

COMMUNICATING SCIENCE

Because Science Matters

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Recently, I was sitting with my five-year-old son on a dingy yellow leather chair in the uncomfortable quiet of our dermatologist's vast waiting room. As I was whisper-reading a Magic School Bus book to him, I heard the words, "Well, I can sort of believe in evolution..." Immediately looking up, I saw a woman in her mid-30s with an open book on her lap. She was relating her opinion to a retiring elderly man seated beside her. I listened intently, hoping for a lively discussion about a topic that is occupying much of my time these days. She continued, "but I just can't see that the big bang really happened."

Most of us are familiar with the dismal state of science literacy. Basic science concepts and facts escape many people. A majority of Americans say that they do not accept the validity of some of the most established scientific theories—as witnessed on that visit to the doctor. And perhaps the most important feature of the woeful state of public understanding of science is the average American's lack of a firm grasp of the process of science itself (1).

The science community and policy-makers point to many ills that result from the public's failure to understand, appreciate, or engage with science and technology. The concept of "civic science literacy" implies that knowledge of basic scientific ideas is necessary for adequate citizen participation in decision-making, preparation for employment, and the practical aspects of daily life (2). The increasing number of science and technology-related public issues makes science literacy an essential component of public participation, informed public policy, support for science (3), and, ultimately, robust global competitiveness.

These worries are not new, and programs to educate the American public about science abound. A quick browse of the Web sites of scientific societies reveals that most have at least one program designed to address the problem. Public schools and universities are reacting to this need, as are most other sectors of society. Given the increasing importance of

science and technology in all of our lives, individual scientists themselves have a responsibility to take the lead in communicating their research findings and offering insight into the scientific process to decision-makers and the public.

Scientists can participate in many ways—speaking with community groups and schools and directly with business leaders and politicians. Speaking to the public through the media offers a way that scientists can efficiently reach many people with their messages. But how can scientists ensure that reporters represent their science accurately? Will they be held in high esteem by their peers for promoting their

work—or will colleagues think that they are wasting precious time that could be spent on "real" work? How can scientists attract reporters' attention in this media-fragmented society in such a way that others will benefit from their insights? All these questions and a host of others are answered in *A Scientist's Guide to Talking with the Media* by Richard Hayes (media director of the Union of Concerned Scientists) and Daniel Grossman (a science journalist). This superbly organized and well-written primer guides

scientists through the process of talking to the public through the media.

At first glance, one might think that this is all just common sense. And much of it is. But the book is full of common sense not commonly practiced. We all know that we should choose a few major messages and stick with them throughout an interview with a reporter, but how many people actually use a "message compass" to keep themselves from wandering from the most important points? Hayes and Grossman offer lists of specific things to ask a reporter prior to an interview as part of doing our homework—items that we just might not think about on our own. Their section on creating effective messages includes examples and helpful advice on specific wording. They remind us that "long-winded statements rarely end up in newspaper articles," so we should

make sure that our messages have "a certain something extra"—something that is "surprising, catchy, humorous, or sobering."

Missing from the book are an emphasis on the fragmentation of the media and how to

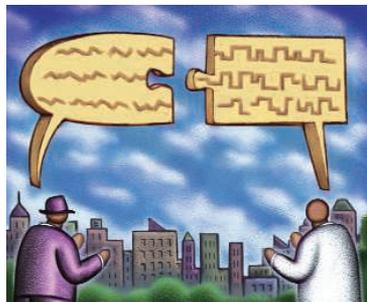
communicate more effectively in an environment where consumers of science information have thousands of choices—including the ubiquitous Web. What's the best way to engage blogger journalists?

One of the book's most useful sections attempts to narrow the cultural divide between scientists and jour-

nalists. Many science journalists do an excellent job reporting on complicated issues under very tight deadlines. Many scientists help that process by pulling out the most relevant messages from and framing their work in ways that are meaningful to people's lives. This and many other actions detailed in the book suggest that there can be a happy, productive partnership between scientists and journalists. But fewer and fewer science-trained journalists are employed by the news media today. General reporters with little or no science expertise often cover science beats and are carrying a heavier load in general (4). The authors tell eye-popping stories about science news articles gone awry, detailing ways in which both the scientists and journalists could have prevented misunderstandings and miscommunications that caused sometimes life-threatening problems. They say, "We have focused on such outrageous cases not to scare you away from contact with the press, but because such stories starkly illustrate that the scientific community needs to communicate better. The situation desperately needs to be improved." I hope that more scientists will embrace communicating with the public and use this book as one of their tools for improving the situation.

References

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A Scientist's Guide to Talking with the Media

Practical Advice from the Union of Concerned Scientists

by Richard Hayes and Daniel Grossman

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