

Current Comments[®]

EUGENE GARFIELD

INSTITUTE FOR SCIENTIFIC INFORMATION[®]
3501 MARKET ST., PHILADELPHIA, PA 19104

Science-Writing Awards: Recognition and Reward for Promoting Public Understanding and Awareness of Science

Number 12

March 23, 1987

In a recent editorial in *The Scientist*[™], I discussed science-supporting professions.¹ Some of these occupations, such as the profession of science critic, have yet to be established formally, while others have become familiar. One of these is science writer, a classification that can include newspaper and magazine journalists as well as book authors. As I noted in *The Scientist*, the job of science journalist became prominent as a result of science's increasing importance to society. Today's current events—including such issues as satellite defense systems and other aspects of the arms race, nuclear power, AIDS research—show how closely the fate of humankind has become linked to developments in science and technology. In these times there is a continuing need for the public to be accurately and reliably informed on these issues, as well as on more mundane aspects of science research and policy. Thus, the occupation of science writer or science journalist has never been more important. In this essay, therefore, I want to discuss awards that recognize excellence in science writing. This seems only reasonable considering the space we have devoted to awards for scientific research.

According to Jon Franklin, formerly of the *Baltimore Evening Sun* and now of the University of Maryland College of Journalism, College Park, the value of awards to journalists should not be underestimated.² In the natural pecking order of the typical American newspaper, science writing has not been a high priority. This appears to be

changing, however, at least in terms of the space that newspapers devote to science coverage. According to a recent survey reported by Fred Jerome and Diane Jukofsky of the Scientists' Institute for Public Information (SIPI), New York, more than 66 daily newspapers across the US now feature science sections—more than three times the number that featured such sections two years ago.³ But while science sections of large newspapers are increasing, the bulk of science-related reporting is by general journalists with little or no science training or education. The science literacy issue is paramount for journalists, just as it is for society as a whole and for children in particular. I have discussed children and science previously, in an essay on juvenile science books.⁴

Franklin and J. Tyson Tildon, Department of Pediatrics, University of Maryland School of Medicine, Baltimore, came to visit me recently to discuss these problems and explained that science-writing awards can elevate the "status" of the science writer who is otherwise considered of less importance than the sports or business writer. Just as we may recognize a scientist's work with the "award" of *Citation Classic*[®] status, science-writing awards can recognize and validate excellence on the part of the science journalist.

In his book *The Science Critic*, Maurice Goldsmith, International Science Policy Foundation, London, writes of the imperative need for the public to be informed on matters concerning science and technology.

He discusses newspapers, magazines, books, and other vehicles that make up our "media culture." According to Goldsmith, the media *do* contribute to public knowledge and understanding of science, although constraints imposed by such factors as time, space, technical language, and commercial considerations often result in diluted or inaccurate information.⁵ It is for this reason, among others, that Goldsmith proposes the "creation of the science critic, a public policy generalist alerting us to the growing-pains of future worlds through day-to-day discoveries of the present."⁵ (p. 16)

Robert C. Cowen, science editor, *Christian Science Monitor*, offers a brief history of science journalism, written in observance of what he considers two significant anniversaries: the 50th anniversary of the National Association of Science Writers, Inc., and the 75th of the *Christian Science Monitor*.⁶

Tracing the newspaper coverage of science over the last three-quarters of a century, Cowen notes a change in the way science topics have been covered. In the early twentieth century, such important developments as Einstein's Special Theory of Relativity and Bohr's concept of the quantized atom were generally ignored in favor of newspaper coverage of geographical exploration, progress in aviation, and other practical matters. In the 1920s and 1930s, according to Cowen, newspapers tended to play up the "wonders of science." By the end of the 1930s, however, some reporters were beginning to grasp the broader, darker implications of research in such areas as nuclear fission—research that would lead, of course, to the atomic bomb.⁶

In World War II, and afterward, there was a greater impetus to report on the concern that many scientists were feeling for the larger impact of their work on society. For the most part, notes Cowen, the scientific community has become increasingly conscious of the social implications of research and invention—a consciousness shared by many, though not all, journalists. In Cowen's view, despite the "simplistic fluff

that often passes for science journalism in the printed and electronic media," there *are* journalists who are contributing to sensible, informed public awareness of the social implications of science and technology.⁶ It is this kind of journalism that deserves recognition and reward.

Table 1 is a selected list of awards for science writing. Where possible, we include information on each award's sponsorship, criteria or purpose, prize money, frequency, and the year it was established.

Some of the awards are sponsored by associations that are devoted to advancing the cause of science writing. The Glaxo Science Writers Awards, for instance, are sponsored jointly by the British firm of Glaxo Holdings, London, and the Association of British Science Writers. These Glaxo prizes, according to Bernard Dixon, European editor of *The Scientist*, have done much to increase the caliber of science reporting and the prestige of newspapers in the UK, particularly regional papers published outside London.⁷ Another award, the Ortho Medical Journalism Award, is sponsored by the Canadian Science Writers' Association, Toronto. Table 2 provides a list of science writers' associations. Included are organizations from the US as well as other countries, including France, Sweden, the Federal Republic of Germany, and the Philippines.

Also included in Table 2 is the National Association of Science Writers, Inc. (NASW), mentioned previously. Conceived by 3 science journalists in 1934, NASW has grown considerably from its original 12 members. Today, there are over 1,200 members involved in print and broadcast media as well as in business, government, and academic communications. NASW publishes *ScienceWriters*, an excellent quarterly newsletter, and also sponsors the Science-in-Society Journalism Awards, included in Table 1.

Table 1 does not include journalism awards, such as the Pulitzer Prizes, that occasionally recognize excellence in the coverage of scientific topics. In 1986, for ex-

Table 1: Selected list of science-writing awards. The awards are arranged alphabetically with additional information, where available, on the sponsor, amount of prize, frequency of award, and the year the award was established.

- AAAS-Westinghouse Science Journalism Awards.** American Association for the Advancement of Science, Washington, DC. For outstanding reporting on the sciences. Five \$1,000 prizes. Annual.
- American Academy of Family Physicians. Journalism Awards.** Kansas City, MO. For increasing the public's awareness in the following three areas: the role of the family physician, the patient's role in health maintenance, and the socioeconomic problems affecting health-care delivery. Fourteen awards totaling \$10,500. Annual.
- American Association of Petroleum Geologists. Journalism Award.** AAPG, Tulsa, OK. For improvement in public understanding of geology and energy resources. Plaque. Granting of award in any year is discretionary. Established 1972.
- American College of Emergency Physicians Awards of Excellence.** ACEP, Dallas, TX. For communicating information about emergency medicine to the public. \$2,000 in prizes. Annual. Established 1982.
- American College of Radiology Medical Reporting Awards—Radiology News Awards.** ACR, Reston, VA. For original stories on the use of radiology in diagnosis and treatment of disease. \$1,000 in prizes. Annual.
- American Dental Association Science Writers Award.** ADA, Chicago, IL. For broadening public understanding of dental treatment and research. \$1,000. Annual.
- American Institute of Physics. Science-Writing Award in Physics and Astronomy.** AIP, New York, NY. For distinguished writing that improves public understanding of physics and astronomy. \$1,500. Annual.
- American Speech-Language-Hearing Association Media Awards.** ASHA, Rockville, MD. For material relating to speech-language pathology and/or audiology. \$1,000 in prizes. Annual.
- Aviation/Space Writers Association. Journalism Award.** Aviation/Space Writers Association, Columbus, OH. For creativity, veracity, and accuracy in producing an article, book, photograph, or documentary about aviation and/or space. Annual.
- Children's Science Book Award.** New York Academy of Sciences, New York, NY. To encourage writing and publishing of high-quality science books for children. \$500. Annual. Established 1971.
- Edward J. Meeman Awards.** Scripps Howard Foundation, Cincinnati, OH. For outstanding science journalism. \$6,000 in prizes. Annual.
- Epilepsy Foundation of America Award.** EFA, Washington, DC. For reporting on epilepsy and its treatment. \$500. Annual. Established 1971.
- Forum Award.** Atomic Industrial Forum, Inc., Bethesda, MD. To encourage factual news coverage of peaceful nuclear applications. \$1,000. Annual. Established 1967.
- Gallaudet Journalism Awards.** Gallaudet College, Washington, DC. For articles on deafness and deaf people. \$500. Annual.
- Glaxo Science Writers Awards.** Glaxo Holdings, London, UK. For British science journalists. In conjunction with Association of British Science Writers. About US \$1,900. Annual. Established 1966.
- Golden Carnation Awards for Nutrition Writing.** Los Angeles, CA. For outstanding writing by daily newspaper staff writers in the US and Canada. \$500. Annual. Established 1970.
- Howard W. Blakeslee Awards.** American Heart Association, Dallas, TX. To encourage highest standards of reporting to the public on cardiovascular diseases. \$1,000. Annual. Established 1952.
- Indira Gandhi Prize for Popularization of Science.** Indian National Science Academy, New Delhi, India. About US \$800.
- James T. Grady-James H. Stack Award for Interpreting Chemistry for the Public.** For articles, books, films, lectures, pamphlets, or broadcasts that increase the public's understanding of chemistry, chemical engineering, and related fields. \$3,000. Annual. Established 1955.
- Kalinga Prize.** UNESCO, Paris, France. For popularization of science. About US \$1,000. Annual. Established 1951.
- Klumpke-Roberts Award.** Astronomical Society of the Pacific, San Francisco, CA. To recognize outstanding contributions to public understanding of astronomy. Annual. Established 1975.
- Michael Daley Award.** Department of Science in association with Australian and New Zealand Association for the Advancement of Science, East Melbourne, Victoria. For excellence in science and technology reporting. \$1,000.
- MS Public Education Awards.** Multiple Sclerosis Society, New York, NY. For the outstanding newspaper or magazine article about multiple sclerosis. \$1,000. Annual. Established 1975.
- Nate Haseltine Fellowships in Science Writing.** Council for the Advancement of Science Writing, Oak Park, IL. For talented young journalists who wish to study science writing at the graduate level. \$2,000. Annual.
- National Media Awards.** American Psychological Association/American Psychological Foundation, Washington, DC. For outstanding contributions toward public understanding of psychology. \$1,000. Annual. Established 1956.
- Nils Gustav Rosen Prize for Science Journalism.** Council for the Planning and Coordination of Research, Sweden. About US \$6,000.
- Ortho Medical Journalism Award.** Canadian Science Writers' Association, Toronto, Canada. To honor outstanding contributions to science journalism in Canadian print media. \$1,000. Annual.
- Patrick M. McGrady, Sr. Memorial Scholarship Awards in Science Writing.** American Tentative Society. For an essay about a scientist embodying the society's founding principle that the essence of science is to regard present knowledge as subject to growth, addition, and revision and, therefore, as tentative. \$2,500. Annual.
- Phi Beta Kappa Award in Science.** The United Chapters of Phi Beta Kappa, Washington, DC. To encourage literate and scholarly interpretations of the sciences. \$2,500. Annual. Established 1959.
- Prix Jean Rostand.** French Association of Science Writers, Paris. For best science book. About US \$825.

- Ray Bruner Science Writing Fellowship.** American Public Health Association, Washington, DC. To recognize outstanding achievement in news reporting by young journalists in the health/medical/science fields. \$500. Annual. Established 1971.
- Robert T. Morse Writer's Award.** American Psychiatric Association, Washington, DC. For significant contribution to public understanding of psychiatry and mental illness. \$1,000. Annual. Established 1964.
- Science-in-Society Journalism Awards.** National Association of Science Writers, Inc., Greenlawn, NY. For investigative and interpretive reporting about the sciences. \$1,000. Annual. Established 1972.
- Thomas L. Stokes Award.** Washington Journalism Center, Washington, DC. For reporting on development and conservation of energy resources and protection of the environment. \$1,000. Annual.
- Vannevar Bush Fellowships in the Public Understanding of Technology and Science.** MIT, Cambridge, MA. Program for science journalists to deepen their knowledge of science and technology. \$18,000 stipend and nine-month residential fellowships. Annual. Established 1983.
- Watson Davis Book Prize in History of Science.** History of Science Society, Washington, DC. For a book useful in undergraduate teaching and/or promoting public understanding of the history of science. \$500.
- William Harvey Awards.** Sponsored by American Medical Writers Association, Bethesda, MD, and Squibb Corp., Princeton, NJ. For writing on hypertension. \$1,500. Annual.

ample, Pulitzers were awarded for newspaper reporting on the Strategic Defense Initiative and on the organ-transplantation system in the US.⁸ One of the first journalists to win a Pulitzer for science writing was Gobind Behari Lal, an Indian-born writer who shared a Pulitzer in 1937.⁹ A more recent winner was Franklin, who received a Pulitzer in 1979 for a feature on neurosurgery and again in 1985 for a series on the new science of molecular psychiatry.^{9,10}

As Cowen implies earlier with his mention of "simplistic fluff," the current state of science journalism is far from perfect. He acknowledges that in some instances writers and editors, under pressure to get stories on the front page, occasionally distort and overdramatize science news items. Publicity-seeking scientific institutions, which inundate newspaper offices with press releases, must also share blame for the lack of considered, objective reporting on science topics.¹¹

There are also long-existing barriers to effective communication between scientists and journalists. Some of these barriers were explored in a poll conducted by Michael Ryan, West Virginia University School of Journalism, Morgantown. Hoping to gauge attitudes about media coverage of science news, Ryan sent questionnaires to science writers and editors as well as to working scientists.¹² The respondents were asked to agree or disagree with a series of statements. Results suggested that, while journalists and

scientists agreed on many points, they disagreed on many others. The scientists, for example, agreed that it would be good policy to have journalists' stories read prior to publication by the scientists quoted in the stories and that scientists should release results to the press only after the information has appeared in a scientific journal. The last statement is reminiscent of the "Ingelfinger rule" at the *New England Journal of Medicine (NEJM)*, which I've discussed previously.¹³ This rule, named for the former *NEJM* editor who formulated it, prohibits prior disclosure to the media of any paper submitted to *NEJM*.¹⁴

In Ryan's study, science writers strongly *disagreed* with these statements. There was also disagreement as to whether newspaper science writers tend to sensationalize science news. In many instances, however, both groups were able to predict accurately how the other would respond to the statements. Ryan concluded that although potential barriers to communication did exist, at least each group had an accurate perception of the nature of the disagreements.¹² Many of these issues are discussed by Dorothy Nelkin, Department of Sociology, Cornell University, Ithaca, New York, in a recent issue of *The Scientist*,¹⁵ which features an excerpt from Nelkin's forthcoming book *Selling Science: How the Press Covers Science and Technology*.¹⁶

One answer to this dilemma, of course, is to foster more productive, mutually beneficial communication between scientist and

Table 2: Selected list of associations and organizations providing information and assistance to science writers.

American Medical Writers Association
5272 River Road
Suite 410
Bethesda, MD 20816

Association of British Science Writers
c/o British Association for the Advancement of
Science
Fortress House
23 Savile Row
London W1X 1AB, United Kingdom

Association of Science Journalists
29 rue de Louvre
75002 Paris, France

Aviation/Space Writers Association
17 South High Street
Suite 1200
Columbus, OH 43215

Canadian Science Writers' Association
c/o The Wellesley Hospital
Public Relations Department
160 Wellesley Street, East
Toronto, Ontario M4Y 1J3, Canada

Council for the Advancement of Science Writing
618 North Elmwood
Oak Park, IL 60302

Danish Science Journalists Club
Henrik Hertz Vej 13
2920 Charlottenlund, Denmark

Dutch Association of Science Journalists
c/o Huub EGGEN
Hardeekosmos
P.O. Box 108
1270 AC Huizen, The Netherlands

Education and Science Journalists Club
c/o ibf
Reichsratsstrasse 17
1010 Vienna, Austria

European Union of Scientific Journalists' Associations
c/o Dr. Ernest Bock
EEC-DG XII
rue de la Loi 200
1049 Brussels, Belgium

French Association of Science Writers
c/o M. Charles Penel
129 rue de l'Abbe-Groult
75015 Paris, France

International Science Writers' Association
c/o Secretary-Treasurer
7310 Broxbourn Court
Bethesda, MD 20817

International Society of Medical Writers
c/o Dr. Alfred Rottler
Aussere Bayreutherstrasse 72
8500 Nuremberg, Federal Republic of Germany

Irish Association of Science & Technology Journalists
303 Martello Estate
Portmarnock
County Dublin, Ireland

Israel Association of Science & Medical Journalists
c/o Hebrew Science Journal
P.O. Box 81
Jerusalem 91007, Israel

National Association of Science Writers, Inc.
P.O. Box 294
Greenlawn, NY 11740

Norwegian Association of Research Journalists
c/o Per Torbo
R Kul
NRK
0340 Oslo 3, Norway

Professional Science Journalists Group
c/o 31 Avenue Bel Air
1181 Brussels, Belgium

Science and Technology Journalists of the Philippines, Inc.
807 East de los Santos Avenue
Quezon City
Metro Manila, Philippines

Science Writers' Association of South Africa
P.O. Box 686
Johannesburg 2000, Republic of South Africa

Spanish Association of Scientific Journalism
c/o Iberian Center for Cooperation
Ciudad Universitaria
Madrid 3, Spain

Swedish Association of Science Journalism
P.O. Box 14131
104 05 Stockholm, Sweden

Swiss Science Journalists Club
c/o Tages-Anzeiger
Werdstrasse 21
8021 Zurich, Switzerland

Technical Literary Society, Inc.
Association of Technical and Scientific Journalism
c/o Klaus Goschmann
AUMA
Lindenstrasse 8
5000 Cologne 1, Federal Republic of Germany

Union of Italian Science Journalists
National Italian Press Federation
Lombard Association
Viale Montesanto 7
20124 Milan, Italy

journalist. The American Cancer Society Writers' Seminars, held annually for the last quarter century, serve as an example of how this can be done. Scientists and science writers convene for a series of briefings, presentations, and question-and-answer sessions on cancer research. The event, as explained by Alan C. Davis, vice president for public affairs, American Cancer Society, New York, is designed for the benefit of the writers, who have plentiful opportunities for face-to-face interaction with the scientists. The result, as Davis notes, is not only extensive, accurate reporting about important research results, but also the establishment of valuable contacts between scientists and journalists.¹⁷ Similar programs are conducted by the American Heart Association, the American Institute of Physics, and the American Chemical Society. And journalists who need quick access to experts on scientific and technical topics can turn to SIPI's Media Resource Service, which maintains extensive computer files of available authorities in various fields.

As Barbara Gastel notes in *Presenting Science to the Public*, it is important that scientists participate fully in communicating on science news and issues. "Presenting science to the public," she notes, "is an opportunity to which the scientist should rise. It can help the public, it can enrich our culture, and it can aid science and scientists."¹⁸

If the quality of science journalism is to continue to improve, then the education of science journalists must be a matter of the highest priority. Schools currently offering graduate programs in science writing include Duke University, Durham, North Carolina; Drexel University, Philadelphia; Johns Hopkins University, Baltimore; the University of Maryland; New York University; and the University of California, Santa Cruz. The science communication program at Santa Cruz, for example, offers admission each fall to 12 students with undergraduate degrees in science or engineering. The nine-month course involves extensive study in

science writing in a variety of styles, such as newswriting, book reviews, and magazine features. Students also serve 10-week internships in print or broadcast media or with a research institution. Other internship programs for science writers include the six-month program offered by the National Cancer Institute, Bethesda, Maryland.

Another innovative program, included in Table 1, is the Vannevar Bush Fellowships in the Public Understanding of Technology and Science, at the Massachusetts Institute of Technology (MIT), Cambridge, directed by Victor McElheny, who also serves on the editorial board of *The Scientist*. This program is designed to give a deeper understanding of engineering and scientific research and its implications to writers and broadcasters who are already involved in presenting science to the public. The Bush fellows participate in seminars featuring speakers who cover developments in scientific research and policy as well as techniques and relevant issues in scientific communication. The program also involves extensive interaction with researchers and faculty at MIT and neighboring institutions.

What might be described as an opposite approach is featured in the Science and Technology Media Fellowships, a program organized by the British Association for the Advancement of Science. In this program, scientists and technologists have the opportunity to spend a month or two working in a media organization, improving their communication skills and learning about the process by which ideas and events become news. The participants return to their professions with a deeper understanding of the media's role in communicating science to the public.

In addition to the growing number of degree programs and fellowships, a further measure of the current interest in science writing is provided by *Books in Print*, which lists nearly 300 titles on scientific and technical communication. One recent book is *Scientists and Journalists*, edited by Sharon M. Friedman, Department of Journalism,

Lehigh University, Bethlehem, Pennsylvania, and colleagues. This collection of essays explores the relationship between scientists and science reporters.¹⁹

The number and variety of prizes in Table 1 demonstrate that there are many opportunities to recognize excellence in science writing. However, considering the increasingly pervasive role that science plays in our lives, I suspect that we need to help elevate the standards of science writing by continued and expanded recognition. While I have no doubt that receipt of these prizes is gratefully acknowledged by each recipient, the awards have not yet been elevated to the status of

a Nobel Prize. Apart from the financial considerations involved, it does say something about the historical lag in recognizing the changed importance of certain fields. I hope to return to this topic again in the near future.

* * * * *

My thanks to C.J. Fiscus and Christopher King for their help in the preparation of this essay.

©1987 ISI

REFERENCES

1. Garfield E. Science needs critics. *The Scientist* 12 January 1987. p. 9.
2. Franklin J. Personal communication. 7 January 1987.
3. Jerome F & Jukofsky D, eds. Now in 66 dailies: newspaper science sections spreading nationwide. (Whole issue.) *SIPscope* 14(4), 1986. 24 p.
4. Garfield E. Science books for children. *Essays of an information scientist: the awards of science and other essays*. Philadelphia: ISI Press, 1985. Vol. 7. p. 430-8.
5. Goldsmith M. *The science critic*. London: Routledge & Kegan Paul, 1986. 217 p.
6. Cowen R C. Avant-garde science journalism. *Technol. Rev.* 87(1):6-7, 1984.
7. Dixon B. Personal communication. 18 February 1987.
8. Winners of Pulitzer Prizes in journalism, letters and the arts. *New York Times* 18 April 1986. p. B4.
9. Kriehbaum H. Science writers and the Pulitzers. *ScienceWriters* 32(3):12-3, 1984. (Newsletter.)
10. Winners of Pulitzer Prizes in journalism, letters and the arts. *New York Times* 25 April 1985. p. B10.
11. Cowen R C. Science writers: angels or devils? *Technol. Rev.* 88(5):6, 1985.
12. Ryan M. Attitudes of scientists and journalists toward media coverage of science news. *Journalism Quart.* 56:18-26, 1979.
13. Garfield E. 100 classics from the *New England Journal of Medicine*. *Op. cit.*, p. 186-93.
14. Ingelfinger F. Definition of "sole contribution." *N. Engl. J. Med.* 281:676-7, 1969.
15. Nelkin D. How scientists control the news. *The Scientist* 9 March 1987. p. 15.
16. -----, *Selling science: how the press covers science and technology*. New York: Freeman. (In press.)
17. Davis A C. American Cancer Society Writers' Seminars: their role in effective communication. *Cancer Invest.* 3:193-5, 1985.
18. Gastel B. *Presenting science to the public*. Philadelphia: ISI Press, 1983. p. IX.
19. Friedman S M, Dunwoody S & Rogers C L, eds. *Scientists and journalists*. New York: Free Press, 1986. 333 p.