"Beyond Discovery" is intended to identify and trace the origins of important recent technological and medical advances and to reveal the crucial role played by basic research, the applications of which could not have been anticipated at the time the original research was conducted. An advisory committee of Academy members selects topics that, collectively, cover the breadth of science. The first 4 topics describe the basic research that led to human-gene testing, discovery of the ozone-depletion phenomenon, the global-positioning system, and modern communication: the laser and fiber-optic revolution.

Developing each topic is an iterative process that includes senior scientists who were involved in the discoveries being described working with professional science writers who aim to write compelling articles for a nonexpert audience. Those manuscripts are then subject to extensive reviews by many other scientists. Their usefulness as a vehicle for helping the public, as well as policymakers, science educators, and scientists reading out of their fields, is now being tested.

The main audiences are policymakers (to inform them about the contributions of basic research to current technologies and human benefits); science educators (to supply information and models for communicating or teaching about basic research); scientists (to increase interest in and models for communicating about research to the public); and the college-educated, nonscientifically trained lay public (to build awareness of the value of basic research). We now print 10 000 copies of each topic, which are distributed to policymakers, science and technology centers and museums, science educators, and a growing list of scientists. Our distribution strategy continues to evolve, and we have plans to target audiences that have a particular interest in a given area. For example, the human-gene testing document was distributed broadly to cancer-research centers and disease-related advocacy groups.

All topics are accessible in both HTML and PDF formats through our Website (http://www2.nas.edu/bsi), where we are in the process of making links to other related Websites. We also invite feedback directly to an e-mail address, a strategy that has produced scores of useful comments.

As this project continues, I, as project director, would be most interested in hearing your feedback about the utility of this kind of information. You can 1) access the Web versions of each topic by going to the Website noted above, and 2) request hard copies of the topics produced to date by sending an e-mail to bsi@nas.edu. After you have had a chance to review the topics, you are invited to send your comments directly to me by e-mail (dgerardi@nas.edu). ➔

♦ Resources on Popular Science Communication

Barbara Gastel
Associate Professor
Texas A&M University
College Station, Texas

Jason E Moore
Graduate Student
Texas A&M University
College Station, Texas

Many books and articles offer practical guidance in presenting science to the public. Likewise, a considerable body of scholarly research exists on popular science communication. Listed below are written materials that offer guidance and research as well as anthologies, newsletters, and electronic resources in the field. Although not exhaustive, the annotated list includes many of the main US resources on popular science communication and some British writings. We welcome suggestions of major resources to include in possible future versions of this list.

Guidance


News & numbers: a guide to reporting statistical claims and controversies in health and other fields. V Cohn. Revised ed. Ames (IA): Iowa State Univ Pr; 1994. 190 p. By a long-prominent science reporter; especially strong on topics such as evaluating study design.


Presenting science to the public. B Gastel. Philadelphia: ISI Pr; 1983. 146 p. Intended mainly for scientists; includes guidance on working with reporters and on communicating science to the public directly.


Media guide for academics. JE Rodgers and WC Adams. Los Angeles: Foundation for American Communications; 1994. 72 p. Designed to help scientists and other academics understand and work with the popular media; includes chapters on working with an institution’s public information officer and on crisis communications.

Strategies for explaining complex science news. KE Rowan. Journalism Educator 1990 Summer;45(2):25-31. Drawing on research, provides advice on presenting scientific explanations, including those designed to overcome popular misconceptions.


On writing well: an informal guide to writing nonfiction. W Zinsser. 5th ed. New York: Harper Perennial; 1994. 300 p. Science and technology, p 156-73. Good chapter on writing science articles for the public; other chapters, such as those on basics of nonfiction writing, also can aid in writing about science.

Description, Analysis, and Commentary


Social scientists meet the media. C Haslam and A Bryman, editors. New York: Routledge; 1994. 256 p. A scientist-centered exploration of how the media portray the social sciences and how journalists and social scientists perceive and relate to one another; includes advice on interacting with the press.


Health in the headlines: the stories behind the stories. S Kaidman. New York: Oxford Univ Pr; 1991. 249 p. Review and critique of mass-media coverage of major health-risk issues; topics include smoking, cholesterol, radon, and AIDS.


When science becomes culture. Boucherville (Quebec): Univ of Ottawa Pr; 1994. p 119-78. Extensive overview of US activities in popular science communication; includes information on activities of government, mass media, museums, nongovernmental organizations, and other institutions; also provides historical perspectives.

When science meets the public. BV Lewenstein, editor. Washington: American Assoc for the Advancement of Science; 1992. 212 p. Workshop proceedings; includes case studies; contains chapters not only on television and newspapers, but also on museums and girls' clubs as vehicles for communicating science to the public.

The literature of science: perspectives on popular scientific writing. MW McRae, editor. Athens (GA): Univ of Georgia Pr; 1993. 321 p. Scholarly essays exploring the portrayal of scientific knowledge in popular writing about science; areas considered include the relationship between scientific knowledge and culture, myth, the role of persuasion, and the use of language.


Journalists reading journals. JA Miller. CBE Views 1990 Apr;13(2):44-5. Highlights of a survey of science journalists regarding their use of journals as sources.


Medical researchers and the media: attitudes toward public dissemination of research. MS Wilkes and RL Kravitz. JAMA 1992;268:999-1003. Survey of 1st authors of scientific articles in the Journal of the American Medical Association and New England Journal of Medicine, respondents generally reported substantial coverage of their research and showed positive attitudes toward the press.

Other


Directory of science communication courses and programs in the United States. S Dunwoody, E Crane, and B Brown. 3rd ed. Madison (WI): Cent for Environmental and Education Studies; 1996. 41 p. Guide to courses and programs that US universities and colleges offer in communicating science to lay audiences; to order, contact Sharon Dunwoody, Center for Environmental Communication and Education Studies, School of Journalism and Mass Communication, University of Wisconsin-Madison; 608-263-3389; fax, 608-262-1361; e-mail dunwoody@facstaff.wisc.edu.

Anthologies

The new science journalists. T Anton and R McCourt, editors. New York: Ballantine Books; 1995. 340 p. Compilation of recent American magazine articles, newspaper articles, and book excerpts on science; consists mainly of fairly lengthy pieces that draw on extensive research, use literary techniques, or both.


Newsletters

ScienceWriters. Newsletter of the National Association of Science Writers; for information, contact NASW, PO Box 294, Greensboro, NC 27419; 919-399-1482; fax, 919-399-1482; e-mail nasw@nasw.org.

SEJournal. Newsletter of the Society of Environmental Journalists; for information, contact SEJ, PO Box 27280, Philadelphia PA 19118; 215-247-9710; fax, 215-247-9712; e-mail SEJoffice@aol.com.
Electronic Resources


FACSNET (http://www.facnets.org). Excellent resource for journalists; includes primers, background, sources, and links of use in science reporting.

National Association of Science Writers (http://www.nasw.org/). Includes NASW materials, links to other sites.

New England Science Writers (http://www.umass.edu/pubaffs/nesw/). Hub with links to science organizations, science publications, science news services, and more.

Society of Environmental Journalists (http://www.sej.org). Resource primarily for those doing environmental reporting; includes SEJ materials, as well as links to sources of environmental information.

PCST-L. Electronic mailing list on public communication of science and technology; to subscribe, send the command “subscribe PCST-L firstname lastname”, where “firstname” is your first name and “lastname” is your last name, by electronic mail to listserv@cornell.edu; for information, contact Bruce Lewenstein at BVL1@cornell.edu.

---

Highlights of the CBE Views Survey Responses

Seth Beckerman, Chair
CBE Views Task Force

The survey “Review the Views” was distributed at the 1996 CBE Annual Meeting and was also printed in the June-July issue of CBE Views. Of the 60 members who responded to the survey, 46 responded at the annual meeting and 14 responded to the survey in CBE Views. Because the survey was not designed to randomly sample the CBE membership and because the total response represents only 5% of the membership (60 of 1226 members), the results (pages 101 and 102) must be interpreted with caution.

The survey was designed to learn how well our periodical is serving members and to find out whether members wanted CBE Views, or a new CBE publication, to be devoted to peer-reviewed, research-based articles on the scholarly publication of science.

About 62% of respondents said that within the next 3 to 5 years, they would like to see CBE Views retain the mix of content and the format it now has (item 20). As a publication to meet member needs, 62% of respondents said CBE Views was very effective or effective (item 6). When asked how CBE Views measures up as a “calling card” to promote CBE membership, 47% of respondents said it was very effective or effective, and another 32% said it was somewhat effective (item 7). As a way to keep up with CBE news and activities, 37% of respondents said CBE Views was very effective, and another 52% said it was effective (item 8).

Respondents had numerous comments about publishing the reports of annual meeting sessions (items 14, 15, 21). Several were frustrated by the length of time it takes to publish all the reports, and some suggested that all annual meeting reports should appear in 1 publication as soon as possible after the annual meeting, either as a special issue of CBE Views or as another publication. In the past it has usually taken a full year after the annual meeting to publish all meeting reports. Other respondents thought that annual meeting reports were not necessary because they had attended the meeting, perhaps forgetting that less than 25% of members travel to our meetings. And even those who do attend often face tough choices about participation in concurrent sessions.

In seeking to meet member needs over the next few years, respondents were asked to list their greatest challenges in scientific publishing (item 12). Of the numerous comments, Internet technology, online editing, and other electronic technology issues emerged as a theme, as did the pressure of deadlines, staff shortages, and generally trying to do more with less.

When asked how CBE Views could help meet their challenges (item 13), many respondents seemed to focus on articles that would help with specific tasks—managing an editorial office; descriptions of “how others do it”; questions and answers about the style manual, changes in publishing, peer review, and shared experiences.

In response to the question about expansions or additions to CBE Views (item 14), a variety of directly applicable, practical features were listed: problem-solving features, information for those new in the field; more job announcements; “nitty-gritty editing stuff”. Other suggestions included more global information, more in-depth articles, and more on ethics, electronic publishing, and nonmedical topics. Two of the 31 responses recommended no expansion.

If CBE Views were to be shortened (item 15), some aspects to be deleted included “Looking Back” and annual meeting reports (but publish them in a separate publication or publish selected reports). Several called for more concise writing.

In general, many members who responded to the survey seem to be pleased with the changes in CBE Views under the editorship of Martha Tacker, and from their comments, look forward to continued improvements.