

## Book Review

# *The Science Communication Challenge* *Truth and Disagreement in Demographic* *Knowledge Societies*

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*The Science Communication Challenge: Truth and Disagreement in Democratic Knowledge Societies* was written by Gitte Meyer, an independent scholar associated with the Department of Business and Politics at Copenhagen Business School in Denmark, who earned her PhD at the University of Southern Denmark in 2004. The majority of her professional work concerns the philosophy of journalism and exploration of the relationship between science and politics found in science communication. Meyer's book explores, both broadly and specifically, the many conflicting ways science (and in turn science communication) has been formulated by humankind. This includes considerations of the history of science, its role in cultures and influence on political thought, and the Truth and Power associated with how communication about science exists both in practice and in the ideal.

The book is written in five chapters. The first, Science

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Communication in Democratic Knowledge Societies, introduces almost all of the concepts that are elaborated or expanded upon in the remaining chapters. Similar to in Thomas S. Kuhn's *The Structure of Scientific Revolutions*, the reader can likely understand Meyer's main points after reading only this first chapter, with the rest providing Meyer space for additional clarifications, explorations, and musings. This is not to suggest the remaining chapters are somehow lesser, just that the first effectively lays out or previews their ideas to the reader.

The second chapter, Science as 'Universal Light,' examines the seemingly conflicting ways that science has been conceptualized: both as the provider of ultimate truth—or "pure, scientific facts, untouched by human interpretations" (p. 39)—and as a source for practical, pragmatic utility for making everyday life easier or more efficient. Conceptualizing science as the former is problematic in Meyer's mind, as it leads the teeming masses (i.e., non-scientists) to treat science as infallible and to simply accept research findings as Truth (as opposed to what individual findings are: pieces of evidence building from and to other). This belief about science also encourages scientists to believe they are themselves truly elite. Conceptualizing science as the latter is also problematic to Meyer, for it suggests to nonscientists that scientific progress is easy, that findings not only can but always should be questioned, and that discoveries are only important if they directly impact the individual considering them.

Science communication from either perspective is inherently influenced by the perspective—wielding unyielding power in the former and lowering the communicator too far in the latter. If science is communicated from the point of view it is the Truth, this further prevents other scientists from reinterpreting, questioning, or even expanding on the ideas being shared, for the

ideas are presented as complete. It also encourages scientists to be thought of as infallible in all ways, not just in their areas of expertise. On the other hand, if the ideas are shared as if between equals—if the layperson is treated as equally (at least potentially) responsible for formulating scientific understanding—they can easily be dismissed as irrelevant if their direct utility is difficult to convey. As an example, climate change is often incorrectly discussed in conversations (mediated or otherwise) about weather. If the climatologist is treated as equal to the person who confuses the two concepts, neither is likely to develop mutual understanding through communication. The chapter also explores the different histories and conceptualizations of science, social science, humanities, and other approaches to knowledge.

The third chapter, *The Elusive Concept of the Modern Public*, explores what the idea of “the public” means in modern democracies, which tend to be divided into the masses and elites. The chapter explores the concept of “mass” publics or audiences, noting in a particularly interesting metaphor that the word originates from material meant to be molded or formed. If communicators think of their receivers this way, the message content they share—especially if from science “on high”—is likely to be formulated with different goals or intentions than if audiences are thought of otherwise.

The fourth chapter, *The Elusive Concept of Modern Politics*, broadly speaking, explores how politics are “the irrational opposite or the rational application of science” (p. 21). As another way of considering the difference between science and politics, the latter was once driven by the supposition that politicians are inherently public servants, just as science is often assumed to be pure and without motive. While science can still be seen this way, political thought now assumes politicians and the political process are intrinsically self-serving. Thus, when science becomes

politicized (e.g., when opposing sides of the debates on climate change or vaccinations believe their challengers' "facts" are, in reality, simply beliefs), science, communication, and science communication become muddled. This chapter also (perhaps too) briefly explores the different types of science communication heralded by journalists and by publicists. The differences between scientists communicating their findings for the greater good, journalists communicating science for public utility, and publicists communicating science for public relations or potential revenue is worthy of greater discussion than Meyer had space for here.

The final chapter, *A Political Category of Science Communication*, explores different challenges science communication faces, though the reader hoping to pick up specific advice or examples of how to communicate within or despite these challenges will be left wanting. Rather, Meyer explores the history, context, and philosophical nature of these challenges. The chapter does end, however, with several pieces of broad advice (not that Meyer's arguments are not specific, but rather that they require broad change in societal perspectives) of how the challenges may be faced or utilized.

Sprinkled through the book are also "snapshots," through which Meyer provides practical examples of her more philosophical conceptualizations. These are often useful and quite interesting, although, like many other elements of the book, Meyer leaves it to the reader to make the connection between the snapshots and the concepts they are supposed to exemplify. While reading some snapshots, which are not otherwise referred to in the chapters in which they live, I wondered what their purpose was other than to point me toward Meyer's other works. Many appear to be quoted or paraphrased from previous writings by Meyer, though removed from their original contexts,

it is left to the reader to decide what their purpose is. This explanation of the snapshots is likely too harsh; just as they rarely lead to clear conclusions, they very much inspire further thought.

Many times, while reading *The Science Communication Challenge*, I was reminded of Kuhn's *The Structure of Scientific Revolutions*, which developed or expanded on the ideas of paradigm shifts and scientific revolutions. Like Kuhn's book, Meyer's takes on an understood concept—in this case, science communication—from a new and unique perspective. However, while offering a distinctive point of view regarding science communication, the book seems to take place mid-argument. The reader is left wondering what Meyer means by certain terms or learn the author's particular definition for a concept (e.g., "knowledge societies") well after it has been utilized at length. I admit this is perhaps merely a personal preference, but Meyer's use of endnotes rather than footnotes made it easy to lose my way in her writing. Flipping to these notes tended to point to further reading, rather than providing clarifications. In other words, rather than briefly clarifying her own operational definitions, the author suggested full books written in a variety of languages and disciplines.

As I referred to above, Meyer often leaves it to her reader to draw the line between concepts and their examples, between terms and their definitions, or between existing concepts and her critiques or application of them. This is not so much a criticism of *The Science Communication Challenge* as it is a warning to readers. The text is not an introduction to the concept, subdiscipline, or practice of scientific communication. Rather, it is a meaningful, complex, and reflective musing on the very philosophical foundations and definitions of science and politics, specifically focused on how science communication can, should, and often fails to connect the two. Meyer reflects on a career concerned

with these ideas and assumes the reader has existing interest and knowledge on the topics she presents. Perhaps frustratingly to someone either wanting to learn about science communication for the first time or for researchers in the field of science communication or practitioners whose professional responsibilities involve communicating science to politicians, the public, or others, Meyer does not use the concept/term “science communication” with its established definition or use. Rather, Meyer conceptualizes and reconceptualizes the idea of science communication throughout the book, to alternatively break and strengthen its philosophical foundations.

In other words, Meyer’s book is not an argument or explanation of “how to” most effectively communicate science, but rather an exploration of what it means to do so, what broad sociological impacts may occur, and why doing so is needed. It is a worthy, often (mildly) frustrating examination of the fundamental ideas of science, politics, and communication that are too infrequently explored (or even thought about) in important research and practice fields.

## Works Cited

Kuhn, T. S. (1996). *The structure of scientific revolutions* (3<sup>rd</sup> ed.). Chicago, IL: University of Chicago Press.

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Submission:	February 23, 2019
Review:	May 8, 2019
Decision of publication:	May 8, 2019