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Wretched week for a typical trio of climate contrarians

Last week was a rough one for climate contrarians Matt Ridley, Patrick Michaels, and Murry Salby

By: Dana Nuccitelli - July 19, 2013

This past week, three relatively high-profile climate contrarians took something of a scientific and reputational beating. Let's review.

Matt Ridley vs. Phil Plait on the Hockey Stick

Writer Matt Ridley penned his final column for *The Wall Street Journal*'s "Mind over Matter," discussing that his 'skepticism' about dangerous climate change is based on the so-called "hockey stick" temperature graph supposedly being wrong, and the historical ice core climate record supposedly showing that carbon dioxide increases are driven by temperature changes rather than vice-versa.

Phil Plait of Slate's Bad Astronomy did a very nice job debunking these two misconceptions last week using peer-reviewed research via the website Skeptical Science (to which I am a contributor). Regarding the "hockey stick" (a study led by Michael Mann in 1998–1999 which shows that global warming over the past century has happened at a rate unprecedented in the past two millennia), Plait correctly pointed out,

"...in the time since the original graph was published there have been numerous other reconstructions using many different methods, and they show that the hockey stick graph is largely accurate."

Indeed, every single reconstruction of temperatures over the past 2,000 years created since Mann's paper was first published 15 years ago shows the same general hockey stick shape - relatively flat temperatures (the shaft) followed by a steep rise (the blade) over the past century. This was most recently confirmed by the Past Global Changes (PAGES) 2k network, which published a paper in the prestigious journal *Nature* involving 78 researchers contributing as co-authors from 60 separate scientific institutions around the world. Each researcher involved in the study was an expert in local temperature reconstructions in his or her region. When they put all of their data together, their result matched Mann's hockey stick nearly perfectly.

Matt Ridley vs. Phil Plait on the CO2-Temperature Correlation

The close historical relationship between carbon dioxide and global surface temperature changes was made famous by Al Gore in *An Inconvenient Truth*. Climate contrarians like Matt Ridley have since argued that this graph is deceptive because the carbon dioxide increase follows behind the temperature increase rather than vice-versa, and that carbon dioxide is thus less of a concern than we're led to believe. There is a nugget of truth to this argument, but the full picture

is much more complicated. Perhaps the best study on this subject was published in 2012, also in *Nature*, by a team led by Jeremy Shakun at Harvard and Columbia universities.

Their study found that there has historically been a seesaw effect beginning with the Earth's orbital cycles triggering an initial warming, first reflected in the Arctic. This Arctic warming melted large quantities of ice, causing fresh water to flood into the oceans. This influx of fresh water then disrupted ocean circulations, in turn causing a seesawing of heat between the hemispheres. The Southern Ocean warmed, causing a release carbon dioxide into the atmosphere, which in turn caused the entire planet to warm via the increased greenhouse effect. Overall the study found that about 93 percent of global warming happened *after* the rise in carbon dioxide. When considering all the scientific evidence, the data are fully consistent with carbon dioxide being the "control knob" that governs the Earth's temperature.

On both points Plait was right that Ridley's arguments were misleading at best. However, Ridley quickly responded with another column in *The Wall Street Journal*. Ironically, Ridley tried to refute Plait's peer-reviewed research-based points with references to climate contrarian blogs, then had the audacity to claim, "*Mr. Plait really should do his journalistic research better*." Plait responded with yet another debunking of Ridley's arguments using peer-reviewed research. It was a rough week for Matt Ridley.

Shauna Theel holds Patrick Michaels Accountable

On the same day as Plait's second debunking of Ridley (10 July 2013), Shauna Theel of Media Matters published a devastating piece detailing the right-wing think tank Cato Institute's Patrick Michaels' history of wrong climate predictions and assertions. Michaels has admitted that his funding comes heavily from the fossil fuel industry, and he has a history of making misleading (at best) climate arguments by deleting inconvenient data.

Theel's whole article is well worth reading. For example, in 1992 Michaels wrote,

"Here's an easy prediction: By the year 2000, plus or minus a few, the vogue environmental calamity will be an ice age."

Quite obviously that "easy prediction" was totally wrong. In 1999 Michaels again made a wrong global cooling prediction:

"I'll take even money that the 10 years ending on December 31, 2007, will show a statistically significant global cooling trend in temperatures measured by satellite."

During that decade, one of the satellite lower atmosphere temperature data sets showed a modest warming trend, the other showed a slight cooling trend. Neither was even close to being statistically significant, because short-term data are noisy, which is why climate changes are generally evaluated over periods of at least 30 years.

In January 2013, Michaels again predicted global cooling:

"it's a pretty good bet that we are going to go nearly a quarter of a century without warming."

Is anybody foolish enough to bet that the third time is the charm for Michaels' global cooling predictions?

Mashey and Readfearn expose Murry Salby

Murry Salby is a researcher formerly at the University of Colorado-Boulder, who moved to Australia to work for Macquarie University in 2008. In 2011, Salby began giving presentations arguing that the rise in atmospheric carbon dioxide is natural rather than human-caused. He claimed to have a paper detailing his findings submitted and undergoing review at a scientific journal, but two years later, no such paper has been published. Last week, Macquarie University sacked Salby, who claimed that his termination was due to his contrarian climate position.

A number of climate contrarian blogs and Rupert Murdoch's *The Australian* published pieces critical of the university based on Salby's accusations, many without first checking the facts or asking for Macquarie's side of the story. This distinct lack of skepticism from these self-proclaimed climate "skeptics" was followed by explanations for the firing from Macquarie University, telling a very different story of an employee who was terminated for failing to meet his contractual teaching obligations. Macquarie University also directly refuted the story in *The Australian*.

John Mashey and The Guardian's Graham Readfearn decided to research Salby's legal history and came up with some stunning findings. Salby had previously been banned for three years from accessing US taxpayer-funded science research money after the National Science Foundation (NSF) found that Salby's "*actions over a period of years displays a pattern of deception, a lack of integrity, and a persistent and intentional disregard of NSF and University rules and policies*."

The NSF report found that Salby had funneled himself hundreds of thousands of dollars in government grant money through a for-profit company he created, of which he was the sole employee. To justify his salary payments to the NSF, Salby claimed to be working for this company for an average of 14 hours per day for 98 consecutive days, which aside from being entirely implausible, would also have left him no time to fulfill his university obligations. The NSF concluded that Salby's behavior was likely fraudulent, but by the time the report was completed, Salby had resigned from the University of Colorado and moved to his job at Australia's Macquarie University.

Potentially fraudulent and unethical behavior aside, what about the scientific credibility of Salby's arguments? They too are entirely lacking in quality. We know that humans emissions are responsible for 100 percent of the atmospheric carbon dioxide increase from simple basic accounting. Humans are emitting approximately 30 billion tons of carbon dioxide per year, and the amount in the atmosphere is increasing by approximately 15 billion tons per year (the other half is absorbed by the oceans, which in turn is causing ocean acidification, known as "global warming's evil twin"). Quite simply, human greenhouse gas emissions cannot magically vanish.

Salby's argument is based on a mathematical error detailed in papers published by two of my colleagues, Gavin Cawley and Mark Richardson. In short, Salby and others who make this same mistake confuse the natural contribution to the short-term wobbles in atmospheric carbon dioxide with the contribution to the long-term trend, which is unquestionably due to human emissions. This is as settled as science gets, as noted above, proven based on simple accounting. Those who wish to be considered climate "skeptics" should think twice about unskeptically accepting the claims of someone with Salby's history and with his obviously fundamentally wrong climate arguments.

This Week Wasn't Much Better for Climate Contrarianism

I should also mention that this week was another rough one for contrarians, with my debunking of Andrew Neil's factually challenged climate claims on BBC Sunday Politics. I also had to refute an error-riddled climate piece from *The Economist* – not normally a climate contrarian publication, but which for some reason published a journalistically irresponsible climate article yesterday.

Standard Climate Contrarianism

While these revelations and debunkings of climate contrarians all coincidentally happened in the past two weeks, the real issue is that this is the norm for climate contrarians. They base their arguments for climate inaction on long-debunked myths and misunderstandings. Many have predicted and continue to predict that any day now the planet will start cooling, when in reality the climate continues to build up heat at a rate equivalent to 4 Hiroshima atomic bomb detonations per second.

The bottom line is that conservative think tanks and media outlets like the Cato Institute, Heartland Institute, *Wall Street Journal*, and *The Australian* have a long history of being wrong on climate change and publishing factually wrong articles from climate contrarians. They only serve as a distraction from solving the climate crisis, and they should be ignored until they stop denying the problem and begin participating in a constructive discussion of solutions. I hope *The Economist* and BBC won't continue to follow their horrid examples.