



SCIENCE POLICY

AAAS Works to Raise Science Visibility in 2008 Campaigns

With important science and technology issues receiving only superficial attention in the 2008 U.S. presidential campaigns, AAAS is engaged in a broad effort to raise the profile of S&T in the months leading up to November's election.

The association's efforts reflect a consensus among U.S. science organizations and officials: With the nation at a decisive juncture for addressing future challenges and taking advantage of exciting science-related opportunities, voters need an opportunity to understand each candidate's vision and policy ideas.

"Year by year, the quality of American science looms larger in the overall perspective of our lives," said AAAS Board Chair David Baltimore, who shared the 1975 Nobel Prize in Physiology or Medicine. "Whether in maintaining our economic growth or our personal health or our military strength, science is a key driving force. And yet its importance is rarely discussed in political campaigns."

"AAAS has broad expertise in science policy, and its authority and nonpartisan approach are well-known and respected among policymakers," added former U.S. Representative John Edward Porter, who now serves as chairman of Research!America and as a partner in the Washington, D.C., law firm of Hogan & Hartson. "That puts AAAS in a strong position to promote discussion of science-related issues in this year's campaigns."

AAAS is using a variety of tools to give science an impact on the campaign: Web sites, newspaper columns, debates, and seminars.

Baltimore, writing with fellow Nobel laureate Ahmed Zewail, published an op-ed on 17 April in *The Wall Street Journal* calling for a renewed U.S. commitment to science and technology. Alan I. Leshner, the association's CEO and executive publisher of *Science*, authored commentaries in *The Des Moines Register* and *The Philadelphia Inquirer*, urging the candidates to more forcefully address science issues.

Past and current AAAS officials have been prominent among the supporters of Science Debate 2008, a proposed presidential debate on

S&T policy also backed by the National Academy of Sciences, the National Academy of Engineering, the U.S. Institute of Medicine, the Council on Competitiveness, and more than two dozen Nobel laureates—plus thousands of other groups and individuals.

But when the candidates did not respond



(left to right) Thomas Kalil, S&T adviser to the campaign of Senator Hillary Clinton; moderator Claudia Dreifus of the *New York Times*; and Alec Ross, S&T adviser to the campaign of Senator Barack Obama, during a debate at the AAAS Annual Meeting in Boston.

favorably to a debate proposed for 18 April, just before the Pennsylvania primary, the organizers issued a new invitation to debate in Oregon, offering three possible dates before the state's 20 May primary.

"AAAS joined with other organizations to try to raise the visibility of science-related issues in the presidential campaign by encouraging a science debate," Baltimore explained. "Thus far we have not been successful, but at least we have been able to get some publicity for our concern about the place of science in the next administration."

A preview of a possible debate played out in February during the AAAS Annual Meeting in Boston, when S&T advisers for Democratic candidates Hillary Clinton and Barack Obama appeared on the same stage to discuss the issues. (The campaign of Republican candidate John McCain was invited, but was unable to send anyone to the event.)

Scientists and journalists jammed the hall for the debate between Alec Ross, Obama's adviser on technology, media and telecommunications, and Thomas Kalil, Clinton's adviser for science, technology and innovation.

The advisers shared much common ground. Each said his candidate would reduce political

pressures on federal research, double the amount of federal funding for basic science, push for increased information technology to streamline health care, and help build a 21st-century workforce by supporting science, technology, engineering, and mathematics education.

But Kalil argued that Clinton has been "a lot more specific" about her proposals for using S&T investment to restore American economic competitiveness. Ross countered that Obama has produced a "dense," detailed platform on technology issues in particular.

Details about all of the candidates' positions and other election resources can be found at Science and Technology in the 2008 Election—<http://election2008.aaas.org>—a Web site developed and managed by the AAAS Center for Science, Technology and Congress.

To help raise the profile of S&T issues in other elections, AAAS has joined with eight other scientific societies in cosponsoring the first annual Campaign Education Workshop on 10 May in Washington, D.C. The nonpartisan workshop, organized by Scientists & Engineers for America (SEA), will focus on the practical considerations of running for office as well as specific ways that scientists can become more involved in political campaigns.

The event is an outgrowth of a workshop organized last July by AAAS and SEA as part of the professional development program for AAAS Science & Technology Policy Fellows.

PUBLIC ENGAGEMENT

Workshops Build Story-Telling Skills of Scientists

More than 100 researchers seeking to sharpen their communication skills attended free workshops in San Jose, California, and Raleigh, North Carolina, this spring, as part of an initiative by AAAS to encourage researchers to engage with the public on science and technology topics.

Like many of the participants, Rikke Kvist Preisler had personal and professional reasons for attending the 14 March San Jose seminar. "I often find myself in a situation where school groups, my friends or family, or acquaintances ask me what I do," the University of California-Santa Cruz doctoral student said, admitting that she "often has difficulties explaining what I do in a clear, concise manner, without oversimplifying everything."

The "Communicating Science" workshops, sponsored by the AAAS Center for Public

Engagement with Science and Technology and the National Science Foundation, are one way to break down “the us-versus-them” barrier that can exist between scientists and the public, said Tiffany Lohwater, AAAS’s public engagement manager. “The idea with these workshops is to



Allison Leidner at the Raleigh, N.C., workshop.

give scientists tools for communicating research in a way that the public can become involved and interested,” she explained.

In small, interactive groups, the participants learned to distill their data into short, meaningful, and memorable messages: prepare for media interviews; reach new audiences through social networking groups such as Facebook; and even rehearse prop use and gestures for their talks.

Igor Gorodezky, a graduate student at the Center for Applied Mathematics at Cornell University who attended the 3 April Raleigh seminar, was interested especially in the perspectives offered by the workshop’s panel of reporters and editors. “Getting such a completely candid perspective on how science gets presented to the public from people who do it for a living was really eye-opening,” he said.

Stuart Wooley, an assistant professor of biological sciences at California State University-Stanislaus who attended the San Jose workshop, considers public outreach “part of my job responsibilities.” But he acknowledged some wariness about the press, recalling several colleagues who have been “misquoted and embarrassed” by news stories. “I think I have something to offer,” he said, “but I want to make sure what I offer is correct and that it is transmitted to the reader or listener correctly.”

Wooley, who talks about his botanical research in front of K–12 students, farmers, and city government officials, was glad to have more information on engaging all kinds of audiences. Similarly, Allison Leidner, a Ph.D. student in zoology at North Carolina State University, told her group at the Raleigh workshop that her audience would include everyone from the families she meets on the beach while collecting butterflies to members of Congress.

According to Lohwater, many of the researchers seemed glad to find out that they were not alone in their desire to become better communicators. “We knew this kind of networking would be a side benefit, but we had

people saying that it was one of the most powerful things about the workshops,” she said.

Lohwater and her colleagues expect to offer more workshops around the country beginning this September, at the start of a new academic year. In the meantime, the project’s Web site, www.aaas.org/communicatingscience, offers a variety of tools, background materials, and even short “webinars” that can help scientists become better storytellers.

—Becky Ham

SCIENCE & SECURITY

Briefing Offers Defense Lessons from Biology

When U.S. Navy submarine designers wanted to improve the hydrodynamics of their sub designs to create a powerful vessel that could cruise the seas for long distances, they found inspiration in the streamlined body shape of the globe-circling skipjack tuna.

The now-decommissioned Skipjack submarines are just one example of how international analysts can look to nature for help in developing nontraditional ways to defend against security threats, according to natural defense expert and Duke University researcher Raphael Sagarin. He spoke at a 10 April briefing sponsored by the AAAS Center for Science, Technology and Security Policy.

“Thinking about the problem holistically may help us understand where and how to intervene, and nature has given us numerous examples of how this can be done,” said Center project director Kavita Berger, who organized the briefing.

The natural defenses lecture was the latest in a series of briefings this spring that focused on the nexus of science and security. The Center also gathered experts in Washington, D.C., to analyze the U.S. Navy’s February shoot-down of a crippled spy satellite and to discuss the potential diversion of civilian nuclear materials into weapons manufacture.

Speakers at the 18 March satellite briefing focused on the data necessary to determine whether the dangers posed by toxic hydrazine fuel on the plummeting satellite were significant enough to justify the shoot-down, or whether the U.S. government used the satellite’s demise as a pretext for testing anti-satellite systems in the wake of a similar shoot-down by the Chinese government last year.

Geoffrey Forden, a senior research associate in the Securities Studies Program at the Massachusetts Institute of Technology, said that even if the satellite’s fuel tank did explode during reentry, there was only a 3.5% chance that an individual on the ground would be injured or killed as a result. Forden and Jeffrey Lewis, an arms control specialist at the non-profit New America Foundation, urged the Pentagon to release its own risk assessment

and simulation data to clarify why the agency considered the satellite too risky to leave alone.

At a 25 March briefing on Capitol Hill, speakers warned that the International Atomic Energy Agency (IAEA) “needs to be greatly improved” if it is to safeguard an expected proliferation of nuclear power plants around the world.

The IAEA’s monitoring capabilities are stretched to their limit, according to Henry Sokolski, executive director of the Nonproliferation Policy Education Center. He said nearly 800 of the IAEA’s 1200 surveillance cameras—placed in nuclear facilities worldwide to monitor suspicious activity—can’t provide real-time video feeds to the agency headquarters in Vienna.

Funded by the MacArthur Foundation, the AAAS Center for Science, Technology and Security Policy promotes the integration of science into international and national security policy, including biosecurity, cybersecurity, and nuclear issues. —Earl Lane, Benjamin Somers, and Becky Ham

EDUCATION

AAAS’s Summers Receives Lifetime Achievement Award



Lauren Summers, a program associate in Education and Human Resources at AAAS, has received the Lifetime Achievement Award from Science Education for Students with Disabilities (SESD) for

her efforts to make science accessible for all children in school classrooms.

In addition to mentoring undergraduate and graduate students on course work and internships, Summers manages NASA’s involvement in the AAAS ENTRY POINT! program, which provides competitive, paid summer internships in top government and private research institutions around the country to promising science and math students with disabilities.

“Through her mentorship, Lauren has made significant contributions to increasing the number of people with disabilities who have entered science, technology, engineering, and mathematics programs and the workforce,” said Babette Moeller, a past SEDS president.

Summers, who has cerebral palsy that affects her speech and muscular coordination, said she was honored to be recognized by SEDS, and stressed the importance of the organization’s work. “Science education is tremendously exciting, and every student should have access to every aspect of science,” she said. “To deny it to anyone is a huge loss.”

Summers received the award on 29 March at the National Science Teachers Association’s national conference in Boston.

—Benjamin Somers