

State of the Beat

## Blinded By Science

How 'Balanced' Coverage Lets the Scientific Fringe Hijack Reality

By [Chris Mooney](#)

On May 22, 2003, the Los Angeles Times printed a front-page story by Scott Gold, its respected Houston bureau chief, about the passage of a law in Texas requiring abortion doctors to warn women that the procedure might cause breast cancer. Virtually no mainstream scientist believes that the so-called ABC link actually exists — only anti-abortion activists do. Accordingly, Gold's article noted right off the bat that the American Cancer Society discounts the "alleged link" and that anti-abortionists have pushed for "so-called counseling" laws only after failing in their attempts to have abortion banned. Gold also reported that the National Cancer Institute had convened "more than a hundred of the world's experts" to assess the ABC theory, which they rejected. In comparison to these scientists, Gold noted, the author of the Texas counseling bill — who called the ABC issue "still disputed" — had "a professional background in property management."

Gold's piece was hard-hitting but accurate. The scientific consensus is quite firm that abortion does not cause breast cancer. If reporters want to take science and its conclusions seriously, their reporting should reflect this reality — no matter what anti-abortionists say.

But what happened next illustrates one reason journalists have such a hard time calling it like they see it on science issues. In an internal memo exposed by the Web site LAobserved.com, the Times's editor, John Carroll, singled out Gold's story for harsh criticism, claiming it vindicated critics who accuse the paper of liberal bias. Carroll specifically criticized Gold's "so-called counseling" line ("a phrase that is loaded with derision") and his "professional background in property management" quip ("seldom will you read a cheaper shot than this"). "The story makes a strong case that the link between abortion and breast cancer is widely discounted among researchers," Carroll wrote, "but I wondered as I read it whether somewhere there might exist some credible

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scientist who believes in it . . . . Apparently the scientific argument for the anti-abortion side is so absurd that we don't need to waste our readers' time with it."

Gold declined to comment specifically on Carroll's memo, except to say that it prompted "a sound and good discussion of the standards that we all take very seriously." For his part, Carroll — now editing his third newspaper — is hardly so naïve as to think journalistic "balance" is synonymous with accuracy. In an interview, he nevertheless defended the memo, observing that "reporters have to make judgments about the validity of ideas" but that "a reporter has to be broad-minded in being open to ideas that aren't necessarily shared by the crowd he or she happens to be hanging around with." Carroll adds that in his view, Gold needed to find a credible scientist to defend the ABC claim, rather than merely quoting a legislator and then exposing that individual's lack of scientific background. "You have an obligation to find a scientist, and if the scientist has something to say, then you can subject the scientist's views to rigorous examination," Carroll says.

The trouble is, the leading proponent of the idea that abortions cause breast cancer, Dr. Joel Brind of Baruch College at the City University of New York, underwent a pro-life religious conversion that left him feeling "compelled to use science for its noblest, life-saving purpose," as he put it in *Physician*, a magazine published by a conservative religious group called Focus on the Family. Brind's dedication to the ABC theory has flown in the face of repeated negative critiques of that theory by his scientific peers. When the National Cancer Institute convened the world's experts to assess the question in February 2003, Brind was the only dissenter from the group's conclusions.

Nevertheless, a later article by Gold suggests he may have taken Carroll's lesson to heart (though Gold says the piece "certainly wasn't a direct response, or an attempt to change anything or compensate" following Carroll's memo). On November 6, 2003, Gold reported on a push in Texas to revise the way biology textbooks teach the scientific theory of evolution, which some religious conservatives don't accept. Gold opened with a glowing profile of one William Dembski, described as a "scientist by trade" but "an evangelical Christian at heart who is convinced that some biological mechanisms are too complex to have been created without divine guidance." But according to his Web site, Dembski is a philosopher and mathematician, not a biologist. Moreover, he's a leader of the new "intelligent design" crusade against Darwin's theory, an updated form of creationism that evolutionary biologists have broadly denounced. (He recently took a job running the Center for Science and Theology at the Southern Baptist Theological Seminary.) The American Association for the Advancement of Science, the world's largest scientific society and publisher of *Science*, the highest-circulation general scientific

journal, has firmly stated that proponents have “failed to offer credible scientific evidence to support their claim” that the intelligent design theory “undermines the current scientifically accepted theory of evolution.”

Scott Gold had it exactly right on abortion and breast cancer. Then he produced an article on “intelligent design” so artificially “balanced” it was downright inaccurate and misleading.

The basic notion that journalists should go beyond mere “balance” in search of the actual truth hardly represents a novel insight. This magazine, along with its political Web site, Campaign Desk, has been part of a rising chorus against a prevalent but lazy form of journalism that makes no attempt to dig beneath competing claims. But for journalists raised on objectivity and tempered by accusations of bias, knowing that phony balance can create distortion is one thing and taking steps to fix the reporting is another.

Political reporting hardly presents the only challenge for journalists seeking to go beyond he said/she said accounts, or even the most difficult one. Instead, that distinction may be reserved for media coverage of contested scientific issues, many of them with major policy ramifications, such as global climate change. After all, the journalistic norm of balance has no corollary in the world of science. On the contrary, scientific theories and interpretations survive or perish depending upon whether they’re published in highly competitive journals that practice strict quality control, whether the results upon which they’re based can be replicated by other scientists, and ultimately whether they win over scientific peers. When consensus builds, it is based on repeated testing and retesting of an idea.

Journalists face a number of pressures that can prevent them from accurately depicting competing scientific claims in terms of their credibility within the scientific community as a whole. First, reporters must often deal with editors who reflexively cry out for “balance.” Meanwhile, determining how much weight to give different sides in a scientific debate requires considerable expertise on the issue at hand. Few journalists have real scientific knowledge, and even beat reporters who know a great deal about certain scientific issues may know little about other ones they’re suddenly asked to cover.

Moreover, the question of how to substitute accuracy for mere “balance” in science reporting has become ever more pointed as journalists have struggled to cover the Bush administration, which scientists have widely accused of scientific distortions. As the Union of Concerned Scientists, an alliance of citizens and scientists, and other critics have noted, Bush administration statements and actions have often given privileged status to a fringe scientific view over a well-documented, extremely robust mainstream conclusion. Journalists have thus had to decide whether to report on a he said/she said

battle between scientists and the White House — which has had very few scientific defenders — or get to the bottom of each case of alleged distortion and report on who's actually right.

No wonder scientists have often denounced the press for giving credibility to fringe scientific viewpoints. And without a doubt, the topic on which scientists have most vehemently decried both the media and the Bush administration is global warming. While some scientific uncertainty remains in the climate field, the most rigorous peer-reviewed assessments — produced roughly every five years by the United Nations' Intergovernmental Panel on Climate Change (IPCC) — have cemented a consensus view that human greenhouse gas emissions are probably (i.e., the conclusion has a fairly high degree of scientific certainty) helping to fuel the greenhouse effect and explain the observed planetary warming of the past fifty years. Yet the Bush administration has consistently sought to undermine this position by hyping lingering uncertainties and seeking to revise government scientific reports. It has also relied upon energy interests and a small cadre of dissenting scientists (some of whom are funded, in part, by industry) in formulating climate policy.

The centrality of the climate change issue to the scientific critique of the press does not arise by accident. Climate change has mind-bogglingly massive ramifications, not only for the future of our carbon-based economy but for the planet itself. Energy interests wishing to stave off action to reduce greenhouse gas emissions have a documented history of supporting the small group of scientists who question the human role in causing climate change — as well as consciously strategizing about how to sow confusion on the issue and sway journalists.

In 1998, for instance, John H. Cushman, Jr., of The New York Times exposed an internal American Petroleum Institute memo outlining a strategy to invest millions to “maximize the impact of scientific views consistent with ours with Congress, the media and other key audiences.” Perhaps most startling, the memo cited a need to “recruit and train” scientists “who do not have a long history of visibility and/or participation in the climate change debate” to participate in media outreach and counter the mainstream scientific view. This seems to signal an awareness that after a while, journalists catch on to the connections between contrarian scientists and industry. But in the meantime, a window of opportunity apparently exists when reporters can be duped by fresh faces.

"There's a very small set of people" who question the consensus, says Science's executive editor-in-chief, Donald Kennedy. "And there are a great many thoughtful reporters in the media who believe that in order to produce a balanced story, you've got to pick one commentator from side A and one

commentator from side B. I call it the two-card Rolodex problem.”

The Stanford climatologist Stephen Schneider echoes this concern. A scientist whose interactions with the media on the subject of climate change span decades, Schneider has reflected at length on the subject, especially in his 1989 book *Global Warming*. Schneider’s climate-change Web site also devotes a section to what he calls “Mediarology,” where he notes that in science debates “there are rarely just two polar opposite sides, but rather a spectrum of potential outcomes, oftentimes accompanied by a considerable history of scientific assessment of the relative credibility of these many possibilities. A climate scientist faced with a reporter locked into the ‘get both sides’ mindset risks getting his or her views stuffed into one of two boxed storylines: ‘we’re worried’ or ‘it will all be okay.’ And sometimes, these two ‘boxes’ are misrepresentative; a mainstream, well-established consensus may be ‘balanced’ against the opposing views of a few extremists, and to the uninformed, each position seems equally credible.”

Academics have studied media coverage of climate change, and the results confirm climate scientists’ longstanding complaints. In a recent paper published in the journal *Global Environmental Change*, the scholars Maxwell T. Boykoff and Jules M. Boykoff analyzed coverage of the issue in *The New York Times*, *The Washington Post*, *The Wall Street Journal*, and the *Los Angeles Times* between 1988 and 2002. During this fourteen-year period, climate scientists successfully forged a powerful consensus on human-caused climate change. But reporting in these four major papers did not at all reflect this consensus.

The Boykoffs analyzed a random sample of 636 articles. They found that a majority — 52.7 percent — gave “roughly equal attention” to the scientific consensus view that humans contribute to climate change and to the energy-industry-supported view that natural fluctuations suffice to explain the observed warming. By comparison, just 35.3 percent of articles emphasized the scientific consensus view while still presenting the other side in a subordinate fashion. Finally, 6.2 percent emphasized the industry-supported view, and a mere 5.9 percent focused on the consensus view without bothering to provide the industry/skeptic counterpoint.

Most intriguing, the Boykoffs’ study found a shift in coverage between 1988 — when climate change first garnered wide media coverage — and 1990. During that period, journalists broadly moved from focusing on scientists’ views of climate change to providing “balanced” accounts. During this same period, the Boykoffs noted, climate change became highly politicized and a “small group of influential spokespeople and scientists emerged in the news” to question the mainstream view that industrial emissions are warming the planet. The

authors conclude that the U.S. “prestige-press” has produced “informationally biased coverage of global warming . . . hidden behind the veil of journalistic balance.”

In a rich irony, a UPI report on August 30, 2004, about the Boykoffs’ study covered it in — that’s right — a thoroughly “balanced” fashion. The article gave considerable space to the viewpoint of Frank Maisano, a former spokesman for the industry-sponsored Global Climate Coalition and a professional media consultant, who called the Boykoffs’ contentions “absolutely outrageous” and proceeded to reiterate many of the dubious criticisms of mainstream climate science for which the “skeptic” camp is so notorious. In the process, the UPI piece epitomized all the pathologies of U.S. coverage of climate change — pathologies that aren’t generally recapitulated abroad. Media research suggests that U.S. journalists cover climate change very differently from their European counterparts, often lending much more credence to the viewpoints of “skeptics” like Maisano.

In an interview, Maxwell Boykoff — an environmental studies Ph.D. candidate at the University of California at Santa Cruz — noted that if there’s one American journalist who cuts against the grain in covering the climate issue, it’s Andrew C. Revkin of The New York Times. That’s revealing, because Revkin happens to be the only reporter at any of the major newspapers studied who covers “global environmental change” as his exclusive beat, which Revkin says means writing about climate change “close to half” of the time. Revkin has also been covering global warming since 1988 and has written a book on the topic. (This fall he began teaching environmental reporting as an adjunct at Columbia’s Graduate School of Journalism.)

Revkin agrees with the basic thrust of the Boykoff study, but he also notes that the analysis focuses only on the quantitative aspect of climate-change coverage, rather than more subtle qualitative questions such as how reporters “characterize the voices” of the people they quote.

After all, the issue isn’t just how many column inches journalists give to the perspective of climate-change “skeptics” versus the mainstream view. It’s also how they identify these contrarian figures, many of whom have industry ties. Take a January 8, 2004, article by The Washington Post’s Guy Gugliotta, reporting on a study in the journal *Nature* finding that global warming could “drive 15 to 37 percent of living species toward extinction by mid-century.” Gugliotta’s story hardly suffered from phony balance. But when it did include a “skeptic” perspective — in a thoroughly subordinate fashion in the ninth paragraph — the skeptic’s industry ties went unmentioned:

One skeptic, William O’Keefe, president of the George C. Marshall Institute, a conservative science policy organization,

criticized the Nature study, saying that the research ‘ignored species’ ability to adapt to higher temperatures’ and assumed that technologies will not arise to reduce emissions.

What Gugliotta didn’t say is this: the Marshall Institute receives substantial support from oil giant ExxonMobil, a leading funder of think tanks, frequently conservative in orientation, that question the scientific consensus on climate change. Moreover, O’Keefe himself has chaired the anti-Kyoto Protocol Global Climate Coalition, and served as executive vice president and chief operating officer of the American Petroleum Institute. Senate documents from 2001 through 2003 also list him as a registered lobbyist for ExxonMobil. (To be fair, when I discussed this matter with O’Keefe while working on a previous article, he said that he registers as a lobbyist “out of an abundance of caution” and keeps his ExxonMobil and Marshall Institute work “separate.”)

Asked about all of this, Gugliotta said he simply didn’t know of O’Keefe’s industry connections at the time. He said he considered O’Keefe a “reasoned skeptic” who provided a measured perspective from the other side of the issue. Fair enough. His industry ties don’t necessarily detract from that, but readers still should know about them. The point isn’t to single out Gugliotta — any number of other examples could be found. And such omissions don’t merely occur on the news pages. Some major op-ed pages also appear to think that to fulfill their duty of providing a range of views, they should publish dubious contrarian opinion pieces on climate change even when those pieces are written by nonscientists. For instance, on July 7, 2003, The Washington Post published a revisionist op-ed on climate science by James Schlesinger, a former secretary of both energy and defense, and a former director of Central Intelligence. “In recent years the inclination has been to attribute the warming we have lately experienced to a single dominant cause — the increase in greenhouse gases,” wrote Schlesinger. “Yet climate has always been changing — and sometimes the swings have been rapid.” The clear implication was that scientists don’t know enough about the causes of climate change to justify strong pollution controls.

That’s not how most climatologists feel, but then Schlesinger is an economist by training, not a climatologist. Moreover, his Washington Post byline failed to note that he sits on the board of directors of Peabody Energy, the largest coal company in the world, and has since 2001. Peabody has resisted the push for mandatory controls on greenhouse gas emissions, such as those that would be required by the Kyoto Protocol. In a 2001 speech, the Peabody executive John Wooten argued that “there remains great uncertainty in the scientific understanding of climate,” and that “imposition of immediate constraints on emissions from fossil-fuel use is not warranted.” Funny, that’s pretty much what Schlesinger argued.

For another group of scientists, the grievances with the press have emerged more recently, but arguably with far greater force. That's because on an issue of great concern to these scientists — the various uses and abuses of somatic cell nuclear transfer, or cloning — journalists have swallowed the claims of the scientific fringe hook, line, and sinker.

Consider the great 2002 cloning hoax. In the media lull following Christmas, one Brigitte Boisselier — the “scientific director” of Clonaid, a company linked to the UFO-obsessed Raelian sect, and already a semi-celebrity who had been profiled in *The New York Times Magazine* — announced the birth of the world's first cloned baby. At her press conference, covered live by CNN, MSNBC, and Fox, Boisselier could not even produce a picture of the alleged child — “Eve” — much less independent scientific verification of her claims. She instead promised proof within eight or nine days. Needless to say, the whole affair should have made the press wary.

Nevertheless, a media frenzy ensued, with journalists occasionally mocking and questioning the Raelians while allowing their claims to drive the coverage. CNN's medical correspondent, Sanjay Gupta, provided a case in point. When he interviewed Boisselier following her press conference, Gupta called Clonaid a group with “the capacity to clone” and told Boisselier, credulously, “We are certainly going to be anxiously awaiting to see some of the proof from these independent scientists next week.”

Perhaps most outspoken in criticizing the press during the Clonaid fiasco was Arthur Caplan, the University of Pennsylvania biomedical ethicist. As one of the nation's most quoted bioethicists, Caplan had the advantage of actual access to the media during the feeding frenzy. Yet that familiarity made little difference. As Caplan complained in an MSNBC.com column following the Raelians' announcement, no one wanted to listen to his skepticism because that would have required dropping the story: “As soon as I heard about the Raelians' cloning claim, I knew it was nonsense,” wrote Caplan. “The media have shown themselves incapable of covering the key social and intellectual phenomena of the 21st century, namely the revolution in genetics and biology.”

Caplan observed that Clonaid had no scientific peer-reviewed publications to prove its techniques were up to snuff, and that cloning had barely worked in live animal species, and then only after countless initial failures. Nevertheless, Clonaid had implausibly claimed a stunning success rate — five pregnancies in ten attempts — in its experiments.

The Clonaid fiasco shows the media at their absolute worst in covering scientific issues. Reviewing the coverage two years later is a painful exercise. As even Gupta later admitted, “I think if we had known . . . that there was going to be no proof at this press conference, I think that we probably would

have pulled the plug.” Later on, even the Raelians themselves reportedly laughed at how easy it was to get free publicity.

But this wasn't just fun and games. The political consequences of the press's cloning coverage were considerable. Widespread fear of human cloning inevitably lends strength to sweeping legislation that would ban all forms of cloning, despite the fact that many scientists think the cloning of embryos for research purposes holds significant medical promise; it would allow for the creation of embryonic-stem-cell lines genetically matched to individual patients. Thus, on an issue where one side of the debate thrives on fear, the media delivered exactly what these cloning-ban advocates desired. Where the press's unjustifiable addiction to “balance” on climate change produces a political stalemate on a pressing issue of global consequence, its addiction to cloning cranks provided a potent political weapon to the enemies of crucial research.

None of those examples of poorly “balanced” science reporting arise from precisely the same set of journalistic shortcomings. In Scott Gold's case at the Los Angeles Times, he appears to have known the scientific issues perfectly well. That gave his writing an authority that set off warning bells in an editor wary of bias. That's very different from the Clonaid example, where sheer credulousness among members of the media — combined with sensationalism and a slow news period — were the problem. And that's different still from the problem of false balance in the media coverage of climate change in the U.S., which has been chronic for more than a decade.

Yet in each case, the basic journalistic remedy would probably be the same. As a general rule, journalists should treat fringe scientific claims with considerable skepticism, and find out what major peer-reviewed papers or assessments have to say about them. Moreover, they should adhere to the principle that the more outlandish or dramatic the claim, the more skepticism it warrants. The Los Angeles Times's Carroll observes that “every good journalist has a bit of a contrarian in his soul,” but it is precisely this impulse that can lead reporters astray. The fact is, nonscientist journalists can all too easily fall for scientific-sounding claims that they can't adequately evaluate on their own.

That doesn't mean that scientific consensus is right in every instance. There are famous examples, in fact, of when it was proved wrong: Galileo comes to mind, as does a lowly patent clerk named Einstein. In the vast majority of modern cases, however, scientific consensus can be expected to hold up under scrutiny precisely because it was reached through a lengthy and rigorous process of professional skepticism and criticism. At the very least, journalists covering science-based policy debates should familiarize themselves with this

professional proving ground, learn what it says about the relative merits of competing claims, and “balance” their reports accordingly.

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