~~Global Warming~~, ~~Climate Change~~, Er, Climate Volatility: 2012 and Beyond

Jonathan A. Lesser

The strikethrough above is not the result of the editor's failure to remove "redlined" changes. Rather, it reflects the ongoing metamorphosis of environmental doomsayers to failed predictions about the earth's climate. Perhaps because global warming was not sufficiently scary to the public, or perhaps because every time former Vice President Al Gore would speak on the subject, his speech would be accompanied by heavy snow or record cold temperatures, global warming became "climate change."

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Of course, the climate has always changed. In the last millennium we have experienced both mini ice ages and periods where temperatures were much warmer than today. Oddly, it was during the latter that humanity most flourished, enjoying more bountiful harvests that created healthier populations more resistant to disease. After all, Greenland was so named by the Scandinavians not because of the mile-thick ice sheets that now cover it, but because they were able to farm there. Nor has the litany of predicted impacts from climate "change" decreased, such as attacks by vampire bats,[1] greater levels of mental illness,[2] and (I am not making this up) space aliens destroying the earth because humans are not eco-friendly.[3]

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Now, the new mantra is "climate volatility," because "volatility" is a scary word. Every day there are stories about stock market "volatility," the "volatility" of oil prices, and so forth. Some electric utilities are fighting deregulation because of the threats posed by "volatile" market prices, even if those volatile prices would still be lower than the steady-as-she-goes, cost-based

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ones. In short, volatility is the cockroach scampering along the kitchen floor you recoil from when the lights are turned on.

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Thus, climate alarmists are now focusing on climate "volatility": more heat waves, heavier rains, flashier floods, and snowier snowfalls, all being caused by carbon emissions. The wildfires that plagued Texas last summer, which burned 1,500 homes and left two people dead, and the continuing drought in that state, were held up by President Obama as "proof" of climate change: "You've got a governor whose state is on fire denying climate change."[4] The actual cause of the wildfires was trees and branches falling onto power lines because of high winds. (To answer the inevitable question, yes, high winds must be caused by climate change.)

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On November 18, 2011, the United Nations' Intergovernmental Panel on Climate Change (IPCC), released a summary of a forthcoming special report on climate extremes. However, despite stating that, "[c]limate extremes, exposure, and vulnerability are influenced by a wide range of factors, including anthropogenic climate change, natural climate variability, and socioeconomic development,"[5] the report focuses solely on human-induced climate change as the cause of "extreme" weather.

WHATEVER IT IS, IT'S CAUSED BY CLIMATE CHANGE

There are a number of problems with this latest focus on climate "volatility." The first is a statistical one. "Extreme" climate events are just that: extreme. That means that they are rare.

Determining a statistically significant change in "extreme" events is more difficult than determining whether there has been a change in, say, the average.[6] For example, it is relatively straightforward to compare average annual rainfall over the last 30 years and determine whether it has changed significantly from the average of the 30 years before that. But if last summer a large thunderstorm dumped five inches of rain in Dallas and this summer a large thunderstorm dumped six inches of rain in Houston, is that an example of more "extreme" weather?

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According to NASA Chief Scientist James Hansen, one of the most vocal defenders of all things climate change, it would be. Recently, for example, he coauthored a paper claiming that the Moscow heat wave of 2010 and the Texas wildfires were "proof" of climate change based on what is called a "three sigma" event.[7] However, the "proof" is based on three false assumptions: that the statistical distribution of summer temperatures is normal (i.e., a bell-shaped curve); that there is no correlation between summer temperatures from year to year; and that regions like Moscow and Texas are "unique."[8]

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In essence, the new mantra of climate "volatility" is a theory that "explains" every weather event, whether heat wave, cold snap, drought, flood, or plagues of locusts and frogs. But a theory that "proves" every climate event is no theory, because it is not testable against a null hypothesis.

WHERE THERE'S SMOKE, WILL THERE BE FIRE?

Because this issue of *Natural Gas & Electricity* focuses on predictions for the coming year,

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how will this newest twist to the global warming/climate change debate fare? In a word, poorly.

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The US and world economies, both of which continue to sputter, will remain at the forefront of the political "do something" crowd. With the Solyndra debacle worsening, along with the green energy/green jobs mantra fading,[9] the likelihood of any action from Congress to enact climate-change policies that increase the energy prices is nil. But this does not mean that no political action affecting energy prices will be taken.

This does not mean that no political action affecting energy prices will be taken. Such actions will be taken and already have been.

Such actions will be taken and already have been. The president's postponement of a decision to approve the TransCanada Keystone XL pipeline, which would transport oil from Alberta's tar sands to Texas, is one example. The US Department of Agriculture recently cancelled a mineral lease auction for Wayne National Forest (WNF) in Ohio, which will postpone any shale gas development there, despite there already being 1,300 oil and gas wells in operation there currently. Moreover, there continue to be looming new rules from the US Environmental Protection Agency regulating air and water pollution from coal-fired power plants and large industrial sources, such as cement manufacturers.

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Nevertheless, with the focus on jobs and the economy, as well as the upcoming presidential election in November, specific policies to curb greenhouse gas emissions will not be forthcoming from Congress. Of course, expect a long, hot summer with more extreme levels of gaseous emissions of the political type. That is a statistical guarantee.

Expect a long, hot summer with more extreme levels of gaseous emissions of the political type.

NOTES

1. Moreno, M. (2008). Modeling changes in vampire bat distributions in response to climate change: Implications for rabies in North America. Presented at the 19th International Conference on Rabies in the Americas, Atlanta, GA, September 28–October 3, 2008.
2. The Climate Institute. (2011). *A climate of suffering: The real cost of living with inaction on climate change.* Retrieved from http://www.climateinstitute.org.au/our-publications/reports/874-aclimateofsuffering. The author of this column expresses his regrets to any readers who may be driven crazy by what he writes.
3. Baum, S., Hagg-Mistra, J., & Domagal-Goldman, S. (2011). Would contact with extraterrestrials benefit or harm humanity? A scenario analysis. *Acta Astronautica*, 68, 2114–2129.
4. German, B. (2011, September 26). Perry: Obama's climate jab 'outrageous.' The Hill. Retrieved from http://thehill.com/blogs/e2-wire/e2-wire/183805-perry-camp-calls-obamas-climate-jab-outrageous.
5. Intergovernmental Panel on Climate Change (IPCC). (2011, November 18). *Special report on managing the risks of extreme events and disasters to advance climate change adaptation (SREX)*; p. 1. Retrieved from http://www.ipcc.ch/news_and_events/docs/ipcc34/SREX_FD_SPM_final.pdf.
6. There is a branch of statistics focused on "extreme value theory." See, e.g., Pickands, J. (1975). Statistical inference using extreme order statistics. *Annals of Statistics*, 3(1), 119–131, that discusses "general extreme values" (GEV) analysis. For a recent application of GEV to climate, see Sousa, P. M., Trigo, R. M., Aizpurua, P., Nieto, R., Gimeno, L., & Garcia-Herrera, R. (2011). Trends and extremes of drought indices throughout the 20th century in the Mediterranean. *Natural Hazards and Earth System Sciences*, 11(special issue), 33–51.
7. Hansen, J., Sato, M., & Ruedy, R. (2011, November). *Climate variability and climate change: The new climate dice.* Retrieved from http://www.columbia.edu/~jeh1/mailings/2011/20111110_NewClimateDice.pdf. Sigma is the measure of standard deviation of a statistical distribution.
8. For a discussion of why these three assumptions are false, see Pilsen, L. (2011, November). James Hansen and 3-sigma "proofs." Retrieved from http://motls.blogspot.com/2011/11/james-hansen-and-3-sigma-proofs.html.
9. See my previous column, (2011, November). Sunburnt: Solyndra, subsidies, and the green jobs debacle. *Natural Gas & Electricity*, 28(4), 30–32.

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