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Smog and Mirrors: the Facts and Fictions of Climate Change

In 1998, *Nature* published the most controversial paper in the history of climate science. "Global-scale temperature patterns and climate forcing over the past six centuries," by Michael E. Mann et al, reconstructed global temperature averages back to 1400. The abstract declared that "Northern Hemisphere mean annual temperatures for three of the past eight years are warmer than any other year since (at least) AD 1400" (Mann, 1998), with carbon emissions the dominant cause. Mann et al included a graph supporting their claim that the global average temperature had been declining a fraction of a degree per century until the 20th century, when it shot up, almost vertically. Mann's "hockey stick" graph, as it came to be known, triggered panic. Fear of the global warming apocalypse swept the nation, perhaps best exemplified in Al Gore's Oscar-winning documentary *An Inconvenient Truth.*

Yet some scientists, senior NASA climatologist Dr. Roy Spencer foremost among them[1], were skeptical that such a crisis-inducing study did not trigger more criticism. Now they and many others suppose that Mann's methodology, rooted in North American tree-ring samples, was not nearly robust enough to support his apocalyptic claims. They have pointed to archaeological and meteorological evidence suggesting that in reality, Earth produces its own radical climate variations as a consequence of various natural weather phenomenon such as the Pacific Decadal Oscillation (PDO). While the hockey stick's flawed methodology assumes human responsibility and disregards even the possibility of natural causes, meteorology suggests that climate may vary naturally, with or without human help.

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[1] Also notable: Stephen McIntyre, Ross McKitrick.

Many politicians and scientists, as well as seemingly all mainstream journalists, speak of global warming as a manmade carbon emissions crisis. In the July/August 2017 issue of *Popular Science,* Rachel Feltman wrote that "2016 was the hottest year on record since humans began keeping track" (2017). But she doesn't note that in 2017, global averages have actually declined, as shown by Dr. Spencer's latest graph (2017). Neither does she elaborate on why a warming trend barely over a century long constitutes an apocalypse, in the grand timescale of the 4.5 billion year old Earth. Finally she cites no data showing why it is certain that carbon emissions have anything to do with such increases. Indeed, manmade warming is a given. But it is not just mainstream media that advocates such a bold view. The IPCC's 2013 "Summary for Policy-makers" declared that "human influence has been the dominant cause of the observed warming since the mid-20th century," and that if carbon emissions were not reduced, disaster would follow (Kosolosky, 2015). University of Oxford Professor of Moral Philosophy John Broome suggests in "The Ethics of Climate Change" that "[I]f the world is to do something about climate change, some people—chiefly the better-off among the current generation—will have to reduce their emissions of greenhouse gases to save future generations from the possibility of a bleak existence in a hotter world" (Broome, 2008). Indeed popular consensus seems to agree that Earth warms due to humanity's carbon emissions.

But as Spencer puts it, "Scientific knowledge is not a matter of consensus, as if scientific truth were something to be voted on. It is either true or not true" (Spencer 153). Indeed, closer inspection of Mann's data and other activist publications reveals flawed methodology and even deliberate forgery, suggesting instead that Earth is not any hotter today than it was one thousand years before industrial emissions. Thus, although Earth is warming, the planet's current temperature is (1) not actually unprecedented, (2) not apocalyptic, and—largely—(3) not humanity's fault. In fact Mann derived his temperature averages from tree-ring measurements of

two forests in North America: one group of California Bristlecones, and a group of Cedars on the Gaspe Peninsula in Quebec. More alarming, annual temperature estimates before 1421 were based on a *single* Quebecois cedar tree. (Steyn, 2015, p.*v*). Even though Mann's hockey stick really represented two groups of North American trees, it was assumed that these values would fairly represent global averages. In truth Mann had no reason for assuming that those measurements indicated reliable averages, and not a fluke of two species in two forests on a single continent. Additionally Craig Loehle (2008) showed that the thermometer-based warming trends after 1950 are not reflected in tree-ring data of the same years, which raises the possibility that Mann's tree rings also underrepresented temperatures. Thus, not only did Mann's study lack variation of tree species and tree locale, but the tree-ring method itself has been shown to be flawed. Mann's standards of methodology, then, do not at all match the grandiosity of his claims. Consequently the sensational debate over whether the Earth is warmer today than in 1400 hinges on a single Quebecois cedar tree, and a contested sample method.

In addition the IPCC and other major climate scientists sometimes innocently misinterpreted, other times deliberately manipulated data and peer review in order to present humanity as responsible for warming. Tree and ice core records have shown that in the 9th century A.D., global average temperatures rose higher than they are today, before dropping back down again (Spencer, 2012). That this occurred long before industrial carbon emissions proves that Earth's climate changes drastically with or without human influence. One wonders why the political and scientific establishment was not more critical when Mann's paper did not show this Medieval Warm Period. In one blatant corruption of science for political reasons, an IPCC scientist declared in an email to a colleague, "We have got to get rid of the Medieval Warm Period" (Horner, 2008, p.102). That the IPCC deliberately plotted to obscure the temperature of this era, which was already under-estimated due to the nature of tree-ring measurements (Loehle,

2008), represents a chilling proof of scientific fraud. The IPCC, Al Gore, and other pseudo-scientific authorities promoted the Mann-made climate crisis not because of its scientific merit, but because they wanted to.

In reality climate change may be attributable to the Earth's natural climate processes, such as the Pacific Decadal Oscillation. Mann's original paper, on the one hand, raised only (1) the sun, (2) volcanoes, and (3) greenhouse-gases as potential sources of heat that could be radically increasing Earth's temperature (Mann, 1998, pp.1). But if carbon emissions can explain all warming trends, why do Mann's own graphs show warming before the 1940s industrial boom, and cooling during the '40s booming war industry, when carbon dioxide was spewing into the atmosphere faster than ever before? (Spencer, 2012, p.115). Other research had considered the possibility that the Earth's natural weather forces, such as El Niño, La Niña, and the Pacific Decadal Oscillation, could themselves generate heat (p.111). Mann's paper was revolutionary exactly because it rejected the preeminent view and argued instead that humanity was *entirely* responsible (p.105). Astrophysicists like James Hansen (who predicted in the '70s that the glaciers would melt entirely by 2021) assume that weather obeys Newtonian laws of motion—a body does not change behavior until acted on by an outside force—but "meteorologists understand that the processes controlling clouds, 'nature's sunshade,' are myriad and complex…" (Spencer, 2012, pp.106). Therefore whereas paleo-climatologists assume that only outside forces can change Earth's temperature, most meteorologists agree (p.106) that weather causes climate change.

The specific nature of natural climate change hinges on heat fluctuations from the Pacific Decadal Oscillation, which influences cloud behavior. Clouds in turn either do not form, allowing the sun to heat the Earth directly, or they do form, reflecting solar irradiance back into

space, keeping the planet cool (p.119). Clouds hence represent the natural climate force that paleo-climatologists overlooked, and meteorologists saw.

See figure 1. One might say that the graphs don't correlate, since temperature dropped in 1900-1910 while the PDO index was positive. Temperature rose in 1970 right after the PDO index dropped. And temperatures after 2000 rise while PDO index drops. But like a pot of water on a stove, Earth's atmosphere does not heat instantly after the PDO flips to a warm period. Notice that after the PDO's positive index between 1900-1910, the the next decade shows a rise in global temperature. Notice, secondly, that after the PDO flattened out in 1940, global temperature continued rising for another year. Then the PDO plummeted, and soon so did the temperature. Notice, thirdly, that for each back and forth in the PDO after 1980s, the temperature graph shows a corresponding flat area 2-3 years afterward.

In sum Spencer estimates that up to 75% percent of this century's warming can be attributed to decreasing cloud activity caused by the PDO, our ancient Earth's own chaotic weather cycle. Twenty-five percent (25%) of recent warming, on the other hand, does seem attributable to carbon emissions (p.120). Mann and his team, therefore, have radically overestimated manmade warming by overlooking a critical natural phenomenon[2] which has been shown to influence temperature.

Although some insist that the "scientific consensus" demands action, in truth the debate is far from closed. Michael Mann's hockey stick simply lacks the robust methodology necessary to prove its lofty claims. Indeed at least some—perhaps most—of this century's warming seems

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[2] It should be noted as a measure of journalistic integrity that Spencer's PDO theory is, of course, not uncontested. See figure 3, which shows the same data in a way that doesn't indicate correlation. I am not a statistics expert, but I find figure 3 suspicious because it places on the same graph two phenomenon which cannot be measured in the same units. The y-axis of Figure 1, for example, advertises correlation by displaying PDO index at high resolution. The y-axis of Figure 3, on the other hand, disguises correlation by displaying PDO index at a low resolution which downplays its habit for preceding global temperature changes. In climate science more than any other discipline, it seems, scientific truth depends on who graphs the data. This constitutes activism, not science.

accountable to natural phenomenon. This presentation of the dreaded climate-deniers' reasoned critiques calls for the end of the unscientific factionalism which hitherto has obstructed true scientific discourse. Let the true climate-change debate begin.

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Figure 1 (Spencer, 2015, p.110)

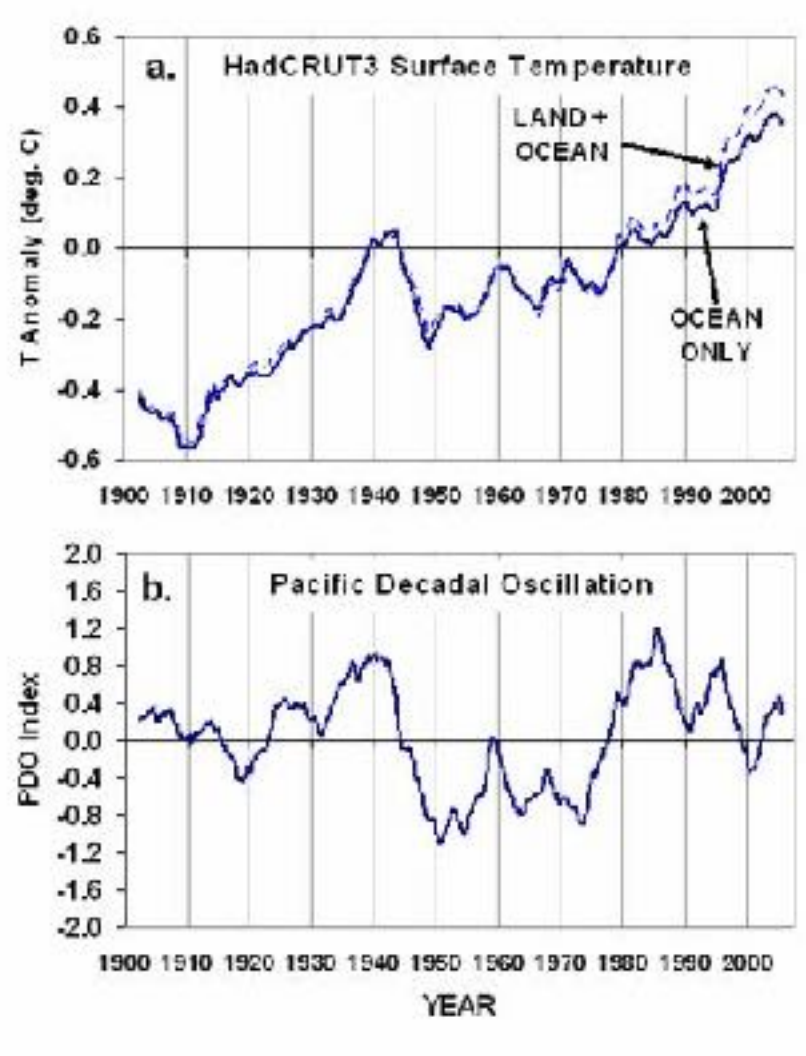

Figure 2: “The hockey stick” (Mann, 1998, p.5)

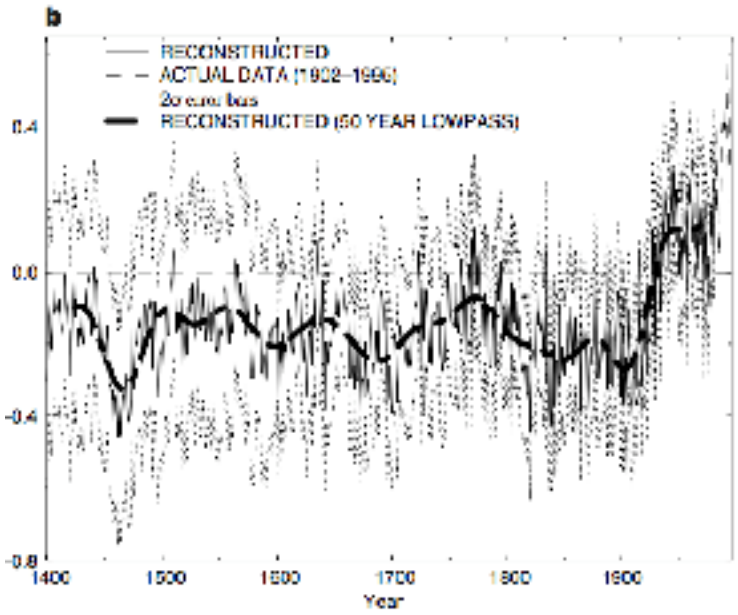

Figure 3 (Skeptical Science, 2010)