PROFILE

Mary Lowe Good: A Call for a New Science Policy

When Mary Lowe Good addressed a crowd of science policy experts one evening in November at AAAS, she occasionally stepped away from the microphone to put up slides of budget figures and trends. But she assured her audience, "If I can lecture on chemistry to a class of 300 freshman at the University of New Orleans—in a huge room without air conditioning—I'm sure you'll be able to hear me." Good, who has not only lectured students but also held positions in government and industry, said she wanted to talk about some of her ideas on science and public policy.

Mary Lowe Good

That evening, Good called on the scientific and technological communities to join together to provide the federal government with a consensus answer as to what their goals for science and technology should be, so that the government can provide a new policy foundation for the next century. She said that only then can solutions be found for such issues as quality education, collaboration between universities and industry, and the appropriate balance in the research and development (R&D) budgets between various fields.

It's that type of cooperation that Good hopes to encourage when she assumes the AAAS presidency at the AAAS Annual Meeting in February 2000. "AAAS is in a unique position to look at science and technology policy of the country and make some serious comments, and I believe we'll be listened to," she said.

"The science community has argued for science policy, when all of us should have been arguing for science and technology policy," Good said. "If you don't tie it to technology, then the public won't understand it. That's not to say you don't need fundamental research."

In her AAAS election statement, Good said it was crucial for any new policy to be able to stir the public imagination, and that we should not get bogged down in a nonproductive debate on defining basic versus applied science. "However defined, science, through its relationship to technology, has become the handmaiden to most of our social and political needs."

Good understands the relationship between science and technology. Good is the Donaghey University Professor at the University of Arkansas Little Rock and serves as the managing member for Venture Capital Investors, LLC, a group of Arkansas business leaders who work to foster economic growth in the area through the support of technology-based enterprises. Previously, Good served 4 years as the Under Secretary for Technology for the Technology Administration in the Department of Commerce during the Clinton administration, where she was the architect of many technology policies that helped strengthen the economy in the 1990s.

In addition, Good chaired the National Science and Technology Council's Committee on Technological Innovation (NSTC/CTI) and served on the NSTC Committee on National Security. Good served under three other presidents—Jimmy Carter, Ronald Reagan, and George Bush—in a variety of science advisory posts.

Before joining the Clinton administration, Good was the senior vice president of technology at AlliedSignal, Inc., where she was responsible for the centralized research and technology organizations.

Good told the policy crowd in Washington, gathered for the AAAS–George Washington University Science and Technology Policy Seminar Series, that while the nation is enjoying the benefits of a successful economy today, we should all be concerned about sustaining that success in the future. "We are not funding the universities to provide the fundamental research that drives the engine of the economy," Good warned. "We don't have enough people to fuel that engine that drove the NASDAQ up 75 points today."

"The fact is that we tied research to the university after the war," Good said. "If that's how you set it up, then you have to feed the system. Even though industry has picked up a big piece of R&D, they don't produce the manpower."

As a result, Good said, many American companies must hire foreign workers. She used a company in her home state of Arkansas as an example. "Wal-Mart is one of the leading employers of information technology people," Good said. "They haven't been able to meet their employment needs by hiring in the United States alone, so they brought in 250 people from India who were trained in computers."

Good's accomplishments in industry came after a successful academic career, with more than 25 years of teaching and research in the Louisiana State University system. She was professor of chemistry at the University of New Orleans and professor of materials science at Louisiana State University, where she achieved the university's highest professional rank, Boyd professor.

She received her B.S. in chemistry from the University of Central Arkansas and her M.S. and Ph.D. degrees in inorganic chemistry from the University of Arkansas. She has also received numerous awards and honorary degrees from many colleges and universities, including the College of William and Mary, Polytechnic University of New York, and Michigan State University.

Good was born in Grapevine, Texas, and grew up in Arkansas where her father was a superintendent of schools and her mother a schoolteacher. Her interest in chemistry began when, as a teenager, she would spend time in a darkroom that she built in her home's cellar, fascinated by the process of photo development.

Good concluded her speech in Washington with a call on the scientific and technological communities to unite in order to seek research funding from Congress, particularly in the physical sciences and engineering where funding has been flat or declining.

"We really need a new science and technology policy," Good said. "We ran a policy at the end of the World War II based on health sciences, defense, and security. Today, our focus is still on the health sciences but also on the economy, and our future will depend on the ability of the nation to be innovative."

REPORTS

Science Texts Receive Poor Rating

Many widely used science textbooks for middle school were recently rated unsatisfactory by Project 2061, the long-term science, mathematics, and technology education reform initiative of AAAS.

The in-depth study found that most textbooks cover too many topics and do not develop any of them well. All texts include many classroom activities that either are irrelevant to learning key science ideas or do not help students relate what they are doing to the underlying ideas.

The study examined how well textbooks for the middle grades can help students learn key ideas in earth science, life science, and physical science, drawn from AAAS's *Benchmarks for Science Literacy* and the National Research Council's *National Science Education Standards*. The evaluation procedure was developed and tested over a period of 3 years in collaboration with more than 100 scientists, mathematicians, educators, and curriculum developers, with funding from the National Science Foundation.

This is the second in a series of Project 2061 textbook evaluations funded by the Carnegie Corporation of New York. An evaluation of middle grades mathematics texts was released in January 1999 and findings for high school algebra and biology textbooks will be released next year.

Results of the 1999 Election of AAAS Officers

Following are the results of the 1999 election. The slate and vote count are given for the president-elect and board members; for other offices, successful candidates are listed. Terms begin on 23 February 2000.

General Offices
President-Elect: Phillip A. Griffiths (6858); Peter H. Raven (9240). *Board of Directors:* Nina V. Fedoroff (10,654); Andrew M. Gleason (5168); Jerome Kagan (6652); Robert C. Richardson (7573). *Committee on Nominations*: Eloise E. Clark, Mildred Dresselhaus, John (Jack) H. Gibbons, Jean'ne M. Shreeve.

Section on Agriculture, Food, and Renewable Resources
Chair-Elect: P. Stephen Baenziger. *Member-at-Large:* Richard E. Stuckey. *Council Delegate:* David Glenn Gilchrist. *Electorate Nominating Committee:* Gale A. Buchanan, Elizabeth D. Owens.

Section on Anthropology
Chair-Elect: Geoffrey A. Clark. *Member-at-Large:* Jane E. Phillips-Conroy. *Electorate Nominating Committee:* Dena F. Dincauze, Douglas H. Ubelaker.

Section on Astronomy
Chair-Elect: Martin Harwit. *Member-at-Large:* Lucy McFadden. *Electorate Nominating Committee:* Richard P. Binzel, Stephen P. Maran.

Section on Atmospheric and Hydrospheric Sciences
Chair-Elect: Robert E. Dickinson. *Member-at-Large:* Peter G. Brewer. *Electorate Nominating Committee:* Judith Grassle, Michael Prather.

Section on Biological Sciences
Chair-Elect: Laura Grabel. *Member-at-Large:* Yolanda P. Cruz. *Electorate Nominating Committee:* Joseph W. Sanger, Teresa Thiel.

Section on Chemistry
Chair-Elect: Robert L. Lichter. *Member-at-Large:* Christopher S. Foote. *Electorate Nominating Committee:* Peter B. Armentrout, K. N. Houk.

Section on Dentistry
Chair-Elect: Marc W. Heft. *Member-at-Large:* Pamela Den Besten. *Electorate Nominating Committee:* Ann Progulske-Fox, Philip Stashenko.

Section on Education
Chair-Elect: Kenneth Tobin. *Member-at-Large:* Lillian C. McDermott. *Electorate Nominating Committee:* William S. Harwood, Joe McInerney.

Section on Engineering
Chair-Elect: Alice M. Agogino. *Member-at-Large:* C. D. Mote, Jr. *Council Delegates:* Thomas E. Everhart, Susan Hackwood. *Electorate Nominating Committee:* John R. Whinnery, Ward O. Winer.

Section on General Interest in Science and Engineering
Chair-Elect: Julie Ann Miller. *Member-at-Large:* Charles F. Lytle. *Electorate Nominating Committee:* Judith E. Parker, Bob H. Suzuki.

Section on Geology and Geography
Chair-Elect: William S. Fyfe. *Member-at-Large:* Mary Lynne M. Bird. *Electorate Nominating Committee:* Steven R. Bohlen, Vance T. Holliday.

Section on History and Philosophy of Science
Chair-Elect: Margaret W. Rossiter. *Member-at-Large:* Jonathan Coopersmith. *Council Delegate:* Michele L. Aldrich. *Electorate Nominating Committee:* Mario Biagioli, Silvan S. Schweber.

Section on Industrial Science and Technology
Chair-Elect: Daniel Berg. *Member-at-Large:* Anthony L. Dent. *Council Delegate:* John D. C. Little. *Electorate Nominating Committee:* David W. Cheney, Donald L. Johnson.

Section on Information, Computing, and Communication
Chair-Elect: Sidney Karin. *Member-at-Large:* Marcia J. Bates. *Electorate Nominating Committee:* Bonnie C. Carroll, Michael A. Harrison.

Section on Linguistics and Language Science
Chair-Elect: Arnold M. Zwicky. *Member-at-Large:* Frederick J. Newmeyer. *Electorate Nominating Committee:* Christine Bartels, William A. Kretzschmar, Jr.

Section on Mathematics
Chair-Elect: Arthur Jaffe. *Member-at-Large:* Barbara Lee Keyfitz. *Electorate Nominating Committee:* Joel L. Lebowitz, Clifford Henry Taubes.

Section on Medical Sciences
Chair-Elect: Gilbert S. Omenn. *Member-at-Large:* David Pleasure. *Council Delegates:* Karen H. Antman, Christine K. Cassel, David Korn, Thomas C. Merigan, Jr., William E. Paul, Thomas A. Woolsey. *Electorate Nominating Committee:* Linda Collins Cork, Bernard Moss.

Section on Neuroscience
Chair-Elect: Larry R. Squire. *Member-at-Large:* Susan Hockfield. *Electorate Nominating Committee:* Constance W. Atwell, Eve Marder.

Section on Pharmaceutical Sciences
Chair-Elect: Leroy B. Townsend. *Member-at-Large:* Sheryl J. Hays. *Electorate Nominating Committee:* Gail D. Anderson, Philip C. Smith.

Section on Physics
Chair-Elect: Patricia M. Dehmer. *Member-at-Large:* William F. Brinkman. *Electorate Nominating Committee:* Laura H. Greene, Harry L. Swinney.

Section on Psychology
Chair-Elect: William T. Greenough. *Member-at-Large:* Joanne L. Miller. *Council Delegate:* James L. McClelland. *Electorate Nominating Committee:* Lila R. Gleitman, Jane Stewart.

Section on Social, Economic, and Political Sciences
Chair-Elect: Eugene Rosa. *Member-at-Large:* Gary E. Machlis. *Council Delegate:* Barbara Boyle Torrey. *Electorate Nominating Committee:* Michael Rothschild, Mitchel B. Wallerstein.

Section on Societal Impacts of Science and Engineering
Chair-Elect: Daryl E. Chubin. *Member-at-Large:* Stephen Hilgartner. *Electorate Nominating Committee:* Elaine Draper, Sheldon Krimsky.

Section on Statistics
Chair-Elect: John C. Bailar, III. *Member-at-Large:* Stephen E. Fienberg. *Electorate Nominating Committee:* Barbara A. Bailar, David C. Hoaglin.