NATIONAL SCIENCE BOARD **REPORT:** In its first annual report to Congress, the National Science Board recommends reform of the present federal research grant system. The Board criticized the present system because much graduate education and, in many cases, faculty salaries are financed through federal research grants. They urge changes in the present system which would separate the money spent for costs of research from that spent for salaries and other institutional expenses. The report, entitled "Toward a Public Policy for Graduate Education in the Sciences," puts emphasis on the need for broader forms of institutional sustaining grants. The National Science Board is the 25-member governing body of the National Science Foundation. The report required by an NSF reorganization law enacted last spring is accompanied by a background volume, "Graduate Education: Parameters for Public Policy." The reports may be obtained for \$1.25 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

• KENNEDY ORDERS HIS OWN ABM REVIEW: Senator Edward Kennedy (D-Mass.), a sharp critic of Pentagon Antiballistic Missile (ABM) deployment plans, has asked nongovernment experts to undertake a political and technical review of the Sentinel System. M.I.T. Provost Jerome B. Wiesner and Harvard law professor Abram Chayes will conduct the review. They are expected to complete their report before 15 March, when the Pentagon plans to announce the result of the military's ABM review.

• EMBO ACCORD SIGNED: The European Molecular Biology Organization (EMBO), which until now has been an organization of distinguished individual biologists, now seems assured of support from Western European governments. An intergovernmental agreement was signed this month near Geneva by Austria, Denmark, Germany, France, Greece, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. This agreement, when ratified, will provide for contributions from member countries for training, teaching, and research scholarships; also exchange programs, courses, and study meetings in biology.

and research generated during the Keppel-Gardner partnership had begun to be diverted or diluted even before Gardner resigned, in the declining months of Johnson's presidency. The Teacher Corps, designed to attract young people into service in ghetto or rural schools, for example, has been halfheartedly financed, despite some stout partisans in Congress. Perhaps more significant is the fate of two programs included in the ESEA. Gardner himself was an advocate of the creation of "supplementary educational centers" which would offer to students, in both public and private schools, programs and services not available in existing school systems in their areas, and which would draw on the resources of universities and educational and cultural institutions such as museums and libraries. Not all the returns are in, but critics claim that the centers are generally far less adventurous in their programs than the original planners hoped they would be. The same ESEA provided for the creation of regional centers for research in education. Research in education has produced results which have been rather less than brilliant despite substantial sums devoted to it since World War II (Science, 10 January 1969), and the regional labs were conceived as providing funds and a focus for research for a new breed of researchers. So far, neither organizationally nor in the quality of the research they are producing are the new labs living up to original hopes; like the supplementary education centers, they seem to have been captured by the regulars of the state departments of education and teacher-training institutions.

Facing Allen as he takes office, therefore, is the question of deciding how to foster innovation in a vast school complex which seems resistant to real change, in part because many of its units are so beset with basic problems of financing and staffing that resources required for successful innovation are simply not available.

It has been said that Allen's main job is to decide which New Frontier– Great Society programs to strengthen and which to kill or allow to wither. The job will be difficult, since almost all of the many new special-purpose programs have strong constituencies. But, even more to the point, it will be difficult to determine which programs are working and which are not, since many of the new programs are operating on a relative pittance; some

have received only planning funds. The Johnson educational revolution has been underfinanced. Appropriations for OE's educational programs amount to about half the sums authorized. For fiscal 1969, appropriations for OE amounted to about \$3.6 billion, while some \$6.8 billion was authorized. The largest single program, Title 1 of ESEA, designed to benefit disadvantaged children, got an authorization of \$2.2 billion but an appropriation of only \$1.1 billion. An even starker contrast is to be found in the funding of grants and loans for construction in the Higher Education Act. Nearly \$936 million was authorized, but only about \$216 million can be spent.

Older programs tend to be better financed. NDEA programs, for instance, do reasonably well. The Vietnam war squeeze doubtless helps to explain why Congress has shown itself willing to create new education programs almost casually, but then has shrunk from financing them adequately. Allen thus inherits a problem which only the early settlement of the Vietnam conflict is likely to solve.

Another limitation on Allen's power as chief wrangler in education is the fact that other federal agencies operate a multiplicity of education programs. The Atomic Energy Commission, National Aeronautics and Space Administration, and National Science Foundation finance various programs, most of which affect higher education; the Office of Economic Opportunity (OEO) and Labor Department operate a number of education and manpower training programs. The OE budget has never amounted to more than half the total federal funds spent on programs defined as education programs. Some consolidation appears to be in progress. The Upward Bound program has been moved from OEO into the HEW section handling programs for disadvantaged college students. The Head Start program for disadvantaged preschoolers seems destined to make the same passage to HEW.

Pluralism, however, is likely to remain the federal formula in education. Proposals that all education programs be concentrated in a cabinet-level Department of Education or Department of Education and Science have developed little momentum. There is probably a better chance, however, that the three main branches of the huge HEW conglomerate may each be given enhanced separate status, rather on the model of the Defense Department and

SCIENCE, VOL. 163