

## Climate Change Revisited

George Rebane – 1dec07

Scientific truth is not the product of a democratic process. All noteworthy scientific discoveries and engineering developments were made by loners swimming against the tide of well-known and accepted knowledge. The more important and greater the discovery, the more it was at odds with the then current establishment. But as we have seen repeatedly, it only takes one person's correct argument to overturn the considered wisdom of the preceding age.

Today we have at least two camps on climate change – by far the largest are the true believers, or more properly, Post-Enquiry Adherents (PEAs) who enthusiastically answer YES! to all of the Five Questions about Anthropogenic Global Warming (AGW). These 5Qs were originally published in '[The Question of Anthropogenic Global Warming](#)' and are repeated below –

- 1. Is the current macro-climate of the earth historically unusual?*
- 2. Should the current dynamics of earth's macro-climate be a cause for alarm about the future of humankind?*
- 3. Assuming that the answers to #1 and #2 are both positive, to what extent are the dynamics of earth's macro-climate the result of human activity?*
- 4. Assuming that the answers to #1, 2, and 3 are all indicative, do we yet know what to do to guarantee that the dire predictions or something worse will not be the result of our planned intervention?*
- 5. Assuming that the answers to #1, 2, 3, and 4 are all supportive, is there anything that we humans are now prepared to do collectively to change the forecasted catastrophe for humankind?*

The smaller, rapidly growing camp is comprised of the Skeptics who are not yet prepared to accept the sweeping conclusions of the PEAs but continue to examine the data presented by both sides. This intolerable state of continued enquiry prompts the PEAs to label the Skeptics as the more pejorative 'Deniers'. Deniers has historically been attached to backward people known beyond debate to be in error, hence the final mantra of the PEAs – "The debate is over." It makes one think that perhaps there is another agenda behind the rush to accept and 'do something, anything!' about the certain advent of AGW.

In matters of science the debate is never over, and historically those seeking to end scientific debate have inevitably been shown to be wrong. Even the debate on Newton's 'law of gravity' is not yet over, and may today be entering into one of its most enlightening and revealing phases. That the 5Qs are so deeply disturbing to PEAs indicates, to me, that they either never considered this kind of structured enquiry or fear where its pursuit would ultimately lead them.

The most worthy attempt for a call to arms a global response to global warming, that I have seen, is summarized in a [video](#) by a certain “johnq5” that casts the argument in terms of utility and decision theory. The approach, though laudable, is in error due to its ‘hidden’ acceptance of priors (tenets believed to be axiomatically true before discourse starts), and its incomplete and over-simplified decision structure. A more comprehensive and therefore useful approach would be to begin with the 5Qs laid out into a decision tree that can capture the uncertainties related to our current state of knowledge. In a future piece I will illustrate that exercise.

Another interesting facet of the ongoing controversy (it’s no longer a debate since the PEAs do not wish there to be one) invisible to the great unwashed is that the scientific arguments presented by the Skeptics are never answered per se, i.e. addressing the essence of the science or data-based arguments. Instead the PEA’s response is simply drawn from a 1) personal attack on the Skeptic, 2) attack on the person(s) originating the data, and/or 3) ignoring the argument and simply trotting out one of the PEA holy cows – e.g. the notorious ‘hockey stick’, or the number of authors of the IPCC report, or the names of the societies/institutions which have issued policy statements in support of anthropogenic global warming. The PEAs consider such responses so logically compelling that nothing more need be said to return the still recalcitrant Skeptic into the padded cell of the Deniers.

As a Skeptic trained in science - particularly in the technologies of Bayesian decision theory, modeling of complex dynamic systems, and with a degree in physics thrown in – given the evidence I have seen, I am not prepared to join the PEAs, and strongly believe that the climate change debate must be rejoined within the bounds of reason as defined by the teachings of western civilization.

On the two powerful legs of Occam’s razor and falsifiability, it was western science that started Mankind’s epic march toward understanding the universe. Occam prescribed that if two competing theories could each explain the (hopefully repeatable) observations, then we should accept and proceed with the simpler of the two. Falsifiability is the strong prerequisite of a theory that requires it to produce explicit ‘true’ statements the negation of which by experiment would negate the theory. In short, if what you propose is such that there is no way to disprove it, then your proposal is an article of faith and not of science.

While not a Keynesian, I am among those in his debt for the oft-quoted reply to a reporter who pointed out an inconstancy in Lord Keynes’ pronouncements – “When new data is presented to me, I change my mind. What do you do?” Along with many other AGW skeptics, I await the new data.