Science Communication and the Era of "Fake News"

Kirstin L. Neff

One of the things that has most surprised me about working on Capitol Hill has been the indispensable relationship between Congress and the press. It has been said that the press is the fourth branch of American government, and my time in a senator's office has shown me the deep truth of that statement. You could have the most brilliant legislative idea, or the strongest conviction about a policy, but none of it matters unless you can communicate it to the public in such a way that they will hear, understand, and care about your message.

Throughout my fellowship year, I've often had the opportunity to work with our office's communications staff to make sure that news of our legislative work reaches our constituents. I've contributed to and fact-checked press releases, statements, op-eds, and speeches, with a goal of not only getting the science and technical information right, but expressing it in a way that engages journalists and their audience, our constituents. I've been reminded that the basic tenets of journalism are not only who, what, when, and where, but also why it's relevant to the lives of readers and viewers. I've learned from my communications colleagues how to frame an issue and avoid the kind of technical vocabulary that makes a reader turn the page or a viewer change the channel.

As scientists, we know it takes trial and error to find out what works to clearly communicate our work to a lay audience. Perhaps you've been interviewed by the local paper or a blog about your research, only to see the final article and grimace at an inaccuracy that arose from miscommunication. Perhaps you've appeared on a radio program or podcast and struggled to avoid using technical jargon. The events of the past year have led many scientists to turn their attention toward political debate, yet the first thing we often realize is how ill-equipped we are to engage with the public on scientific topics.

Just as scientists experience how easily their work can be misunderstood or misconstrued, so do politicians, whose statements and actions are held under a high-powered microscope, facilitating misinterpretation. Political communication involves not only explaining the why, often using stories from constituents to demonstrate the reasoning behind votes or co-sponsored legislation, but also about the how: Congressional procedure can be difficult to understand and counterintuitive, even for those who practice it daily. It is this difficulty that gave rise to former presidential candidate John Kerry's infamous 2004 quote, "I actually did vote for [supplemental military spending in Iraq and Afghanistan], before I voted against it." Kerry was alluding to a procedural vote before final passage of the bill, which was altered with amendments during floor debate. He failed to explain that to an audience that (justifiably) knows and cares little about Senate procedure. He struggled, like many scientists, to avoid jargon and meet his audience where they stood.

Thankfully, there are a growing number of avenues for scientists to practice and develop their public communication skills. The proliferation of podcasts offers an increasing number of opportunities for scientists to discuss their work before a lay audience. Across the world, science pub nights are increasing in popularity and offering scientists an informal venue in which to present short, often humorous talks highlighting the joy and wonder of their scientific endeavors. I was fortunate to have the chance to present at D.C.'s Nerd Nite event, hosted by professional science communicators who are eager to share their tips and tricks for making your science entertaining and meaningful. Blogging about your work is another quick entrée into communicating with lay audiences.

But at the same time that the scientific community is recognizing the need to engage with the press and tailor their work to lay audiences, the press itself is undergoing heightened external pressures and institutional changes. Traditional print media are struggling to find a functional business model in the digital age, resulting in a consolidation of print sources and fewer resources for in-depth reporting. Cable news outlets increasingly rely on commentators and less on investigative journalism. And newer online sources are bringing a greater diversity of perspectives and stories into our newsfeeds, expanding the conversation but sometimes serving as an echo chamber, reinforcing existing beliefs. In this era of change and uncertainty, leaders who would see the power of the press diminished have promoted the idea of "fake news," threatening the credibility of our indispensable fourth branch of government.

Scientists currently have a wealth of opportunities to engage the public with their work, from highlighting the value of federal research and development funding to explaining the real-world applicability of their work. Just as politicians must justify their actions and decisions to their constituents, so must scientists now justify the value and relevance of their work. The necessity of applying scientific knowledge to policymaking has never been more clear as we face increasing natural hazards and big decisions about the energy, transportation, and technology sectors. The lessons I've learned in communication on Capitol Hill are relevant also to scientists: Use commonly understood vocabulary (even if you think it oversimplifies!), meet your audience where they already are (in the pub or on your local news), and lead with why your work matters to their lives. For scientists who want to engage, there is a wealth of opportunity to spread the word about the value of science to society.

This manuscript is submitted for publication by Kirstin Neff, 2016–2017 GSA-USGS Congressional Science Fellow, with the understanding that the U.S. government is authorized to reproduce and distribute reprints for governmental use. The one-year fellowship is supported by GSA and the U.S. Geological Survey, Department of the Interior, under Assistance Award no. G16AP00179. The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. government. Neff works in the office of Senator Martin Heinrich (D-NM) and can be contacted by e-mail at Kirstin_Neff@heinrich.senate.gov.