

When Nuance Is the Enemy

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There has been a proliferation of books aiming to help scientists communicate their work and expertise to nonspecialists. By and large, these books provide similar and sensible advice, and it's reasonable to ask if yet another addition to this already healthy supply has anything much to offer.

The answer, as it turns out, is yes. Christopher Reddy's *Science Communication in a Crisis: An Insider's Guide* distinguishes itself within this burgeoning literature by zooming out from communication tactics and tips to present a view of how scientists fit into the broader information ecosystem. The result is a book with a great deal of empathy for the interests and constraints that shape the behavior of not just scientists, but the whole range of players with a stake in effective science communication, including decisionmakers, emergency responders, journalists, affected communities, and the general public.

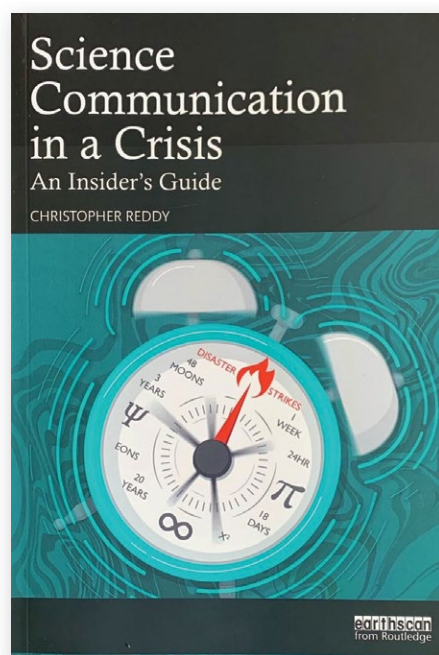
As the title indicates, Reddy's book focuses on the challenge of communicating during a crisis, a moment when attitudes toward science immediately shift from the baseline of lukewarm interest—at best—to a demand for immediate answers. And

if possible, please don't contaminate these answers with the nuance, acknowledgment of uncertainty, and humility that is core to the scientific enterprise.

Reddy's insights are hard-won. He has had a long and distinguished career as a marine pollution researcher, which includes playing a key role in the immediate aftermath of the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, an event that frames the book. He is admirably candid about some of the communication missteps early in his career and passes along their lessons so that others might learn from them.

It's no secret that the culture of academic research is not very hospitable to effective communication, despite increasing demands on scientists to demonstrate their "relevance" and "impact." Reddy understands that the communication challenges facing scientists extend beyond translating their jargon into accessible language. In addition to the fact that communications activities have not generally been central to tenure decisions (although this situation is changing), subtle incentives exist that can either discourage communicating altogether or lead experts to communicate—and even orient their research—in unhelpful ways.

For example, the understandable fear that a poor communication interaction will lead to professional embarrassment can result in the decision to forgo the process of interacting with nonscientists altogether, potentially creating an information vacuum. At the other extreme, the competitive instinct and desire for public recognition have their own risks. Musings about worst-case scenarios without context to a journalist can lead to alarmist stories that have real-world impacts on suffering communities. The desire to be the first out of the gate with findings can misdirect research efforts away from where they're needed and complicate the critical work of responders. Reddy discusses, for instance, how multiple research groups operating in the wake of



**Science Communication in a Crisis:
An Insider's Guide**

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the Deepwater Horizon disaster reduced the availability of badly needed research vessels. As one government scientist told him, "Right when we figured out what sort of work needed to be done, you guys went and took all the good boats. And you were all studying the same thing."

Reddy makes clear that at the root of many communication failures is a misguided archetype: the scientist as a solitary hero, either toiling in obscurity or coming to save the day with their insights. Through the course of the book, Reddy demonstrates the need to view science communication as a partnership, with a focus on teamwork; allies may come from numerous places depending on the situation. For example, he discusses how the wisdom of veteran environmental journalist Peter Lord saved him from embarrassment at the very beginning of his career, when Lord chose not to print an ill-advised statement Reddy made in his very first media interaction.

Communicating science, especially in a crisis, will always be challenging. Reddy outlines the ways that the various players in a given situation all have different incentives, and how they can each be the source of different benefits and risks. He is understandably frustrated by the tendency of reporters, for instance, to seize upon and amplify worst-case scenarios without providing appropriate caveats. I have a bit more sympathy for journalists, since communicating low-probability, high-consequence outcomes is a complex task without a straightforward, "correct" solution.

In addition to its merits as a communications manual, *Science Communication in a Crisis* also serves as a fascinating personal history of the science-response-policy interface immediately after the Deepwater Horizon disaster. Having served as a staffer on the presidential commission created after the spill, I found that the book brought back memories of flow rates, underwater plumes, health and ecological problems associated with the use of dispersants, and the safety of Gulf seafood, among other concerns. Still, much of Reddy's account was new to me.

The book's title reads as a bit of a double entendre. Science communication itself can be seen as experiencing something of a crisis, the erosion of public trust and the decline of traditional gatekeepers creating a sea of information and misinformation. In addition to Deepwater Horizon, the shadow of the COVID-19 pandemic looms large over this book. As the information environment deteriorates, the stakes around effectively communicating science continue to grow. *Science Communication in a Crisis* is a valuable contribution to that effort, and should be of interest to not only scientists, but to journalists and communications professionals as well.

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