

Opinion & Analysis

Cold 'snap' does not undo climate trends



**JOHN
GIBBONS**

We need to get beyond anecdotal reasoning about the weather and look at the proven global warming

WHO COULD possibly argue with common sense? Scientists are, however, wary of its limitations, and with good reason. Albert Einstein famously dismissed common sense as “the collection of prejudices acquired by the age 18”. For centuries, scientists have risked ridicule, ruin and worse when propounding theories that threatened established thought. The German geophysicist Alfred Wegener proposed the theory of continental drift in 1912. Common sense, however, tells us continents can’t just drift around. It took nearly half a century for this scientific fact to be widely accepted.

“Having before my eyes the Holy Gospel, which I touch with my hands, I abjure, curse and detest the error and the heresy of the movement of the Earth,” Galileo Galilei told the Roman Inquisition in 1634. It took the Vatican until 1994 to concede that yes, Galileo may have been on to something.

The germ theory of disease transmission proposed micro-organisms as the cause of many diseases. In 1847, Dr Ignaz Semmelweis observed that hand disinfection dramatically reduced maternal mortality rates in hospital, but many doctors were deeply offended at his assertion that by refusing to disinfect their hands, they themselves were the vectors of disease and so Semmelweis was pilloried. It was not until Louis Pasteur’s experiments that the germ theory was finally widely accepted.

However, resistance to scientific advances is nowhere more dogged than among non-scientists, especially those with fame in an unrelated field. Irish playwright George

Bernard Shaw was, as late as 1911, able to dismiss germ theory as folly: “when great cities have thrown all their sewage into the open river, the water has sometimes been cleaner 20 miles below the city than 30 miles above it”. Many people died needlessly of typhus and cholera due to the persistence of views like Shaw’s and the weight they carried among the public and media.

From microbes to X-rays or atoms, none of these scientific breakthroughs could possibly have been adduced by intuition or common sense, for the obvious reason that all three are invisible to the naked eye. Similarly, tectonic shift, quantum mechanics and the theory of evolution could never have been figured out without the scientific method.

Evolution equipped humans to reason anecdotally. We depend on heuristics, or experience-based rule-of-thumb methods of problem solving, discovery and learning. These are useful in navigating our daily lives, but can actively block us from comprehending or accepting realities not amenable to our own first-hand experiences. The purpose of the scientific method, on the other hand, “is to make sure nature hasn’t misled you into thinking you know something you actually don’t know”, says author Robert Pirsig.

The recent extended cold snap has led to a fevered outbreak of anecdotal reasoning, and not just among the general public. “Global cooling” was the headline on a leader in this newspaper last week. Ireland and much of Europe has been unusually cold, but crucially, is this a “global” phenomenon?

The World Meteorological Organisation

Even our recent freeze has been more complex than the media caricature

(WMO) last month declared the decade 2000-2009 as the warmest since accurate instrumental records began in the 19th century. The continental US experienced an unusually cold 2009, leading to intense media speculation about “global cooling”. The US, however, accounts for less than 2 per cent of the surface area of the planet.

The WMO says 2009 was probably the fifth warmest year since records began, which means that 10 of the warmest years globally have occurred in the last 13 years. Australia’s Bureau of Meteorology said 2009 would be remembered for “extreme bushfires, dust-storms, lingering rainfall deficiencies, areas of flooding and record-breaking heatwaves”.

And, even our recent freeze has been more complex than the media caricature. Goose Bay in Newfoundland has an average January temperature of -23 degrees. This month, it’s been about zero – warmer than much of Ireland. Oymyakon in eastern Siberia is

probably the coldest inhabited place on Earth, but this month, its temperatures are up 10 degrees to a balmy -35.

Large parts of northern Canada and much of southwest Asia are also well above January averages. Long-term trends are more revealing. In the 50 years since 1949, Alaska’s mean winter temperature has risen by 3.3 degrees. Taken together, these wide variations point to an increasingly restive climate system, where the abnormal is becoming the new norm.

The phenomenon driving the current freeze is known as the Arctic Oscillation, with a region of high pressure over the Arctic pushing down bitterly cold air over northern Europe and some of Asia. The reason the cold snap persisted was as a result of a “blocking anti-cyclone”, a static high-pressure area over Greenland, which kept our usual milder, wetter Atlantic weather systems at bay.

The northern hemisphere freeze is “essentially a series of weather events happening simultaneously, well below the climate scale”, said the chief of the US National Climatic Data Centre. Ocean surface temperatures hugely influence global weather from year to year. The El Niño and La Niña phenomena occur over five- to nine-year cycles and can have dramatic, if short-lived, effects on weather patterns.

To the unwary or prejudiced, these weather events can obscure the underlying warming trend. Weather, in short, is not climate. That is, or should be, only common sense.

John Gibbons blogs at www.thinkorswim.ie