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to-Nixon reduction in funding for airport development.

President Nixon left intact the money for the new Consumer Protection and Environmental Health Service, but his personnel squeeze hit the agency hard. Fifty jobs are going down the drain. The bulk of those are out of the Aedes aegypti mosquito control program, which Johnson did not finance.

But where President Johnson had asked for 123 more officials for the Food and Drug Administration and 138 new air pollution control agents, Nixon proposes to stand pat, while he levers over 100 jobs out of the variety of health agencies that come under the Environmental Control Administration.

The FDA comes in for little more than half of the \$2.3 million increase Johnson had proposed; the new total is \$72 million. And Air Pollution Control Administration is in for the same \$96.8 million Johnson had requested.

The National Bureau of Standards, down to \$39.2 million from the \$41.6 million Johnson figure, will have only \$700,000 to spend on its metric system study (SN: 7/6, p. 10), about half of the earlier proposal. ◇

POVERTY WAR

Job Corps, Headstart reassigned

Ever since it began during the Kennedy years, the Federal campaign against poverty has been beset by interne-cine strife among its own dedicated warriors.

The goal—the elimination of want from American life—has been widely shared, but the methods of achieving it have differed just as widely.

The Nixon Administration has accepted the torch of the anti-poverty crusade from its predecessors. But in keeping with the perceived conservative drift of the electorate, the White House has sought to reorganize the main anti-poverty agency, the highly controversial Office of Economic Opportunity. In doing so, it has run against OEO's powerful and impassioned defenders among the moderate and liberal Democrats in the Congress.

Two crucially important segments of the OEO, the youth-training Job Corps and the Headstart program, designed to give deprived preschoolers an enriched foundation of experiences, have been severed from the parent agency and reassigned to the Labor and Health, Education and Welfare Departments respectively (SN: 3/8/69, p. 232).

Both the Job Corps and Headstart have come in for scorching criticism in evaluations conducted by outside agencies. The Job Corps was severely dealt with by the General Accounting Office

(SN: 4/5/69, p. 328), while Headstart was badly deflated in a report last week by investigators from the Westinghouse Learning Corporation and Ohio University.

The survey said that poor children who participated in Headstart were not appreciably better off than equally disadvantaged children who did not. It also concludes that there is no improvement in the slum child's sense of personal worth.

The survey did not measure Headstart's effect on health, diet or family-community relationships, however, although the program's impact in these areas may have been significant. The investigators also strongly urged that their criticism of Headstart not be used to condemn the idea of such a program.

The Administration is forced to come to Congress for authority to revise some of the statutes governing the Job Corps. The original Job Corps act specifies that 40 percent of all male trainees must be in conservation work, but under the realignment and closing orders being carried out by Labor Secretary George P. Shultz the percentage will drop to about 32. Congress must give permission for such a change, and it is in this forum that the Democratic critics are expected to challenge the Administration.

The President is reported to be looking for a Congressman to direct OEO, possibly to blunt the cutting edge of Congressional criticism. The heavy favorite is Representative Donald Rumsfeld (R-Ill.), a 36-year-old who may be a future Senatorial candidate should 73-year-old Everett Dirksen (R-Ill.) decide to retire in 1974.

The closing of the 59 Job Corps centers, with its corollary of returning some 13,000 unemployed and disenchanted youths to jittery urban slums, has upset many Congressmen. So has the manner in which the centers were closed. Numerous political leaders were caught napping and had to learn about the phase-outs from irate constituents or OEO staffers.

Shultz feels strongly that much greater economy can be obtained in the existing centers and through other Federal job-training programs. He wants to cut the cost-per-year for each trainee from \$8,000 under the present system to about \$5,250 in the more urban-oriented centers which have been left open, where young people can stay close to home during training.

Shultz contends that requiring the youths to leave home increased the dropout rate and limited the possibilities for on-the-job training. He emphasizes further that the Job Corps is now only a small part of the Government's manpower retraining program. When

the corps began, he says, there were slots for 27,000 youths. Now, the Government claims that it is retraining 600,000.

The shift of Headstart to HEW will place it squarely under the control of Secretary Robert H. Finch, who is the President's closest political ally.

Finch has incorporated Headstart into a new Department of Child Development, and is now looking for someone to head it. The top contender is said to be Jules Sugarman, a highly regarded former Headstart executive.

IMMUNOGLOBULIN

Deciphering a giant

The mighty immune system that wipes out invading bacteria, protects against cancer and rejects transplanted hearts is primarily in the business of recognizing three-dimensional shapes. When it spots an intruding shape—a foreign antigen such as a virus or bacterium or abnormal cell—it makes antibodies (proteins) to carry it away.

Gamma globulin or immunoglobulin is the protein watchdog that is the key to immunity. Unlike other proteins it comes in a vast array of shapes. It has a 1,320 amino-acid chain, 19,996 atoms, a molecular weight of 150,000.

After 12 years' effort, it has finally been analyzed, but in what amounts to only two of its three dimensions.

Scientists at Rockefeller University have deciphered one immunoglobulin, learning in exactly what order its amino acids are strung together. Amino-acid sequence determines an antibody's shape. Its shape determines its ability to recognize an antigenic shape, and that is what makes the system run. But the shape is the third and still unknown dimension.

"If we could really understand the three-dimensional architecture of an antibody-antigen combination," says Dr. Gerald M. Edelman, who headed the Rockefeller team, "we could perhaps design a drug to control it."

Currently, Dr. Edelman and others are trying to produce pure crystals of immunoglobulin that, when submitted to X-ray crystallography, will reveal the protein's full three-dimensional structure, showing precisely how its 1,320 amino-acid chain is organized in space.

In his sequence studies, reported at the meeting of the Federation of American Societies for Experimental Biology in Atlantic City last week, Dr. Edelman used homogeneous immunoglobulin drawn from a patient with multiple myeloma, a cancer of antibody-producing white blood cells. Immunoglobulin molecules, he observes, contain two different types of subunits or poly-

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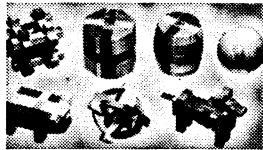
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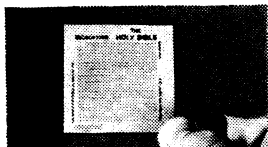
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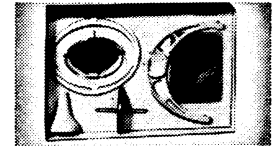
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