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## Unequivocal Equivocation – an open letter to Dr. Kevin Trenberth

by Willis Eschenbach

I would like to take as my text the following quote from the recent [paper](#) (PDF, 270k also [on web here](#)) by Dr. Kevin Trenberth:

*Given that global warming is “unequivocal”, to quote the 2007 IPCC report, the null hypothesis should now be reversed, thereby placing the burden of proof on showing that there is no human influence [on the climate].*



*Figure 1. The game of Monopoly's "Community Chest" card that was randomly drawn by Dr. Kevin Trenberth. Some guys are just lucky, I guess.*

The “null hypothesis” in science is the condition that would result if what you are trying to establish is not true. For example, if your hypothesis is that air pressure affects plant growth rates, the null hypothesis is that air pressure has no effect on plant growth rates. Once you have both hypotheses, then you can see which hypothesis is supported by the evidence.

In climate science, the AGW hypothesis states that human GHG emissions significantly affect the climate. As such, the null hypothesis is that human GHG emissions do not significantly affect the climate, that the climate variations are the result of natural processes. This null hypothesis is what Doctor T wants to reverse.

As Steve McIntyre has often commented, with these folks you really have to keep your eye on the pea under the walnut shell. These folks seem to have sub-specialties in the “three-card monte” sub-species of science. Did you notice when the pea went from under one walnut shell to another in Dr. T’s

quotation above? Take another look at it.

The first part of Dr. T's statement is true. There is general scientific agreement that the globe has been warming, in fits and starts of course, for the last three centuries or so. And since it has been thusly warming for centuries, the obvious null hypothesis would have to be that the half-degree of warming we experienced in the 20th century was a continuation of some long-term ongoing natural trend.

But that's not what Dr. Trenberth is doing here. Keep your eye on the pea. He has smoothly segued from the IPCC saying "*global warming is 'unequivocal'*", which is true, and stitched that idea so cleverly onto another idea, '*and thus humans affect the climate*', that you can't even see the seam.

The pea is already under the other walnut shell. He is implying that the IPCC says that scientists have "unequivocally" shown that humans are the cause of weather ills, and if I don't take that as an article of faith, it's my job to prove that we are *not* the cause of floods in Brisbane.

Now, lest you think that the IPCC actually did mean that 'humans are the cause' when they said (in his words) that 'global warming was "unequivocal"', here's their full statement from the IPCC Fourth Assessment Report [Summary For Policymakers](#) (2007) (PDF, 3.7 MB):

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level (see Figure SPM-3).

Despite the vagueness of a lack of a timeframe, that is generally true, but it says nothing about humans being the cause. So he is totally misrepresenting the IPCC findings (which he helped write, remember, so it's not a misunderstanding) to advance his argument. The IPCC said nothing like what he is implying.

Gotta love the style, though, simply proclaiming by imperial fiat that his side is the winner in one of the longest-running modern scientific debates. And his only proffered "evidence" for this claim? It is the unequivocal fact that Phil Jones and Michael Mann and Caspar Amman and Gene Wahl and the other good old boys of the IPCC all agree with him. That is to say, Dr. T's justification for reversing the null hypothesis is that the IPCC report that Dr. T helped write agrees with Dr. T. That's recursive enough to make Ouroboros weep in envy ...

And the IPCC not only says it's true, it's "unequivocal". Just plain truth wouldn't be scientific enough for those guys, I guess. Instead, it is "unequivocal" truth. Here's what "unequivocal" means (emphasis mine):

***unequivocal: adjective: admitting of no doubt or misunderstanding; having only one meaning or interpretation and leading to only one conclusion ("Unequivocal evidence")***

Notice how well crafted Dr. T's sentence is. After bringing in "global warming", he introduces the word "unequivocal", meaning we can only draw one conclusion. Then in the second half of the sentence, he falsely attaches that "unequivocal" certainty of conclusion to his own curious conclusion, that the normal rules of science should be reversed for the benefit of ... well, not to put too fine a point on it, he's claiming that normal scientific rules should be reversed for the benefit of Dr. Kevin Trenberth and the IPCC and those he supports. Probably just a coincidence, though.

For Dr. Trenberth to call for the usual null hypothesis (which is that what we observe in nature is, you know, natural) to be reversed, citing as his evidence the IPCC statement that the earth is actually warming, is nonsense. However, it is not meaningless nonsense. It is pernicious, insidious, and dangerous nonsense. He wants us to spend billions of dollars based on this level of thinking, and he has cleverly conflated two ideas to push his agenda.

I understand that Dr. T has a scientific hypothesis. This hypothesis, generally called the “AGW hypothesis”, is that if greenhouse gases (GHGs) go up, the temperature must follow, and nothing else matters. The hypothesis is that the GHGs are the master thermostat for the globe, everything else just averages out in the long run, nothing could possibly affect the long-term climate but GHGs, nothing to see here, folks, move along. No other forcings, feedbacks, or hypotheses need apply. GHGs rule, OK?

Which is an interesting hypothesis, but it is woefully short of either theoretical or observational support. In part, of course, this is because the AGW hypothesis provides almost nothing in the way of a statement or a prediction which can be falsified. This difficulty in falsification of the hypothesis, while perhaps attractive to the proponents of the hypothesis, inevitably implies a corresponding difficulty in verification or support of the hypothesis.

In addition, a number of arguably cogent and certainly feasible scientific objections have been raised against various parts of the hypothesis, from the nature and sign of the forcings considered and unconsidered, to the existence of natural thermostatic mechanisms.

Finally, to that we have to add the general failure of what few predictions have come from the teraflops of model churning in support of the AGW hypothesis. We haven't seen any acceleration in sea level rise. We haven't seen any climate refugees. The climate model [Pinatubo prediction](#) was way off the mark. The number and power of hurricanes hasn't increased as predicted. And you remember the coral atolls and Bangladesh that you and the IPCC warned us about, Dr. T, the ones that were going to get washed away by the oncoming Thermageddon? Bangladesh and the [atoll islands](#) are both getting bigger, not smaller. We were promised a warming of two, maybe even three tenths of a degree per decade this century if we didn't mend our evil carbon-loving ways, and so far we haven't mended one thing, and we have seen ... well ... zero tenths of a degree for the first decade.

So to date, the evidentiary scorecard looks real bad for the AGW hypothesis. Might change tomorrow, I'm not saying the game's over, that's AGW nonsense that I'll leave to Dr. T. I'm just saying that after a quarter century of having unlimited funding and teraflops of computer horsepower and hundreds of thousands of hours of grad students' and scientists' time and the full-throated support of the media and university departments dedicated to establishing the hypothesis, AGW supporters have not yet come up with much observational evidence to show for the time and money invested. Which should give you a clue as to why Dr. T is focused on the rules of the game. As the hoary lawyer's axiom has it, if you can't argue facts argue the law [the rules of the game], and if you can't argue the law pound the table and loudly proclaim your innocence ...

So now, taking both tacks at once in his paper, Dr. T. is both re-asserting his innocence and proposing that we re-write the rules of the whole game ... I find myself cracking up laughing over my keyboard at the raw nerve of the man. If he and his ideas weren't so dangerous, it would be truly funny.

Look, I'm sorry to be the one to break the bad news to you, Dr. T, but you can't change the rules of scientific inquiry this late in the game. Here are the 2011 rules, which curiously are just like the 1811 rules.

**First**, you have to **show that some aspect of the climate is historically anomalous or unusual**. [As far as I know](#), no one has done that, including you. So the game is in serious danger before it is even begun. If you can't show me *where* the climate has gone off its natural rails, if you can't point to where the climate is acting unusually or anomalously, then what good are your explanations as to *why* it supposedly went off the rails at some mystery location you can't identify?

(And of course, this is exactly what Dr. T would gain by changing the rules, and may relate to his desire to change them. With so few examples to give to support his position, after a quarter century of searching for such evidence, it would certainly be tempting to try to change the rules ... but I digress.)

But perhaps, Dr. T., perhaps you have found some such climate anomaly which *cannot* be explained as natural variation and you just haven't made it public yet.

If you have evidence that the climate is acting anomalously, then **Second**, you have to **show that the anomaly can be explained by human actions**. And no, Dr. T., you can't just wave your hands and say something like "*Willis, the IPCC sez you have to prove that what generations of people called 'natural', actually is natural*". There's an arcane technical scientific name for that, too. It's called "*cheating*", Dr. T., and is frowned on in the better circles of scientific inquiry ...

(N.B. – pulling variables out of a tuned computer model and then proudly announcing that the model doesn't work without the missing variables doesn't mean you have established that humans affect the climate. It simply means that you tuned your computer model to reproduce the historical record using all the variables, and as an inevitable result, when using only part of those variables your model doesn't do as well at reproducing the historical record. No points for that claim.)

**Third**, you have to **defend your work**, and not just from the softball questions of your specially selected peer reviewers who "know what to say" to get you published in scientific journals. In 2011, curiously, we've gone back to the customs of the 1800s, the public marketplace of ideas — except this time it's an electronic marketplace of ideas, rather than people speaking from the dias and in the halls of the Royal Society in London. If you won't stand up and publicly defend your work, it's simple – you won't be believed. And not just by me. Other scientists are watching, and considering, and evaluating.

This doesn't mean you have to reply to every idiot with a half-baked objection and a tin-foil hat. It does mean that if you refuse to answer serious scientific questions, people will take note of that refusal. You must have noticed how such refusal to answer scientific questions totally destroyed the scientific credibility of the website RealClimate. Well, they're your friends, so perhaps you didn't notice, but if not, you should notice, here's an [example](#). (PDF, 147K) Running from serious scientific questions, as they make a practice of doing at RealClimate, makes you look weak *whether you are or not*.

And **Always**, you have to **show your work**. You have to archive your data. You have to reveal your computer algorithms. You have to expose everything that supports and sustains your claims to the brutal light of public inquiry, warts and all.

Dr. T., I fear you'll have to get used to the sea change, this is not your father's climate science. The bottom line is we're no longer willing to trust you. You could publish in the Akashic Records and I wouldn't believe what you said until I checked the figures myself. I'm sorry to say it, but by the actions of you and your colleagues, you have forfeited the public's trust. You blew your credibility, Dr. T, and you have not yet rebuilt it.

And further actions like your current attempt to re-write the rules of science aren't helping at all. Nor is trying to convince us that you look good with a coat of the finest English whitewash from the "investigations" into Climategate. Didn't you guys notice the lesson of Watergate, that the coverup is more damaging than the original malfeasance?

Dr. T, you had a good run, you were feted and honored, but the day of reckoning up the cost is has come and gone. Like some book said, you and the other un-indicted co-conspirators have been weighed in the balances, and found wanting. At this point, you have two choices — accept it and move on, or bitch about it. I strongly advise the former, but so far all I see is the latter.

You want to regain the trust of the public, for yourself and for climate science? It won't be easy, but it can be done. Here's my shortlist of recommendations for you and other mainstream climate scientists:

- **Stop trying to sell the idea that the science is settled.** Climate science is a new science, we don't even have agreement on whether clouds warm or cool the planet, we don't know if there are

thermostatic interactions that tend to maintain some temperature in preference to others. Or as you wrote to Tom Wigley, Dr. T,

How come you do not agree with a statement that says we are no where close to knowing where energy is going or whether clouds are changing to make the planet brighter. We are not close to balancing the energy budget. The fact that we can not account for what is happening in the climate system makes any consideration of geoengineering quite hopeless as we will never be able to tell if it is successful or not! It is a travesty!

SOURCE: email 1255550975

Curious. You state strongly to your friend that we're not close to knowing where the energy is going or to balancing the energy budget, yet you say in public that we know enough to take the most extraordinary step of reversing the null hypothesis ... how does that work again?

At this point, there's not much about climate science that is "unequivocal" except that the climate is always changing.

- **Don't try to change the rules of the game in mid-stream.** It makes you look desperate, *whether you are or not.*
- **Stop calling people "deniers"**, my goodness, after multiple requests that's just common courtesy and decency, where are your manners? It makes you look surly and uncivilized, *whether you are or not.*
- **Stop avoiding public discussion and debate of your work.** You are asking us to spend *billions of dollars* based on your conclusions. If you won't bother to defend those conclusions, don't bother us with them. Refusing to publicly defend your billion dollar claims make it look like you can't defend them, *whether you can or not.*
- **Stop secretly moving the pea under the walnut shells.** You obviously think we are blind, you also clearly believe we wouldn't remember that you said we have a poor understanding of the climate system. Disabuse yourself of the idea that you are dealing with fools or idiots, and do it immediately. As I have found to my cost, exposing my scientific claims to the cruel basilisk gaze of the internet is like playing chess with Deep Blue ... individual processors have different abilities, but overall any faults in my ideas will certainly be exposed. Too many people looking at my ideas from too many sides for much to slip through. Trying anything but absolute honesty on the collective memory and wisdom of the internet makes you look like both a fool and con man, *whether you are one or not.*
- **Write scientific papers that don't center around words like "possibly" or "conceivably" or "might".** Yes, *possibly* all of the water molecules in my glass of water might be heading upwards at the same instant, and I could *conceivably* win the Mega-Ball lottery, and I *might* still play third base for the New York Yankees, but that is idle speculation that has no place in scientific inquiry. Give us facts, give us uncertainties, but spare us the stuff like "*This raises the possibility that by 2050, this could lead to the total dissolution of all inter-atomic bonds ...*". Yeah, I suppose it could. So what, should I buy a lottery ticket?
- **Stop lauding the pathetic purveyors of failed prophecies.** Perhaps you climate guys haven't noticed, but Paul Ehrlich was not a visionary genius. He was a failure whose only exceptional talent is the making of apocalyptic forecasts that didn't come true. In any business he would not have lasted one minute past the cratering collapse of his first ridiculous forecast of widespread food riots and worldwide deaths from global famine in the 1980s ... but in academia, despite repeating his initial "We're all gonna crash and burn, end of the world coming up soon, you betcha" prognostication method several more times with no corresponding crashing burning or ending, he's still a professor at

Stanford. Now that's understandable under tenure rules, you can't fire him for being a serially unsuccessful doomcaster. But he also appears to be one of your senior AGW thinkers and public representatives, which is totally incomprehensible to me.

His string of predicted global catastrophes that never came anywhere near true was only matched by the inimitable collapses of the prophecies of his wife Anne, and of his cohorts John Holdren and the late Stephen Schneider. I fear we'll never see their like again, a fearsome foursome who between them never made one single prediction that actually came to pass. Stop using them as your spokesmodels, it doesn't increase confidence in your claims.

- **Enough with the scary scenarios, already.** You've done the Chicken Little thing to death, give it a rest, it is sooo last century. It makes you look both out-of-date and hysterical *whether you are or not*.
- **Speak out against scientific malfeasance whenever and wherever you see it. This is critical to the restoration of trust.** I'm sick of watching climate scientists doing backflips to avoid saying to Lonnie Thompson "Hey, idiot, archive *all* of your data, you're ruining all of our reputations!". The overwhelming silence of mainstream AGW scientists on these matters is one of the (unfortunately numerous) reasons that the public doesn't trust climate scientists, and justifiably so. You absolutely must clean up your own house to restore public trust, no one else can do it. Speak up. We can't hear you.
- **Stop re-asserting the innocence of you and your friends.** It makes you all look guilty, *whether you are or not* ... and since the CRU emails "unequivocally" favor the latter possibility, it makes you look unapologetic as well as guilty. Whether you are or not.
- **STOP HIDING THINGS!!!** Give your most private data and your most top-secret computer codes directly to your worst enemies and see if they can poke holes in your ideas. If they can't, then you're home free. *That* is true science, not hiding your data and [gaming the IPCC rules](#) to your advantage.
- **Admit the true uncertainties.** The mis-treatment of uncertainty in the IPCC reports, and the underestimation of true uncertainty in climate science in general, is a scandal.
- **Scrap the IPCC.** It has run its race. Do you truly think that whatever comes out of the next IPCC report will make the slightest difference to the debate? You've had four IPCC reports in a row, each one more alarmist than the previous one. You've had every environmental organization shilling for you. You've had billions of dollars in support, Al Gore alone spent \$300 million on advertising and advocacy. You've had 25 years to make your case, with huge resources and supercomputers and entire governments on your side, and you are still losing the public debate ... after all of that, do you really think another IPCC report will change anything?

If it is another politically driven error-fest like the last one, I don't think so. And what are the odds of it being an honest assessment of the science? Either way the next IPCC report won't settle a single discussion, even if it is honest science. Again, Dr. T, you have only yourself and your friends to blame. You used the IPCC to flog bad science like the Hokeyschtick, your friends abused the IPCC to sneak in papers y'all favored and keep out papers you didn't like, you didn't check your references so stupid errors were proclaimed as gospel truth, it's all a matter of record.

Do you truly think that after Climategate, and after the revelations of things like IPCC citations of WWF propagandist pieces as if they were solid science, and after Pachauri's ludicrous claim that it was "voodoo science" to point out the Himalayan glacier errors, after all that do you think anyone with half a brain still believes the IPCC is some neutral arbiter of climate science whose ex-cathedra pronouncements can be relied upon?

Because if you do think people still believe that, you really should get out more. At this point people

don't trust the IPCC any more than they trust you and your friends. Another IPCC report will be roundly ignored by one side, and cited as inerrant gospel by the other side. How will that help anyone? Forget about the IPCC, it is a meaningless distraction, and get back to the science.

That's my free advice, Dr. T., and I'm sure it's worth every penny you paid for it. Look, I don't think you're a bad guy. Sadly for you, but fortunately for us, you got caught hanging out with the bad boys who had their hands in the cookie jar. And tragically for everyone, all of you were seduced by "noble cause corruption". Hey, it's nothing to be ashamed of, it's happened to me too, you're not the first guy to think that the nobility of your cause justified improper actions.

But as far as subsequently proclaiming your innocence and saying that you and your friends did nothing wrong? Sorry, Dr. T, the jury has already come in on that one, and they weren't distracted by either the nobility of your cause, nor by the unequivocal fact that you and your friends were whitewashed as pure as the driven snow in the investigation done by your other friends ... instead, they noted your emails saying things like:

In that regard I don't think you can ignore it all, as Mike [Mann] suggests as one option, but the response should try to somehow label these guys a[s] lazy and incompetent and unable to do the huge amount of work it takes to construct such a database.

Indeed technology and data handling capabilities have evolved and not everything was saved. So my feeble suggestion is to indeed cast aspersions on their motives and throw in some counter rhetoric. Labeling them as lazy with nothing better to do seems like a good thing to do.

SOURCE: email 1177158252

Yeah, that's the ticket, that's how a real scientist defends his scientific claims ...

w.