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Keynote Address—Paradox of Trust in Unsettled Times: Can Scientists "Speak Truth to Power"?

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Paradox of Trust in Unsettled Times: Can Scientists “Speak Truth to Power”?

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ABSTRACT: The phrase, “speak truth to power”, traces back at least to a pamphlet produced in the 1950s. Its central concern was international peace in an age of atomic and hydrogen weapons. In 2018, it has achieved a much broader meaning, including, but not limited to, speaking in defense of scientific theories, hypotheses, and facts that inconvenience people holding political power and authority. The recent letter sent out by members of the U.S. Academy of Sciences demonstrates the challenge of trust in an era when science and nominally democratic government, in the United States at least, are fundamentally at odds.

KEYWORDS: communication, democracy, power, science, truth

1. INTRODUCTION

An open letter signed by over 500 members of the U.S. Academy of Sciences prompted me to focus on speaking truth to power in an era when science and government are at odds, with some of the world’s most powerful political leaders openly encouraging public distrust of science (Concerned Members, 2018). One caveat I need to offer at the beginning is that, although I focus on the United States (US) and am aware that the US plays a leading role, I’m fully aware that open hostility toward science is not limited to this country.

The phrase “speak truth to power” is commonly traced to a pamphlet produced in the 1950s (American Friends Service Committee, 1955).¹ Its central concern was international peace in an age of atomic and hydrogen weapons. In 2018, the phrase has achieved a much broader meaning, including, but not limited to, speaking in defense of scientific theories, hypotheses, and facts that people holding political power and authority actively attempt to silence. Speaking truth to power is not limited to assertions of fact, but also includes value claims, and policy recommendations.

Today, I will begin by sharing some text from this letter and from the pamphlet, *Speak Truth to Power*. Then, I will offer three examples of ways the problem of trust in science is framed, including what scientists are told they should do about that problem. Finally, I will discuss why I believe this approach is doomed to failure, and then offer an alternative approach that draws from western rhetorical thought, and from the more recently established Science, Technology and Society (STS) studies.

¹ Prior to 1955, Bayard Rustin is reputed to have coined the phrase as part of his civil rights work. Rustin also was a member of the group that authored the pamphlet in 1955 (<https://www.afsc.org/story/bayard-rustin>).

2. SCIENCE AND SOCIETY

Let us begin with some statements drawn directly from the 2018 letter. I offer them as illustrations of fact claim, value assertion, and policy recommendation. The authors state that,

Human-caused climate disruption is leading to suffering and economic loss. Suffering and loss are not future hypotheticals. They are happening now. Despite these serious negative consequences, the present Administration has fulfilled its threat to initiate U.S. withdrawal from the Paris climate accord. The United States is the only nation in the world that has taken this action (Concerned Members, 2018).

This statement claims that climate disruption “*is leading*” somewhere, that its results “*are happening now*,” that the US “*has fulfilled*” a threat, and that it “*is the only nation . . . that has taken this action*” [italics added for emphasis]. It also asserts that the situation contributes “*to suffering and economic loss*,” that there are “*serious negative consequences*.” It casts “U.S. withdrawal from the Paris climate accord” negatively by describing it as a “*threat*.” The authors then follow their factual claims and value assertions with recommendations that, “*scientific evidence and research should be an important component of policymaking*” and offer clear direction as to how this should be accomplished:

We therefore call on the Federal Government to maintain scientific content on publicly accessible websites, to appoint qualified personnel to positions requiring scientific expertise, to cease censorship and intimidation of Government scientists, and to reverse the decision to withdraw the United States from the Paris Agreement.

My point here is that the letter integrates fact claims, value assertions and policy recommendations. And the integration of values and policy into a statement of fact does not invalidate the facts.

Speak Truth to Power (American Friends, 1955), states that one who seeks to “speak truth to power” must recognize and face “the paradox that [people] who long for freedom are willing to accept so easily the doctrines of political totalitarianism”. Further, when speaking truth to power, a person “seeks to change the attitude of the opponent rather than to force . . . submission through violence”. Note that the opponent is not necessarily recast as a friend, but is offered an alternative path.

I would submit that these principles of speaking truth to power offer a path forward; one that has the potential to reinstate science as a trustworthy component of society. But, reinstatement may be the wrong word, for they do not encourage a nostalgic vision of a return to the good old days when the masses had more respect for authority, whether it be religious or scientific authority. Rather, they point to the potential for a future where inclusion of diverse and sometimes conflicting perspectives becomes the central and unresolvable challenge (Mouffe, 2000, 2005; Peterson, et. al, 2005). In doing so they shift the focus from identifying the single correct approach, to negotiating among multiple options, and identifying those most appropriate for a particular time and place; tasks that not only recognize, but also appreciate the contingent nature of human society (Cox, 2010; Toulmin, 1958).

3. THE PROBLEM OF TRUST

Now, let's turn to some examples of how the problem of trust in science is commonly framed. In November 2009 a server used by the Climatic Research Unit (CRU) at the University of East Anglia was breached (Henig, 2009). The attackers obtained more than 1,000 email messages spanning 13 years, as well as many times that in other documents. On 19 November someone uploaded a file containing those data to a server in Tomsk, Russia. Climate change denier blogs widely publicized the emails especially, asserting a major scandal. Examples include:

- Greatest deception in history
- Worst scientific scandal of our generation
- Deliberate fraud
- Cherry-picked data
- Smoking guns
- Hiding the decline [in measured temperatures]
- Data manipulation

Mainstream media framed the story with headlines such as:

- Climate e-mail hack will impact on Copenhagen Summit
- Climate-unit chief steps aside amid probe
- Climate sceptics claim leaked emails are evidence of collusion among scientists
- Stolen climate e-mails cause a ruckus in Congress

Following Climategate, climate scientists in the United States, United Kingdom, and Australia received death threats and other hostile e-mails. Researchers at CRU protested that the leaked emails reflected an honest exchange of ideas, and were taken out of context to fit the political agenda of climate change deniers. Stephen Schneider compared the attacks to the witch-hunts of McCarthyism. Others wrote that the timing suggested an attempt to undermine talks at the 2009 Global Climate Summit in Copenhagen.

Numerous governmental and nongovernmental organizations investigated the allegations of fraud. Eventually, eight committees in the UK and US published reports stating they had found no evidence of fraud or scientific misconduct. Some of the reports did, however, cite CRU's failure or delay in responding to Freedom of Information (FOI) requests. All concluded that nothing in the leaked data conflicted with the scientific consensus that the current rate of climate change is largely induced by human activity. A US investigation conducted in response to a request by Senator James Inhofe (a notable climate denier), stated, "we did not find any evidence that NOAA inappropriately manipulated data . . . or failed to adhere to appropriate peer review procedures" (Donovan, 2011). As of 2018, the full report, which was prepared by the U.S. Commerce Department, had been removed from the Internet. The UK House of Commons "found no reason in this unfortunate episode to challenge the scientific consensus . . . that "global warming is happening [and] that it is induced by human activity'." Regarding "accusations of dishonesty, . . . there is no case to answer" (Science and Technology Committee, 2010). Some of the reports did, however, cite CRU's failure or delay in responding to Freedom of Information (FOI) requests. They also noted that the scientists

were sometimes impolite in their characterizations of those who publicly opposed the scientific consensus.

A *Nature* editorial described the media as being "led by the nose, by those with a clear agenda, to a sizzling scandal that steadily defused as the true facts and context were made clear." Erik Conway and Naomi Oreskes (2010) wrote that,

the vindication of the climate scientists has received very little coverage at all. Vindication is not as sexy as accusation, and many people are still suspicious. After all, some of those emails, taken out of context, sounded damning. But what they show is that climate scientists are frustrated, because for two decades they have been under attack (p. 34).

Now, I'll turn to a much less exciting case, the concern among conservation scientists about their public credibility. If you attend a conference of the professional organizations interested in conservation science, you can count on a few sessions where participants bemoan the lack of public trust in their science and where other participants offer suggestions on how to improve the situation. These meetings range from conferences of state and regional-level groups such as the Texas Chapter of the Wildlife Society to the Ecological Society of America, to the Society for Conservation Biology.

After listening to and reading about these discussions for more than a decade, some colleagues and I decided to examine advice on this topic that was published in the peer-reviewed conservation science literature (Horton et. al, 2015). The first thing we found was a steep uptick in such papers within the past decade. Then, we found that credibility typically was framed as a static entity lacking dimensionality. While authors often mentioned expertise, and to a lesser extent, trustworthiness, they did not identify them as dimensions of credibility. The third dimension of credibility identified by Aristotle, goodwill, is almost never mentioned.

Finally, let's examine segments from a blog post on the London School of Economics' Website. Economist Thomas Basbøll (2018) responds to a previous post advocating that scientists should become better storytellers. To the claim that better stories will facilitate greater respect for science because humans find stories compelling, his response is that science should be "*vulnerable to criticism*" rather than compelling. He fears that a compelling story "perhaps unintentionally [encourages readers] to avoid critical engagement."

Basbøll (2018) then uses a rhetorical question to move directly from the concern with avoiding critical engagement to claiming that science should be presented as a series of arguments *rather* than as a story: "why should we encourage scientists to present their ideas in ways that key into 100,000 years of conditioned responses, hormonal stimulation, and emotional shortcuts?" The answer, of course, is that scientists should not do so. Rather than pandering to the masses by telling stories, they should challenge the masses. Noting that, "the structure of human understanding is like a crooked mirror, which causes distorted reflections," Basbøll sets up scientists to battle the "false conceptions which are derived from public human communication". Essentially, Basbøll is placing scientists and scholars in the position of Plato's philosopher kings or religion's sacred writ (Peterson, et. al, 2007). This, I would submit is an extremely dangerous position.

4. NEGOTIATING THE PARADOX

So where does this leave us? Let's try looking at these cases from a perspective that is consistent with speaking truth to power.

As you're probably aware, the fallout from Climategate has included numerous suggestions for how the scientists could have handled better. Most of these suggestions were superficial, however, such as the recommendation that climate scientists should self-police their internal email conversations so as to avoid saying anything impolite. Some people wrote that they should have responded more quickly and thoroughly to the data breach, while others wrote that they overreacted. Some of the official reports cited CRU's failure or delay in responding to Freedom of Information (FOI) requests, and these reports stipulated that they should be more prompt in responding to future requests. What I find most interesting about Conway and Oreske's (2010) commentary is the sentence stating "that climate scientists are frustrated, because for two decades they have been under attack." So, perhaps the limitations of reactivity and defensiveness should be considered. And Latour (2010) argues that climate scientists missed an exciting opportunity to educate both the media and the general public as to the uncertainty inherent in all scientific enterprise.

When examining the interpretations of credibility in conservation biology, we found that a mechanistic perspective on credibility dominates conservation science, and we suggest it may limit the ability of conservation scientists to contribute to biodiversity conservation. Perhaps paying greater attention to the emergent quality and multidimensionality of credibility could contribute to greater public trust in conservation science. And, any student of 20th and 21st Century rhetoric and argumentation should be aware that the either/or frame used by Basbøll (2018) is likely to strangle public discussion.

If scientists hope to carve a place for science and research in contemporary Western democracies, they would do well to seek ways to "change the attitude of the opponent rather than to force . . . submission" (American Friends Service Committee, 1955). This means preferring the provisional over the permanent, inclusivity over exclusivity, and appreciating both individuality and symbiotic relationships with others—simultaneously (Latour, 2010). Scientists who seek to speak truth to power, such as those who signed the open letter to U.S. president Donald Trump, cannot afford the limitations of Basbøll's (2018) notion of stories versus arguments; they need to integrate both into their lexicon. They cannot afford the limitations of a version of credibility that ignores particularity and notions of care. They need to be responsive, rather than reactive, when attacked by those who profit from continuing the status quo, despite what that status quo means for human society in general. And they need to anticipate that, rather than producing an easy consensus, science and the policies it seems to support in any given situation will be increasingly faced with polarized views that operate across a variety of hegemonic configurations. To quote John Peters (1999), "instead of being terrorized by the quest for communication with aliens, we should recognize its ordinariness" (p. 257). Science communication is important to every citizen in a nominally democratic regime because it has the potential to bring all of them, both those who identify as scientists and those who identify as other-than-scientists, into the chaotic political milieu where democracy is continually reconstituted.

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