

Apollo Applications Program, which will use Apollo systems for scientific work and will prepare for additional lunar flights in 1970 and beyond. The budget also proposes a modest program of planetary exploration consisting of two Mars orbiters in 1971 and two Mars orbiters with landers in 1973. There are currently no planetary missions scheduled beyond two Mars flybys in 1969. The proposed new Mars missions would cost much less than the Voyager program that was cut from the 1968 budget, and would provide less scientific information. They would include no life detection experiments. In proposing the missions, President Johnson told Congress: "We will not abandon the field of planetary exploration." Despite the cuts in NASA's budget, overall federal support of space programs will increase, according to the Administration, primarily because of increases in Defense Department development of an orbiting laboratory.

Atomic Energy Commission. The AEC's operating funds for the conduct of research are budgeted at \$1.5 billion, an increase of nearly \$140 million, or roughly 10 percent, over current levels. Two thirds of the increase is for the weapons program, primarily involving development of warheads for the Sentinel antiballistic missile system. All other Commission R&D efforts would increase by an average of about 5 percent. Development of civilian applications of nuclear explosions (the Plowshare program) would be cut to \$14.5 million from the current level of about \$18 million. Obligations for constructing and equipping research and development facilities would increase by \$290 million, primarily reflecting a deferral of obligations from 1968. Much of the boost would finance construction of three major research facilities. The budget provides \$25 million to initiate construction of the 200-Bev proton accelerator at Weston, Illinois (total estimated cost, \$310 million); \$26 million for continuation of construction of the Los Alamos Meson Physics Facility (total estimated cost, \$55 million); and \$35 million for construction of the Fast Flux Test Facility at Richland, Washington (total estimated cost, \$88 million).

Public Health Service. The budget would boost PHS obligations for research and development to almost \$1.3 billion, an increase of \$103 million, or about 9 percent, from current levels. Relatively large increases are budgeted for air pollution research, which would

be conducted largely by industry, and for research on improving the methods of delivering health care. The National Institutes of Health is budgeted for an appropriation of \$1197 million, an increase of \$21.5 million over current levels. Of the eight separate institutes, seven are budgeted for modest increases, while the budget of the eighth—the National Institute of Child Health and Human Development—would rise substantially, from \$68.6 million currently to \$75.4 million. Regional medical programs (heart disease, cancer, and stroke) would rise to \$69 million, a jump of \$10 million, while grants for construction would drop precipitously. The National Institute of Mental Health is budgeted for \$377 million, an increase of \$19 million.

Office of Education. Obligations for research and development are budgeted at \$145 million, an increase of \$58 million over current levels. The work involves a broad range of efforts to improve educational curricula and instruction. Appropriations for construction grants for higher education would drop sharply, from \$450 million in 1968 to \$75 million next year.

Public and Educational Broadcasting. There have been no appropriations so far this year. The administration plans to seek supplemental appropriations of roughly \$4.5 million for the remainder

of this year and proposes an additional \$33 million in 1969.

Supersonic Transport. The budget would appropriate \$223 million for the SST, up from \$142 million in the current year, but less than originally planned, largely because of delays. (The SST does not count as part of the R&D budget.)

Many uncertainties lie ahead of the President's new budget. North Korea's recent seizure of an American surveillance ship highlights the possibility of unanticipated military activity, which almost certainly would drain off resources from domestic activities. A long, hot summer of riots could focus national attention on urban problems to the detriment of research activities. And there is the still-unresolved question of a tax increase. The President's budget is based on the assumption that there will be a tax boost. But to win approval of new taxes from an economy-minded Congress, the President may have to offer some sharp budget cuts. And if he fails to get the taxes, the President would presumably have to reduce his proposed outlays to avoid a huge deficit. Virtually the only thing certain about the President's budget proposals is that the numerous uncertainties will result in some cuts in the proposed support for R & D. How substantial the cuts will be remains to be seen.—PHILIP M. BOFFEY

Gardner's Resignation: The Crunch between Expectations and Resources

Why, why then, this restlessness?

*Because when a great ship cuts through the sea, the waters are always stirred and troubled. And our ship is moving—*President Johnson in his 1968 State of the Union address.

President Johnson seems to have lashed himself to the wheel as he sails through troubled waters, but, one by one, his senior officers are leaping off the deck and swimming ashore.

The latest officer to leave the ship is John W. Gardner, the highly regarded Secretary of the Department of Health, Education, and Welfare (HEW). Al-

though for months there had been vague rumors of Gardner's restlessness, the actual resignation greatly surprised Washington, including Gardner's close associates at HEW.

It was a strange time for a resignation. Gardner's announcement came only a few days before the unveiling of the lean Administration budget for fiscal 1969, thus virtually assuring claims that Gardner had left because of the President's failure to give HEW adequate funds. Also, Gardner, who set about modernizing HEW after he took office in 1965, is currently in the midst of unfulfilled reorganization plans. Announcement of

a proposal to reorganize the health services of the Department has been expected momentarily. Any reorganization plans will now be proclaimed without the valuable backing of the chief architect who supervised their construction.

Even Gardner's most fervent supporters could not legitimately claim that he had fully achieved the reorganization of his sprawling department. Gardner himself, in a newly published report to employees, which has a distinctly valedictory tone, said: "When I came to HEW it was generally recognized that the Department was not ideally organized." After citing the various transformations that had occurred Gardner added, "We are still in a period of transition; more changes must be made."

In the initial press reports about the resignation, reporters said that Gardner was quitting because of dissatisfaction over the Administration's policy on Vietnam. Gardner denied this, and there is no reason to discount his denial. It should be remembered that Gardner agreed to join the Cabinet in July 1965, well after the President had ordered the bombing of North Vietnam and intensification of the war in the south.

The announcement of Gardner's resignation has caused widespread concern in the educational and medical communities. In the nation, Gardner is publicly identified with providing leadership in increasing the scope of the federal commitment to health services, medical research, universities, and preuniversity education. President Johnson's success in persuading Gardner to leave the presidency of the Carnegie Corporation to assume the HEW post was widely hailed. Coupled with Defense Secretary Robert McNamara's recent resignation, Gardner's departure means that the President's Cabinet is now bereft of men who command widespread enthusiasm in the intellectual community.

One of Gardner's main assets as Secretary has been his ability to inspire some zest in a traditionally stodgy bureaucracy. He has attracted and appointed imaginative administrators—men such as Food and Drug Administration Commissioner James L. Goddard and Assistant Secretary for Health and Scientific Affairs Philip R. Lee—and has backed them up when their ideas aroused critical attack.

As a Republican, Gardner has been immune from many of the partisan jibes which would have been hurled at a



HEW Secretary John W. Gardner

Democratic Secretary of HEW. Upon learning of Gardner's resignation, Republican Albert H. Quie (Minn.), a member of the House Education and Labor Committee, commented, "I don't think Johnson will be able to replace him." Democrats in Congress also think highly of Gardner. Edith Green (D-Ore.), the most important member of the House on education legislation, said she learned of Gardner's resignation as Secretary of HEW with the "profoundest sense of regret," and called him "the ablest administrator ever to fill that post."

In the field of medicine, it is possible that Gardner's departure will revitalize the effort of the forces led by health patron Mary Lasker to secure the appointment of Michael E. De Bakey to succeed James Shannon as head of NIH. (De Bakey has said he does not want the appointment.) Gardner is reported to have put the brakes on the De Bakey appointment in past months.

Speculation about a successor to Secretary Gardner has turned up several names, including leading businessmen and Democratic ex-governors. Most attention, however, focuses on the possible appointment of HEW Undersecretary Wilbur J. Cohen, 54, who has been dealing with social welfare concerns of the government ever since 1935. Most HEW officials interviewed by *Science* expressed a willingness to see Cohen appointed Secretary. The buoyant former New Dealer is a known quantity; his colleagues are well aware of where he stands in regard to their programs, and they trust him to protect HEW with his usual vigor. Most respect Cohen's ad-

ministrative skills and his understanding of the legislative process. One HEW official called Cohen "the work horse of the department," and several commented that he has been handling a great portion of the major chores during Gardner's tenure.

Although Cohen would be a popular choice inside HEW, his appointment would do little politically for Johnson. The liberal Cohen has made enemies among conservative organizations, such as the American Medical Association, and his appointment would not make friends for the President in new places. One speculation is that the President will make Cohen Acting Secretary and will delay appointing a permanent replacement until after the November election.

If Johnson could appoint a distinguished man from outside Washington to fill Gardner's job he would improve morale in an Administration which has been depleted by several top-level resignations in recent months. Since Gardner's appointment in 1965, the President has not shown great ability to attract prestigious men from outside this city. Many of his appointments have been promotions of men within the Administration or men drawn, as was the new Defense Secretary, Clark M. Clifford, from the President's long-time Washington acquaintances.

Gardner said he was departing because he had overstayed his leave from the Carnegie Corporation by 6 months and because he wanted to undertake special projects on urban problems for Carnegie. (He is not returning to the Carnegie presidency.) Gardner is, without doubt, greatly interested in the urban crisis, but most people in Washington find it hard to believe that any man who was reasonably well satisfied as Secretary of HEW would feel he could do more to influence urban problems in a private capacity. With a budget of more than \$13 billion, HEW is the largest governmental spender outside the Defense Department. In view of HEW's vast expenditures in cities, the Secretaryship of HEW is an unexcelled position of power for a man wanting to solve urban problems.

When asked why he was resigning, Gardner replied, "the reasons for my departure are not to be found in any issue or incident, but are simply a judgment on where I can be most useful in the immediate future." One HEW associate said a main reason for Gardner's

leaving was his wish to free himself to speak out more candidly about the magnitude of the domestic crises that face this nation.

While philosophic in approach, Gardner has some of the admirable qualities of a crusader. When he took office in 1965 he threw himself with great energy into President Johnson's crusade against poverty, urban decay, and inadequate educational and health services. But since 1965, the Administration's activities in Asia have somewhat unexpectedly drained off the financial and execu-

tive resources which were to have been used for expansion of the crusade against the nation's domestic ills. When asked why Gardner had resigned, one of Gardner's HEW colleagues replied, "The country can't seem to conduct two crusades at once."

A month ago Gardner gave a major speech in which he talked of "the coming crunch between expectations and resources." This Administration has done much to raise expectations of domestic reform and improvement, but now, in light of the great demands of Vietnam,

neither the President nor a major part of the Congress and the American public is willing to fulfill those expectations by allocation of adequate resources. For Gardner and for the rest of the nation, the crunch is no longer "coming" but is here. Secretary Gardner is only the latest, and perhaps the most illustrious, of a group of talented officials who have concluded that they can do more for their country outside the federal government than they can as members of this preoccupied Administration.

—BRYCE NELSON

International Cancer Research: New Horizons for Epidemiology

Lyons. The International Agency for Research on Cancer has a tie with the UN, and the sign on the door and the office stationery accordingly carry the name in English and French. The staff of IARC tends to favor the French version, *Centre Internationale de Recherche sur le Cancer*, because *centre* suggests an organization directly involved in research, whereas "agency" might mean a bureaucratic intermediary. This question of participation in research has been the crucial one for IARC since it was established by the World Health Assembly in 1965 after a prenatal period untypical of international scientific organizations.

The origin of IARC can be traced to a proposal in 1963 by a group of French intellectuals that major nations contribute ½ percent of their defense budgets to cancer research, specifically to an international cancer research organization. President de Gaulle endorsed the idea with apparent enthusiasm, and it was made known that the French would welcome creation of such an institute on French soil.

One difficulty was that nobody with a knowledge of cancer research had been a member of the original group of savants. Scientists who knew the field tended to feel that cancer research needed funds less than man-

power and ideas. In December of 1963, a meeting of experts was held to see what could be done to make the proposal scientifically useful, complementary to national programs, and acceptable to governments. The consensus was that an international research organization stressing geographical epidemiology was the most promising possibility.

Since the United States defense budget was the world's biggest, a point which the French progenitors of the idea seem to have had very much in mind, U.S. action on the proposal was carefully watched. Official feelings about IARC were mixed. The U.S. was already spending nearly the equivalent of ½ percent of its military budget on cancer research in those pre-escalation days. There was a reluctance to divert major funds from national research programs, and doubt that vast new funds could be spent effectively. But it was hard to oppose an idea that was against cancer and for disarmament.

A formula was ultimately fashioned under which the principle of basing contributions on defense expenditures was abandoned, and the scale of the project was reduced. A cancer research organization was proposed to which nations could belong voluntarily on pay-

ment of an annual contribution of \$150,000. As the grandeur of the original conception dimmed, de Gaulle's ardor is said to have cooled, but French sponsorship of the project was sustained when the energetic mayor of Lyons offered a site for the center in his city and French governmental support for a building.

From five participating states at the start, membership has grown to nine: Australia, Federal Republic of Germany, France, Israel, Italy, Netherlands, the Soviet Union, United Kingdom, and the United States. The group of expert advisers has evolved into IARC's scientific council, appointed because of their scientific competence by the governing council. This governing council is made up of one representative of each participating state and the director general of the World Health Organization. IARC is an autonomous agency within the framework of WHO.

Given a mission—"to promote international collaboration in cancer research"—a base, and a budget, the next question was what should an international cancer research organization do which would not simply duplicate the work of national programs. Expert opinion had pointed to cancer epidemiology, but there were doubts that the new IARC could justify itself simply as a statistical bank.

Clearly, the first director and staff members would have a decisive influence on the development of IARC. The directorship went to John Higginson, a pathologist with an interest in cancer epidemiology, who had a firm belief in a multidisciplinary approach for IARC and who in his first memo to the governing council said that