In my opinion . . .

Angry. Antagonistic. The words aptly describe the dialogue surrounding the subject of global climate change. Few other science policy issues in recent years—stem cell research, intelligent design versus evolution, genetically modified foods—have fostered such rancor.

Why does the question of humankind's role in global climate change elicit such fierce, uncivil discourse?

Last summer, Ohio State psychology professor Richard Petty published findings of a set of experiments that may offer some explanations. His work showed that people who have invested time and thought in an issue—and have formed an opinion—are less likely to change their minds, even when later confronted by experts armed with reputable facts.

The key, he said, lies in the effort people spend on the topic before forming an opinion.

People who are unfamiliar with an issue will generally accept what experts tell them. "That's normal—you'd expect that," Petty said. "But what happens if the person has already thought about the issue and has formed an opinion, like those who refuse to accept the role humans play in global warming?"

Petty said people will dig in their heels when confronted by an acknowledged expert whose opinion is different from theirs.

"The natural reaction is an ego defense, an attempt to ward off information that threatens the position you hold. And if your arguments can, in your mind, successfully resist the expert's opinion, then that builds your confidence and reinforces your conviction that you're right."

The commitment to a conviction that a person has spent time and thought on is very strong, he said. An expert may see the person's arguments as irrelevant or self-delusional, but that matters little to the person with the opinion. Such people are able to withstand the arguments of the expert, validating their stance.

And, Petty said, "There is a second point that has arisen from our social psychology research that probably applies to the climate change debate. That has to do with whether or not the expert seems to be speaking from a vested interest, that is, whether he or she has something to gain.

"Scientists aren't generally seen as having a vested interest in their science," he said. "But recent controversies, such as the so-called Climategate, gave people the impression that perhaps some climate scientists might have a vested interest beyond their scientific curiosity. People may suspect that scientists will benefit from grants or other funding by taking the position on the issue that they have."

This, coupled with questions about the role of advocacy among researchers, has changed the traditional view some people have of scientists. "We don't expect scientists to make recommendations about science policy issues, even though it would seem perfectly reasonable for them to do so," Petty said. When the evidence is strong, why not discuss the possible choices?

"Nevertheless, advocacy on the part of scientists has always been a controversial topic," he said. ■

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