

INSIGHTS

Sensational News

Scientists serious about reaching the public should bypass the media.

BY SUSAN M. FITZPATRICK

A growing number of important policy debates—such as those about access to medical care, global climate change, genetic engineering, or Internet commerce—hinge on scientific and technical arguments. The benefits of having the pros and cons of such debates carefully considered by a scientifically literate and informed society are obvious. But how can the non-scientifically trained public access the information it wants and needs to guide informed decision making?

A popular notion among scientists is that public understanding of science would be enhanced if the popular press increased coverage of science news. But is enhanced public *understanding* of science the true driving force behind the scientific community's push for increased media coverage of science? Or might the true aim be generating public *enthusiasm* for science? Does all the media buzz truly educate the public on complex scientific issues, or does it merely generate noise? Why do

scientists consider pitching stories to the popular press as the major route for public education?

Over the past five years, I have participated in several retreats, panels, workshops, and roundtable discussion groups that brought together scientists and journalists with the aim of increasing science news coverage. The standard agenda for such gatherings is journalists, editors, and media consultants telling scientists how they can successfully package their stories. Journalists and editors explain, quite bluntly, that they are not in the education business. They are looking for news, and they are primarily interested in stories that have an element of controversy. The take-home message is that scientists need to become more media savvy. The translation of the word *savvy* as used by editors is that researchers must learn to play the game and become adept at crafting scientific findings, no matter how arcane or mundane, into news. (See "Pest Control, Rumor Control" in this issue of FORUM.) I have wondered if it

might not be time to reexamine whether or not scientists should continue doggedly down the media track.

Lost Illusions

In a 1993 letter to the editor of the *Chronicle of Higher Education*, I naively argued a point of view about relations between science and the media that was opposite to that expressed by the noted sociologist of science Dorothy Nelkin.¹ In a 1993 essay published in the *Chronicle*, which unfortunately remains relevant today, Nelkin took molecular biologists and geneticists to task for the rather irresponsible way much of the news about basic research in their fields was packaged for popular consumption.²

Nelkin was particularly concerned that the metaphors and analogies scientists use to discuss their findings were often inappropriate and promised more than the data actually delivered—describing the genome as "The Book of Man," for example. The views I expressed in my letter probably reflected what many laboratory

scientists thought seven years ago. I wrote at the time that scientists owed the public information and should be encouraged to speak out, not discouraged from it. If a researcher's enthusiasm for her published findings outpaced her skill for generating apt metaphors, it was the responsibility of the journalist to temper the tone and balance the story.

I was working from the assumption that a good science journalist, like any good journalist, should approach a science story with healthy skepticism. I believed good writing about science should explain or take into account the process of science, the way a body of scientific knowledge is built slowly by fitting together individual bits of information.

The stereotype of scientists as generally incomprehensible, unable to communicate without excessive use of jargon, didn't ring true. Many of the scientists I knew could explain their research quite clearly, and it seemed that any skilled journalist who took the time to ask careful and thoughtful questions could successfully negotiate the technical gaps.

If researchers, as had often been claimed, were unwilling to publicize the results of scientific research, I thought that could only be explained by intellectual snobbery, elitism, and sheer hubris on their part.

Today, with 20/20 hindsight, I also think that researchers' earlier reluctance to talk about their work can be attributed to honest reticence—and both the scientific community and the general public could benefit from a resurgence of that reti-

cence. Who could have guessed, eight years later, that much of what concerned Nelkin would become commonplace, and that scientific “breakthroughs” would be trumpeted in news headlines almost daily.

Consider the media hoopla generated in response to the June announcement of the completion of the human genome map. The joint press conference convened by President Clinton, the Human Genome Project, and the biotechnology company Celera was a publicity stunt orchestrated to shift public attention away from a recent spate of stories on the competition between the publicly funded and privately funded research teams. In fact, the map—to use one of the metaphors that are common currency in reporting on this research—will not actually be completed for several years, and the real work of translating the map into information that could actually benefit human life is yet to be done. There has also been a steady stream of progress reports from all the major research groups involved. One has to wonder—what was the news? And what did any of the resulting press coverage add to the public's understanding about genetics? In this case, as in many others, journalists should have more seriously heeded Nelkin's sage warnings.

Courting the Press

So why does the scientific community now court the popular press? For issue-oriented advocacy groups, institutional public-relations offices, and public-awareness lobbying campaigns such as those spawned by the Human Genome Project

and the Decade of the Brain, communicating scientific findings to the public is an important part of their overall agenda.

Adept at shaping and pitching stories to the press, these groups helped make science accessible to journalists, stimulated public enthusiasm for science, and convinced scientists of how beneficial public support garnered through such exposure could be during national budget wars. Lobbying and marketing professionals emphasized that the public, or, perhaps more accurately, those members of the public elected to Congress or involved in making public policy, were weary of the oft-repeated message that more studies and more funding for basic science were needed.

Scientists were told that the time had come for emphasizing their accomplishments and the relevance of their work. Scientists, supported by their institutions, grew increasingly eager to have their work discussed in the pages of newspapers and newsmagazines and mentioned on television news shows. In response to public—and special—interests, many media outlets, including the average daily papers that are read by many people, created a dedicated medical/science slot. But filling the slots on a daily basis requires a steady stream of scientific “breakthroughs.”

Hot Tips

In retrospect, it is difficult to conceive how the incremental nature of scientific progress, fundamentally at odds with the pace of news, could possibly meet the demand. But somehow science obliges. The American

Association for the Advancement of Science sponsors a “comprehensive website about the latest advances in science, medicine, health, and technology.” Each day, *EurekAlert!* posts an average of 22 new press releases crafted by institutional public-relations offices and funding agencies.³

Many prestigious science journals, such as *Science*, *Nature*, and the *Proceedings of the National Academy of Sciences*, also release weekly or monthly media tip sheets highlighting and summarizing soon-to-be-published papers. University administrations, associations like Research!America—a group dedicated to increasing federal funding for biomedical research—professional scientific societies, and disease-specific lobbying groups actively encourage media coverage of scientific results and encourage scientists to produce press releases and to hold press briefings. Federal funding agencies such as the National Institutes of Health and the National Science Foundation have personnel responsible for publicizing research.

Today, moreover, many scientists want their work published in the international weekly science journals *Science* and *Nature*, not only because of the broad interdisciplinary readership, but because of the potential for capturing media attention.

Basing editorial decisions on press releases and media tip-sheets raises serious doubts as to whether a majority of the scientific findings highlighted are so novel, important, and timely that they require being reported as *news*.

The coverage generated from

press releases is formulaic, and examples can be found in every daily paper. The typical science news story consists of an attention-grabbing headline—Scientists Create New Life Form!—accompanied by 500 words or less superficially covering the science, mainly repeating what was emphasized in the release. The piece will usually contain some exuberant quotes from the featured researchers with the final paragraph seasoned by banal quotes from individuals, whose credibility the average reader has no way of evaluating, saying that the finding is interesting but more research is needed.

If the story manages to be sensational enough—even if the science actually falls short of that adjective—television news might pick it up, and from there it can get some play in the weekly newsmagazines. Radio and television talk show interest then follows. In general, there is nothing inherently wrong with this system. News evolves to features, where there is theoretically more opportunity to explain the details of the science. Unfortunately, the science often becomes less and less central as the message is honed towards some public issue. Lost in the ensuing discussion is what precisely made the original scientific finding news in the first place.

Just Say No

What does anyone get out of this system? The public gets a sense that progress is being made. Universities and funding agencies enjoy free publicity. Journalists are satisfied that they are doing their part to inform the public.

Advocacy groups garner validation for the significance of their particular cause. Good scientists, usually dissatisfied with the depth of the coverage, feel that, if their universities and funders are happy and they have not been seriously misrepresented, they have no reason to complain. But there is a dark side.

The media, overwhelmed with press releases, arbitrarily cover stories that can most easily be made sensational or controversial without regard to the actual value of the science.⁴ Institutions must continually crank up the hype so their researchers' stories pop out of the noise. The conditions for a dangerous spiral are in place. How long will it take a wearying public to tune out scientific breakthroughs that in the absence of context make less and less sense? This is already happening with medical news. It doesn't take long for public enthusiasm to make way for public apathy.

Maybe the time has come for scientists who are truly interested in communicating their work to broader audiences to just say no and stop participating in an activity out of kilter with its professed goals. When reporters call, scientists should evaluate how serious the writer is about the quality and depth of the piece before agreeing to provide background or be interviewed.

Granted, this strategy runs the risk of leaving the media with no one to call except those only too happy to provide the gratuitous quote or wild extrapolation. But most journalists do not want to cover something that really is not news, and a well-known scientist at a prestigious research center can, when called about what is

essentially a nonstory, try to persuade a writer that “there is no there there.”

Most important, scientists should carefully evaluate why they think the publication of a paper, or a presentation at a meeting, should be accompanied by a press release designed to attract media coverage. Institutions and funding agencies should carefully consider why they are encouraging the proliferation of press releases.

When science is truly news, and can be reported as news, that’s fine. Newsworthy science might be the discovery of a new planet or the unraveling of a previously misunderstood disease mechanism. But most science stories require more work.

Increasingly, when listening to calls for more coverage of science by the popular press, I find myself wondering if what is truly needed is *less* science news and *fewer* media-savvy scientists. I do not want less communication between scientists and the public, but I think there should be less reliance on the media.

Scientists serious about educating and informing the public about their work should write articles for magazines or websites. When advocacy groups or public policy experts misuse scientific findings, scientists should respond with opinion pieces and commentaries. In short, scientists should make more of an effort to help nonscientists understand the nature of scientific discovery so that the nonscientists can be more educated consumers of science news. We need more forums where scientists and the public meet face to face, without intermediary translators with hidden agendas such as selling newspapers, promoting positions, or fundraising.

Public enthusiasm and public understanding are not mutually exclusive goals. The *Beyond Discovery* series published by the Office of Public Understanding of the National Academy of Sciences is one good model of how to achieve both.⁵ Rather than more “media savvy” scientists, we need more scientists

seriously considering careers geared towards public outreach. If the scientific community and its supporters truly believe it is in everyone’s best interest to have a scientifically literate society, it is time to become more *savvy* about precisely what reaching that goal requires. And it is time to become more reflective about what stands in the way.■

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NOTES

1. Susan M. Fitzpatrick, “The Willingness of Scientists to Go Public,” *Chronicle of Higher Education* (March 31, 1993), p. B4.
2. Dorothy Nelkin, “The Grandiose Claims of Geneticists,” *Chronicle of Higher Education* (March 3, 1993), pp. B1-2.
3. See *EurekaAlert!* website <<http://www.eurekaalert.org>>.
4. Susan M. Fitzpatrick, “What Makes Science Newsworthy?” *The Scientist*, 13(23) (November 22, 1999), p. 12.
5. See <<http://www.beyonddiscovery.org>>.