking listed in previous sub-sections could ultimately prove to be true, by luck or better data. But it's more likely that other theories will win out, and I'm convinced that climate behaviour will prove to be driven by entirely different mechanisms, many of which we have known for a very long time. And even if one or two of the "D-cubed thinking" turn out to be true, the point here is that the current data and analysis do not support categorical conclusions, or the trashing of other scientists.

But as I'm waiting for someone to point out any [honest AND competent AND diligent] line of reasoning to support the Kyoto premise, I'm certainly not holding my breath.

IV. Summary

In summary, I am not aware of ANY substantive and credible data/ analysis to support the hypothesis that man-made GHGs drive temperatures that are not better interpreted as:

1. temperature drives CO₂ - This conclusion should be the primary conclusion of the ice core data series, but even if scientist believe otherwise the alternative (which is the
2. water vapor is most likely the reason for the GHG effect, given its overall (near complete) dominance as a GHG. One would also expect the GHG effect of water vapor to be far more sensitive to moderate temperature variations than CO₂, given the phase changes that will occur (vapor, water, ice). Methane

Of course, it should be easy to attack the second statement. That it has not already been addressed in the papers promoting the Kyoto premise shows a major weakness on their part.

I think that its extremely important to point out that these failures most often arise from simple initial data and analysis, leaving little reason to have any confidence at all for the scientific community's consensus or ability to handle the far more complex parts of climate change behavior and impacts.

If you are a scientist who has strongly advocated the Kyoto Premise, if any of the "D-cubed thinking" above are a surprise to you, then you should probably really reassess how you go about your work, how or whether you think, and how and when you should be advocating ???policies based on KNOWN science with clear conclusions. What I'm suggesting is that you probably have a problem... and that advice for the public is more precious when some thought [and work, and critical review] has gone into it. Watching television with your mind shut off is not an alternative to thinking (although "subliminal" thinking enthusiasts would disagree with me).

If you are not a scientist who has been promoting the Kyoto Premise, if ANY of the points I raise in the above are news to you, and if you feel that my statements above are even close to being correct, then

you are probably wondering:

- Have most of the scientists lied to me, or persistently misled me, for ten years or more on some of these points?; and/or
- Given that most scientists are honest and honorable in their intentions, how could they be so off base for so long? and/or
- Why is it that so many "lay people", that is non-scientists who don't study or work with this issue as a living, seem to have intuitively better judgement than the experts? Farmers are a great example of this, as are the ancients.

My own guess is that there are very good scientists who are strong proponents of the Kyoto Premise, and who have a [competent AND honest AND diligent] basis of thinking supporting their conclusion. But I think that they are probably as rare as the early leaders of the "skeptics or deniers" pre-2002, that is to say, not more than five or ten scientists in Canada, ten times that number in the USA. As for the tens of thousands of other scientists who are keen supporters of the Kyoto Premise in Canada (from those riding the bandwagon with only a passive interest to worldwide experts), I suspect that almost all have been exhibiting D-cubed thinking (and by the definition of D-cubed thinking, that means in not inconsiderable amounts).

Ultimately, the "truth" could go in any direction, including many directions not yet conceived. But it's not whether we win or lose, it's how we play the science. [Howell 2007]

To conclude this section, let's reflect on the definition of D-cubed thinking as it pertains to individual scientists and modest teams:

D-cubed thinking -> dysfunctional **and/OR** dishonest **and/OR** delinquent

But for the Kyoto Premise movement as a whole, with the huge number of scientists involved with huge resources to tackle the science, all of the excuses disappear:

D-cubed thinking -> dysfunctional **AND** dishonest **AND** delinquent

There is little ambiguity about the communities involved either:

The Kyoto Premise is a fraud by government and academic research scientists, it is amplified by government policy analysts, and it is (of course) taken to a lunatic scream by environmentalists.

These are harsh words. Keep in mind that they are well in keeping with the Kyotoist opinions and attacks against the "non-believers", for whom they have even coined the term "Deniers" to draw a parallel to the Holocaust. This is how most of the "lost generation" of today's scientists thinks.

But the real point here is not to create a pessimistic "Heart of Darkness" regarding scientists in particular, nor humanity in general. The point is to RECOGNIZE our recurring and persistent failures, and to use that knowledge to free up our thinking, and to entertain different points of view.

And its clear that where rational thinking fails, progress is still possible through other modes of thinking (to be explained elsewhere). And that is the second big lesson to pull from the scientific

debacle.

But there is also something larger here. The Kyoto Premise is only one more of a long series of science fashions that transformed into a science cult, and then a science religion. In spite of that, science itself has continued to progress. Luckily, and so far at least, there have always been rare individuals willing to challenge the dogmas, new generations to trash the loosing dogmas of their forbearers. But there are plenty of examples of civilisations where that process was stifled and died, and for whom progress largely stopped. So let's not get too complacent!

In any case, the next Chapter A.2 will delve into the widespread nature of these failure of “rational, logical, and scientific” thinking by essentially all scientists.

endsection

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