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THE NEED FOR FEMINIST APPROACHES TO SCIENCE COMMUNICATION

Feminist standpoint theory and science communication

Megan Halpern

Abstract

This commentary introduces feminist standpoint theory and discusses its potential value in science communication. It offers two ways in which feminist standpoints can help in both research and practice. First, science communicators should aim to understand the perspective from which they understand and share scientific knowledge. Second, practitioners and researchers alike should seek insights from marginalized groups to help inform the ways the dominant view of science reflects hegemonic social and cultural norms.

Keywords

Public engagement with science and technology; Science communication: theory and models; Women in science

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Introduction

I was walking through a U.S. national park, on vacation with my family, when my six-year-old son casually mentioned perspective to me. I can't recall the exact quote, but it was along these lines: *If you stand in one place something looks one way and if you stand in a different place, it looks another way.* I was astounded. Yes, I tell him, that's right. How did you know that? He tells me he learned it from a public broadcasting cartoon. I praise the cartoon and him for learning the lesson, and suggest he always look for multiple perspectives in life.

He was speaking literally, about visual perspectives, but perspective functions as a metaphor for a broader understanding of the basic concept that things look different for you than they do for me. Part of understanding perspective, both physically and metaphorically, is recognizing that there's no way to escape it. There is no view from nowhere; nothing that can be seen outside of the perspective from which we see it. If we fully embrace the understanding that everyone's views are partial, incomplete, and unique, it must impact how we understand everything, including science and science communication. As Haraway [1988] notes:

> The "eyes" made available in modern technological sciences shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building on translations and specific ways of seeing, that is, ways of life. There is no unmediated photograph or passive camera obscura in scientific accounts of bodies and machines; there are only highly specific visual possibilities, each with a wonderfully detailed, active, partial way of organizing worlds. (p. 583)

The idea that knowledge comes from a particular perspective might, at first glance, seem dangerous to science. The conventional view of scientific knowledge presumes that we can arrive at objective knowledge; a view from nowhere, which Haraway calls the "God trick." But some feminist scholars advocate embracing the multitude of perspectives as part of what makes science so powerful. I want to suggest that embracing perspective can also change the way we think about science communication — because it changes not only how we understand the science we are communicating, but also how we understand what it means to communicate science in the first place. By first situating ourselves, and then those with whom we'd like to communicate, we are better able to understand the strengths of our own scientific knowledge, and the place from which it comes. We are also better able to learn from others to understand how scientific knowledge fails them or falls short, and then use that knowledge to help our communication research and practice.

For example, in 2009, emails from the Climate Research Unit of the University of East Anglia were anonymously leaked, resulting in "Climategate," a controversy in which climate change skeptics pointed toward emails that they claimed showed bias and even a cover-up by climate scientists. The scandal was called a PR disaster for climate science [Pearce, 2010], bolstering the claims of climate science deniers and conspiracy theorists across the globe. Though several investigations revealed no wrongdoing, the damage had already been done. Part of the reason Climategate unfolded the way it did is because the scientific community has, for too long, claimed that science has no perspective, when, in fact, scientists are rarely driven to work in their fields just because they strive for objective knowledge. Climate scientists are often inspired to go into environmental science because they are deeply concerned for the health of the planet, just as biomedical researchers are often driven by the desire to cure diseases that have cost them a loved one. So, when journalists accuse climate scientists of bias, or when scientists shy away from activism because it seems anathema to objectivity, they are playing into a false narrative that scientific information can be separated from those who generate and share that knowledge. This is where feminist standpoint theory can help to reorient science communication.

Feminist standpoint theory

Feminist standpoint theory is not new; feminist scholars such as Smith [1974], Hartsock [2003], Harding [1986], Harding [1991], Harding [1995], Harding [2003a], Jaggar [1989], Jaggar [2003], Haraway [1988] and Haraway [1994] began writing about it in the early 1970s and 1980s. Even before feminist theory took up standpoint theory, the idea of situated knowledge can be traced back to Hegel as well as Marx. The basic principles of the theory are that (a) all knowledge is situated, interpreted, and thus local; and (b) those belonging to marginalized groups are situated in ways that allow them to see more than those who are not. As Harding put it, "Each oppressed group can learn to identify its distinctive

opportunities to turn an oppressive feature of the group's conditions into a source of critical insight about how the dominant society thinks and is structured" [2003a, p. 7]. This means that not only do we see things differently from different perspectives, but that those who are outside of the dominant perspective have access to knowledge that those within it do not. While there are many schools of thought about standpoint theory even within feminist scholarship, this is the thread that runs through feminist interpretations of knowledge.

The primary critique leveled at standpoint theory is that it can only lead to unchecked, radical relativism. Critics suggest that if all knowledge is situated, there is no way to know whether any knowledge claims are "true." It might be tempting to say that if nothing is objectively true, than either we must accept all knowledge claims as equally true, or reject all knowledge claims because they come from partial perspectives. But standpoint theorists argue that we can still hold knowledge claims to high standards without insisting they are objectively, universally true. This means that we can know things subjectively.

Further, taking standpoints into account can, in fact, strengthen knowledge claims. The over-used cudgel that any particular knowledge claim is biased becomes meaningless when approaching knowledge from a standpoint perspective. The recognition that all knowledge claims are biased offers not only a release from such easy, and often insincere, critiques, but also provides an opportunity for a more rigorous form of objectivity, which Harding calls "strong objectivity" [1995; 2003b]. Strong objectivity demands that a knowledge claim be defended along with its biases, rather than apart from them. Similarly, Haraway [1988] notes that partial perspectives require us to be *more*, rather than less, accountable for our knowledge by rejecting the split between mind and body or subject and object.

> The moral is simple: only partial perspective promises objective vision. All Western cultural narratives about objectivity are allegories of the ideologies governing the relations of what we call mind and body, distance and responsibility. Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. It allows us to become answerable for what we learn how to see. (p. 583)

What feminist standpoints offer science communication

Standpoint theory offers a way of thinking about the social and situated nature of science without dismissing the value of scientific knowledge. Similarly, it can offer a way for science communicators to value not only our own situated perspectives on science, but also the multiple, varied perspectives of the publics with whom we engage.

Owning our standpoints

If we, as science communicators, devote part of our practice to locating and articulating the position from which we gained our knowledge, we are likely to find that many of us sit at an intersection between dominant and marginalized perspectives. As experts, science communicators are often in positions of privilege and power; however, if, as Lewenstein suggests in his contribution to this collection of

commentaries, science communication has become predominantly a field populated with women, many of us also have valuable standpoint perspectives to share.

Since most western science communication is still grounded in the idea of detached, objective science, embracing situated knowledge has huge implications for those of us with marginalized positions. Within standpoint theory, our positions outside these central domains of power actually offer us a *privileged* position from which to better see the knowledge and the systems in which it was created. By first acknowledging that our own knowledge is situated, and then making our perspectives transparent in our work, we can help to illuminate not only our own positions, but also the dominant perspectives that shape discourse around science. In short, we, as women or other marginalized groups in the sciences, have been communicating about science on someone else's terms and from their perspectives. By doing so, we have helped to sell the idea that there is one true perspective. It is time we let ourselves share scientific knowledge from our own unique perspectives, acknowledging the value of the subjectivity that is already inherent in our work.

To begin this process, I suggest science communicators ask themselves three questions:

1. How is my knowledge situated? What is my background, how did I come to be here? What do I know about my area of expertise and my audiences that no one else does?
2. How can I acknowledge and pay tribute to the unique place from which my knowledge comes?
3. How can resituating my knowledge from my own perspective (as opposed to the God's eye view, or view from nowhere) inform how we see all scientific knowledge?

Valuing others' standpoints

The next step toward embracing standpoint theory in science communication is to learn from marginalized standpoints. Though science communicators are often trained to know their audiences, they aren't often encouraged to draw on their audiences' knowledge to help inform their own perspectives. But perhaps standpoint theory can reveal the long sought-after path toward engagement. Recognizing our own partial perspective and learning to understand the situated knowledge of our audiences can provide a more complete view of the many dimensions of socially situated science.

This does not mean accepting all perspectives as equally valuable. Once again, these feminist theories do not suggest we can't have high standards for what becomes certified knowledge, just that we also reveal and examine the context within which the certification process takes place.

> But here there also lies a serious danger of romanticizing and/or appropriating the vision of the less powerful while claiming to see from their positions. To see from below is neither easily learned nor unproblematic, even if "we" "naturally" inhabit the great underground terrain of subjugated knowledges.

> The positionings of the subjugated are not exempt from critical reexamination, decoding, deconstruction, and interpretation.... The standpoints of the subjugated are not "innocent" positions. On the contrary, they are preferred because in principle they are least likely to allow denial of the critical and interpretive core of all knowledge. [Haraway, 1988, pp. 583–584]

For example, what situated knowledge do those who refuse vaccinations possess that can help us understand the fraught nature of vaccination decisions and the rise of vaccination apprehension? I do not suggest that celebrities railing against vaccinations know more about medicine, biology, or epidemiology than medical professionals and policymakers who fight to keep vaccination rates up, but I do suggest that from our position of power we do not see the whole picture. By learning about their fears and concerns, we may learn about the ways the medical and pharmaceutical industries fail to adequately share information or about problematic ways in which they characterize evidence. We may even come to better understand the problematic ways in which the evidence was generated in the first place.

This is the value of standpoint theory: not to tell science why it is wrong, but to see, through the eyes of those without access to the knowledge and social capital we have as scientists or scholars, how our own knowledge is limited and privileged by our position. Having seen that, we can begin our own communication research and practice.

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Author

Megan K. Halpern is an Assistant Professor at Michigan State University, where she teaches science communication and science & technology studies at Lyman Briggs College. Her research interests include art/science collaboration, public engagement with science, feminist approaches to science communication, and research through design. She earned her PhD in Science Communication at Cornell University and completed her Postdoctoral Research Fellowship at Arizona State University, with the Center for Nanotechnology and Society and the Center for Science and the Imagination. Before earning her PhD, Dr. Halpern was a theatre artist and the co-founder and Artistic Director of Redshift Productions, a company that created performances inspired by science. E-mail: mhalpern@msu.edu.

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