edited by S. L. BYRAND

Gift to AAAS Honors Revelle

Roger Revelle towered in life and not just because he stood 6 foot 4. One colleague, Walter Munk, described him as "truly a Renaissance man." Another, Edward D. Goldberg, called Revelle "a modern-day Aristotle."

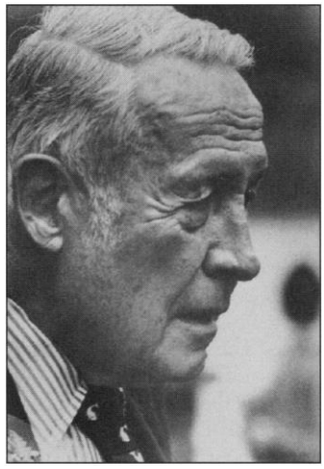
As a scientist, Revelle excelled across several fields of study: he not only launched a new era of ocean exploration at the Scripps Institution and helped to focus scientific attention on the discipline of oceanography, but also pioneered research in global warming and world hunger. As AAAS president in 1974 and a longtime leader in the Association and other scientific institutions, Revelle sought ways for science to serve humankind, always appraising a project in terms of how many it could feed, how it could help meet people's needs. Though he died in 1991, Revelle's vision still influences the AAAS programs that work toward solving environmental and social problems. Now, a $1-million memorial to AAAS from his family will ensure that his legacy continues.

The gift has allowed AAAS to create the Roger Revelle Fellowship in Global Stewardship, which will encourage and support young scientists who, like Revelle, want to contribute to society by helping to create effective and meaningful science policy (see the box on this page). "Roger was one of few individuals able to communicate to policy-makers from a scientific platform," said Tom Malone, the chief scientist for Sigma Xi and a leading member of AAAS's Consortium of Affiliates for International Programs. "He always believed we need to encourage that and open the lines of communication with the people who make policy."

In addition to the annual fellowship, the gift established a conference room at the AAAS Center for Science and Engineering. The Association will name the conference room in Revelle's honor on 4 September, in conjunction with the dedication of the new AAAS headquarters.

Scientist, Humanitarian

Revelle started his scientific career as a geologic oceanographer; his many contributions include pioneering studies of the Indian Ocean that broadened the scope of marine geology. "He was an inveterate explorer," said Malone.



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Roger Revelle

In just two decades, Revelle went from a first-year grad student at Scripps Institution of Oceanography in 1931 to its director in 1951—while serving 7 years in the Navy. "He was the one who had all of the ideas," said Keith R. Benson, executive secretary for the Seattle-based History of Science Society.

Revelle helped catapult Scripps toward a world-renowned reputation, acquiring a seagoing fleet that logged more than a million miles under his directorship. He initiated a series of international collaborations and research expeditions, including explorations of the Pacific that helped to develop modern theories of plate tectonics. "There is still a feeling of the power of his presence," said Edward D. Goldberg, a marine chemist and retired professor at Scripps. "He was a phenomenal man."

Even as he was transforming Scripps, Revelle launched a campaign to establish a campus for the University of California at San Diego. His efforts in founding it included recruiting distinguished scientists to form the core of the faculty. To recognize Revelle's many contributions, the California university system named the campus's first college after him.

Revelle also helped to advance other projects and his fellow scientists. "He was always so encouraging," said Walter Munk, an oceanographer who first met Revelle at Scripps in 1939 and became his lifelong friend. Munk recalls that Revelle had a chronic problem with his legs that made it painful to walk in later years. But that did not stop Revelle from helping others, such as when Munk had a permit hearing for a controversial experiment to measure ocean temperature acoustically. "Roger walked the endless corridors of the Department of Commerce to come support me, going through great discomfort," said Munk. "I had no idea that he had planned to do this. His silent presence made all the difference in the world. This is just one of many examples of how he helped me and others."

An explorer who believed in science's potential to help humankind, Revelle searched for ways to apply science and technology to relieve world hunger. In 1964, he became the first director of Harvard's Center for Population Studies, serving for more than a decade. His interest, however, began during his term as the first-ever science adviser to a U.S. secretary of the interior. President Kennedy sent Revelle to Pakistan to fix technical problems related to water usage. He found and addressed as necessary greater issues related to poverty, population, and education. The late Jerome B. Wiesner, president emeritus of MIT, wrote of Revelle's success: "Roger virtually single-handedly revealed and led the way out of the horrible... mess that the Pakistani agriculture was in. It was a triumph."

When Revelle defined his goals for the University of California at San Diego, he said that he wanted it to be "fully involved with the world." He set that standard for himself as well. Throughout his life, Revelle immersed himself in the processes and problems of the Earth, his curiosity about a question growing in proportion to the challenges it raised. He saw poverty as humankind's main enemy and worked to defeat it through science tempered with compassion. "He was not only a great natural scientist, he was a great social scientist," said Goldberg. "I consider Roger Revelle one of the great humanitarians of the 20th century."

With research assistance by Annmarie S. Edwards.

A Chance to Follow in Revelle's Footsteps

Through the Roger Revelle Fellowship in Global Stewardship, AAAS's new policy fellowship program, a scientist will have the opportunity to work for 1 year in a domestic or international policy area with Congress, the White House Office of Science and Technology Policy, or another science policy organization in Washington, D.C. "The fellowship is not tied to a particular agency so it gives a great deal of flexibility," says Al Teich, director of AAAS's Science and Policy Programs, which will oversee the program. "It enhances our ability to bring young people with expertise in environmental science into Washington to gain policy experience."

AAAS is initiating the selection process now for the fellowship, with the first Fellow to be named in the fall of 1998. All applicants must be Ph.D. scientists with at least 3 years of relevant postdoctoral professional experience. For more information, call 202-326-6600.

Briefing on Crypto Reveals New Concerns

The debate over legislating encryption in digital technology has been focusing on privacy and problems in law enforcement. On one end of the seesaw sit industry and consumers who want secure channels for conducting business on the Internet. On the other end are the FBI and the National Security Agency, which want access to all encryption keys to counter terrorism and drug trafficking.

In early August, a congressional briefing sponsored by AAAS's Science and Policy Programs expanded the debate to include human rights and scientific freedom. Two leading cryptography researchers and two experts on human rights issues addressed the packed committee room, which included staff from Congress and the executive branch. The audience size more than doubled when Internet users logged into the briefing, which was broadcast live on the World Wide Web by Democracy.net, a joint project of the Center for Democracy and Technology and the Voters Telecommunications Watch. This briefing marks the first time that a AAAS event was cybercast.

In her introductory remarks at the briefing, U.S. Representative Connie Morella (R–MD), who is chairwoman of the House Subcommittee on Technology, summed up the importance of encryption to national security, scientific research, and human rights: "It's safety, it's security, it's the humanizing of what is the natural birthright of all people—that is to be able to live freely."

"Electronic security is quite literally a matter of life or death," said one of the briefing's speakers, Patrick Ball, who works with AAAS's Science and Human Rights Program by training human rights groups around the world how to use electronic communication. He reported that although computer technology makes it easier and faster to analyze and report human rights abuses, it can also be dangerous. "In a computer, the information is concentrated, which makes it easier to steal," explained Ball. "Electronic communication is easy to monitor, and so human rights groups communicating by e-mail or fax are vulnerable to surveillance."

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Cyber security. Encryption, said Patrick Ball (above), is key to curbing human rights abuses.

He displayed a fictional e-mail that gave the location of death squad witnesses, which he said could result in them being tracked down, even killed. After the meeting, he reported that death squads during Haiti's de facto regime used phone company trucks and uniforms, which would have allowed them to electronically monitor human rights groups. The solution to such infiltration, said Ball, lies in encryption that only the receiver can decode.

Dinah PoKempner, deputy general counsel for Human Rights Watch, also discussed how encryption can save lives, while reporting that any future U. S. domestic policy will have global ramifications. "The United States is traditionally in the forefront defending the freedom of expression as an international right. Any regime adopted in this country will have profound influence on what other governments do and how they justify it. We will be in a poor position to criticize abusively implemented restrictions if they are patterned on our own."

Two leading cryptography scientists discussed the effect of current policy as it relates to scientific freedom: Matt Blaze, who conducts basic research for AT&T Laboratories, and Ian Goldberg, a graduate student researcher in computer security at the University of California, Berkeley, who is best known for breaking a 40-bit encryption key in less than 3.5 hours. Goldberg explained that export controls on encryption software and technology stifle research: cryptography scientists who are U.S. citizens or working in the United States cannot collaborate with international colleagues, contribute to international projects, or publish their research on the Internet.

Reporting that these restrictions impinge on scientific freedom and put the United States behind on the technology curve, Goldberg said, "The policy of the government right now can be summed up in a nutshell: Export Jobs, Not Crypto." As a Canadian, he is freer than his American peers to conduct research—as long as he performs and publishes the research in Canada. "But I can't go home every time I have an idea," he quipped. On a more serious note, Goldberg advised, "We must reverse these policies."

The briefing and supplementary information are available at www.aaas.org/spp/dspp/cstc/briefings/crypto on the Internet.

AAAS Artifacts Needed

A special exhibit set to open at the 1998 AAAS annual meeting in Philadelphia will commemorate the Association's 150th anniversary. Members can help make the exhibit as accurate and engaging as possible by lending their memorabilia.

"The older the better," says Al Teich, director of AAAS's Science and Policy Programs and who is helping to coordinate the exhibit. Teich, however, does not want members to limit their search. "I'm interested in learning about whatever people might have saved," he said. "There may be things we have not thought of."

Examples of items that might be useful for the exhibit include the following: memorabilia such as meeting badges, buttons, and photos from AAAS meetings and other events; press clippings about the Association; objects containing the AAAS logo (old ones, especially); and artifacts relating to people (particularly well-known scientists) who played a significant role in AAAS history (presidents, board and council members, and so on).

Those who contribute an item that is used in the exhibit will receive credit (unless they wish to remain anonymous). If requested, AAAS will also reimburse for shipping. After the exhibit closes in September 1998, AAAS will return the memorabilia. To avoid duplication, please do not send any items without contacting AAAS first. Write Al Teich, Science and Policy Programs, 1200 New York Avenue, N. W., Washington, DC 20005; phone 202-326-6600, fax 202-289-4950; or e-mail ateich@aaas.org

AAAS to Survey Members

In conjunction with its 150th anniversary in 1998, the Association is publishing a membership directory to help AAAS members network for career advancement, look up old friends, or exchange ideas with colleagues. So that this directory will be complete and accurate, the Association is asking members to respond to a questionnaire that will be mailed in October 1997.

By filling out the questionnaire, members can ensure that their profile is up to date, providing data such as primary job function, work sector, job title, place of employment, academic information, AAAS sectional affiliations, and other organizational affiliations. After the initial questionnaire mailing, members will receive information on how to purchase a copy of the directory, which will be distributed in fall 1998.