

# COLUMBIA JOURNALISM REVIEW

Strong Press, Strong Democracy

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## Hot Air

Why don't TV weathermen believe in climate change?

By Charles Homans

**T**he small makeup room off the main floor of KUSI's studios, in a suburban canyon on the north end of San Diego, has seen better days. The carpet is stained; the couch sags. John Coleman, KUSI's weatherman, pulls off the brown sweatshirt he has been wearing over his shirt and tie all day and appraises himself in the mirror, smoothing back his white hair and opening a makeup kit. "I kid that I have to use a trowel, to fill the crevasses of age," he says, swiping powder under one eye and then the other. "People have tried to convince me to use more advanced makeup, but I don't. I don't try to fool anyone."

Coleman is seventy-five years old, and looks it, which is refreshing in the Dorian Gray-like environs of television news. He refers to his position at KUSI, a modestly eccentric independent station in San Diego whose evening newscast usually runs fifth out of five in the local market, as his retirement job. When he steps in front of the green screen, it's clear why he has chosen it over actual retirement; in front of the camera he moves, if not quite like a man half his age, then at least like a man three quarters of it. His eyes light up, and the slight stoop with which he otherwise carries himself disappears. His rumble of a voice evens out into a theatrical baritone, full of the practiced jocularity of someone who has spent all but the first nineteen years of his life on TV.

By his own rough estimate, John Coleman has performed more than a quarter million weathercasts. It is not a stretch to say that he is largely responsible for the shape of the modern weather report. As the first weatherman on ABC's *Good Morning America* in the late 1970s and early '80s, Coleman pioneered the use of the onscreen satellite technology and computer graphics that are now standard nearly everywhere. In 1982, chafing at the limitations of his daily slot on *GMA*, Coleman used his spare time—and media mogul Frank Batten's money—to launch The Weather Channel. The idea seemed quixotic then, and his tenure as president ended a year later after an acrimonious split with Batten. But time proved Coleman to be something of a genius—the channel was turning a profit within four years, and by the time NBC-Universal bought it in 2008 it had 85 million viewers and a \$3.5 billion price tag.

Those were the first two acts of Coleman's career. On a Sunday night in early November 2007, Coleman sat down at his home computer and started to write the 967 words that would launch the third. "It is the greatest scam in history," he began. "I am amazed, appalled and highly offended by it. Global Warming: It is a SCAM."

What had set him off was a football game. The Eagles were playing the Cowboys in Philadelphia on *Sunday Night Football*, and as a gesture of environmental awareness—it was “Green is Universal” week at NBC-Universal—the studio lights were cut for portions of the pre-game and half-time shows. Coleman, who had been growing increasingly skeptical about global warming for more than a decade, finally snapped. “I couldn’t take it anymore,” he told me. “I did a Howard Beale.”

Skepticism is, of course, the core value of scientific inquiry. But the **essay that Coleman published** that week, on the Web site ICECAP, would have more properly been termed rejectionism. Coleman wasn’t arguing against the integrity of a particular conclusion based on careful original research—something that would have constituted useful scientific skepticism. Instead, he went after the motives of the scientists themselves. Climate researchers, he wrote, “look askance at the rest of us, certain of their superiority. They respect government and disrespect business, particularly big business. They are environmentalists above all else.”

The Drudge Report picked up Coleman’s essay, and within days its author was a cause célèbre on right-wing talk radio and cable television, beaming into Glenn Beck’s TV show via satellite from the KUSI studios to elaborate on the scientists’ conspiracy. “They all have an agenda,” Coleman told Beck, “an environmental and political agenda that said, ‘Let’s pile on here, we’re all going to make a lot of money, we’re going to get research grants, we’re going to get awards, we’re going to become famous.’”

Along with the appearances on Beck’s and Rush Limbaugh’s programs came speaking offers, and soon Coleman was on the conference circuit, a newly minted member of the loose-knit confederation of professional skeptics. (Coleman insists his views on climate change are apolitical, and says he has turned down offers to speak at Tea Parties and other conservative events.) His interviews and speeches that have been posted to YouTube have, in some cases, been viewed hundreds of thousands of times.

None of it would have had much of an impact, but for Coleman’s résumé. For the many Americans who don’t understand the difference between weather—the short-term behavior of the atmosphere—and climate—the broader system in which weather happens—Coleman’s professional background made him a genuine authority on global warming. It was an impression that Coleman encouraged. Global warming “is not something you ‘believe in,’” he wrote in his essay. “It is science; the science of meteorology. This is my field of life-long expertise.”

Except that it wasn’t. Coleman had spent half a century in the trenches of TV weathercasting; he had once been an accredited meteorologist, and remained a virtuoso forecaster. But his work was more a highly technical art than a science. His degree, received fifty years earlier at the University of Illinois, was in journalism. And then there was the fact that the research that Coleman was rejecting wasn’t “the science of meteorology” at all—it was the science of climatology, a field in which Coleman had spent no time whatsoever.

**C**oleman’s crusade caught the eye of Kris Wilson, an Emory University journalism lecturer and a former TV news director and weatherman himself, and Wilson got to wondering. He **surveyed** a group of TV meteorologists, asking them to respond to Coleman’s claim that global warming was a scam. The responses stunned him. Twenty-nine percent of the 121 meteorologists who replied agreed with Coleman—not that global warming was unproven, or unlikely, but that it was a *scam*.<sup>\*</sup> Just 24 percent of them believed that humans were responsible for most of the change in climate over the past half century—half were sure this wasn’t true, and

another quarter were “neutral” on the issue. “I think it scares and disturbs a lot of people in the science community,” Wilson told me recently. This was the most important scientific question of the twenty-first century thus far, and a matter on which more than eight out of ten climate researchers were thoroughly convinced. And three quarters of the TV meteorologists Wilson surveyed believe the climatologists were wrong.

In fact, anecdotal evidence of this disconnect had been accruing for several years. When a freakish snowstorm hit Las Vegas in December 2008, CNN meteorologist Chad Myers, appearing on *Lou Dobbs Tonight*, used the occasion to expound on his own doubts about global warming. “You know, to think that we could affect weather all that much is pretty arrogant,” he told Dobbs. “Mother Nature is so big, the world is so big, the oceans are so big.” Today’s most oft-quoted and influential skeptics include Joseph D’Aleo, The Weather Channel’s first director of meteorology, and Anthony Watts, a former Chico, California, TV meteorologist and prolific blogger who is leading a volunteer effort to document irregularities among the twelve hundred weather stations the National Weather Service maintains across the country (a concern that the National Oceanic and Atmospheric Administration considers negligible, and in any case has factored into its calculations since the ’90s). When Oklahoma Senator James Inhofe, Congress’s most reliable opponent of climate-change legislation, presented a list of more than four hundred “science authorities” who disagreed with the prevailing scientific opinion on climate change in 2008, forty-four of them were TV weathercasters. And after the signature of Mike Fairbourne, the weatherman for Minneapolis’s CBS affiliate, turned up on a similar petition that year, reporters for the Minneapolis *Star Tribune* called around and found that hardly *any* of the city’s TV weathercasters believed in climate change; one had recently called the idea “crazy” on a local talk-radio show.

More striking is the fact that the weathercasters became outspoken in their rejection of climate science right around the time the rest of the media began to abandon the on-the-one-hand, on-the-other-hand approach that had dominated their coverage of the issue for years, and started to acknowledge that the preponderance of evidence lay with those who believed climate change was both real and man-made. If anything, that shift radicalized the weathermen. “I think the media is almost sleeping with the enemy,” one meteorologist told me. “The way it is now, there is just such a bias as to what gets out.”

Free-market think tanks like the Heartland Institute, knowing an opportunity when they see one, now woo weathercasters with invitations to skeptics’ conferences. The National Science Foundation and the Congress-funded National Environmental Education Foundation, meanwhile, are pouring money into efforts to figure out where exactly the climate scientists lost the meteorologists, and how to win them back. The American Meteorological Society (AMS)—which formally endorsed the scientific consensus on climate change years ago, but counts many of the skeptics among its members, to its chagrin—has started including climate-change workshops for weathercasters in its conferences. For all of their differing agendas, the outfits have one thing in common: they have all realized that, however improbably, the future of climate-change policy in the United States rests to a not-insubstantial degree on the well-tailored shoulders of the local weatherman.

**I**n the fall of 2008, researchers from George Mason and Yale universities conducted the most **fine-grained survey** to date about what Americans know and think about climate change. The short answer, unsurprisingly, was not very much. “Climate change is an incredibly complicated subject,” says Anthony Leiserowitz, director of the Yale Project on Climate Change and one of the study’s co-authors. “Most people are not interested in digging through the scientific literature, and in that situation trust becomes an enormous factor. We rely on people and organizations to guide us through this incredibly complicated and risky landscape.”

That was where the survey's findings got interesting. When asked whom they trusted for information about global warming, 66 percent of the respondents named television weather reporters. That was well above what the media as a whole got, and higher than the percentage who trusted Vice-President-turned-climate-activist Al Gore, either of the 2008 presidential nominees, religious leaders, or corporations. Scientists commanded greater credibility, but only 18 percent of Americans actually know one personally; 99 percent, by contrast, own a television. "Meteorology benefits from the fact that we're just about the only science that has an individual in people's living rooms every night," says Keith Seitter, the executive director of the American Meteorological Society. "For many people, it's the only scientist whose name they know."

There is one little problem with this: most weathercasters are not really scientists. When Wilson surveyed a broader pool of weathercasters in an [earlier study](#), barely half of them had a college degree in meteorology or another atmospheric science. Only 17 percent had received a graduate degree, effectively a prerequisite for an academic researcher in any scientific field.

This case of mistaken identity has been a source of tension throughout television's sixty-odd-year history. When TVs began to proliferate in postwar American households, the first generation of weathercasters that viewers saw on them was mostly military men, recently discharged World War II veterans who had trained in meteorology in the Navy and the Army Air Corps. (Louis Allen, Washington, D.C.'s first TV weatherman, had drawn up the forecasts for the invasions of Iwo Jima and Okinawa.) But as broadcasting licenses multiplied and stations began to compete with each other in the '50s, meteorologist Robert Henson recounts in *Weather on the Air: A History of Broadcast Meteorology* (to be published this year), the Army men gave way to entertainers: scantily clad "weather girls" abounded, as did puppets, including one who divined the forecast with his handlebar mustache. A weatherman in Nashville read his forecast in verse. One New York station featured a "weather lion."

After a few years of this sort of thing, the American Meteorological Society decided to step in; the professional association's membership, then comprised mostly of government and academic meteorologists, had grown wary of what the weather girls were doing to their reputation. The society devised a voluntary meteorological certification system, a seal of approval that TV weathercasters could obtain with the right academic background—at least a bachelor's degree in meteorology—or demonstrated knowledge in the field. (This seal is what technically distinguishes a meteorologist from a weathercaster.) In a 1955 *TV Guide* article entitled "Weather is No Laughing Matter," AMS member Francis Davis wrote that "If TV weathermen are going to pose as experts, we feel they should *be* experts."

Although it took years, Davis's view eventually won out. By the end of the '70s, weathercasters had begun to treat their responsibilities with some seriousness. They started to see themselves as everyman (they were still mostly men) scientists, authority figures who helped viewers not only anticipate once-unpredictable events, but also comprehend them. And when you think about it, the achievement weathercasters have pulled off as science educators is remarkable—ask anyone with a television to name some meteorological terms, and odds are they will be able to rattle off half a dozen: low pressure systems, wind shear, cumulonimbus clouds. Weathercasters are usually a sort of science ambassador to their communities as well, and spend as much time talking to elementary school classes and civic groups about science as they do forecasting on the air. The work hasn't gone unappreciated; heaps of [audience research](#) have identified the weather report as the most popular segment of the local news broadcast, and the biggest factor in viewers' choice of which newscast to watch. Even as

Americans' trust in the media as a whole has cratered, love for the weatherman has persisted at levels unchanged since Walter Cronkite's day.

The Clinton administration had all of this in mind in October 1997, when it gathered meteorologists from dozens of the nation's biggest television markets at the White House for a special summit on climate change. In two months, negotiators would be meeting in Kyoto to renegotiate the United Nations Framework Convention on Climate Change, the talks that would ultimately produce the Kyoto Protocol. Americans were still largely uninformed about climate change, and the White House was hoping the weathercasters could help bring them up to speed. More than one hundred of them showed up to hear speeches from Gore—an early version of the slideshow later documented in *An Inconvenient Truth*—and President Bill Clinton, as well as leading NOAA climate researchers.

As the administration had hoped, the meteorologists used the occasion to opine about climate change—but what many of them said wasn't quite what Al Gore had in mind. "There's still a significant segment of the scientific community that's not sold on this," Harvey Leonard, then the weatherman at WHDH in Boston, told *The Washington Post*. Others loudly refused to attend the summit, including all but one of the weathercasters in the Oklahoma City market. "I'm not smart enough to know [if the earth is warming], and I don't think any person on the planet is," KOKH meteorologist Tim Ross told the *Daily Oklahoman*. The following month, twenty TV weather personalities added their names to the Leipzig Declaration, a petition opposing the global warming theory.

It was only a blip on the radar, but it presaged the broader rejection of climate science that would come a decade later. The question was, *why?* No doubt, some of the blame belonged to the White House. In positioning themselves as advocates for not only a policy position but also a scientific one, Clinton and Gore had conflated the political question of what to do about climate change—one that was, and remains, deeply partisan in the U.S.—with the apolitical question of whether it was happening. This put the weathermen in a tricky spot—embracing what was, even then, the majority position in the scientific community would make them look like shills for the administration. "Since the White House is behind it, it's political," Leonard told the *Post*. "I'm not a lap dog," Gary England of KWTU in Oklahoma City—now a prominent climate skeptic—told the *Daily Oklahoman*. "I think Al Gore's motives were pretty good—he saw early on the potential that these people had," Kris Wilson says. "But he was probably the wrong spokesman. As journalists, we're taught to be skeptical, right? We're taught that if your mother says she loves you, get a second source."

But the disagreement, then as now, also came down to the weathercasters themselves, and what they knew—or believed they knew. Meteorology has a deceptively close relationship with climatology: both disciplines study the same general subject, the behavior of the atmosphere, but they ask very different questions about it. Meteorologists live in the short term, the day-to-day forecast. It's an incredibly hard thing to predict accurately, even with the best models and data; tiny discrepancies matter enormously, and can pile up quickly into giant errors. Given this level of uncertainty in their own work, meteorologist looking at long-range climate questions are predisposed to see a system doomed to terminal unpredictability. But in fact, the basic question of whether rising greenhouse gas emissions will lead to climate change hinges on mostly simple, and predictable, matters of physics. The short-term variations that throw the weathercasters' forecasts out of whack barely register at all.

This is the one explanation that everyone who has mulled the question seems to agree on—and indeed, when I spoke with meteorologists who were skeptical of or uncertain about the scientific consensus, it was the one

thing they all brought up. “Meteorologists know our models,” Brian Neudorff, a meteorologist at WROC in Rochester, New York, told me. “There’s a lot of error and bias. We’ll use five different models and come back with five different things. So when we hear that climatological models are saying this, how accurate are they?”

But that hardly explains why so many meteorologists have disregarded the mountain of evidence of global warming that has *already* occurred—or why, in the case of the hard-line skeptics, they are so fixated on proving a few data sets’ worth of tree-ring and ice core measurements wrong. “I think a lot of people have theories,” Robert Henson says, “but nobody knows for sure.”

In the absence of a clear answer, several institutions—the National Environmental Education Foundation (NEEF), the Yale Forum on Climate Change & the Media, and the University Corporation for Atmospheric Research among them—have decided that education is the problem, and have launched projects aimed at teaching the weathercasters the basics of climatology. All proceed from the assumption that unreachable skeptics like Coleman are few and far between, and that most meteorologists are more uncertain than adamant, lost amid the Internet’s slurry of fact and counterfact. “While there is a group that seems to have made up their mind about climate change, there’s still a substantial portion that’s interested in learning more,” says Sara Espinoza, a program director at NEET. The AMS—which finds its credibility threatened by its televised emissaries a second time—is working with NEEF on a do-it-yourself climate science education package for meteorologists that points them to government data and peer-reviewed research. It is part of the AMS’s broader “station scientist” program, which aims to give meteorologists the tools they need to become the go-to authorities in their newsrooms on all scientific subjects, not just the weather. In essence, it is a doubling down on the wager that the AMS made fifty-five years ago: if viewers are going to assume weathercasters are experts anyway, we might as well try to *make* them experts.

It remains a laudable goal. But in my own conversations with skeptical meteorologists, I began to think that that earlier effort had helped create the problem in the first place. The AMS had succeeded in making many weathercasters into responsible authorities in their own wheelhouse, but somewhere along the way that narrow professional authority had been misconstrued as a sort of all-purpose scientific legitimacy. It had bolstered meteorologists’ sense of their expertise outside of their own discipline, without necessarily improving the expertise itself. Most scientists are loath to speak to subjects outside of their own field, and with good reason—you wouldn’t expect a dentist to know much about, say, the geological strata of the Grand Canyon. But meteorologists, by virtue of typically being the only people with any science background at their stations, are under the opposite pressure—to be conversant in anything and everything scientific. This is a good thing if you see yourself as a science communicator, someone who sifts the good information from the bad—but it becomes a problem when you start to see scientific authority springing from your own haphazardly informed intuition, as many of the skeptic weathercasters do. Among the certified meteorologists Wilson surveyed in 2008, 79 percent considered it appropriate to educate their communities about climate change. Few of them, however, had taken the steps necessary to fully educate themselves about it. When asked which source of information on climate change they most trusted, 22 percent named the AMS. But the next most popular answer, with 16 percent, was “no one.” The third was “myself.”

The biggest difference I noticed between the meteorologists who rejected climate science and those who didn’t was not how much they knew about the subject, but how much they knew *about* how much they knew—how clearly they recognized the limits of their own training. Among those in the former category was Bob Breck, the AMS-certified chief meteorologist at Fox affiliate WVUE in New Orleans and a thirty-two-year veteran of the

business. Breck rejected the notion of human-driven climate change wholesale—"I just find that [idea] to be quite arrogant," he told me. Instead, when Breck talked to local schools and Rotaries and Kiwanis clubs about climate change, he presented his own ideas: warming trends were far more dependent on the water vapor in the atmosphere than carbon dioxide, he told them, and the appearance of an uptick in global temperatures was the result of the declining number of weather stations in cold rural areas.

These theories were not only contradictory of each other, but had also been considered and rejected by climate researchers years ago. But Breck didn't read much climate research; "the technical journals are controlled by the professors who run the various societies," he told me, and those professors were hopelessly dependent on the "gravy train of grants from the NSF" that required them to propagate "alarmist theories." When I mentioned the AMS, Breck bristled. "I don't need the AMS seal—which I have," he said. "I don't need their endorsements. The only endorsements I need are my viewers, and they like what I do."

As Breck went on, I began to get a sense of the enormity of the challenge at hand. Convincing someone he is an expert is one thing. Actually making him one—well, that is another thing entirely.

**\*Correction:** The article originally stated that 29 percent of survey respondents agreed with the statement that global warming was "the greatest scam in history." It has been changed to reflect the fact that the statement they agreed with was: "global warming is a scam." We regret the error.