Source: Minneapolis Star Tribune

Too much advocacy? Scientists and public policy

* Article by: GREG BREINING
* Updated: September 9, 2012 - 1:46 PM

By advocating social policy positions, scientists may be forfeiting their credibility, instead becoming just ordinary folks with opinions.

James Hansen, director of the NASA Goddard Institute for Space Studies, recently wrote in the New York Times that if Canada continues to pump oil from its tar sands, "it will be game over for the climate." This from the same climate scientist who warned three years ago, "We're toast if we don't get on a very different path."

Hansen may be a scientist, but neither statement is scientific. It's not clear what "game over for the climate" means -- either for the climate or for humans. His statement doesn't take into account that Canada's oil sands are a tiny fraction of the world's supply of fossil fuels. And the ramifications of climate on human life and industry lie well outside Hansen's expertise.

Hyperbolic and emotional as they are, these statements are examples of a scientist speaking not as a scientist, but as an advocate. They address policy, not science. And for these kinds of proclamations, Hansen is embraced by environmentalists and excoriated by climate-change deniers.

But what about all the people in the middle? People who may be willing to accept that the globe is warming, that humans are probably responsible, but still wonder what we might do about it?

Most likely, their bullshit detectors just went on high alert.

First, so you know, I am not a climate-change skeptic. Or a science skeptic. I believe most of what James Hansen says and that science offers a uniquely profound way to understand the world.

But by advocating policy positions -- overtly or by stealth -- scientists may be forfeiting their privileged positions as scientists and becoming just ordinary guys with opinions, and in the process, undercutting the credibility of their scientific work.

"I'm not saying that natural scientists aren't entitled to be people," says Jon A. Krosnick, professor of humanities and social sciences at Stanford University. "They are. Of course they have opinions about what they want government to do. They're entitled to express those opinions, to become activists, pressure government.

"However, bear in mind other people may be less convinced of your science after you do that."

Krosnick recently conducted an experiment that demonstrates that people are willing to trust a scientist who presents evidence for global warming and discusses the nature of a warmer Earth. But as soon as that same scientist urges listeners to write their politicians, people immediately began to suspect his motives and discount the accuracy of his scientific message.

If scientists realized as much, says Krosnick, "they may decide, you know what, it's not worth it. I'd rather maintain my scientific credibility and have someone else speak to the policy."

Advocacy -- overt and covert

"Scientists increasingly seem to be joining the political fray by equating particular scientific findings with political and ideological perspectives," writes Roger Pielke, professor of environmental science at the University of Colorado. "From the perspective of the public or policymakers, scientific debate and political debate on many environmental issues already have become indistinguishable."

At least Hansen's flag is flying in the breeze for all to see. Other advocacy masquerading as science is harder to recognize -- so difficult that scientists themselves may not see it.

George Wilhere of the Washington Department of Fish and Wildlife calls it "inadvertent advocacy" and labels it "professional negligence." Robert T. Lackey of the U.S. Environmental Protection Agency calls it "stealth policy advocacy."

The trend is particularly widespread in environmental fields. "Advocating personal positions on ecological policy issues has become widely tolerated as acceptable professional behavior and is even encouraged by a substantial fraction of the scientific community," Lackey writes in Conservation Biology.

A common example, Lackey says, is the widespread use of the innocent-sounding term "ecosystem health." But the phrase means nothing in science; it's just a metaphor to equate human health with a certain kind of ecosystem. But what kind? The writers who use the phrase usually mean a community of animals and plants that most resembles the ecosystem before white settlers plundered Eden.

"One person's damaged ecosystem is another person's improved ecosystem," writes Lackey. "Should a healthy ecosystem be defined as the ecological state that existed a thousand years ago, just prior to 1492, or at the end of last week? The answer is a value judgment, a policy choice, perhaps the product of political deliberations, but it is not solely a scientific decision."

Erica Fleishman, researcher at John Muir Institute of the Environment, University of California, Davis, had noticed stealth advocacy in the research papers submitted to Conservation Biology after she was hired as editor a bit more than two years ago. It didn't occur often -- in perhaps one paper in 10. But she began asking authors to strike unsubstantiated opinions and policy statements, or at the very least, identify them as opinions.

"In the scientific papers themselves I encouraged authors to use value-neutral language. Stick to the facts rather than emotion," Fleishman says. "I really wanted the journal to be seen as an honest broker of science to anyone who cares to use science regardless of their politics."

This spring, the Society for Conservation Biology gave Fleishman the boot. She was told that some authors and the governing board were, as Fleishman recalls, "unhappy with your insistence that policy preferences and value statements either not be included or be clearly identified as opinion in research papers."

Making meatloaf

So what? Scientific findings are just reflections of scientists' personal agendas, right?

Well, no. But that is a conclusion people easily come to. And once they do, they lose faith in science.

Michael Shellenberger, founder of the environmental Breakthrough Institute, pointed out a couple of years ago that a Gallup survey showed increasing numbers of Americans believe global warming has been hyped. And not just Republicans, but others, too. "Apocalypse talk is great red meat for the green base," Shellenberger writes, "but as Gallup shows, it is backfiring even among Democrats."

Jon Krosnick's recent experiment suggests why. In research not yet published, Krosnick recruited a national sample of nearly 800 American adults. Group one, the control, watched a video about making meatloaf. Group two watched a scientist talk about the science of climate change. And the third group watched the same scientist give the same talk, but with an added appeal to demand action from elected representatives. Then the viewers filled out a survey on their attitudes toward global warming.

Krosnick found that subjects who listened to the scientist discuss science scored the same on climate change as the group that learned to make meatloaf.

"In other words," says Krosnick, "the American public has heard a lot from natural scientists for a long time about their findings on climate change, and these particular participants did not manifest any changes in their opinion as a result of hearing yet another scientist say the kinds of stuff they're used to hearing."

But the third group, who heard the political appeal, were turned off. "First of all, people were less trusting of the scientist and of natural scientists in general after they heard the political statement," says Krosnick. "People were less supportive of government policies to address climate change than they had been if they hadn't heard that statement. In fact, people were less likely to say they even believed that climate change had been happening."

So what?

So, if more environmental scientists are willing to spout off or sneak policy opinions into their research -- what of it?

First, a lot of people will become not just skeptical, but unreasonably so. People are always looking for ways to avoid challenging information -- Al Gore's movie is called "An Inconvenient Truth," after all. By being able to suspect the motives of the messenger, listeners can discard the whole unpleasant message.

Second, not only will individual scientists lose credibility, but the whole scientific endeavor will become just another story, a narrative concocted for dramatic effect or self-serving motives. Science will become just another advocacy group -- in a lab coat.

Third, a collapse in credibility means that science will play an even less constructive role in public-policy debates. And when "stealth advocacy" enters the debate dressed up as science, it will become a proxy for clearly expressed values so that the values themselves are never discussed. As Wilhere puts it, "Inadvertent policy advocacy undermines the rational political discourse necessary for the evolution of society's values."

Finally, while scientists have plenty to contribute to public debate as "honest brokers" of scientific knowledge, they are not particularly good at staking out policy. This is why we elect politicians and hire regulators.

James Hansen (not to pick on him, but he's handy) is a climate scientist, but that's no reason to think he knows much about the economics of the carbon tax he has advocated. (Instead, one might look to an economist such as William Nordhaus, whose research has indeed supported the efficacy of a carbon tax, among other measures.)

Not to say that advocacy on the part of scientists is the sole cause of the nation's skepticism toward science in general and climate change in particular. More influential by far has been the terrific sum invested by fossil-fuel industries and their allies in challenging any science that the Earth is warming.

And Americans' religious beliefs and populism have inoculated them against even such basic, policy-neutral science as evolution.

But scientists' advocacy in politically charged debates does give opponents an opportunity to impeach their credibility and turn the conversation from science, which is hard to argue, to motives and doubt, which are a lot easier.

-----------------------------

Greg Breining writes about science, nature and travel. He is the author of "Paddle North: Canoeing the Boundary Waters-Quetico Wilderness" and "Wild Shore: Exploring Lake Superior by Kayak."