Publishing About Science

Books and the Popularization of Science

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This article discusses best-selling science books, the characteristics of the audience for popular science books, and the role of books within science popularization and science education. Best-selling science books have been rare, but generally readable. Regional books, also important sources of scientific information, aim at much smaller, far more price-sensitive audiences. Many successful regional, nontechnical science books are readable, heavily illustrated, and, in some cases, cross-disciplinary. To increase the attentive audience for scientific information, improvement in science education is necessary, and the most efficacious role for scientific institutions may be the production of materials that can be easily incorporated into school curricula.

Studies of science popularization generally focus on the role of television, newspapers, and magazines in providing information to the general public. For the most part, those studies have found that the attentive audience for scientific information—that 20 percent or so of the people who are interested in and regularly read about science—will seek out sources of scientific information. Still, the scientific literacy of that group remains relatively low. The remainder, the “nonattentive” public, is probably reached more effectively through broadcasting, particularly commercial television.

One recent study looked at all those sources of popularization, including informal education (such as visits to zoos or museums) but did not discuss the role of books in science popularization and education. This article discusses science books, both national and regional, that have reached a large public audience; describes the audience, insofar as it is known; and examines the role of books in science popularization and science education.

Science Bestsellers

Sales are one obvious, though limited, measure of the success of nontechnical books about science. A number of those books have made it onto the
Publishers Weekly annual list of nonfiction bestsellers for the United States. For the period from 1912 to 1988, only thirteen books with science as their primary subject made it onto the annual nonfiction, hardcover bestseller list, which usually includes the ten best-selling books in any given year. In identifying those thirteen books, science was defined broadly enough to include some health and environmental literature, but not so broadly as to include diet books (which regularly make bestseller lists and may actually be an important source of medical information). Of that total, only five science books have made the list since 1975, and at least two of those, The Ascent of Man by Jacob Bronowski and The Discoverers by Daniel J. Boorstin, were about the history of science rather than science itself. Of that list, only one science book, Cosmos by Carl Sagan, finished atop the bestseller list, and that may be at least in part due to the accompanying television series on public television. (Stephen Hawking’s A Brief History of Time was published in 1989, beyond the time range of this study. It regularly appeared on weekly bestseller lists, even without the benefit of an accompanying television series.) It is apparent, then, that science books make up a small percentage of bestsellers.

Sales of those best-selling books generally range in the hundreds of thousands, an impressive number in the bookselling business. However, book sales are significantly less than total sales of science magazines. Several popular science magazines, such as Scientific American, Discover, and Science 86 (at least before it went out of business), reached millions of people. It is difficult to compare the readership between books and magazines; there is little research on the people who buy books and actually read them, probably because of the assumption that anyone motivated enough to shell out money for a book is probably sufficiently motivated to read it, though that may or may not be true. What’s more, book sales do not reflect additional readership based on library copies or the books that are passed from one reader to the next.

The argument can be made that the impact of books really cannot be measured in their sales, but rather should be viewed in the far less quantifiable terms of their influence on society, or at least that component of society that makes decisions. That certainly may be true. For example, few science-related books in the past fifty years were more influential than Rachel Carson’s Silent Spring, which did not make it onto Publishers Weekly’s end-of-the-year bestseller list. Stephen Jay Gould is among the most prolific and influential science authors active today; although his books obviously sell well, they do not generally appear on bestseller lists. However, because of his role as a source of information and ideas about science, Gould proves the importance of reaching that attentive, scientifically interested audience.

Having said that, however, there may be some question about why science does not reach a broader audience. There are at least two possibilities, and perhaps more. First, the audience for science is simply smaller than the audience for other types of books. If, as research suggests, the market for