

The Climate On Facebook

Todd Tanner

(Web links are underlined and in **blue.)**

I was on the web the other day when I ran across a friend's Facebook post casting doubt on climate science. I should have ignored it - trying to change minds on the internet is typically a waste of time - but for some reason I didn't. Instead, I fired off a heavy-handed response that, whether or not it did any good, at least made me feel like I'd set the record straight. With any luck, that would have been the end of it.

Luck, though, was apparently out of town on vacation. Another commenter on the thread took me to task for what I had to say, and now I find myself in the uncomfortable position of having to respond to a man who wears his ignorance like a badge of honor.

I could, of course, simply move on. And there's something to be said for that approach. I suppose I could also tell him to go frack himself - a response that, despite its inherent shortcomings, is simple enough that he might actually understand it. But at the end of the day, making fun of someone else's cluelessness is the easy way out. No, I should look at this as an opportunity to practice my craft. So here goes:

Climate change is inherently a moral issue. The people who say there's nothing to it - it hasn't been proven; it's a hoax; it's a communist plot; it's a liberal attempt to institute a one-world government; it's a way for scientists to keep the big money rolling in - have neither science nor logic on their side. Let's look at the science first.

The [U.S. National Academy of Sciences](#), the most respected scientific body on the planet, says: "Climate change is occurring, is very likely caused primarily by the emission of greenhouse gases from human activities, and poses significant risks for a range of human and natural systems. Emissions continue to increase, which will result in further change and greater risks. In the judgment of this report's authoring committee, the environmental, economic, and humanitarian risks posed by climate change indicate a pressing need for substantial action to limit the magnitude of climate change and to prepare for adapting to its impacts."

A shorter version of that same statement is NAS's assertion that climate change is a "[settled fact](#)."

So [who agrees with the NAS?](#)

[NASA](#)

[NOAA](#)

[American Association for the Advancement of Science](#)

[American Astronomical Society](#)

[American Chemical Society](#)

[American Geophysical Union](#)

[American Institute of Physics](#)

[American Meteorological Society](#)

[American Physical Society](#)

[Australian Meteorological and Oceanographic Society](#)

[Australian Bureau of Meteorology and the CSIRO](#)

[British Antarctic Survey](#)

[Canadian Foundation for Climate and Atmospheric Sciences](#)

[Canadian Meteorological and Oceanographic Society](#)

[Environmental Protection Agency](#)

[European Federation of Geologists](#)

[European Geosciences Union](#)

[European Physical Society](#)

[Federation of American Scientists](#)

[Federation of Australian Scientific and Technological Societies](#)

[Geological Society of America](#)

[Geological Society of Australia](#)

[Geological Society of London](#)

[International Union for Quaternary Research \(INQUA\)](#)

[International Union of Geodesy and Geophysics](#)

[National Center for Atmospheric Research](#)

[National Oceanic and Atmospheric Administration](#)

[Royal Meteorological Society](#)

[Royal Society of the UK](#)

Academia Brasileira de Ciencias (Brazil)

Royal Society of Canada

Chinese Academy of Sciences

Academie des Sciences (France)

Deutsche Akademie der Naturforscher Leopoldina (Germany)

Indian National Science Academy

Accademia dei Lincei (Italy)

Science Council of Japan

Academia Mexicana de Ciencias (Mexico)

Russian Academy of Sciences

Academy of Science of South Africa

And who disagrees? Which major scientific organization says that climate change is a hoax? Not one. Crickets.

But what about the climate scientists themselves? What do they think? Well, according to the following peer-reviewed scientific studies:

[Oreskes \(2004\)](#)

[Doran \(2009\)](#)

[Anderegg \(2010\)](#)

[Cook \(2013\)](#)

An overwhelming majority of climate scientists - approximately 97% - agree with our National Academy of Sciences that the earth is warming, that people are responsible, and that we're putting our future at risk.

Is there a peer-reviewed study that disputes these findings? No, there is not.

So here's what we've learned so far. Every major scientific organization on the planet, along with 97% of our climate scientists, believe that our CO2 emissions are heating up the earth. How can we be sure that's correct? Because I just gave you specific links that will enable you to verify my claims. And I'm not linking to bloggers who live in their parents' basements, or to partisan political hacks, or to "experts" funded by the fossil fuel industry; I'm linking to peer-reviewed science and reputable stories about peer-reviewed science.

Okay, next question. What does this warming look like? Is there a graph that makes it easily understandable? Yes, there is. It's the World Meteorological Organization graph that convinced the Washington Post to use this headline: [You Can't Deny Global Warming After Seeing This Graph](#). Go ahead. Click on the link and see if the Post is right. Personally, I'd amend the headline to say "No Rational Person Can Deny Global Warming After Seeing This Graph" - simply because irrational folks are able to deny pretty much anything.

Two final points on the science. The first is that some climate doves have argued that global warming is a good thing; that we would actually benefit from a warmer planet. Well here are [some of the things that our scientists predict](#). Which ones sound beneficial? How about:

Stronger storms.

More severe flooding.

Longer, more extreme droughts.

Sea level rise and coastal inundation.

Larger, more catastrophic wildfires.

Dying forests.

Massive heat waves.

Ocean acidification.

The second point is on the empirical side. We - that's you and I - can actually see all these things starting to happen. Which means that these impacts aren't merely

theoretical; we are beginning to experience them right here in the United States. Our dry areas [are getting drier](#). Our wet areas [are getting wetter](#). [2012 was the hottest year on record in the U.S.](#) Huge wildfires [are torching the West](#). Our oceans [are becoming more acidic](#). Our [forests are dying](#). Everything the scientists have predicted is happening before our eyes. Here in Montana, our winters start later and end earlier - and they aren't as cold as they used to be. Our snowpack melts earlier, and spring comes earlier. Runoff finishes earlier. Wildfire season starts a month earlier and runs a month (or more) later. Precipitation is declining. Rivers run lower and warmer in the summer. Smoke fills our skies. Pine beetles, which are no longer controlled by cold temperatures, are decimating our forests. These problems aren't conjecture - they're creating headlines in our local newspapers.

Okay, that's enough about the science, and about climate impacts. I could go on and on, but if I haven't made my point by now, another 10 pages of accurate scientific information isn't likely to help. Now let's turn to the moral aspects of climate change.

As an American, and as a father, I don't believe it's moral, or ethical, for us to play Russian Roulette with our future, or with the lives of our children and our grandchildren. Yet that's exactly what climate doves and climate deniers do on a daily basis. Even though they aren't scientists themselves, they dispute [the overwhelming scientific consensus](#). There's not a person alive who can say with certitude that our scientists are wrong about climate change. Nor is there a person alive who can guarantee that our kids and grandkids won't suffer because we're injecting more than [30 billion tons of CO2](#) into the atmosphere every year. As [Lonnie Thompson](#), the famous climate scientist and glaciologist, said a few years ago:

“Climatologists, like other scientists, tend to be a stolid group. We are not given to theatrical rantings about falling skies. Most of us are far more comfortable in our laboratories or gathering data in the field than we are giving interviews to journalists or speaking before Congressional committees. Why then are climatologists speaking out about the dangers of global warming? The answer is that virtually all of us are now convinced that global warming poses a clear and present danger to civilization.

That bold statement may seem like hyperbole, but there is now a very clear pattern in the scientific evidence documenting that the earth is warming, that warming is due largely to human activity, that warming is causing important changes in climate, and that rapid and potentially catastrophic changes in the near future are very possible. This pattern emerges not, as is so often suggested, simply from computer simulations, but from the weight and balance of the empirical evidence as well.”

How, in the face of that statement, can any rational, ethical human being deny climate change? How can someone have the temerity to call it a hoax? How, as they lay in bed at night, can climate doves & deniers avoid asking themselves, ***“Dear God, what if the overwhelming number of climate scientists are right, and what if I'm wrong about***

global warming?” How can they ignore the headlines about extreme storms and massive wildfires and put everything they care about - their country, their home, their children - at risk? Especially when the scientific community - the same scientific community that is responsible for every major scientific breakthrough and technological innovation of the last 100 years - is begging us to cut our greenhouse gas emissions dramatically?

Here’s the thing. The doves & deniers simply can’t allow themselves to have a rational discussion about climate change. They can’t even consider the possibility that they’re wrong. They’re stuck in a tin-foil-hat conundrum of their own making, where climate change can’t be real because the solutions are too expensive, or too onerous, or too closely aligned with people on the other side of the political aisle; where continued blind faith in con artists and partisan ideologues - and in the fossil fuel companies that have a huge stake in maintaining the status quo - is the only acceptable course of action.

I don’t believe that climate change should be a political issue. It definitely shouldn’t be a partisan line in the sand. And I honestly couldn’t care less if someone is a Democrat or a Republican; a liberal, a moderate or a conservative. We all need to accept what our scientists are telling us, and what we’re seeing with our own eyes, and work together to create the best possible solutions. Anything less is an abdication of our moral responsibility and a giant “Fuck You!” to future generations of Americans.

(A side note for all my hardcore libertarian friends. To quote climate hawk Joe Romm, "If you hate government intrusion into people’s lives, you’d better stop catastrophic global warming, because nothing drives a country more towards activist government than scarcity and deprivation.")

One final point. We should take just a second to consider the implications of our actions. If we address climate change now and, through some miracle, it turns out that all our top scientists are wrong and climate change isn’t a serious issue, we will still have weaned ourselves away from our addiction to fossil fuels, we will have stepped back from an ever-more-expensive form of energy, we will have stopped sending huge amounts of money to foreign dictators and terrorists, we will create healthier landscapes, we will avoid the potentially horrific impacts of ocean acidification, and we will enshrine America as the leader in the global clean energy economy.

If, however, our scientists are right and we don’t act - if we prove ourselves a generation of Neville Chamberlains and piss away our future through inaction and sheer, irrational stubbornness, then our children and our grandchildren will curse our names as they wade through disaster after disaster of our making.

No patriotic American should ever elevate his or her partisan political beliefs over our country’s safety and welfare. No parent should ever put his or her child at risk because he, or she, is unwilling to accept what our National Academy of Sciences describes as a [“settled fact.”](#) We have a moral & ethical responsibility to ourselves, and to our children, to accept the best available science and address climate change while there’s still time.

Anything less, any abdication of this duty, falls somewhere between depraved indifference and pure evil. Choose well, because the future will not be kind to people who spit on science and put America at risk.

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Author's note: This is a rough draft in response to comments on a Facebook post. I'll likely clean this up and publish it at some point over the next month or two.