Dear Skeptic (or anyone just plain not sure what to make of this issue),
I think understanding on this issue can only be made by first realizing that there are two main types of questions we are considering in this controversy. The first type are the scientific questions, which must of course be researched, analyzed and debated without political considerations by scientific experts qualified in the relevant areas of investigation (e.g., one doesn't ask their plumber to provide advice on dentistry). The second type of questions are political, economic and/or social questions, which should be informed by the scientific expert consensus, but ultimately decided by those political, economic or social experts with experience in the relevant areas under consideration with input from the democratic process.

As to the scientific questions there are three primary questions:

1. Are global temperatures rising?
2. Are humans producing increasingly high levels of CO2 in the atmosphere?
3. Can this increase in CO2 (and other greenhouse gases) explain the observed average global temperature rise?

These are all scientific questions and as mentioned previously, these must be considered using evidence based investigations by scientific experts with the relevant experience and resources. The other political and economic and social questions (e.g., what should we do, how much will it cost?), are entirely separate from the science questions and should have no bearing on the scientific process and its findings.

First let us observe that there is a scientific consensus on this first set of questions. Two types of studies (survey studies and literature search) have looked at the scientific consensus (Oreskes, 2007 and Doran and Zimmerman, 2009). The more recent survey study by Doran and Zimmerman found that 97% of professional climate scientists (and 90% of earth scientists in general) agree the answer to these three scientific questions is "yes". The lowest levels of consensus are found among meteorologists (64%) and economic geologists (47%), the latter statistic which brings to mind Upton Sinclair's observation that it is difficult to get a man to accept something if his livelihood depends on him not believing it! Oreskes confirms the overwhelming acceptance of the scientific consensus in the scientific literature, by scientists in this fiercely competitive and closely examined process.

In short, there is a robust scientific consensus despite the presence of a few contrarians (which are ubiquitous in every field of science). The lack of any alternative explanations by these contrarians for the observed CO2 and temperature changes confirms this.

Here's the larger issue on climate science for me: I'm not a climate expert and you're not a climate expert. But I assume that we both would agree that politics and ideology should not determine scientific results. Scientific data and scientific expertise should determine scientific results.

If the scientific conclusions are weak they will be rebutted, and they will be rebutted by scientific experts with scientific data. Not by politicians with an axe to grid or even scientists with expertise in other unrelated areas of science. Why can't just anyone have their own scientific opinions? For several excellent reasons as we will see. For one thing, it's not a matter of opinion, it's a matter of evidence. For another thing, it's not our day jobs. Sure we could quit our regular jobs, go to school and become trained in climate science and then possibly make a scientific contribution in this area, but it is generally more efficient to defer to physicists to figure out physics and chemists to figure out chemistry and biologists to figure out biology. And we defer to climate scientists to figure out climate science- or at least we should if we want it done properly.

That is why we have experts in the first place. They are better at their respective areas of expertise because they have done all their homework and it's been checked by other experts, many times. All trying to prove each other wrong based on the evidence and let the chips fall where they may. That's how you get a reputation in science and god forbid if you are caught cheating. That's why science works and why it gets results that are reliable in the first place.

Sure, you can bet against the science but the odds are against you, and if by chance your ideologically held position is eventually verified by the science (unlikely but possible in principle), you would have been correct for exactly the same reason that a stopped clock gives the right time twice a day. In other words, if you are untrained in the relevant areas of scientific expertise regarding a particular complex scientific question, by relying on your naïve intuitions, you have exactly as much chance of being right as flipping a coin (assuming a yes/no answer). Scientists have a much better batting average on these complex questions because they have the requisite training to evaluate the data properly and also a vested interest in finding where the science is weak and can be improved.

The bottom line is that scientists are not like normal people in some ways. Scientists desperately care about getting it right. They care about the truth, more than anything else.

That is the way it should be. So here's my problem with most skeptic climates: every climate skeptic I know is a free market, anti-regulation or libertarian conservative. Is that just a coincidence? Maybe, but I don't think so.

If the skeptical argument against AGW is truly scientific, wouldn't there be at least a few apolitical climate scientists (many scientists don't care at all about politics or religion) demonstrating the evidence against AGW? Because they would be famous IF they had some evidence on their side. In fact they would probably get a Nobel Prize. But we see no such scientists. In fact we see the opposite. Instead we see many scientists that are conservative libertarians and they DO accept the consensus AGW science!

Why? Because the evidence is overwhelming.

Yes there are a few climate scientists that don't fully accept AGW but when we look closer we find two things. First, they are all conservative politically, so one has to wonder whether this is affecting their objectivity. And second, as I is often overlooked, all (three or so) of those climate experts that have some doubts about AGW, all do accept the GW part of the science (the first two questions above), they just argue over the exact climate sensitivity value from CO2 doubling.

Now the current and best scientific consensus is that the climate sensitivity is large enough (2-4 degrees C) to be very important, but there are always contrarians. But that scientific GW position is very different from the vast majority of climate skeptics that won't even accept that the planet is warming in the first place.

By not accepting the overwhelming scientific consensus, the non-climate expert reveals that they are not driven by the science, instead they are selecting which science to accept based on personal intuitions- that is merely ideological driven cherry picking.

This situation is very similar to the observable fact that almost every single skeptic on evolutionary biology is a religious fundamentalist (this includes Christian and Muslim fundamentalists). I know of no exceptions to this pattern. Is this a coincidence too? Maybe, but I doubt it. I suspect that it's not the science they have a problem with, it's the possible implications of the science (e.g., if we are descended from animals, we will act like animals). So deny the science and prevent these possible moral or social implications from even being a possibility. Their religion has affected their objectivity with regard to the science. By the way, just because we are descended from fish doesn’t mean we have to act like a fish- after all, we aren’t fish!

The same I suspect is true for some climate skeptics, but in this case it's politics and not religion affecting their objectivity. Not all, but most of them.

So, my advice is: accept the science- you're not going to do a better job than the scientific experts and peer reviewed science. And if you do have a reasoned argument with some climate legislation, regulation or other political, economic or social issue related to climate change, well that is a totally reasonable place to have a discussion. But you can't argue the science unless you are an expert trained in that field. Well you can, but you're in danger of fooling yourself. And as Feynman said : "The first principle is that you must not fool yourself and you are the easiest person to fool".

Now maybe we should do nothing about CO2, just go ahead and burn carbon with little or no restrictions and just deal with the climate problems as they occur. The human race will survive probably. So that is a valid political/social position one could take. Not very nice to just kick the can down the road, but it's been done before and as has been noted: what have future generations ever done for us?

But none of these social/political/economic arguments should affect the scientific determination of the climate sensitivity factor for a doubling of CO2, nor for that matter one's acceptance of the science as a whole. For that determination (and other scientific determinations) we should rely on the best science we have, performed by experts that care about getting it right.

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