

# An 'Allergy' To Global Warming?

## America In General Still Seems Reluctant To Embrace Climate-Change Ideas

*EDITOR'S NOTE: Climate change has already provoked debate in a U.S. presidential campaign barely begun. An Associated Press journalist draws on decades of climate reporting to offer a retrospective and analysis on global warming and the undying urge to deny.*

BY CHARLES J. HANLEY  
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NEW YORK — Tucked between treatises on algae and prehistoric turquoise beads, the study on page 460 of a long-ago issue of the U.S. journal *Science* drew little attention.

"I don't think there were any newspaper articles about it or anything like that," the author recalls.

But the headline on the 1975 report was bold: "Are We on the Brink of a Pronounced Global Warming?" And this article that coined the term may have marked the last time a mention of "global warming" didn't set off an instant outcry of angry denial.

In the paper, Columbia University geoscientist Wally Broecker calculated how much carbon dioxide would accumulate in the atmosphere in the coming 35 years, and how temperatures consequently would rise. His numbers have proven almost dead-on correct. Meanwhile, other powerful evidence poured in over those decades, showing the "greenhouse effect" is real and is happening. And yet resistance to the idea among many in the U.S. appears to have hardened.

What's going on?  
"The desire to disbelieve deepens as the scale of the threat grows," concludes economist-ethicist Clive Hamilton.

He and others who track what they call "denialism" find that its nature is changing in America, last redoubt of climate naysayers. It has taken on a more partisan, ideological tone. Polls find a widening Republican-Democratic gap on climate. Republican presidential candidate Rick Perry even accuses climate scientists of lying for money. Global warming looms as a debatable question in yet another U.S. election campaign.

From his big-windowed office overlooking the wooded campus of the Lamont-Doherty Earth Observatory in Palisades, N.Y., Broecker has observed this deepening of the desire to disbelieve.

"The opposition by the Republicans has gotten stronger and stronger," the 79-year-old "grandfather of climate science" said in an interview. "But, of course, the push by the Democrats has become stronger and stronger, and as it has become a more important issue, it has become more polarized."

The solution: "Eventually it'll become damned clear that the Earth is warming and the warming is beyond anything we have experienced in millions of years, and people will have to admit..." He stopped and laughed.

"Well, I suppose they could say God is burning us up."

The basic physics of anthropogenic — manmade — global warming has been clear for more than a century, since researchers proved that carbon dioxide traps heat. Others later showed CO2 was building up in the atmosphere from the burning of coal, oil and other fossil fuels. Weather stations then filled in the rest: Temperatures were rising.

"As a physicist, putting CO2 into the air is good enough for me. It's the physics that convinces me," said veteran Cambridge University researcher Liz Morris. But she said work must go on to refine climate data and computer climate models, "to convince the deeply reluctant organizers of this world."

The reluctance to rein in carbon emissions revealed itself early on.

In the 1980s, as scientists studied Greenland's buried ice for clues to past climate, upgraded their computer models peering

into the future, and improved global temperature analyses, the fossil-fuel industries were mobilizing for a campaign to question the science.

By 1988, NASA climatologist James Hansen could appear before a U.S. Senate committee and warn that global warming had begun, a dramatic announcement later confirmed by the Intergovernmental Panel on Climate Change (IPCC), a new, U.N.-sponsored network of hundreds of international scientists.

But when Hansen was called back to testify in 1989, the White House of President George H.W. Bush edited this government scientist's remarks to water down his conclusions, and Hansen declined to appear.

That was the year U.S. oil and coal interests formed the Global Climate Coalition to combat efforts to shift economies away from their products. Britain's Royal Society and other researchers later determined that oil giant Exxon disbursed millions of dollars annually to think tanks and a handful of supposed experts to sow doubt about the facts.

In 1997, two years after the IPCC declared the "balance of evidence suggests a discernible human influence on global climate," the world's nations gathered in Kyoto, Japan, to try to do something about it. The naysayers were there as well.

"The statement that we'll have continued warming with an increase in CO2 is opinion, not fact," oil executive William F. O'Keefe of the Global Climate Coalition insisted to reporters in Kyoto.

The late Bert Bolin, then IPCC chief, despaired.

"I'm not really surprised at the political reaction," the Swedish climatologist told The Associated Press. "I am surprised at the way some of the scientific findings have been rejected in an unscientific manner."

In fact, a document emerged years later showing that the industry coalition's own scientific team had quietly advised it that the basic science of global warming was indisputable.

Kyoto's final agreement called for limited rollbacks in greenhouse emissions. The United States didn't even join in that. And by 2000, the CO2 built up in the atmosphere to 369 parts per million — just 4 ppm less than Broecker predicted — compared with 280 ppm before the industrial revolution.

Global temperatures rose as well, by 0.6 degrees C (1.1 degrees F) in the 20th century. And the mercury just kept rising. The decade 2000-2009 was the warmest on record, and 2010 and 2005 were the warmest years on record.

Satellite and other monitoring, meanwhile, found nights were warming faster than days, and winters more than summers, and the upper atmosphere was cooling while the lower atmosphere warmed — all clear signals greenhouse warming was at work, not some other factor.

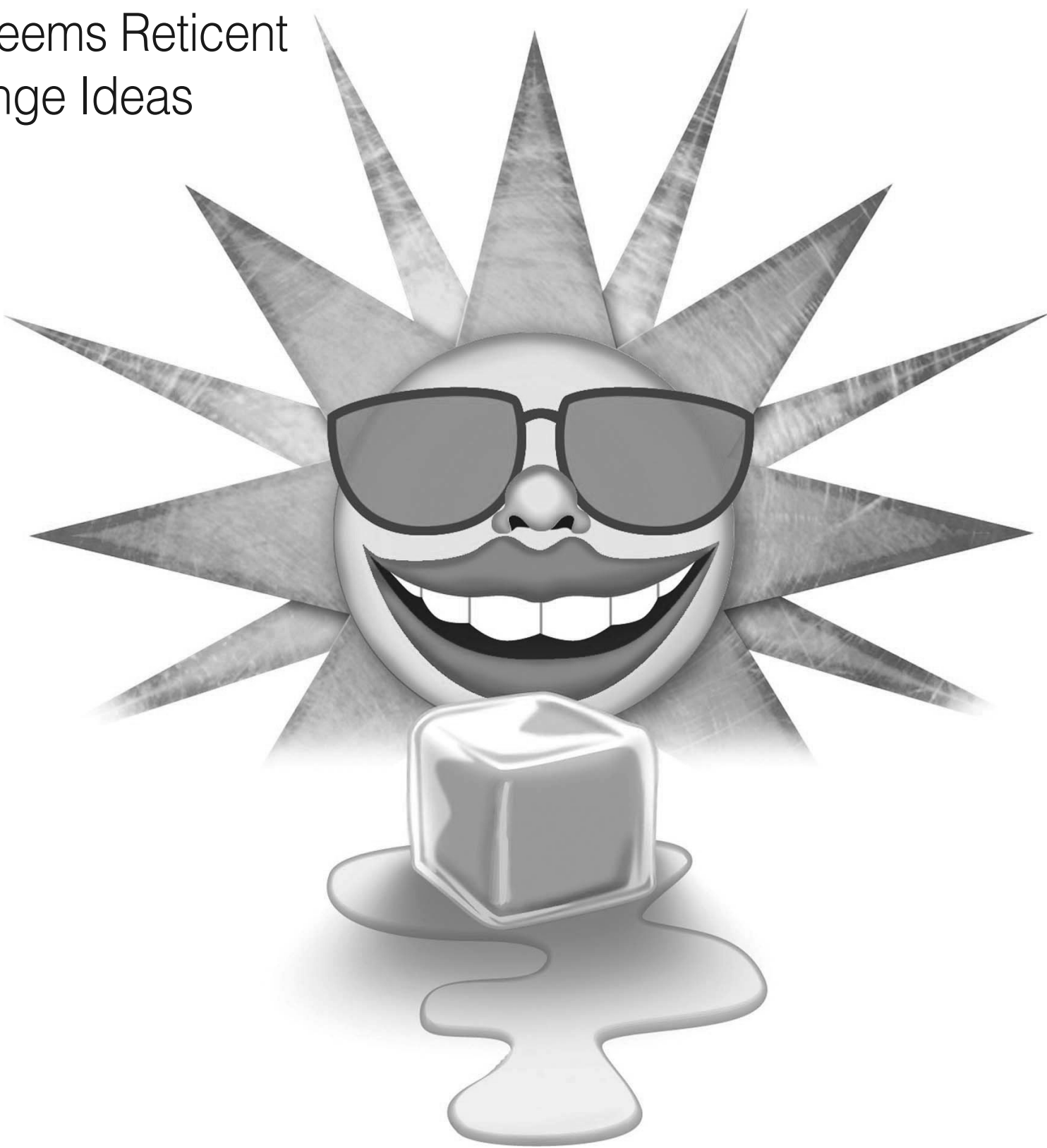
The impact has been widespread.

An authoritative study this August reported that hundreds of species are retreating toward the poles, egrets showing up in southern England, American robins in Eskimo villages. Some, such as polar bears, have nowhere to go. Eventual large-scale extinctions are feared.

The heat is cutting into wheat yields, nurturing beetles that are destroying northern forests, attracting malarial mosquitoes to higher altitudes.

From the Rockies to the Himalayas, glaciers are shrinking, sending ever more water into the world's seas. Because of accelerated melt in Greenland and elsewhere, the eight-nation Arctic Monitoring and Assessment Program projects ocean levels will rise 90 to 160 centimeters (35 to 63 inches) by 2100, threatening coastlines everywhere.

"We are scared, really and



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truly," diplomat Laurence Edwards, from the Pacific's Marshall Islands, told the AP before the 1997 Kyoto meeting.

Today in his low-lying home islands, rising seas have washed away shoreline graveyards, saltwater has invaded wells, and islanders desperately seek aid to build a seawall to shield their capital.

The oceans are turning more acidic, too, from absorbing excess carbon dioxide. Acidifying seas will harm plankton, shellfish and other marine life up the food chain. Biologists fear the world's coral reefs, home to much ocean life and already damaged from warmer waters, will largely disappear in this century.

The greatest fears may focus on "feedbacks" in the Arctic, warming twice as fast as the rest of the world.

The Arctic Ocean's summer ice cap has shrunk by half and is expected to essentially vanish by 2030 or 2040, the U.S. National Snow and Ice Data Center reported Sept. 15. Ashore, meanwhile, the Arctic tundra's permafrost is thawing and releasing methane, a powerful greenhouse gas.

These changes will feed on themselves: Released methane leads to warmer skies, which will release more methane. Ice-free Arctic waters absorb more of the sun's heat than do reflective ice and snow, and so melt will beget melt. The frozen Arctic is a controller of Northern Hemisphere climate; an unfrozen one could upend age-old weather patterns across continents.

In the face of years of scientific findings and growing impacts, the doubters persist. They ignore long-term trends and seize on insignificant year-to-year blips in data to claim all is well. They focus on minor mistakes in thousands of pages of peer-reviewed studies to claim all is wrong. And they carom from one explanation to another

for today's warming Earth: jet contrails, sunspots, cosmic rays, natural cycles.

"Ninety-eight percent of the world's climate scientists say it's for real, and yet you still have deniers," observed former U.S. Rep. Sherwood Boehlert, a New York Republican who chaired the House's science committee.

Christiana Figueres, Costa Rican head of the U.N.'s post-Kyoto climate negotiations, finds it "very, very perplexing, this apparent allergy that there is in the United States. Why?"

The Australian scholar Hamilton sought to explain why in his 2010 book, "Requiem for a Species: Why We Resist the Truth About Climate Change."

In an interview, he said he found a "transformation" from the 1990s and its industry-financed campaign, to an America where climate denial "has now become a marker of cultural identity in the 'angry' parts of the United States."

"Climate denial has been incorporated in the broader movement of right-wing populism," he said, a movement that has "a visceral loathing of environmentalism."

An in-depth study of a decade of Gallup polling finds statistical backing for that analysis.

On the question of whether

they believed the effects of global warming were already happening, the percentage of self-identified Republicans or conservatives answering "yes" plummeted from almost 50 percent in 2007-2008 to 30 percent or less in 2010, while liberals and Democrats remained at 70 percent or more, according to the study in this spring's *Sociological Quarterly*.

A Pew Research Center poll last October found a similar left-right gap.

The drop-off coincided with the election of Democrat Barack Obama as president and the Democratic effort in Congress, ultimately futile, to impose government caps on industrial greenhouse emissions.

Boehlert, the veteran Republican congressman, noted that "high-profile people with an 'R' after their name, like Sarah Palin and Michelle Bachmann, are saying it's all fiction. Pooh-poohing the science of climate change feeds into their basic narrative that all government is bad."

The quarterly study's authors, Aaron M. McCright of Michigan State University and Riley E. Dunlap of Oklahoma State, suggested climate had joined abortion and other explosive, intractable issues as a mainstay of America's harden-

ing left-right gap.

"The culture wars have thus taken on a new dimension," they wrote.

Al Gore, for one, remains upbeat. The former vice president and Nobel Prize-winning climate campaigner says "ferocity" in defense of false beliefs often increases "as the evidence proving them false builds."

In an AP interview, he pointed to tipping points in recent history — the collapse of the Berlin Wall, the dismantling of U.S. racial segregation — when the potential for change built slowly in the background, until a critical mass was reached.

"This is building toward a point where the falsehoods of climate denial will be unacceptable as a basis for policy much longer," Gore said. "As Dr. Martin Luther King Jr. said, 'How long? Not long.'"

Even Wally Broecker's jest — that deniers could blame God — may not be an option for long.

Last May the Vatican's Pontifical Academy of Sciences, arm of an institution that once persecuted Galileo for his scientific findings, pronounced on manmade global warming: It's happening.

Said the pope's scientific advisers, "We must protect the habitat that sustains us."

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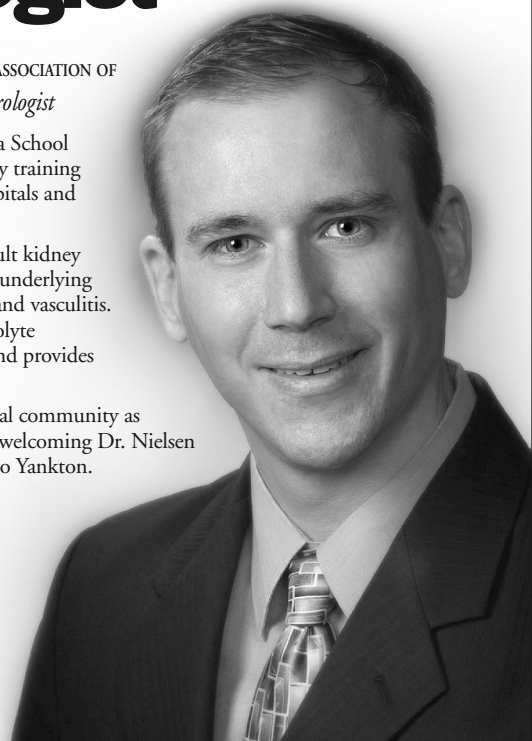
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