

From "Is it True?" to "So What?"

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by [Roger Pielke, Jr.](#)

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Scholars who study the role of science in society have long appreciated how arguments about science become a proxy for political debate. Peter Weingart, of the [University of Bielefeld](#), has described such situations as being "scientized" - where questions that are fundamentally about values are expressed in terms of competing factual claims or, more grandiosely, in terms of ultimate truth. And then political debate takes place about the truth or falsity of scientific claims. In such situations the question typically at the center of such a debate is, "Is it True?"

But while science provides a tremendously powerful way of looking at and shaping the world, in some situations it is fundamentally incapable of resolving claims to truth. First, as Prof. Weingart observes, political debates involving science often press right up to the frontiers of knowledge, where competing claims to certainty are most hotly debated among scientists and understandings remain contested. The ongoing debate over the role of greenhouse gas emissions on hurricane behavior provides an example of this dynamic. Daniel Sarewitz, of Arizona State University, offers a complementary perspective, observing that science does not provide a single view of the world, but rather a wide range of partial views from different disciplinary perspectives that do not "add up" to a coherent whole. For instance, Prof. Sarewitz suggests that plant geneticists who focus on improving agricultural productivity for human benefit view the risks of genetically modified crops differently than do ecologists who focus on protecting natural systems from human encroachment.

So then, what is true? Have hurricanes been intensified by global warming? Do genetically modified crops pose risks? Science simply cannot provide unambiguous answers to these questions. Of course the promise of science is that, at some point in the future, answers to these questions will be within our grasp, but meanwhile decisions about climate change and genetic modification need to be made.

When truth is elusive in political battles over science, a popular strategy has been to focus instead on the degree of agreement among experts as an indicator of truth. However, reaching agreement is a social process that involves far more than just science, and thus may reflect outcomes other than the truth. For example, an investigation of a US government drug approval advisory committee found that its individual

members' views on a particular drug's safety could be predicted by whether or not they had received drug company support in the past. The climate science community has, with some considerable success, institutionalized a consensus perspective on climate science. But this success has come at the price of reducing freedom of inquiry - today anyone who challenges the consensus view on climate change risks professional ostracism and public attack.

One consequence of looking to agreement among experts as a surrogate for truth is that partisans in political debate seek to condemn and dismiss certain experts according to whom they may be associated with, rather than based on the content of their views. Not long ago I experienced this dynamic firsthand when an enthusiastic writer at "Gristmill," a widely read environmental advocacy blog, publicly sought to evaluate my views on science and politics based on the fact that I had been invited by Republicans in the US Congress to testify at a hearing on the Bush Administration's politicization of science. Had he actually read my testimony, he would have found some strong criticisms of the action of the current Republican administration. More generally, the substitution of ideological preferences for substance in evaluating expert knowledge is one of the risks of using agreement as a proxy for truth. In this way arguments putatively about "truth" can devolve to character assassination and worse, shedding little light on competing factual claims.

So if the question "Is it True?" can lead to unsatisfactory outcomes for both policy and science as a basis for resolving political debates, is there an alternative? I think there is, and the alternative is to focus instead on the question, "So What?"

In a 1904 lecture titled "What Pragmatism Means," William James proposed a thought experiment: Imagine a squirrel on the trunk of a tree, and a man standing on the other side of the tree trunk where he cannot see the squirrel. The man tries to circle the tree in order to look at the squirrel, but as he does so the squirrel moves round the tree, keeping the trunk between him and the man. They go around the tree several times in this way. James poses a question: Does the man go around the squirrel?

The answer depends on the frame of reference one chooses to impose upon the situation and, specifically, what it means to "go around." James used this example to illustrate how, for some questions of truth, answers often depend upon the practical implications of knowledge - what he called its "cash value."

A concrete example of this thought experiment can be found in the example of genetically modified crops suggested by Prof. Sarewitz. Judgments of "risk" in this context are a function of risks to whom or what - e.g., to human health and/or agricultural markets? Evaluated in what manner - e.g., via environmental precaution or cost/benefit analysis? These types of questions reflect how much pragmatic thinking has to offer in contemporary political debates that involve contested issues of science. Specifically, it forces us to ask "So What?" when confronted with contested knowledge claims, rather than "Is it True?"

Consider the policy of implementing effective hurricane policies - i.e., policies most likely to save lives and protect property. There are good reasons to think that it really does not matter whether or not greenhouse gas emissions have influenced hurricanes. If they have, there is exceedingly little that can be done to modulate the behavior of storms in the coming decades via energy policies. In any case, the most effective actions are likely to be adaptive and will make sense regardless.

When we ask "So What?" we are immediately forced to consider the values at stake, outcomes associated with those values, and the various paths available for achieving those desired outcomes. With a focus on values and outcomes, it becomes much more difficult to hide political debates behind science, and opens up discussion to a wider range of options to achieve shared goals, and also the possibility that political

compromises might be reached regardless of the state of agreement on contested truth claims.

Those who expect that appeals to truth can resolve political disputes are likely to sense a frustrating circularity in pragmatic thinking because, for some issues, there simply is no resolution by an appeal to ultimate truth. Knowledge instead is provisional, negotiated, subject to revision, and not subject to verification. As Harvard's Sheila Jasanoff has written, we deal not with total truths, but with "serviceable truths."

So the next time you find yourself in a political dispute involving science, it may be tempting to try to convince your opponents of the truth (as they attempt the same approach with you). But when debates over truth prove unproductive, as they often do, you might also remember to ask "So What?" Perhaps political progress can still be made even if agreement on ultimate truths remains beyond our reach.

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