

The New York Times

Freezing Out the Bigger Picture

By Justin Gillis
February 10, 2014

At the exact moment President Obama was [declaring](#) last month that “[climate change](#) is a fact,” thousands of drivers in Atlanta were trapped in a grueling winter [ordeal](#), trying to get home on roads that had turned into ribbons of ice.

As the president addressed Congress and the nation in his State of the Union speech, it was snowing intermittently outside the Capitol. The temperature would bottom out later that night at 13 degrees in Washington, 14 in New York, 1 in Chicago, minus 6 in Minneapolis — and those readings were toasty compared to some of the lows earlier in January.

Mr. Obama’s declaration provoked head-shaking from Congressional climate deniers, and unleashed a stream of mockery on Twitter. “As soon as he mentioned ‘climate change’ it started snowing on Capitol Hill,” said a [post](#) from [Patrick J. Michaels](#), a climate skeptic at the Cato Institute.

The chortling was predictable, perhaps, but you do not necessarily have to subscribe to an anti-scientific ideology to ask the question a lot of people are asking these days:

If the world is really warming up, how come it is so darned cold?

The question might say more about how humans perceive the world than it does about the climate. After all, in principle, we are all supposed to know that climate and weather are not the same thing. But we have a strange tendency to think that whatever is happening to us right now must be happening everywhere.

Scientists refer to *global* warming because it is about, well, the globe. It is also about the long run. It is really not about what happened yesterday in Poughkeepsie.

The entire United States, including Alaska, covers less than 2 percent of the surface of the earth. So if the whole country somehow froze solid one January, that would not move the needle on global temperatures much at all.

In fact, even this year’s severe winter weather has affected only part of the country. The Arctic blasts were caused by big dips in the jet stream that allowed frigid air to descend from the polar

regions into the central and eastern United States. But toward the west, those dips have been counterbalanced by unusual northward swings of the jet stream that sent temperatures soaring.

So while New Yorkers have been shivering this winter, California has been setting record or near-record high temperatures. The state is in its third year of a [drought](#) so severe that some towns have started to worry about running out of drinking water.

Alaska has been downright balmy for much of the winter. “Record warmth, confused plants: An Alaska January to remember,” The Anchorage Daily News [declared](#). Likewise, large parts of Russia, Canada and Europe have had bizarrely warm temperatures this winter.

Though the case is as yet unproven, a handful of scientists think the 50-degree temperatures in London and the frigid weather in Minneapolis might be a consequence of climate change. They contend the massive decline of sea ice in the Arctic has destabilized a weather pattern that normally keeps frigid air bottled up near the pole. That pattern is known as the polar vortex and its boundary is a fast-moving river of air called the jet stream. When the vortex weakens, the jet stream can develop big kinks, creating zones of extreme heat and cold.

This winter is not over, but so far, the most interesting fact about the Arctic blasts in the East might actually be how short they have been compared with the past.

The meteorologists Brandt Maxwell, of the National Weather Service in San Diego, and Robert Henson, of the [National Center for Atmospheric Research](#) in Boulder, Colo., have been doing some comparisons.

In the winter of 1976-77, they point out, the temperature in Chicago stayed below freezing for 43 days straight, and in 1985 the city had a below-freezing stretch of 40 days. The longest stretch so far this winter was 11 days. Similarly, New York’s longest stretch below freezing this year has been six days, less than half as long as the freezing periods in the 1970s.

Perhaps this is the real reason everyone is panicking about the cold: Winters have become so mild over the past 20 to 30 years that a blast of Arctic air feels extraordinary. “If you were 10 years old when this last happened and now you’re 40, that’s quite a chunk of your life,” Mr. Henson said.

In turn, the cold-weather angst may be influencing how people see the larger issue. Scientists studying human perception have found that our immediate, visceral experience of the world can influence our judgments on tangentially related questions. For example, the [research](#) shows that on a day perceived as hotter than normal, people are more likely to say on a survey that global warming is real, and vice versa.

It gets wackier: People surveyed in a hot *room* are [more likely](#) to say global warming is real, compared with folks in a cold room. Our rational minds may know the temperature is being controlled by a thermostat, but the logic somehow breaks down before we answer the survey questions.

Fortunately, we are not stuck with human perception alone. Nowadays we have sophisticated thermometers scattered all over the place. On land, aboard boats, attached to satellites, floating in the ocean — wherever we put them, they are telling us a pretty consistent story.

No matter how cold it got in Wisconsin last week, the world really is [warming up](#).