

Expanding Views: The AAAS Minority Scholars Workshop on Ethics in Science

Whoever said good science was a staid and orderly business wasn't at the Minority Scholars Workshop on Values and Ethical Issues in Science and Technology near Washington, D.C., earlier this month.

Voices rose and arms waved as 27 minority scholars from around the country and an equal number of faculty, many of them white, gathered to explore the question of whether a minority perspective on scientific issues exists, and if so, how that can be brought into major policy-making, publishing, and funding streams.

At the end of the sometimes raucous gathering, "some people may have walked away frustrated, but I don't think anyone walked away disappointed," says Mark Frankel, program director at the American Association for the Advancement of Science (AAAS), which organized the 28 July to 3 August workshop.

The event was funded by the National Science Foundation with support from the National Institute of Mental Health and cosponsored by 17 other professional groups.

"It was very intense, very emotional in some cases," says Frankel.

"We met late into the night," agreed one of the visiting scholars, environmental sociologist Robert Bullard of the University of California at Riverside. "There was a lot of consensus building [among the participants]."

Sessions included such topics as therapists and clients of different ethnic backgrounds, the historical abuse of minorities as research subjects, and—the hottest session—the disposition of Indian remains.

"The frustrations of all minorities in dealing with mainstream society were mirrored in that session," says attendant Jaime Cardenas-Garcia, a mechanical engineering professor at Texas Tech University.

Members of the faculty as well as the participants agree that the workshop got off to a slow start largely because of the way it was structured.

"Initially there were just presentations" from the faculty, says Bullard. "People felt lectured to rather than [seen] as scholars in their own right" who had experienced the topics firsthand.

But by midweek, says Frankel, "the participants took over the workshop, in a sense, and redesigned the last half" to make the sessions more interactive. "I think it worked out extremely well," he says.

When Bullard first heard about the workshop, he says, "I saw immediately that this was something that would be very useful to me."

Bullard studies questions of environmental equity, mostly relating to the disproportionate

placement of landfills and toxic waste dumps in poor and minority neighborhoods—in other words, "Who gets dumped on and why."

The scholarly consideration of what values are at work in science and technology "hasn't been as diverse as it should be in terms of alternative perspectives," says Bullard. "A new incinerator may [represent] the best technology available, but where it will be placed is an [equally] serious concern for scientists."

For Bullard, the question of whether there is a particular minority perspective on values in science is "one we all grapple with. There is no homogeneity among minority groups."

"But at the workshop, the theme that cut across it all for us was this: How are problems defined, what issues are left out, and who benefits" from most scientific discourse?

"There's a skepticism," says Bullard, "that scientists don't apply science in a value-free way. Funding is dictated and influenced by political considerations" that too often fail to

include minority perspectives.

To Cardenas-Garcia, "The basic ethical issue with respect to minorities in science is discrimination."

For example, he says, "In some people's minds, the growing number of people coming to engineering schools from outside the U.S. means the quality of engineering education is dropping."

Participants came from as far away as Puerto Rico and Taiwan and included African-American, Latino, Asian-American, and Native American men and women. More than 800 people asked for information about the workshop; of those, about 200 applied for the final slots.

Despite the diversity, enough common ground was discovered for the participants to spontaneously draft and adopt a joint statement by week's end (see box).

In the wake of the workshop, the participants are expected to develop research proposals for ethics projects and send them to AAAS. "We're committed to working with them and their institutions to find funding" for those projects, says Frankel.

In addition, Bullard and Cardenas-Garcia are both members of a seven-person task force elected by the participants to work with AAAS to plan a follow-up conference and build a national network of minority scholars interested in ethics and values related to science and engineering.

A critical role the task force can play, says Frankel, is that of a resource for those seeking minority scholars to appoint to editorial review boards, panels, and other crucial cogs in the

Statement Adopted by the Workshop Participants

As scientists and scholars from diverse cultural backgrounds, we affirm our right to expand the frontiers of scientific knowledge and its applications.

With the intent of overcoming exclusion and marginalization, we came together to reconceive the existing ways in which science is defined, practiced, and applied.

Our scientific vision, which recognizes and is inclusive of the diversity of U.S. and global experience, is a new and enriching resource which makes possible culturally appropriate science and technology.

* This statement represents the views of the participants only, and does not necessarily reflect the opinions of their institutions or AAAS.

publishing and funding of scientific research.

"I've been working in the ethics field since the 1970s," says Frankel. "There have been only a few minorities [in organizational roles], and they're always the same people.

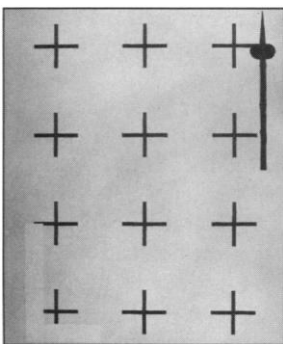
"I hope this effort will change that."

For more information about the workshop or its participants, contact Mark Frankel at 202-326-6600. ♦

Inner Vision

Years ago, economist F. Hadi Madjid wondered how to account methodologically for "the unknown factor" that makes real events more surprising than predictable by even the best models.

In the midst of a collabora-



tion on this question with physicist John Myers, Madjid—who has been blind since age 15—began experiencing vivid abstract images that seemed to hold clues to some of the problems they were wrestling with.

The result was a series of paintings now on display until 12 September at AAAS headquarters in Washington, D.C., as part of the Art of Science and Technology program.

Imagined and described by Madjid, the paintings were executed by his daughter Katharine or by Myers. Madjid relied

on memory, a color encyclopedia, and cardboard shapes to get across the images he saw in his mind's eye.

"[Myers] and I argue that for logic to work properly, it requires a surprise, a hole in it," says Madjid. "These paintings reflect various aspects" of this theory.

For more information about the Art of Science program, contact Virginia Stern at AAAS, 202-326-6672. ♦

In Memory of Roger Revelle

Former AAAS president Roger Revelle (1974), a pioneer researcher in the area of global warming, died in July at the age of 82 at a San Diego medical center he cofounded.

Among other advances, the one-time head of the Scripps Institution of Oceanography was responsible for research leading to the modern theory of plate tectonics. AAAS staff members remember Revelle as a warm-hearted man and a dynamic scientist. He will be missed. ♦

Gold Rush Revisited

Chemist Robert Lindblom knows better than to believe in alchemy.

But he conferred a little touch of magic to a recent AAAS Travels trip to Alaska, which included a stop in Nome. At an early gathering, Lindblom told his fellow travelers

that his grandfather had been one of the "Three Lucky Swedes" who discovered gold outside Nome and set off the Alaska Gold Rush.

Narca Moore-Craig, the trip's guide, phoned ahead to the group's bus driver in Nome, who in turn alerted the townspeople. When the AAAS group got to Nome, Lindblom found himself something of a celebrity.

"We were there on the Fourth of July, and the mayor introduced me during the festivities," says Lindblom, laughing. "It was nice. Some people even asked for my autograph."

Before he left, Lindblom

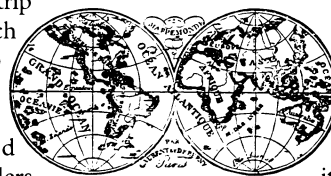
panned for gold at Anvil Creek, the site of his grandfather's big strike. All he found were a few flakes, but "just being there was enough for me," he says. Lindblom has been a member of AAAS since 1973.

The AAAS Travels program is a member benefit offered in conjunction with Betchart Expeditions in California.

Betchart arranges educational trips for AAAS members and their friends to such places as Brazil, Mexico, and the Galapagos Islands. Travelers are guaranteed knowledgeable guides and scientifically minded traveling companions.

"Having gone with a group like that," says Lindblom, "now I'm prejudiced."

The next AAAS Travels trips are to Australia (7–18 October), Thailand and Hong Kong (8–24 November), and Antarctica (6–20 January). For more information on these and other AAAS tours, contact Betchart Expeditions, 800-252-4910. ♦



In Brief

■ **Science Sources 1991** is available as a guide to public information contacts in major science and technology organizations. Included are schools, federal agencies and laboratories, nonprofit and industrial research institutions, and more. Compiled by the AAAS Office of Communications, the book costs \$12 plus shipping and handling and comes with a computer disk version in ascii. For more information and an order form, contact Eleanor Mohammed, 202-326-6440.

■ **The first AAAS Overseas Science, Engineering, and Diplomacy Fellow** will start her year abroad on 1 September. Ecologist Sharon Pfeifer joins the Agency for International Development's mission in Nairobi, Kenya, to help further their work in natural resource management. **The new Fellowship seeks applicants** for the 1992–93 program who, like Pfeifer, participated in AAAS's Washington, D.C.-based Science, Engineering, and Diplomacy Fellowship program or who have comparable experience. Future Fellowships may involve

a variety of disciplines and countries. For more information, contact the AAAS Directorate for Science & Policy Programs, 202-326-6600.

■ **A reminder:** 1 October is the application deadline for members interested in representing AAAS at the annual session of the **Sri Lanka Association for the Advancement of Science 2 to 6 December** in Colombo. (See "Inside AAAS" in the 26 July 1991 issue of *Science*.) For more information, contact Laura Mann, 202-326-6664. ♦