

its energies to the review of what Hemily considers small and "marginal" projects for developing countries. In evaluating and fostering such projects, a pattern of bureaucratic unilateralism developed, with little or no outside review from peer scientists.

The situation was not helped any, Hemily feels, by the attitude of "benign neglect" that US administrations tended to adopt toward international organizations in the 1970s. Instead of assigning its strongest diplomats to UNESCO, Hemily maintains, the United States permitted problems to fester uncorrected.

Hemily also places some blame on the US press, which he feels overreacted to proposals in UNESCO for a "new international information order." He thinks that even after such proposals failed the US press tended to neglect the valuable things UNESCO does.

The scientific side of UNESCO never got very politicized, Hemily asserts, and "if science were an independent unit in UNESCO, we'd still be in it, although the UNESCO bureaucracy would still require corrective action."

Prospects for UNESCO would be considered better in the United States if Amadou-Mahtar M'Bow, the controversial and allegedly autocratic director of the agency, were replaced next year. Rumors circulating in Europe have it that M'Bow may not run again.

But the developing countries have rallied to M'Bow's support, and the Soviet Union may not wish to alienate them, even though it was reported last year that the Soviet government would prefer to see M'Bow replaced in 1987. In Kaddoura's estimation, member states in UNESCO would like to have the United States back in the organization, even though the US absence gives some of them an advantage in just those political bodies that have caused such irritation to US sensibilities.

If Kaddoura is right, these countries will not press their political advantage too hard. M'Bow, for his part, appears scrupulously to have avoided any appearance during the past two years that he is taking reprisals against US scientists. According to *The Wall Street Journal*, however, he did fire the top-ranking US citizen in UNESCO as well as the Yugoslavian assistant director general, who "had dared to criticize the group's anti-West propaganda and corrupt bureaucracy and to suggest that a fire destroying financial records a couple of years ago was no accident" (see PHYSICS TODAY, February 1985, page 54).

A high State Department official with the bureau for international organizations believes that M'Bow is "pretty well assured reelection in 1987." While the executive board of UNESCO will take nominations this Oc-

tober, the official does not anticipate that M'Bow will face any real competition.

Asked about the staff and program cuts at UNESCO, the same official said that the US government is "aware of the cuts" and "aware of the current leadership situation." He said that the government "would like UNESCO to get its house in order, to become a much more effective organization than it was when we left it, but the situation looks pretty bleak."

The prospect of falling dominoes seemed to loom last year when the US withdrawal was followed in quick succession by the withdrawals of the UK and Singapore. *The Wall Street Journal* claimed in an editorial in May that Japan, West Germany, Switzerland, the Netherlands and Denmark will leave UNESCO next year if M'Bow is reelected.

Contrary to that claim, a general bolt of Western states appears increasingly unlikely. Member states did much to try to retain the UK and Singapore in

the organization. This was particularly clear, Kaddoura points out, during the November 1985 session of the general conference. In the UK, the select committee of the House of Commons advised against withdrawal, but the final decision went counter to that advice.

Other countries continue to criticize some of UNESCO's programs, Kaddoura told us, but it is unlikely that there will be more withdrawals. Officials at the German and Japanese embassies in Washington say it is not true that their countries will withdraw in the event of M'Bow's reelection and assert that they will remain in UNESCO and work for far-reaching reforms.

Jacques Laureau, a French foreign-office official responsible for cooperation in science and technology, shrugged when asked about the outlook for UNESCO and the United States. "The United States will have to go back sooner or later," he said. "How can it stay out?"

—WILLIAM SWEET

ASA elects McKinney and Medwin

Chester M. McKinney is the president-elect of the Acoustical Society of America, and Herman Medwin is vice-president-elect. McKinney will succeed Ira Dyer as president in 1987, and Medwin will succeed W. Dixon Ward as vice-president.

McKinney received a PhD in physics from the University of Texas in Austin in 1950, after serving as a radar officer in the US Army Air Force from 1942 to 1946. He taught physics at Texas Technical University in Lubbock from 1950 to 1953 and has held a series of positions at the University of Texas in Austin since 1953. He was director of the Applied Research Laboratories at the University of Texas from 1965 to 1980.

Since about 1950 McKinney has worked largely on underwater acoustics and sonar engineering. His specialty is high-resolution sonar related to submarine and mine detection as well as ocean-floor mapping, navigation and fish finding. Much of his time also has gone into administration of acoustics research.

Dyer earned his PhD in acoustics at MIT in 1954. He worked as an acoustical scientist with Bolt, Beranek & Newman Inc from 1951 to 1961 and was vice-president and director of physical sciences for the firm from 1961 to 1971. He also served as director of the advanced-study program from 1964 to 1967. From 1971 to 1981 he was department head and professor of ocean engineering at MIT, and he continues to be a professor in that

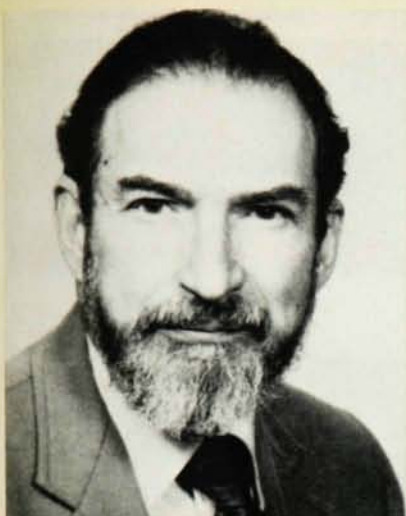
department.

Dyer's main research interests for the last decade have been Arctic ocean acoustics and Arctic science. He specializes in the behavior of Arctic ice and its fracture mechanisms, which give rise to noise radiated into the ocean. Observation of the noise provides clues to the mechanisms and and also provides practical data for designers and users of sonar systems.

Medwin earned his PhD in physics from the University of California, Los Angeles, in 1954. He worked for Bolt, Beranek & Newman Inc from 1954 to 1955. He then accepted a faculty appointment at the Naval Postgraduate School in Monterey, California, where

McKINNEY





DYER

he has been a professor of physics since 1960. He served as liaison scientist with the Office of Naval Research in London in 1961-62 and was editor of *European Scientific Notes* in 1962. He has been owner of Ocean Acoustics Associates in Pebble Beach, California, since 1980.

Medwin's early research was in finite-amplitude effects such as shock-wave propagation and acoustic streaming. Later he developed acoustical methods for determining the number densities of microbubbles at sea. Since about 1970 he has constructed labora-

tory scale models and computer models to calculate sound scattering from ocean boundaries.

Ward, a specialist in psychoacoustics, earned a BS in physics at the South Dakota School of Mines and Technology in 1944 and a PhD in experimental psychology at Harvard in 1953. He worked as a research engineer at Baldwin Piano in 1953-54 and as a research scientist at the Central Institute for the Deaf in 1954-57. From 1957 to 1962 he was a research associate with the subcommittee on noise of the Committee on the Conservation of Hearing, American Academy of Ophthalmology and Otolaryngology. He has been a professor of otolaryngology and communication disorders at the University of Minnesota since 1962.

Ward has been concerned all his life with noise-induced hearing loss and its prediction. His laboratory and fieldwork has had practical applications in industrial health and safety. He also has conducted research on musical perception.

Stanley L. Ehrlich, a consulting engineer with the submarine-signal division of Raytheon Company, and Alice H. Suter, a consultant in industrial and community noise, joined the ASA executive council this year. Paul Ostergaard of Ostergaard Associates in Caldwell, New Jersey, and Robert C. Spindel of Woods Hole Oceanographic Institute joined last year.

NRDC in USSR to verify nuclear tests

The US and Soviet governments, despite their guarded and ambiguous positions on arms control, have acted with remarkable speed and decisiveness to permit implementation of the agreement on test-ban verification negotiated by the Natural Resources Defense Council and the Soviet Academy of Sciences in May (PHYSICS TODAY, July, page 63).

The US Commerce Department issued export licenses for the first batch of equipment that NRDC wanted to transfer to the Soviet Union just six days after NRDC's initial application, and by the end of June a team of US scientists headed by Jim Brume of the Scripps Institution of Oceanography was in the Soviet Union setting up surface seismometers at two locations—Karkaralinsk, which is about 200 kilometers west of the Soviet test site, and Bayanaul, 100 km north of Karkaralinsk. A third station, which will be on the other side of the test site, remained to be selected.

According to Tom Cochran, the NRDC physicist who hatched the idea of the verification agreement last January, nothing in the first batch of

equipment was terribly sensitive politically. It was all "off-the-shelf equipment," he says, and besides, it would remain under the control of US scientists at the Soviet stations.

NRDC has ordered down-hole seismometers from Teledyne Geotech in Texas, which are to be installed in the Soviet Union and United States during the next phase of the verification program, beginning, it is hoped, toward the end of this year. The Teledyne equipment is in use both in the United States and overseas, Cochran says, and so its transfer should not be problematic. The more sensitive export applications will be for microprocessors and digital recorders.

Even if all the equipment gets through and into place, the Soviets will not collect any substantial data from the US test site that are not already available in published US sources, according to Cochran. While it is clear that the Soviets want to demonstrate that verification is no obstacle to a test-ban agreement, he says, Soviet scientists "actually are more interested in building a research program around earthquake analysis" than in the

science of test verification as such.

In addition to having won the cooperation of the Soviet and US governments, NRDC has raised money to support the verification program with remarkable ease. Money from private donors has been forthcoming, and the MacArthur, the Carnegie and probably the Ford Foundation are expected each to contribute \$200 000.

—WILLIAM SWEET

Electrical engineer is new British science adviser

Around the same time that President Ronald Reagan nominated a new science adviser (PHYSICS TODAY, July, page 45), the top government science job turned over in Britain as well. What is striking in both countries is that those striding the corridors of power are no longer top scientists. In recent years British prime ministers seem unwilling or unable to appoint boffins with the stature of Frederick Lindemann (later known as Lord Cherwell), Hermann Bondi or Sir Solly Zuckerman.

So, when Prime Minister Margaret Thatcher named Sir Robin Nicholson, a metallurgical engineer, to the cabinet-office position in 1983, many research scientists were disgruntled. After Nicholson left last January to join Pilkington Brothers, the big glass manufacturer (PHYSICS TODAY, February, page 67), scientists hoped Thatcher would choose a prominent academic. Instead, on 1 May the post went to John Fairclough, an electrical engineer who spent the last 27 years at IBM (UK).

"My background is making money out of technology," Fairclough told us. At IBM he helped develop the successful System-360 computer and worked as a marketing director. Since 1974 he has been responsible for R&D and manufacturing in Britain, where IBM has laboratories employing about 2000 scientists and technicians and factories with 5000 workers. For the past two years he has pumped IBM money into British universities through a program that provides free computing time to teachers and students to upgrade skills and research. Among the beneficiaries are engineering departments at Cambridge and Imperial College as well as the politics, philosophy and economics departments at Oxford.

Fairclough has no illusions about the power and glory of his new post. As Sir Robin had found before him, the job of cabinet science adviser is only as influential as the prime minister wants it to be. He has no funds to give even the most worthy school or scientist. He carries no civil-service grade and in fact continues to be paid his usual salary by IBM, which has seconded him to 10