COMMUNICATING SCIENCE

so-phis-ti-cat-ed (sə-fis'ti-kā'tid) adj. 1. Having worldly knowledge or refinement; lacking natural simplicity or naiveté: "We considered ourselves very sophisticated and talked of sex and morality in a superior way" (Jawaharlal Nehru). 2. Complex or complicated; refined: a sophisticated machine. 3. Suitable for or appealing to the tastes of sophisticates. —so. soph-is-try (sŏf'əs-trē) n., pl. -tries. 1. A plausible but misleading or fallacious argument. 2. Plausible but fallacious argumentation; faulty reasoning. Soph-o-cle-an (sŏf'a-klē'an) adj. Pertaining to or ch

Manufactroversy

The Art of Creating Controversy Where None Existed

By Leah Ceccarelli

MANUFACTROVERSY (măn'yə-făk'-trə-vûr'sē) N., pl. -sies. 1. A manufactured controversy that is motivated by profit or extreme ideology to intentionally create public confusion about an issue that is not in dispute; 2. Effort is often accompanied by imagined conspiracy theory and major marketing dollars involving fraud, deception and polemic rhetoric.

Don't bother to look for this definition above in any dictionary because "manufactroversy" has yet to make that grade. But don't dismiss the importance of what is defined there, either, just because the word is a new invention. Manufactroversy defines precisely a rhetorical flourish in need of challenge.

Indeed, with all the sophisticated sophistry besieging mass audiences today, there is a need for the study of rhetoric now more than ever before. This is especially the case when it comes to the contemporary assault on science known as manu-

factured controversy: when significant disagreement doesn't exist *inside* the scientific community, but is successfully invented for a public audience to achieve specific political ends.

Three recent examples of manufactured controversy are global warming skepticism, AIDS dissent in South Africa, and the intelligent design movement's "teach the controversy" campaign.

The first of these has been called an "epistemological filibuster" because it magnifies the uncertainty surrounding a scientific truth claim in order to delay the adoption of a policy that is warranted by that science. Languaging expert Frank Luntz admitted as much in his now infamous talking points memo on the environment, leaked to the public in 2002, where he confessed that the window for claiming controversy about global warming was closing, but he nonetheless urged conservative congressional and executive leaders "to continue to make the lack of scientific certainty a primary issue in the debate."

ExxonMobil was doing this, too, when it published its "Unsettled Science" advertisement about climate science on the editorial pages of The New York Times in March 2000. A more recent guest editorial by a reader made the same claim in the pages of The Seattle Post-Intelligencer in January 2008. All three seemed to be following the playbook of the tobacco industry when scientists discovered that their products cause cancer; when a threat to their interests arises from the scientific community, they declare "there are always two sides to a case" and then call for more study of the matter before action is taken.

South African President Thabo Mbeki's support for AIDS dissent eight years ago is a similar case. Like global warming skepticism, this assault on the science of HIV/AIDS research ingeniously turned the scientific community's values against it by drawing on the importance of rational open debate, a skeptical attitude, and the need for continued research.

Mbeki alleged that the mainstream scientific community branded scientists who questioned the causal link between HIV and AIDS as "dangerous and discredited' with whom nobody, including ourselves, should communicate or interact." Claiming the successful dissident's authority in post-apartheid South Africa, Mbeki condemned the mainstream scientific community for occupying "the frontline in the campaign of intellectual intimidation and terrorism which argues that the only freedom we have is to agree with what they decree to be established scientific truths."

A parallel case is being made by the intelligent design movement in conjunction with its "teach the controversy" campaign against evolutionary biology. Ben Stein's new movie, Expelled, portrays scientists as participating in a vast conspiracy to silence anyone who questions the Darwinian orthodoxy. This movie promises to be the most extreme application

yet of the intelligent design movement's "wedge" strategy to break the supremacy of evolutionary theory in contemporary science.

Just as a wedge can be set into a chink in a solid structure and, with the careful application of some concentrated force, will split that structure to pieces, so too do the producers of this movie hope that it can break the scientific community and allow for a change in how science is taught in America. Of course, any claim by biologists that there is no scientific controversy to teach merely feeds the conspiracy theory.

In light of this difficulty, some have suggested that the best response to manufactured controversy is no response at all. They say that countering such nonsense merely gives these modern-day sophists publicity and enables their continued efforts to reopen debate on settled science.

I understand this impulse to remain silent in the face of foolishness, but as a professor of rhetoric, I think it's shortsighted to cede the public stage to the anti-science forces in the naive hope that no one will pay attention to them. Ever since the field of rhetoric was born, there have been those who misuse the power of persuasion to mislead public audiences, and it has been only through vigilant counterpersuasion that such deception has been overcome.

The ancient sophists, or "wise men" (wise guys?) taught the new art of rhetoric to those who would pay their fee in the 5th century BCE. They included Gorgias, who was said to have boasted that he could persuade the multitude to ignore the expert and listen to him instead, and Protagoras, who claimed that there are always two sides to a case and it's the sophist's job to make the worse case appear the stronger.

It was to oppose this kind of deception that Aristotle codified the art of Rhetoric in his treatise by that title. Aristotle recognized that before lay audiences "not even the possession of the exactest knowledge" ensures that a speaker will be persuasive, so he promoted the study of rhetoric so that experts could confute those who try to mislead public audiences. Today's sophists exploit a public misconception about what science is, portraying it

as a structure of complete consensus built from the steady accumulation of unassailable data.

COMBATTING MANUFACTROVERSIES

As a scholar of rhetoric, I have studied some modern cases of manufactured controversy to discover how to best confute these contemporary sophists. The result? I have come up with some preliminary hypotheses about what makes their arguments so persuasive to a public audience.

First, they skillfully invoke values that are shared by the scientific community and the American public alike, like free speech, skeptical inquiry, and the revolutionary force of new ideas against a repressive orthodoxy. It is difficult to argue against someone who invokes these values without seeming unscientific or un-American.

Second, they exploit a tension between the technical and public spheres in postmodern American life. Highly specialized scientific experts can't spare the time to engage in careful public communication, and are then surprised when the public distrusts, fears, or opposes them.

Third, today's sophists exploit a public misconception about what science is. They portray science as a structure of complete consensus built from the steady accumulation of unassailable data. Any dissent by *any* scientist is then seen as evidence that there's no consensus, and thus truth must not have been discovered yet.

A more accurate portrayal of science sees it as a process of debate among a community of experts in

which one side outweighs the other in the balance of the argument, and that side is declared the winner. A few skeptics might remain, but they're vastly outnumbered by the rest, and the democratic process of science moves forward with the collective weight of the majority of expert opinion.

Scientists buy into this democratic process when they enter the profession, That's why a call for the winning side to share power in the science classroom with the losers, or to continue debating an issue that has already been settled for the vast majority of scientists so that policy makers can delay taking action on their findings, seems particularly undemocratic to most of them.

Aristotle believed that things that are true "have a natural tendency to prevail over their opposites," but that it takes a good rhetor to ensure that this happens when sophisticated sophistry is on the loose. I concur.

Only by exposing manufactured controversy for what it is, recognizing its rhetorical power and countering those who are skilled at getting the multitude to ignore the experts while imagining a scientific debate where none exists, can scientists and their allies use my field to achieve what Aristotle envisioned for it—a study that helps the argument that is in *reality* stronger also *appear* stronger before an audience of nonexperts. Sp

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