



Democracy and the Professional Communicator

The Vital Role that Technological Writers have in Bridging the Gap between Science and the Public

by Carrie M Nielson

Our task of communicating science, technology, and health information to the public is an important one. We might not realize just how important it is becoming in an age when science and technology are moving at breakneck speeds. When we make clear scientific information available to the public, we don't just work for the companies who hire us; we work for a more democratic society, where citizens can make informed decisions about the technology, including drugs and medical therapies, they use. Traditionally, news media have been poor communicators—because of misunderstanding or lack of interest in science—and the public has been ignorant or misinformed of many important issues in science and medical technology. Our combined skills in understanding science and medicine and communicating clearly are vital to an informed, involved public.

Communicator as Advocate of the Lay Citizen

While technology becomes increasingly important to our work and even takes up our leisure time, explanations of technology and science are getting more difficult to understand. A 1992 study of the lexical difficulty of science publications illustrates how inaccessible they have become over the years to lay audiences, including scientists outside of the field of discussion. Whereas sixty years ago journals like *Nature*, *Science*, and *Scientific American* were written at or around the level of a modern newspaper, today they are up to thirty times more difficult.¹ When text gets this difficult, not only do readers stop understanding, they stop trying to understand. "When the difficulty of the average article [in *Scientific American*] approached 15 [times the difficulty of a modern newspaper], there was a decline of over 125,000 subscribers, implying that many readers found texts written at those levels too opaque".¹ Driving this increase in difficulty is increased specialization in science and accompanying new terms and concepts. While science reaches unprecedented levels of knowledge and understanding, readers require an unprecedented amount of background and training even to read the language used to report research in many fields.

Knowledge will forever govern ignorance: and a people who mean to be their own Governors must arm themselves with the power knowledge brings.

American statesman James Madison

Publications specializing in science increasingly fail to meet citizens' needs for simplified information, especially in recent decades, but popular mass media have long been criticized for oversimplified, sensationalist, and incomplete reporting of complex issues. Dorothy Nelkin discusses the inappropriate reporting in the 1940s of a new procedure called lobotomy. "The press welcomed the new technology . . . with uncritical enthusiasm, though prevailing opinion within the medical community

remained skeptical of the practice".² Between 1945 and 1952, articles in *Reader's Guide*, *New York Times*, and *Times* were overwhelmingly biased toward the use of the technique; few articles gave neutral accounts, and even fewer reported the warnings of doctors who knew the damaging side effects.² If we consider these two alternatives—esoteric science publications and incomplete popular media—for sources of citizens' knowledge, it becomes clear that the challenge of providing complete, clearly written communication with sufficient resources to background information is still waiting for competent, unbiased communicators.

Communicator as Agent of the Expert

To foster better communication with the public, we should also help experts distribute the scientific information they hold. Openness and the desire to be understood are attractive qualities for anyone—especially for those who are involved in controversial discussions. Good communication of the benefits and risks of research are not only essential for responsible citizenship but encourage the trust necessary to keep lines of communication open. Lack of information (or lack of *understandable* information) is often construed as secrecy or deception, even when none is intended and can in this way damage relationships with the public. "Because secrecy can debilitate judgment and choice . . . it often affects others even when it is not intended to. This helps explain why, in the absence of clear criteria for when secrecy is and is not injurious, many people have chosen to regard all secrecy as potentially harmful".³ Although some secrets are necessary for trade and competition, the communicator should work on behalf of experts to bring as much relevant information as possible to the public to secure the expert's image as a person of goodwill.

A popular government without popular information or the means of acquiring it, is but a prologue to a Farce or a Tragedy or perhaps both.

American statesman James Madison

The benefits of open communication were proven this June, when Swiss citizens rejected the "Gene Protection Initiative", allowing genetic research to continue. When the debate began two years ago, scientists started to leave their laboratories and communicate with the public. Columns by scientists appeared in popular newspapers. Laboratories opened their doors to the public for tours and lectures. At the University of Zurich's Institute for Experimental Immunology, co-director Hans Hengartner said the vote proves that their efforts worked: "Swiss people did not respond well to the scare tactics used by the initiative's sponsors. In the end, what counted the most was objective information"⁴. Microbiologist Richard Braun chairs the Gen Suisse foundation in Bern: "We have learned through this campaign that it is best to be as open as possible about your research . . . Now, even with this decisive vote, scientists cannot withdraw back into an ivory tower. We have to keep up this dialogue with the public".⁴

Through a study that surveyed experts in the pharmaceutical industry, John Abraham and Julie Sheppard found that many experts supported more open communication with the public and bemoaned the industry's culture of secrecy. They said that not only would better communication improve public relations, it would "lead to improved regulatory decision-making" and "improve the quality of the decision-making process".⁵

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The sentiment was that if they knew they would be accountable directly to potential consumers, they would have to make the decisions they knew they could defend honestly and directly. Bok also reports that scientists working under conditions of intense secrecy have testified to its stifling effect on their judgment and creativity. "It can debilitate judgment, first of all, whenever it shuts out criticism and feedback, leading people to become mired down in . . . unexamined, often erroneous beliefs and ways of thinking. Neither their perception of a problem nor their reasoning about it then receives the benefit of challenge and exposure".³ Again, I am not proposing we divulge trade secrets or compromise competitive advantages as long as they do not present a risk to society. But when possible, communicators will help both experts and the public by making research understood and open to constructive feedback.

Technology and science will only become more prevalent in almost every aspect of our society in the future. If we are to continue to live in a democracy, we must be able to make informed decisions about that technology. As communicators, we have the ability to make such responsible decision-making possible.

References

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Carrie M Nielson
3019 Autumn Way
Meridian, ID 83642
USA
cnielson@worldnet.att.net