



Bruce Alberts is Editor-in-Chief of *Science*.

## After 5 Years at *Science*

THIS EDITORIAL, WRITTEN AS I COMPLETE MY TERM AS EDITOR-IN-CHIEF OF *SCIENCE*, PROVIDES AN opportunity to reflect on the role of science in human societies. As the president of the U.S. National Academy of Sciences from 1993 to 2005, I came to realize that science is much more important for the world than most scientists suspect.\* The scientific values of honesty, respect for evidence, openness, and tolerance are critical for every nation. And scientific approaches to problem-solving are essential everywhere for meeting a huge range of societal challenges. Those challenges have formed the basis for many special issues of *Science* magazine, including those published in the past few years on Science Education, Working with Waste, Disease Prevention, H5N1, Human Conflict, Food Security, and Population.†

It is fitting that these reflections coincide with the current issue on India: Science for All. India's first prime minister, Jawaharlal Nehru, wisely worked to create both the strong base for science and technology and the "scientific temper" that he believed necessary to ensure the success of his populous, highly diverse democracy. Through many visits to India, I have become aware of the large number of innovative experiments under way aimed at harnessing science and technology to improve the livelihoods of the more than 400 million Indians who live in extreme poverty—one-third of the world's poor. Several of India's most prestigious scientific institutions have long been engaged in projects targeting sustainable technologies, including the Indian Institute of Science in Bangalore. And in a visit last month with our News team, I learned about promising projects pioneered by the Indian Institute of Technology Madras, the M.S. Swaminathan Research Foundation, and others (see p. 1032).

Similar experiments are attempting to harness science and technology for poverty reduction in other nations. As in India, some have been successful, but many others have failed. It is unfortunate that the world lacks efficient mechanisms for learning from these experiments—especially from failures, where perhaps the most can be learned—so as to create the type of ever-improving knowledge base that underlies the sciences. Instead, those in charge of projects aimed at benefiting the poor often feel forced to claim victory. Thus, the failures that should generate profound learning experiences are often hidden in ways that prevent any honest analysis.

### Online

**sciencemag.org**

 Podcast interview with author Bruce Alberts ([http://scim.ag/ed\\_6136](http://scim.ag/ed_6136)).

The good news is that new centers are emerging that focus on "science and technology for poverty" on the campuses of some of the leading U.S. universities. These reflect a strong interest of outstanding young scientists and engineers, as well as many prominent faculty, in confronting these challenges. How might such institutions in industrialized nations help connect everyone with similar goals across the globe to create a new "science of sustainable poverty reduction"? What roles might scientific societies and academies play in such a movement? How could scientific journals contribute?

Science provides a powerful approach to cooperative problem-solving. There is an enormous amount yet to be discovered, and it is energizing to be faced with such great opportunities for further progress. Personally, I shall focus on some of the opportunities for invigorating science education that have been featured in *Science* throughout my term as Editor.‡

I am extremely pleased to leave *Science* in the hands of Dr. Marcia McNutt, an outstanding geophysicist and institution builder who becomes the new Editor-in-Chief next month. She inherits a very talented and dedicated staff, whom I sincerely thank for all that they have done over the past 5 years to advance our common mission of spreading the knowledge and spirit of science around the globe.

— Bruce Alberts

10.1126/science.1240945

\*<http://biochemistry.ucsf.edu/labs/alberts/nas.html>. †[www.sciencemag.org/site/collections/online/special](http://www.sciencemag.org/site/collections/online/special).

‡[www.sciencemag.org/site/extra/education/](http://www.sciencemag.org/site/extra/education/) (this site is open access, not requiring a subscription to *Science*).

