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FINDINGS In 2008, a 100 Percent Chance of Alarm

By JOHN TIERNEY Published: January 1, 2008

Correction Appended

I'd like to wish you a happy New Year, but I'm afraid I have a different sort of prediction.



Amelia Bauer

You're in for very bad weather. In 2008, your television will bring you image after frightening image of natural havoc linked to global warming. You will be told that such bizarre weather must be a sign of dangerous climate change — and that these images are a mere preview of what's in store unless we act quickly to cool the planet.

Unfortunately, I can't be more specific. I don't know if disaster will come by flood or drought, hurricane or blizzard, fire or ice. Nor do I have any idea how much the planet will warm this year or what that means for your local forecast. Long-term climate models cannot explain short-term weather.

But there's bound to be some weird weather somewhere, and we will react like the sailors in the Book of Jonah. When a storm hit their ship, they didn't ascribe it to a seasonal weather pattern. They quickly identified the cause (Jonah's sinfulness) and agreed to an appropriate policy response (throw Jonah overboard).

Today's interpreters of the weather are what social scientists call availability entrepreneurs: the activists, journalists and publicity-savvy scientists who selectively monitor the globe looking for newsworthy evidence of a new form of sinfulness, burning fossil fuels.

A year ago, British meteorologists made headlines predicting that the buildup of greenhouse gases would help make 2007 the hottest year on record. At year's end, even though the British scientists reported the global temperature average was not a new record — it was actually lower than any year since 2001 — the BBC confidently proclaimed, "2007 Data Confirms Warming Trend."

When the Arctic sea ice last year hit the lowest level ever recorded by satellites, it was big news and heralded as a sign that the whole planet was warming. When the Antarctic sea ice last year reached the highest level ever recorded by satellites, it was pretty much ignored. A large part of Antarctica has been cooling recently, but most coverage of that continent has focused on one small part that has warmed.

When Hurricane Katrina flooded New Orleans in 2005, it was supposed to be a harbinger of the stormier world predicted by some climate modelers. When the next two hurricane seasons were fairly calm — by some measures, last season in the Northern Hemisphere was the calmest in three decades — the availability entrepreneurs changed the subject. Droughts in California and Australia became the new harbingers of climate change (never mind that a warmer planet is projected to have more, not less, precipitation over all).

The most charitable excuse for this bias in weather divination is that the entrepreneurs are trying to offset another bias. The planet has indeed gotten warmer, and it is projected to keep warming because of

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Further Reading

"Availability Cascades and Risk Regulation." Timur Kuran and Cass Sunstein. Stanford Law Review, 1999

"Media Coverage and Climate Change." Prometheus blog, Roger Pielke, Jr.

"Media Mania for a 'Front-Page Thought' on Climate." Dot Earth blog, Andrew C. Revkin.

"2007 Tropical Cyclone Season Summary." Ryan N. Maue, Center for Ocean-Atmospheric Prediction Studies.

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"Arctic Melt Unnerves the Experts." Andrew C. Revkin. New York Times, Oct. 2, 2007.

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"NASA Examines Arctic Sea Ice Changes Leading to Record Low in 2007."

"2007 to Be 'Warmest on Record.'" BBC News.

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greenhouse emissions, but this process is too slow to make much impact on the public.

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Amelia Bauer

When judging risks, we often go wrong by using what's called the availability heuristic: we gauge a danger according to how many examples of it are readily available in our minds. Thus we overestimate the odds of dying in a terrorist attack or a plane crash because we've seen such dramatic deaths so often on television; we underestimate the risks of dying from a [stroke](#) because we don't have so many vivid images readily available.

Slow warming doesn't make for memorable images on television or in people's minds, so activists, journalists and scientists have looked to [hurricanes](#), wild fires and starving polar bears instead. They have used these images to start an "availability cascade," a term coined by Timur

Kuran, professor of economics and political science at Duke University, and [Cass R. Sunstein](#), a law professor at the [University of Chicago](#).

The availability cascade is a self-perpetuating process: the more attention a danger gets, the more worried people become, leading to more news coverage and more fear. Once the images of Sept. 11 made terrorism seem a major threat, the press and the police lavished attention on potential new attacks and supposed plots. After Three Mile Island and "The China Syndrome," minor malfunctions at nuclear power plants suddenly became newsworthy.

"Many people concerned about climate change," Dr. Sunstein says, "want to create an availability cascade by fixing an incident in people's minds. Hurricane Katrina is just an early example; there will be others. I don't doubt that climate change is real and that it presents a serious threat, but there's a danger that any 'consensus' on particular events or specific findings is, in part, a cascade."

Once a cascade is under way, it becomes tough to sort out risks because experts become reluctant to dispute the popular wisdom, and are ignored if they do. Now that the melting Arctic has become the symbol of global warming, there's not much interest in hearing other explanations of why the ice is melting — or why the globe's other pole isn't melting, too.

Global warming has an impact on both polar regions, but they're also strongly influenced by regional weather patterns and ocean currents. Two studies by [NASA](#) and university scientists last year concluded that much of the recent melting of Arctic sea ice was related to a cyclical change in ocean currents and winds, but those studies got relatively little attention — and were certainly no match for the images of struggling polar bears so popular with availability entrepreneurs.

Roger A. Pielke Jr., a professor of environmental studies at the [University of Colorado](#), recently noted the very different reception received last year by two conflicting papers on the link between hurricanes and global warming. He counted 79 news articles about a paper in the *Philosophical Transactions of the Royal Society*, and only 3 news articles about one in a far more prestigious journal, *Nature*.

Guess which paper jibed with the theory — and image of Katrina — presented by [Al Gore](#)'s "Inconvenient Truth"?

It was, of course, the paper in the more obscure journal, which suggested that global warming is creating more hurricanes. The paper in *Nature* concluded that global warming has a minimal effect on hurricanes. It was published in December — by coincidence, the same week that Mr. Gore received his Nobel Peace Prize.

In his acceptance speech, Mr. Gore didn't dwell on the complexities of the hurricane debate. Nor, in his roundup of the 2007 weather, did he mention how calm the hurricane season had been. Instead, he alluded somewhat mysteriously to "stronger storms in the Atlantic and Pacific," and focused on other kinds of disasters, like "massive droughts" and "massive flooding."

"In the last few months," Mr. Gore said, "it has been harder and harder to misinterpret the signs that our world is spinning out of kilter." But he was being too modest. Thanks to availability entrepreneurs like him, misinterpreting the weather is getting easier and easier.

#### **Correction: January 4, 2008**

*The Findings column in Science Times on Tuesday, about the way severe weather is tied to predictions of global warming, gave an outdated academic affiliation for Timur Kuran. He is a professor of economics and political science at Duke University; he is no longer a professor of economics and law at the University of Southern California.*

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