

Communicative Disorders and Stroke. Senility is a problem for half a million Americans. With the help of the National Institute of General Medical Sciences, the institute will try to reduce the great number of untoward drug interactions and drug effects that occur among the elderly. The institute will study osteoporosis, a problem for 14 million older American women, and will develop new prostheses for the elderly, such as remote control preparation of foods and sensors on canes. It will study exercise for the aged.

One of the greatest differences between the Institute of Aging and the other NIH institutes, Butler stresses, is that the new institute will study the process of aging,

not diseases, an altogether different thing. "It is important," Butler says, "that the public realizes that there is a process of aging."

Even with the new institute established, though, Americans have a long way to go before they become deeply committed to better understanding the process of aging and how to cope with it. Although federal funds for the new institute are expected to go up from under \$20 million for fiscal 1976 to \$26 to \$30 million for fiscal 1977, such funds are but a drop in the bucket compared to those allotted to the more popular disease research areas. (The National Cancer Institute was authorized \$685 million for fiscal 1977.) □

Nuclear retrenchment around the world

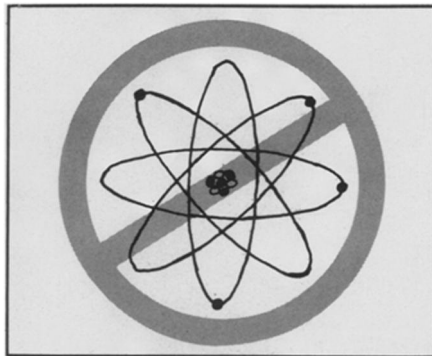
News Analysis

The week of Sept. 19 may someday be remembered as a key watershed in the history of atomic energy. It began with the nuclear power question playing a decisive role in the ousting of Sweden's Socialist government. Next came a British Royal Commission report urging that further nuclear expansion be postponed "as long as possible." And the week ended with a pledge by Jimmy Carter, the first major presidential candidate to have a nuclear engineering background, to curb nuclear exports. More important than the individual events, however, were indications that they reflect a growing international receptiveness to the arguments of antinuclear environmentalists (SN: 1/17/76, p. 44 and 1/24/76, p. 59).

The Swedish election represents the most clear-cut case. Olaf Palme's Social Democratic government was pledged to building 13 new nuclear reactors by 1985, which would have given Swedes the world's highest per capita consumption of nuclear energy. His opponent, Thorbjorn Falldin, has built his career on an antinuclear stance. He promised not only to scrap plans for future nuclear plants, but also to phase out the five now in operation. After the election, Palme said of his defeat: "If the nuclear issue had not existed, we would have won."

Two circumstances of this upset are particularly noteworthy. First, though Falldin has few scientific credentials himself—he is a farmer and shepherd by trade—he apparently came by his nuclear opposition through contacts with Swedish scientists. In particular, he has been influenced by Swedish Nobel laureate Hannes Alfvén, one of the leading antinuclear members of the physics community. Second, his campaign appealed especially to the nearly half-million newly enfranchised voters under 20. Raised with a heightened sensitivity to environmental dangers, these young people bitterly opposed Palme's ambitious nuclear plans.

In the end, Falldin will probably have



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to compromise on the nuclear issue—he heads a coalition government in which his partners are likely to push for some sort of continued nuclear development. The question is whether opposition parties in other European countries will see in the Swedish experience a way to gain voters by campaigning against nuclear power.

In Britain, opposition to expansion of nuclear power came from within the government itself. After a two-and-one-half-year study, the government-appointed Royal Commission on Nuclear Energy concluded that the breeder reactor and the "plutonium economy" should not be developed until after full public debate. The report called for a "special procedure" to set forth and judge the issues of nuclear power. The first step would be to draft a "comprehensive document," similar to American environmental impact statements, to take the place of "bland, unsubstantiated official assurance."

Such blunt talk is rare for Royal commissions, and a protracted debate in Parliament is likely to result. The commission's report is even more significant because of the man who chaired it, Sir Brian Flowers, sometimes called the "father of Britain's reactor program." He told a press conference that he does not wish to see a nuclear moratorium, but that his message is, "For Heaven's sake, stop to think."

Again, the specific issues were those that troubled voters in Sweden and played a role in the California referendum (SN:

5/22/76, p. 324 and 6/12/76, p. 357). The commission cited the dangers of nuclear terrorism, weapons proliferation and the possibility of decreased civil liberties at home, due to security measures. The report's conclusions are particularly significant since nuclear energy is one of the few technological areas in which Britain is still a world leader.

Jimmy Carter's latest remarks on the nuclear question came in a speech to the San Diego City Club on Sept. 25. He promised to halt further sales of nuclear technology or fuels to nations that developed nuclear weapons, built their own fuel reprocessing plants or failed to open their nuclear facilities to international supervision. He called for a five-year ban on all Soviet and U.S. nuclear explosions (including "peaceful" ones) and a ban on the sale of nuclear reprocessing plants, including those already negotiated by France and West Germany.

In remarks submitted to the American Physical Society and published in its October PHYSICS TODAY, Carter expanded on this theme, saying bluntly: "I believe we must make every effort to minimize our dependence on nuclear energy." The "excessive emphasis" on developing a breeder reactor should be reduced, conventional reactors should be located underground, and plants should be located "in sparsely populated areas and only after consultation with local officials."

In the same issue of PHYSICS TODAY, President Ford defended the present government policy: "The use of nuclear energy will increase around the world as the supplies of oil and natural gas diminish. Recognizing this, I believe that we must maintain our role as a major supplier of nuclear fuel and equipment for peaceful purposes—so that we can influence others to accept controls to minimize the threat of proliferation."

Ford said, however, that a review of nuclear policy is continuing, particularly with respect to proliferation, exports and fuel reprocessing. If changes of policy are needed, he promised, "I will act promptly." To underscore this concern over proliferation, the administration has just forced Taiwan into halting its nuclear fuel reprocessing. Though the Taiwanese have never officially admitted carrying on such activity—which is the first step toward weapons production—intelligence reports indicated they had nearly completed construction of a reprocessing facility.

During this fall's election, several states will have nuclear moratorium initiatives on their ballots. Atomic energy advocates once felt confident that the resounding defeat of the California initiative would undermine further opposition. It has also been the conventional wisdom that the rest of the world would follow the American lead in developing nuclear power. This week's events cast doubt on both these assumptions.

—John H. Douglas