

Sharon Dunwoody's Legacy: Three Timely Lessons for Us

Science Communication
2023, Vol. 45(1) 127–137
© The Author(s) 2023



Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/10755470221149438
journals.sagepub.com/home/scx



Hans Peter Peters¹ 

Abstract

Sharon Dunwoody gained international reputation for her research on science journalism and media risk communication. Drawing on her publications published over more than four decades and the author's long-lasting collaboration with her, this commentary elaborates on three of her most characteristic beliefs and orientations and suggests that they may serve as timely lessons for us to critically reflect on current assumptions and practices: substance over showmanship, improving one-way communication, and respecting the audience.

Keywords

science journalism, risk communication, public information, public understanding of science

Sharon Dunwoody began her research career in the mid-1970s when the World Wide Web did not exist, and public communication was dominated by printed newspapers and magazines, radio, and television. Public “science communication” was then almost synonymous with “science journalism.” Sharon devoted her professional life to the study of science journalism with a focus on the communication of uncertainty and risk. Given the decline of traditional science journalism in the United States, some may remember her

¹Free University of Berlin, Germany

Corresponding Author:

Hans Peter Peters, Institute for Media and Communication Studies, Free University of Berlin, Garystraße 55, 14195 Berlin, Germany.
Email: h.p.peters@fu-berlin.de

respectfully as a great scholar of the past who has helped to institutionalize the field of science communication scholarship but assume that she has little to contribute to today's issues and challenges. Based on my knowledge of her work and experience from my long-standing collaboration with her, I try to show that her legacy is of high relevance at present, and that the beliefs and assumptions underlying her work offer opportunities to reflect on science communication scholarship and practice even in a changed media ecosystem.

Decades ago, during one of my first visits to the School of Journalism and Mass Communication at the University of Wisconsin-Madison, Sharon invited me, then a young postdoc, to join her as she taught one of her classes. I was quite impressed at how she led the course, encouraging students to speak out and politely offering constructive critical feedback, and I decided to copy her way of teaching. Yet, back in Germany and trying to do the same, I noticed that what appeared so effortless and natural for her was impossible to do for me. This impression of unpretentious brilliance in listening closely, grasping quickly, speaking and writing clearly, generously spreading insights and advice, and contributing to solutions—whether it was injecting new ideas into a stuck project meeting, chatting with colleagues during a conference break, giving a lecture, or writing a journal article—was a constant experience during my encounters with Sharon. Surely, this was due to her giftedness and sharp brain, but her insight, overview, and power of judgment were also the result of disciplined hard work. Above that, Sharon won the hearts of those she worked with by her scholarly excellence, inspiring nature, and exemplary character. She genuinely cared about the people around her and was a person of good spirit and high morale.

Sharon's work circles around two entangled strands of research: first, science journalism, and, second, media coverage of risk and uncertainty and its reception by audiences. It is impressive how coherently and straight she followed her research interests from her PhD thesis on news gathering behavior of science journalists (Dunwoody, 1978) up to her last publication that I am aware of, the major revision of her handbook article on science journalism in the digital age (Dunwoody, 2021). In the four decades in between, she systematically dealt with almost every aspect of science journalism, such as science journalism as profession and discipline (e.g., Dunwoody, 1980), content production (e.g., Dunwoody, 1992), selection of topics and sources (e.g., Dunwoody & Ryan, 1987), scientists as mass media sources (e.g., Dunwoody, 1986, 2015), and the mediating role of universities' public relations staff (e.g., Dunwoody & Ryan, 1983). Her focus included public communication of social and behavioral sciences (e.g., Dunwoody, 2007b), and she was among the first to study the potential of the internet for quality science journalism (e.g., Dunwoody, 2001; Eveland & Dunwoody, 1998).

The publication dates of the two groundbreaking books *Scientists and Journalists. Reporting Science as News* (1986) and *Communicating Uncertainty. Media Coverage of New and Controversial Science* (1999), both co-edited with Sharon M. Friedman and Carol L. Rogers (see their commentary in this issue), indicate the temporal development of her research focus from science journalism as a profession and practice in general, to its function and quality in the communication of risk issues. She focused on both the provision of journalistic risk information and its reception by audience, studying the challenges of reporting uncertainty and controversy, and analyzing information-seeking, reception, and processing of risk information by audiences. While she continued publishing about science journalism, a large share of her research and publications since 1990 dealt with media risk coverage (e.g., Dunwoody, 1992, 1999; Dunwoody & Konieczna, 2013; Dunwoody & Rossow, 1989; Griffin et al., 1995; Ryan et al., 1991) and its use by audience members (e.g., Dunwoody et al., 1992; Dunwoody & Neuwirth, 1991; Griffin et al., 1998, 2004, 2012; Kahlor et al., 2006).

Sharon was not a lone fighter. She understood science as a joint endeavor of a peer community. She was very anxious to link her research to previous scholarship, was a frequent presenter at scientific conferences, and readily engaged in collaborations with colleagues that often led to a series of co-authored publications around a certain topic. Most noticeable is her long-lasting and close research collaboration with Robert J. Griffin, leading to more than 30 co-authored publications.

Quite early in her career, Sharon gained international reputation and influence. Her impact on the development of academic research on science journalism and risk coverage in Germany may be an example. In the early 1980s, science journalism practice, training, and scholarship in the United States served as a model for Germany. German scholars took an “envious look” at U.S. science journalism (Hömberg, 1984) and considered America “two steps ahead” of Germany and a “promised land” for science journalism (Ruß-Mohl, 1984). Along with other colleagues from the United States, Sharon was invited to Germany for a workshop on “Science Journalism in the USA. Infrastructures, Training Programs and Secrets of Success” in 1984 (Robert Bosch Stiftung, 1985) and again in 1992 for a workshop on “Risk Reporting and Science Journalism” (Göpfert & Bader, 1998). I was lucky to meet her in the context of these activities organized by the Robert Bosch Foundation. This initial contact developed into a collaboration of almost 35 years—sometimes very intensely, at other times more casual.

In this commentary, I offer three general lessons from Sharon’s lifework and her points of view that are significant for me and that I believe to be of value for self-critical reflection on current assumptions and on research practices more generally.

Substance Over Showmanship

In a project meeting in Cologne in 2005, an international group of investigators involved in a comparative survey of scientists in five countries (Peters et al., 2008) discussed the fresh results of an initial data analysis. The idea of submitting our first paper to *Science* emerged in the meeting and was enthusiastically greeted by most of us (including me). Sharon did not outright oppose our enthusiasm, but I sensed her uneasiness with the course of our discussion and understood the reason.

She would have preferred that we first had worked on a detailed article for our peer community and submitted it to *Science Communication* or *Public Understanding of Science*, carefully contextualizing it in the scholarship on the scientist-journalist relationship and addressing our peers, rather than “selling” a rather simple and short narrative with descriptive data highlights to a prestigious interdisciplinary journal with a mostly “hard science” audience—a journal that would be interested in our paper mainly from a professional policy perspective and not because of its scientific merits.

Of course, impact is important too, and our *Science* publication has had scholarly “impact” (if that can be measured in a number of citations), and it probably helped to counter the myth among scientists and science managers of scientists having mostly negative experiences with journalists. It also resulted in a number of media interviews and newspaper articles in the countries involved, and the article (and the media response it created) significantly improved my standing in my organization. Yet, there was a conflict in priority setting between optimizing our contribution to scholarly knowledge versus maximizing broad visibility and career benefit. Sharon—perhaps out of a sense of modesty but above all because of her commitment to a traditional scientific code of conduct—would likely have set the priorities differently than our group actually did.

While traditionally there has been ambivalence within science about addressing the public (e.g., Rödder, 2012), and some particularly visible scientists have been heavily criticized by the scientific community for their public communication activities (see the article about the Sagan effect in China in this issue), the call for scientists to engage with publics outside their scientific community is now ubiquitous. Yet, the “medialization of science” theory of Peter Weingart (2012) claims that public visibility and its benefits for oneself can be a “lure” for scientists to strive for public prominence rather than for scientific reputation, potentially compromising both scientific research and its public communication. In the episode described above, this lure may have influenced our decision to aim at broader impact rather than prioritizing communication with our own peer community. There is nothing wrong with

addressing audiences outside one's own peer community, of course; Sharon's work is actually devoted to making science accessible for the public and scientific expertise useful for individual citizens and society. The lesson thus is not to abstain from addressing broader publics beyond the narrow peer community but doing it with a good reason, at the right time, and not at the expense of making substantial scholarly contributions.

Improving One-Way Communication

Sharon spent most of her professional life on research related to dissemination of information by science journalism—a form of science communication that for most recipients of a news story is essentially “one-way,” even if back channels exist such as letters to the editor or online comments. Browsing through her work, one rarely finds the buzz words of our community today, such as “dialog,” “participation,” or “public engagement.”

The absence of these words does not mean that she failed to recognize the changes of the media environment toward online communication and social media, or the paradigm shift from “public understanding” to “public engagement.” She was actually quick to study the possible benefits of the internet and the hypertext structure of messages for science communication (Dunwoody, 2001; Eveland & Dunwoody, 1998), and she discussed how journalism adapts to the “digital age,” acknowledging the problems but also showing optimism (Dunwoody, 2021). Furthermore, she recognized limits of one-way mass communication for persuasion (Dunwoody, 2007a) and approvingly noted that journalistic stories, although seemingly one-way, sometimes initiate public discourses due to active audiences (Dunwoody, 2021, p. 22). But despite the growing number of alternative channels and arenas of dialogic science-public encounters, she claimed that “science journalism has never been more important” than at the present (p. 14).

Public communication of science serves several goals such as building mutual trust and democratization of science through co-construction and participation in the governance of science and innovation. The Science and Technology Studies community with its focus on the relationship of science with its social environment rather than knowledge dissemination has very successfully and rightfully put these goals on the agenda of science communication (e.g., Stilgoe et al., 2014)—and addressing these goals requires dialog and participation. Yet, these goals do not make the traditional and most basic goal of science communication obsolete: giving lay publics access to information from and about science. As a former journalist, Sharon believed in the value of providing valid and relevant information to audiences by professional communicators. And she also believed that mass communication is

the most common source of science information for most people (cf. Dunwoody, 1993, p. 3). While she had journalism in mind when making that claim in 1993, she later pointed to the many forms of public dissemination by scientists made possible by the internet and bypassing journalism (Dunwoody, 2021, p. 26). These remain basically one-way mass communication.

Sharon was quite critical toward both journalists and scientists as public communicators (see below). She recognized that science journalism has an educated audience in mind and did not believe in a strong impact on the larger part of the media audience, but she believed that journalism connects a broad audience to science, even if only, for most media consumers, in a superficial way (Dunwoody, 1993, p. 29). Her research was motivated by the belief that by better understanding of the audience and careful anticipation of its needs in the creation of messages beyond the rigid use of objectivity and balance heuristics (Dunwoody & Griffin, 2002, pp. 185–186), journalistic dissemination can become more inclusive and relevant. The lesson to be learned from Sharon's work is that even in times when the call for dialog is ubiquitous, dissemination is necessary and still deserves scholarly attention.

Respecting the Audience

The term “enabling information,” introduced in the article “Inclusion of Useful Detail in Newspaper Coverage of a High-Level Nuclear Waste Siting Controversy” (Rossow & Dunwoody, 1991, p. 89), had an eye-opening impact on me. Referring to the concept of “mobilizing information” used by Lemert et al. (1977) but modifying it, the authors analyzed newspaper coverage on a nuclear waste siting controversy from the perspective of whether the coverage enabled readers to act. Here, the analysis used a narrow operationalization of “enabling” in the specific context of political participation. However, understood more broadly, the term “enabling information” summarizes precisely Sharon's normative perspective toward science communication: the deep conviction that science communication should serve the audience, not the communicator, and that it should help audience members to learn, understand, and act rationally according to their genuine interests rather than to conform with externally defined persuasive goals of mobilization or acceptance.

We learn more about Sharon's view on audiences in two conceptual book chapters. In “Focus on the Audience” (Dunwoody, 2008), she claims that actors in science communication (media, journalism, science) “have adopted audience orientations that served their specific needs but, until recently, never sought the kind of deeper understanding that could actually serve audience members themselves.” She criticizes media organizations for having “long

concentrated on viewing their audiences as products that can be sold to advertisers” and science journalists for their “superficial, almost stereotypical understandings of audience,” and notes that “science’s historic interest in audiences has been in service to maintaining public support for science, its processes, and its products” (pp. 241–242), essentially criticizing the deficit model approach without using the term.

In the second book chapter that I wanted to discuss, “The Challenge of Trying to Make a Difference Using Media Messages” (Dunwoody, 2007a) published in *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change* (Moser & Dilling, 2007), she struggles with the tension between enabling and persuasive communication in issues such as climate change, where many people show beliefs, attitudes, and behaviors that are against their genuine interests and seem immune to evidence and arguments. While noting that the mass media channels face several “roadblocks,” making persuasive success unlikely for people holding strong counter-beliefs (and praising interpersonal channels as the “gold standard” to overcome that problem), she warned against abandoning the mass media channels. Emphasizing the value of information, she explained that “after all, media campaigns offer dramatic economies of scale by reaching large audiences at relatively low cost with potentially useful information” (p. 89) and pointed to knowledge gain as probably “the strongest direct effect of media messages” (p. 100).

I understand Sharon’s work as rejection of the idea that science communicators are entitled to treat the public as flock of “cognitive misers” that needs to be herded by whatever persuasive means are effective. Her lesson is to respect the media audience by not writing it off too readily as incapable of meaningful sense-making with respect to knowledge and arguments. Revealing her ambivalent attitude toward persuasion and her strong preference for informing the audience, she writes, “While an increasingly nuanced understanding of audience obviously will make persuasion more effective, for good or ill, it also makes it possible for communicators to ‘tell’ stories more effectively in service to informing and learning” (Dunwoody, 2008, p. 244).

In this commentary, I offered an interpretation of Sharon’s past and ongoing significance for the field of science communication. My reconstruction of three of her deep convictions is necessarily selective and subjective. When re-reading some of Sharon’s publications for this article, I was again reminded of how nuanced her claims usually were and how carefully she analyzed situations being aware of their empirical and normative complexity. Bold theoretical claims were not her style, but she certainly had principles that guided her work and might be helpful in reflecting on ours.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Hans Peter Peters  <https://orcid.org/0000-0002-8777-4329>

References

- Dunwoody, S. (1978). *Science journalists: A study of factors affecting the selection of news at a scientific meeting*. Indiana University.
- Dunwoody, S. (1980). The science writing inner club: A communication link between science and the lay public. *Science, Technology, & Human Values*, 5(30), 14–22.
- Dunwoody, S. (1986). The scientist as source. In S. M. Friedman, S. Dunwoody, & C. L. Rogers (Eds.), *Scientists and journalists: Reporting science as news* (pp. 3–16). The Free Press.
- Dunwoody, S. (1992). The media and public perceptions of risk: How journalists frame risk stories. In D. W. Bromley & K. Segerson (Eds.), *The social response to environmental risk: Policy formation in an age of uncertainty* (pp. 75–100). Kluwer.
- Dunwoody, S. (1993). *Reconstructing science for public consumption: Journalism as science education*. Deakin University Press.
- Dunwoody, S. (1999). Scientists, journalists, and the meaning of uncertainty. In S. M. Friedman, S. Dunwoody, & C. L. Rogers (Eds.), *Communicating uncertainty: Media coverage of new and controversial science* (pp. 59–79). Lawrence Erlbaum.
- Dunwoody, S. (2001). Studying users of the why files. *Science Communication*, 22(3), 274–282. <https://doi.org/10.1177/1075547001022003004>
- Dunwoody, S. (2007a). The challenge of trying to make a difference using media messages. In S. C. Moser & L. Dilling (Eds.), *Creating a climate for change: Communicating climate change and facilitating social change* (pp. 89–104). Cambridge University Press. <https://doi.org/10.1017/CBO9780511535871.008>
- Dunwoody, S. (2007b). Journalistic practice and coverage of the behavioral and social sciences. In M. K. Welch-Ross & L. G. Fasig (Eds.), *Handbook on communicating and disseminating behavioral science* (pp. 57–72). SAGE.
- Dunwoody, S. (2008). United States: Focus on the audience. In M. Bauer & M. Bucchi (Eds.), *Journalism, science and society* (pp. 241–245). Routledge.

- Dunwoody, S. (2015). Environmental scientists and public communication. In A. Hansen & R. Cox (Eds.), *The Routledge handbook of environment and communication* (pp. 63–72). Routledge.
- Dunwoody, S. (2021). Science journalism: Prospects in the digital age. In M. Bucchi & B. Trench (Eds.), *Routledge handbook of public communication of science and technology* (3rd ed., pp. 14–32). Routledge.
- Dunwoody, S., & Griffin, R. J. (2002). Judgmental heuristics and news reporting. In R. Gowda & J. C. Fox (Eds.), *Judgments, decisions, and public policy* (pp. 177–198). Cambridge University Press.
- Dunwoody, S., & Konieczna, M. (2013). The role of global media in telling the climate change story. In S. J. A. Ward (Ed.), *Global media ethics: Problems and perspectives* (pp. 171–190). Blackwell.
- Dunwoody, S., & Neuwirth, K. (1991). Coming to terms with the impact of communication on scientific and technological risk judgments. In L. Wilkins & P. Patterson (Eds.), *Risky business: Communicating issues of science, risk, and public policy* (pp. 11–30). Greenwood Press.
- Dunwoody, S., Neuwirth, K., Griffin, R. J., & Long, M. (1992). The impact of risk message content and construction on comments about risks embedded in “letters to friends.” *Journal of Language and Social Psychology*, *11*(1–2), 9–33. <https://doi.org/10.1177/0261927x92111002>
- Dunwoody, S., & Rossow, M. (1989). Community pluralism and newspaper coverage of a high-level nuclear waste siting issue. In L. A. Grunig (Ed.), *Environmental activism revisited: The changing nature of communication through organizational public relations, special interest groups and the mass media* (pp. 5–21). North American Association for Environmental Education.
- Dunwoody, S., & Ryan, M. (1983). Public information persons as mediators between scientists and journalists. *Journalism Quarterly*, *60*(4), 647–656. <https://doi.org/10.1177/107769908306000410>
- Dunwoody, S., & Ryan, M. (1987). The credible scientific source. *Journalism Quarterly*, *64*(1), 21–27. <https://doi.org/10.1177/107769908706400103>
- Eveland, W. P., & Dunwoody, S. (1998). Users and navigation patterns of a science World Wide Web site for the public. *Public Understanding of Science*, *7*(4), 285–311. <https://doi.org/10.1088/0963-6625/7/4/003>
- Göpfert, W., & Bader, R. (Eds.). (1998). *Risikoberichterstattung und Wissenschaftsjournalismus. Tagungsbericht zum 4. Colloquium Wissenschaftsjournalismus* [Risk communication and science reporting. Proceedings of the 4th Colloquium Science Journalism], Berlin. Schattauer Verlag.
- Griffin, R. J., Dunwoody, S., & Gehrmann, C. (1995). The effects of community pluralism on press coverage of health risks from local environmental contamination. *Risk Analysis*, *15*(4), 449–458. <https://doi.org/10.1111/j.1539-6924.1995.tb00337.x>
- Griffin, R. J., Dunwoody, S., & Zabala, F. (1998). Public reliance on risk communication channels in the wake of a cryptosporidium outbreak. *Risk Analysis*, *18*(4), 367–375. <https://doi.org/10.1111/j.1539-6924.1998.tb00350.x>

- Griffin, R. J., Neuwirth, K., & Dunwoody, S. (2012). Using the theory of reasoned action to examine the impact of health risk messages. In B. R. Burleson (Ed.), *Communication yearbook 18* (pp. 201–228). Routledge.
- Griffin, R. J., Neuwirth, K., Dunwoody, S., & Giese, J. (2004). Information sufficiency and risk communication. *Media Psychology, 6*(1), 23–61. https://doi.org/10.1207/s1532785xmep0601_2
- Hömberg, W. (1984). Neidvoller blick [Envious look]. *Journalist, 6*, 54–56.
- Kahlor, L., Dunwoody, S., Griffin, R. J., & Neuwirth, K. (2006). Seeking and processing information about impersonal risk. *Science Communication, 28*(2), 163–194. <https://doi.org/10.1177/1075547006293916>
- Lemert, J. B., Mitzman, B. N., Seither, M. A., Cook, R. H., & Hackett, R. (1977). Journalists and mobilizing information. *Journalism Quarterly, 54*(4), 721–726. <https://doi.org/10.1177/107769907705400408>
- Moser, S. C., & Dilling, L. (Eds.). (2007). *Creating a climate for change: Communicating climate change and facilitating social change*. Cambridge University Press.
- Peters, H. P., Brossard, D., de Cheveigné, S., Dunwoody, S., Kallfass, M., Miller, S., & Tsuchida, S. (2008). Science communication: Interactions with the mass media. *Science, 321*(5886), 204–205. <https://doi.org/10.1126/science.1157780>
- Robert Bosch Stiftung (Ed.). (1985). *Wissenschaftsjournalismus in den USA: Infrastrukturen, Ausbildungsangebote, Erfolgsgeheimnisse. Tagungsbericht zum 2. Colloquium Wissenschaftsjournalismus vom in Stuttgart-Degerloch* [Science journalism in the USA: Infrastructures, training programs and secrets of success. Proceedings of the 2nd Colloquium Science Journalism in Stuttgart-Degerloch].
- Rödger, S. (2012). The ambivalence of visible scientists. In S. Rödger, M. Franzen, & P. Weingart (Eds.), *The sciences' media connection—Public communication and its repercussions* (pp. 155–177). Springer. https://doi.org/10.1007/978-94-007-2085-5_8
- Rosow, M. D., & Dunwoody, S. (1991). Inclusion of “useful” detail in newspaper coverage of a high-level nuclear waste siting controversy. *Journalism Quarterly, 68*(1–2), 87–100. <https://doi.org/10.1177/107769909106800110>
- Ruß-Mohl, S. (1984). Amerika—zwei Schritte voraus. Wissenschaftsjournalismus im gelobten Land. Anmerkungen und Fragen aus der Diaspora [America – two steps ahead. Science journalism in the promised land. Remarks and questions from the diaspora]. *transfer. Beihefter zur Deutschen Universitätszeitung (DUZ), 12*, 153–156.
- Ryan, M., Dunwoody, S., & Tankard, J. (1991). Risk information for public consumption: Print media coverage of two risky situations. *Health Education Quarterly, 18*(3), 375–390. <https://doi.org/10.1177/109019819101800309>
- Stilgoe, J., Lock, S. J., & Wilsdon, J. (2014). Why should we promote public engagement with science? *Public Understanding of Science, 23*(1), 4–15. <https://doi.org/10.1177/0963662513518154>
- Weingart, P. (2012). The lure of the mass media and its repercussions on science. In S. Rödger, M. Franzen, & P. Weingart (Eds.), *The sciences' media connection—Public communication and its repercussions* (pp. 17–32). Springer. https://doi.org/10.1007/978-94-007-2085-5_2

Author Biography

Hans Peter Peters (Dr. rer. soc., Ruhr-Universität Bochum) is Adjunct Professor of Science Journalism at the Free University of Berlin and editor-in-chief of *Public Understanding of Science*. Retired as researcher from Research Center Jülich, Germany, his research has focused on scientists as public communicators, the relationship of scientists and journalists, and medialization of science. He collaborated with Sharon Dunwoody for more than 30 years, beginning with co-authoring the article “Mass Media Coverage of Technological and Environmental Risks: A Survey of Research in the United States and Germany,” published in 1992.