JCOM

The need for feminist approaches to science communication

Bruce Lewenstein

Abstract

As science communication develops as a field of both practice and research, it needs to address issues of equity, diversity, and inclusion across a wide range, including race, power, class, gender. Doing so will require deeper understanding of conceptual work and practical activities that address those issues. This brief comment introduces a series of commentaries that provide one approach: feminist approaches to science communication.

Keywords

Science communication: theory and models; Social inclusion; Women in science

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In early 2018, I was asked to moderate a panel on a feminist agenda for science communication. I can honestly say that until then I'd never even considered that there might be a particular "feminist" approach to the field.

Yet in retrospect, the panel was the third time in about that many months that the issue had come up. I had participated in the defenses for two doctoral dissertations (at different institutions, indeed on different continents) that had raised for me the question of an "ethics of care" — a feminist idea — in science communication. Stephanie Steinhardt's thesis at Cornell on the communication practices of oceanographers had highlighted how women faced different challenges, ones that could be understood through ideas of care [Steinhardt, 2018]. Britt Wray's thesis at the University of Copenhagen, on the production and use of a media tool for public engagement, explicitly explored the way that concerns about care shaped the way her informants — especially her female informants — had responded [Wray, 2018]. Moreover, during the defense, Wray considered a paradox: if her work suggested that science communicators should attend more to issues of care, would that further gender an already gendered field?

To me, the "ethics of care" was a new topic, though I've since learned that it is a longtime concern in the feminist literature [Gilligan, 1982; Noddings, 1984]. It turned out that it isn't even a new topic in science communication: Steinhardt sent

me Tania Perez-Bustos's [2014] article on the topic as we planned the panel discussion. So I wondered: what are other perspectives that a feminist agenda might bring to talking about science communication?

The most obvious perspective is to think about gender. On that topic, I had previously noted a couple items:

The first is the obvious one: there's a gender imbalance in the field, especially among practitioners. My own science communication courses are almost always majority female, sometimes as much as 90%. (I would have guessed that more researchers are men, but an informal count of recent authors in *JCOM* and *Public Understanding of Science* shows about an even split.) When I speak orally about this imbalance, I can use a tone of irony as I say "the positive interpretation is that women are a lot smarter than men and have figured out that science communication is a lot more interesting than science itself." Unfortunately, and less ironically, there's a less positive interpretation, which is that science communication is a ghetto for women: lower paid, less status, less stability than science itself. I've called out this possibility a number of times in conferences and classrooms, but no one has wanted to take a stand about whether this is true, or a problem. (Several of the contributors to this set if commentaries, especially Elizabeth Rasekoala, do take on the question.)

The second gender-related issue is well-known in the science communication practitioner community: the issue of sexual harassment. Five years before the current #MeToo movement started in 2017, the science communication community was rocked by sexual harassment charges against the co-founder of one of the most innovative and exciting science communication meetings of the time, the ScienceOnline unconference series. I won't go through all the details, but the furor and fallout literally killed off the series as the community struggled to come to new understandings of acceptable behavior. The issue of harassment raised more general concerns about gender equality, and a group of science writers organized in 2014 a one-time conference on women in science writing (https://sciencewritingsummit.org/home/). There have been a variety of followup activities, especially in the science journalism world. But the intertwining of harassment and equality as issues continues; as recently as January 2019, an online column from Christie Aschwanden [2019] appeared bemoaning the need to keep creating lists of women science writers — shouldn't we be past that, she and others asked? And, of course, in the last few years, several prominent science communicators such as Larry Krause and Neil deGrasse Tyson have been accused of sexual harassment (Krause retired when his university planned to fire him after its investigation; Tyson's employers also conducted investigations and afterwards allowed him to continue his activities).

But these relatively easy observations about gender are only a beginning. We have to think more broadly about what it means to think about a feminist agenda for science communication.

Science communication as a field has developed largely through practice, informed by questions raised by researchers in fields like communication, science & technology studies, sociology, science education, museum studies, and so on.

As the field matures, practitioners and scholars increasingly recognize that science is fundamentally embedded in social structures. While "science" likes to highlight its ability to produce knowledge that is reliable across time, space, and culture, we now know how much of that production and reliability is shaped by forces that go well beyond science: gender, race, class, access to power, and so on. As the examples of gender above suggest, those forces affect science communication, too.

Many practitioners and a few scholars have started to ask questions about how diversity and power shape science communication [Dawson, 2019; Feinstein and Meshoulam, 2013; Previs, 2016; Steinke, 2005; Steinke and Long, 1996; Yong, 2018]. Just a month after I am composing this introduction in August of 2019, the University of Rhode Island's Metcalfe Institute for Marine and Environmental Reporting will host the second "Inclusive Science Communication" conference — a marker of how these questions are becoming part of our conversation (https://inclusivescicomm.org/).

Perhaps the most well-known questions about diversity deal with gender. In 1957, the anthropologist Margaret Mead and her colleague Rhoda Metraux pioneered studies assessing the image of science and scientists, surveying American high school students. They identified the classic image: "The scientist is a man who wears a white coat and works in a laboratory. He is elderly or middle aged and wears glasses…" [Mead and Metraux, 1957, p. 386]. Most importantly, they discussed how the image "divides girls and boys" (p. 387), changing career expectations and attitudes. In the years since, an array of studies have confirmed and expanded our understanding of how the images of scientists are shaped by gendered expectations, of how those expectations play out in many forms of science communication, and of the effects of those images. I here list a very small number of such studies [Long, Boiarsky and Thayer, 2001; Miller et al., 2018; Steinke, 2005; Weitekamp, 2015], but many more exist.

Still, these studies are largely descriptive. We are only now beginning to draw on the theoretical tools that new approaches to scholarship (feminism, queer studies, post- and de-colonial studies, etc.) offer us.

As I noted above, I am not especially familiar with that literature. I am a quintessential insider: an older white cis-gendered male who prefers traditional pronouns (he/him/his), teaching and researching at an elite American university. My own research is hardly radical in its theoretical approach. Thus I was tremendously honored when my former students Megan Halpern and Stephanie Steinhardt asked me to moderate the panel I described above at the February 2019 meeting of the American Association for the Advancement of Science. Though we were scheduled at 8:00 am on the first day of the meeting, the room was packed with about 100 people.

Not surprisingly — but perhaps disappointingly — the vast majority of the audience were women. Some of the practicing scientists and science communicators in the room told us afterwards that this was the first time they'd had a chance to talk about the field from a perspective that explicitly questioned power dynamics (in this case, gendered ones). That's disappointing. We cannot make progress on bringing the value of diversity to our practice and our scholarship if we do not have opportunities to make those issues explicit.

Thus I'm especially grateful for the invitation from the editor of *JCOM*, Emma Weitkamp, to bring together a series of commentaries inspired by feminist approaches to science communication. Some are from the panelists at that AAAS meeting, others are from researchers and practitioners who we knew are thinking about these issues. I hope that making their perspectives available through *JCOM* will provide more, and more widespread, opportunities to question, challenge, and ultimately move forward in our understanding and practice of science communication.

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Author

Bruce V. Lewenstein is Professor of Science Communication and chair of the Department of Science & Technology Studies at Cornell University. Trained as a historian of science, he works across the field of public communication of science and technology, including informal science education, citizen science, and communication training for scientists. He is a member of the Editorial Advisory Board of JCOM and a former editor of the journal Public Understanding of Science. E-mail: b.lewenstein@cornell.edu.

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