

## The Author's Summary: Scientists Making Their Work Accessible

*Moderator:*

**Iain Taylor**  
University of British Columbia  
Vancouver, British Columbia

*Speakers:*

**Monica M Bradford**  
*Science*  
Washington, DC

**Mark L Winston**  
Simon Fraser University  
Vancouver, British Columbia

**Patrick Keeling**  
University of British Columbia  
Vancouver, British Columbia

*Reporter:*

**Olga Kuchment**  
University of California  
Berkeley, California

Leaving after this session, I imagined a world where scientists can speak of their research with passion, with humor, without jargon to scientists in other fields or even to the lay public. "You may say that I'm a dreamer", in the words of John Lennon, "but I'm not the only one." In this session, organized by Iain Taylor, an editor and two scientists each described an unorthodox way to present science.

Monica M Bradford, executive editor of *Science*, spoke of the journal's "author's summary experiment": In every issue published from 2 November to 7 December 2007, two research articles were accompanied by nontechnical authors' summaries. The articles were selected by staff from those accepted for publication. If the authors agreed to contribute a summary (and they all agreed), they received instructions for producing a one-page summary that would explain the results and their implications to scientists in other fields. The authors were also asked to think of a new figure to

illustrate the main results. The summaries were edited, and the figures produced, by *Science* staff. The experiment evolved from readers' comments that they rarely read papers outside their fields because of unfamiliar jargon and because key information is often relegated to online supplementary materials.

A reader's survey accompanied each summary. One representative survey showed that around 75% of responders had read the summary, compared with the 25% to 33% who had read the full paper. For the vast majority of those who read both, the summary aided understanding of the paper, although a small fraction of readers (less than 10%) said that the summary was simplistic. A large majority of responders requested future summaries of research in and outside their fields. The statistics held for readers of the print and online editions, in different research fields, in different countries, and of different ages. Bradford read a few of the responses, which ranged from "Please stop this. I think this is pretty stupid", to "I think this is an excellent idea. Often writers are prompted by cross-fertilization of ideas, and these summaries may well facilitate that process."

Bradford said that it remains uncertain whether author's summaries will appear in future issues of *Science*. The experiment showed that *Science* could improve its value by providing jargon-free, implication-oriented summaries but at substantial increases in its cost and size. Each summary required up to 20 staff hours.

Patrick Keeling, a professor at the University of British Columbia, talked of his efforts to make science more accessible to the public. He said that most scientists are barely involved with press releases about their work, sometimes with disastrous consequences. Keeling also has seen the mass media "sex up" a topic by exaggerating disagreements between scientists or by implying that there are two

equally valid scientific viewpoints when one is much more strongly supported (as in the climate-change and intelligent-design debates). The mass media may also misrepresent research to appear iconoclastic or misrepresent basic research as applied, he said. "If we don't advocate for curiosity-driven basic research", Keeling said, "can we expect the public to support it?"

Keeling, with help from Iain Taylor, produced a press release that was published almost verbatim by the Canadian newspaper *National Post*. Scientists may not always have time to write their own press releases, but writing them helps ensure that their research is reasonably explained.

Mark L Winston, a professor at Simon Fraser University, discussed his idea for a new type of journal: In addition to hard-science articles and digests, it would publish creative stories that convey scientists' passion for their subjects. Winston said that such a journal would help engage both the scientific and general publics. "We have done science a huge disservice by leaving it cold and dispassionate", Winston said. "Science is not only about the numbers. It's about who we are, why we are here, [and] what we are going to do about the world." 