

Awards Presented at Annual Meeting

A AAS prizes honoring individual scientists for contributions to the scientific community, for public understanding of science, for especially responsible behavior, and for outstanding research papers, as well as awards to science journalists, were presented at the 1988 Annual Meeting in Boston last month.

The awards for public understanding and for freedom and responsibility, along with the Abelson Prize, Newcomb Cleveland Prize, and Behavioral Science Research Prize were made at the President's Lecture on 14 February. Winners of the AAAS-Westinghouse Science Journalism Awards were honored at the annual banquet of the National Association of Science Writers (NASW) on 13 February.

Public Understanding of Science and Technology—Philip Morrison, professor of physics at the Massachusetts Institute of Technology, received the first annual AAAS-Westinghouse Award for Public Understanding of Science and Technology.

Morrison was honored for a commitment, demonstrated throughout his career, to make science and technology more accessible to the public. He received a \$2500 prize and a citation reading "Scientific knowledge and understanding is not a purely cerebral affair; it is soaked with emotion, excitement, and nervous tension, as everybody knows who has heard Philip Morrison talk."

Most recently, Morrison created and hosted "The Ring of Truth" on the Public Broadcasting Service. In the six-part series, Morrison asked viewers to

explore the inner workings of science through everyday experiences that revealed scientific principles at work.

Following undergraduate work at the Carnegie Institute of Technology, Morrison studied under J. Robert Oppenheimer at the University of California, Berkeley, and received his Ph.D. there in 1940.

During World War II, Morrison worked on the Manhattan Project at Los Alamos. Following the war he joined many of his colleagues in recognizing the need for international control of atomic weapons and has remained an outspoken advocate for arms control.

From 1946 to 1965 he taught and conducted research in theoretical physics at Cornell University. There he developed courses to show that such diverse subjects as poetry and physics have a common goal—increasing our understanding of the universe.

Morrison, who has been at MIT since 1964, has collaborated with his wife, Phylis Morrison, on a number of projects including "The Ring of Truth" and an annual review of about 50 children's books for *Scientific American*. In 1980, with four colleagues, they published *The Price of Defense: A New Strategy for Military Spending*. Their book of images, *Powers of Ten*, was published in 1982.

The AAAS-Westinghouse Award for Public Understanding of Science and Technology was established to help improve communication and understanding between the scientific community and the public. The award is cosponsored by the Westinghouse Electric Fund

and AAAS and is administered by the AAAS Committee on Public Understanding of Science and Technology.

Philip Hauge Abelson Prize—Norman Hackerman, chairman of the Scientific Advisory Board of The Welch Foundation, received the AAAS-Philip Hauge Abelson Prize for his contributions to science and as a public servant.

In honoring Hackerman, the judging committee noted, "In his activities in science, education, and service, Dr. Hackerman's vigorous and well-judged descriptions of problems, and his pragmatic approach to solutions, have won him a host of friends and admirers. He richly merits the prize."

Beginning in 1952 as chairman of the chemistry department at the University of Texas, Hackerman rose through the administrative ranks, ultimately becoming president of the University in 1967. In 1970 he became president of Rice University, a position he held until his retirement in 1985.

Hackerman has long been an active public servant of science and technology. He served on the National Science Board from 1968 to 1980, chairing the Board from 1974 to 1980. Over the years he has taken on a number of assignments for the AAAS, the American Chemical Society, the National Academy of Sciences, and governmental agencies such as the departments of Defense and Energy, and national laboratories.

Hackerman received his A.B. and Ph.D. degrees from the Johns Hopkins University. He is the author or coauthor of more than 200 scientific publications, and has served as editor of the *Journal of the Electrochemical Society* since 1950.

He received a citation and a \$2500 prize in Boston. The AAAS-Philip Hauge Abelson Prize was established in 1985 to honor a public servant in recognition of sustained exceptional contributions to advancing science, or a scientist whose career has been distinguished both for scientific achievement and for

other notable services to the scientific community.

Scientific Freedom and Responsibility—Roger M. Boisjoly, who while a Morton Thiokol engineer, warned of impending troubles for the Challenger, and Richard L. Garwin, who has long advocated more public involvement in deciding how science and technology should be applied, each received a AAAS Scientific Freedom and Responsibility Award.

Boisjoly was honored for "his exemplary and repeated efforts to fulfill his professional responsibilities as an engineer by alerting others to life-threatening design problems on the Challenger space shuttle and for steadfastly recommending against the tragic launch of January 1986."

Boisjoly was a senior scientist assigned to the space shuttle booster joint seal program at Morton Thiokol at the time of the preparations for the Challenger launch. He had expressed serious concerns about the O-ring erosion problem to his superiors at Morton Thiokol a number of times. While his urgings did prompt the formation of a company task force to examine the O-ring problem, Boisjoly criticized the work of that task force and noted that the team was having problems with a "business as usual attitude . . ." (at Morton Thiokol). Finally, during the 24 hours preceding the Challenger launch, Boisjoly was adamant in objecting to launching the shuttle due to the projected weather conditions.

No longer with Morton Thiokol, Boisjoly has used his experience to speak out publicly on the responsibilities of engineers to make ethical considerations an integral part of their decision making and recommendations to management.

Richard L. Garwin received the Award for "his courageous, sustained, and effective efforts over a distinguished scientific career to educate government policy-makers and the public of such highly controversial applications of science to technology as the Anti-Ballistic Missile System, the Supersonic Transport,

and the Strategic Defense Initiative."

In the 1960s, Garwin's technical arguments against the Anti-Ballistic Missile (ABM) system, outlined in his 1968 *Scientific American* article, coauthored with Hans Bethe, played an important role in shaping public policy. Later, as chair of the President's Science Advisory Committee panel on the Supersonic Transport, Garwin was an outspoken critic of the SST despite pressure from the Nixon Administration to remain silent on the matter. Most recently, he has pursued various avenues for educating the public and the Congress on the technical problems associated with the Strategic Defense Initiative.

Garwin is an IBM Fellow at the Thomas J. Watson Research Center; an adjunct research fellow at the Kennedy School of Government, Harvard University; the Andrew D. White Professor-at-Large, Cornell University; and an adjunct professor of physics at Columbia University.

Boisjoly and Garwin each received a \$1000 prize. The AAAS Scientific Freedom and Responsibility Award was established in 1981 to honor scientists and engineers whose actions have exemplified principles of scientific freedom and responsibility.

Newcomb Cleveland Prize—Two papers describing the molecular genetics of human color vision and one paper demonstrating the catalytic capabilities of RNA won AAAS-Newcomb

Cleveland Prizes. Each group of authors received a bronze medal and a share of a \$5000 prize.

One of the awards is for two articles, "Molecular genetics of human color vision: The genes encoding blue, green, and red pigments," by Jeremy Nathans, Darcy Thomas, and David S. Hogness, and "Molecular genetics of inherited variation in human color vision," by Nathans, Thomas P. Piantanida, Roger L. Eddy, Thomas B. Shows, and Hogness. The articles were published in the 11 April 1986 issue of *Science*.

Using genetic engineering techniques, Nathans, Hogness, and others at Stanford University Medical School identified and isolated the genes responsible for the three eye pigments that make color vision possible. The results will aid research into color blindness as well as normal vision.

A second prize was awarded to Arthur J. Zaugg and Thomas R. Cech for their article "The intervening sequence of RNA of *Tetrahymena* is an enzyme," which was published in the 31 January 1986 issue of *Science*.

In their article, which was described as "among the classics in biochemistry," Zaugg and Cech show that RNA is not merely a messenger for DNA but can, in fact, replicate itself in the absence of protein enzymes. The research demonstrates that RNA fulfills all of the criteria expected of proteins in their roles as biological catalysts and has wide-reaching implications

for the evolution of the gene expression apparatus.

The AAAS-Newcomb Cleveland Prize, established in 1923, is the Association's oldest award. It is presented annually to the author(s) of an article, research article, or report published in *Science* that "includes original research data, theories, or syntheses and is a fundamental contribution to basic knowledge or a technical achievement of far-reaching consequence."

Behavioral Science—An examination of links between rhetoric and action in American-Soviet relations and the behavioral style of the new Soviet leadership was awarded the AAAS Prize for Behavioral Science Research.

Philip E. Tetlock of the Department of Psychology, University of California, Berkeley, analyzed both American-Soviet interactions and internal developments within the Soviet Union. His paper, "Monitoring the integrative complexity of American and Soviet policy rhetoric: What can be learned?" will be published in the *Journal of Social Issues* at a later date.

Tetlock concludes that the transition of power in the Soviet Union has brought to prominence a less ideological and more conceptually complex group of leaders who can be expected to pursue pragmatic internal policies and flexible external ones.

Tetlock, who received a \$1000 prize, has been in the Department of Psychology at the University of California,

Berkeley, since 1979. Currently, he is a professor in that department and a research psychologist at the University's Survey Research Center.

The AAAS Behavioral Science Research Prize is awarded annually for a meritorious essay that furthers the understanding of psychological-social-cultural behavior of human beings. It is intended to encourage social inquiry in the development and application of the kind of methodology that has proved so fruitful in the natural sciences.

Science Journalism Awards—Winners of the AAAS-Westinghouse Science Journalism Awards included representatives from newspapers, magazines, radio, and television. Five awards of \$1000 each were given in recognition of outstanding reporting on the natural sciences and their engineering and technological applications, excluding health and clinical medicine.

The 1987 winners and their entries were:

■ For science reporting in newspapers with over 100,000 daily circulation—Robert Lee Hotz, for a four-part series, "Life, Death, and DNA," published 26 to 29 April 1987 in the *Atlanta Journal and Constitution*.

■ For science reporting in newspapers with under 100,000 circulation—James Ehmann, for three articles, "Homing pigeons keep a secret," "There in a flash," and "Red wolf," published 23 April, 14 May, and 9 July 1987 in the *Syracuse Post-*

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Standard. An honorable mention in this category went to Bob Anderson and Mike Dunne for a four-part series, "Ill Winds," which ran 21 to 24 June 1987 in the Baton Rouge *Morning Advocate*.

■ For science writing in general circulation magazines—Michael Lemonick, Thomas McCarroll, J. Madeleine Nash, and Dennis Wyss, for an article, "Wiring the future: The superconductivity revolution," published 11 May 1987 in *Time*.

■ For science reporting on radio—Michelle Trudeau, for a report, "A baby's first hours," broadcast 6 October 1987 on National Public Radio. An honorable mention went to Dan Mushalko for a report, "Enlightening conversation on the amazing science emporium," broadcast 6 May 1987 on WIIN-AM in Atlantic City, New Jersey.

■ For science reporting on television—Steve Delaney for "Nuclear power: In France it works," broadcast 11 March 1987 on NBC. Honorable mentions in television reporting went to Robert Bazell, Robert Hager, and John Hart for their four-part series, "Endangered future," which aired 14 to 17 April 1987 on NBC and to Michael Skoler for "Is it live or is it synthesized?" which aired 17 October 1987 on WGBH-TV in Boston.

The AAAS-Westinghouse Science Journalism Awards are supported by the Westinghouse Educational Foundation and administered by the AAAS Office of Communications.

JOAN WRATHER
Office of Communications

SB&F Reviews High School Texts

The March/April 1988 issue of *Science Books & Films (SB&F)* contains comprehensive evaluations of 27 current high school textbooks in biology, chemistry, and physics, updating the magazine's previous high school textbook evaluation projects published in the May/June 1985,

May/June 1986, and September/October 1986 issues.

This valuable update is designed to help textbook selection committees across the country in their selection of appropriate new texts for high school science curricula. Some of the texts have 1988 copyrights and are just now being released to the market.

In the same issue, *SB&F* has also nominated its choices for the top-rated current textbooks for several high school level courses.

Copies of the March/April issue of *Science Books & Films* can be obtained for \$6 plus \$1.50 postage and handling. Full 1-year and 2-year subscriptions also are available for \$28 and \$51, respectively (10 percent discount for AAAS members). To order, contact the Marketing Office at AAAS.

Pacific Division Holds R&D Conference

West Coast AAAS members and others interested in policies and funding for research and development will have an opportunity to learn what's in store in the coming fiscal year at the Third Annual AAAS Pacific Division R&D Conference, Thursday, 7 April 1988, at the Holiday Inn in Palo Alto, California. The meeting will feature speakers from major federal research agencies, the Office of Management and Budget, the White House Office of Science and Technology Policy, and the Congress. Officials from the National Science Foundation, the National Institutes of Health, and the departments of Defense and Energy will make plenary presentations on their agencies' R&D budgets for fiscal 1989, then meet with small groups for in-depth question and answer sessions.

Working scientists and engineers as well as research administrators from universities, industrial firms, and not-for-profit organizations will benefit from

the inside look at the Washington R&D scene.

For information on registration and housing, contact Alan Leviton, executive director, AAAS Pacific Division, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118 (415-752-1554). For information on the program, contact Albert H. Teich, head, Office of Public Sector Programs, at the AAAS address (202-326-6600).

SWARM Meets in Wichita Late This Month

The 64th annual meeting of the Southwestern and Rocky Mountain (SWARM) Division will be held in Wichita, Kansas, 29 March through 2 April, with the theme "Explorations in Science." The Divisional meeting will be held with the Wichita State University.

Former astronaut Eugene M. Shoemaker will deliver the keynote address on Tuesday, 29 March. His lecture will be "Solar system roulette: Consequences for life on Earth." The general opening session, on Wednesday, 30 March, will feature AAAS Executive Officer Alvin W. Trivelpiece.

Other lectures are the John Wesley Powell Memorial Lecture, by Donald B. McIntyre of Pomona College on "Footprints on the sands of time," and the SWARM presidential address, "On the shoulders of giants," by Russell D. Larsen of Texas Tech University.

Symposia will include Great Plains Agriculture; Pattern Recognition and Machine Intelligence; The Western Cretaceous Seaway; Animal Conservation Issues in the Western United States; Exploring Social Reality; Re-Conceptualizing Intelligence; and Traditional Cultures and Conservation of Biological Diversity.

The meeting will take place at the Plaza Inn in Wichita. Co-sponsors are the Great Plains Agricultural Council, Kansas

Academy of Science, Kansas Geological Society, Kansas Agricultural Experiment Station, Kansas Association of Teachers of Science, Association for Education of Teachers in Science/SW Region, Archaeological Association of South-Central Kansas, Kansas Anthropological Association, and National Association of Geology Teachers/Kansas-Oklahoma Section.

For more information or a copy of the preliminary program, write to M. Michelle Balcomb, SWARM executive officer, Colorado Mountain College Spring Valley Campus, 3000 County Road 114, Glenwood Springs, Colorado 81601, or call 303-945-5516.

More Museum Benefits for Members

AAAS is pleased to announce that the Reuben H. Fleet Space Theater and Science Center of San Diego now offers a 10 percent membership discount to AAAS members.

Celebrating its 15th anniversary this month, the Reuben H. Fleet Space Theater and Science Center includes the world's first Omnimax theater and more than 50 hands-on science exhibits. Museum membership includes free tickets to the Space Theater, unlimited free admission to the Science Center, discounts on educational programs, events and gift shop purchases, and a subscription to *Space Reflections* magazine.

AAAS members in the San Diego area should be on the lookout for more information coming in the mail this month, and members in other cities can obtain more information by contacting the membership office at participating museums.

AAAS is working to extend this new museum benefit to more science and technology centers around the country. Watch "AAAS News" for further announcements.

MARLENE ZENDELL
Membership Office