planning to intensify its work in this area. Unquestionably, it could have done a great deal more without explicit congressional approval; and it was, in fact, getting itself more involved in population matters. But foreign aid is perhaps the most badgered and downtrodden of all federal programs, and within the agency there was little enthusiasm for any venture that might multiply its congressional problems. A reported effect of this timidity was that AID's foreign missions have been slow to realize that the climate has changed at home. As one AID official put it recently, "Many of the people in the field have seen so many shifts in thinking about foreign aid that they are naturally afraid to get mixed up with anything that has long been so controversial as birth control." One result is that, although Washington-based officials have announced that this country would consider requests for population-control assistance, none has been forthcoming. The reason for this, according to AID officials, is that foreign governments, mindful of this country's longstanding sensitivities on the subject, automatically look elsewhere when they seek birth-control assistance-for example, to Sweden or to nongovernmental sources. And AID officials abroad apparently haven't put very much zest into convincing them that things are now different in Washington.

Hopefully, this will soon change, for AID headquarters is about to acquire its first full-time personnel for handling population problems. In addition, NIH is expanding work on fertility research which is of crucial importance, since the development of a cheap, highly effective, and easily accepted contraceptive would go a long way toward solving the problem.

In any case, the events of the past year have left such old-time campaigners as Planned Parenthood and the Population Reference Bureau happily stunned with success. After years of shouting in the wilderness, their industry and perseverance have paid off in a way that might be characterized as the "end of the beginning." In line with this, Robert Cook, head of the Population Reference Bureau, which is an invaluable collector and disseminator of population information, commented last week: "If three years ago, I had predicted that 1963 would turn out as it did, my friends would have told me that I was crazy and I would have had to agree with them."

-D. S. GREENBERG

Education Legislation: Deadlock on Vocational Education Broken; Landmark College Aid Bill Passed

Until Monday of last week it appeared entirely possible that the congressional leaders responsible for the fate of education legislation might snatch defeat from the jaws of victory.

Then, on 9 December, House and Senate conferees on a major vocational education bill emerged from a meeting to say that they had resolved differences which had kept the bill frozen in conference since the end of October.

The next day, by no coincidence, a college construction aid bill providing \$1.2 billion over 3 years, which had been in cold storage awaiting only Senate action, was brought to the floor and sent along to the White House by a thumping 54-to-27 majority.

On Thursday of last week the House passed, 300 to 65, the conference version of the vocational education bill, and the Senate followed suit on Friday by blessing the measure by an 82-to-4 vote.

Tacked onto the vocational education bill as amendments, and included in the final version, were a 1-year extension of the National Defense Education Act and a 2-year extension of the so-called impacted areas legislation, which provides federal payments of more than \$350 million a year to public school districts enrolling substantial numbers of children of federal employees. The extensions would carry both programs to July 1965.

Passage of the college aid bill, which provides the first general aid for higher education in U.S. history, is, without exaggeration, an epoch-making event for federal aid to education. Counted in with a medical education facilities bill enacted earlier in the session (Science, 3 May) and the vocational education act which is also an innovating bill, it completes a trio of measures which give the Kennedy-Johnson administration an unsurpassed mark in education legislation. Enactment of the three new laws also adds to the legislative record of the 88th Congress a luster it has conspicuously lacked.

Now that the college aid bill has been passed there is reason to speculate on whether the perils which the bill survived were real or apparent, but it is worth noting that a number of legislators closely concerned with the question were convinced, for a time at least, that the measure was in mortal danger.

Since both the college aid and the

vocational education bills had passed both House and Senate with sizable majorities and both enjoyed strong bipartisan support and firm administration backing, it might seem curious to the outsider that they should have mired down just short of final passage. Explanation of the impasse was to be found in differences between House and Senate versions of the vocational education bill, and less clearly—but equally importantly—in touchy House-Senate relations and a play of strong personalities which resulted in collisions of both pride and principle.

It is not easy to reconstruct the interrelated histories of the two education bills over the last two months—irritations and misunderstandings among conferees waxed and waned, and the assassination of President Kennedy and succession of President Johnson added a radical element to the situation—but it is of more than academic interest to try to recapture some of the essential points, since the same pressures and the same people will be involved in future debates over aid to education.

Attention in Congress began to focus on the education bill as October ended, because it was then recognized that work on the civil rights and tax bills could not be completed before Congress adjourned for Christmas and ended the session. Bills introduced in the first session of a Congress stay alive until the end of the second session, and the education bills could have been held over. But for the sake of the record, congressional leaders like to win a few secondary objectives before they lead their troops into winter quarters, and the education measures filled the bill.

In addition, it was becoming evident that time was running against the college aid bill. The active volcano of the church-state issue was rumbling and smoking again, and legislators close to the situation doubted that the bill could survive another eruption like the one in the summer of 1962.

In some ways legislative history seemed to be repeating itself. In the summer of '62 both houses of Congress had passed college aid bills and sent them to conference for a reconciliation of differences. The House opposed a provision in the Senate bill providing scholarship assistance for undergraduates, and the Senate was reluctant to authorize grants and loans for construction of academic facilities to private institutions as well as public colleges and universities. While the conference was in progress, the Supreme Court issued its decision against prayer in the classroom, and the resulting furor enveloped the college aid bill. Groups opposing aid to educational institutions operated by religious denominations put heavy pressure on Congress, and although the public-private distinction had not been invoked in most legislation affecting higher education before, college aid was consigned to election-year limbo and died with the session.

In early October of this year, however, the prospect for college aid seemed brighter than ever before. Both houses passed bills and the conference proceeded, without apparent serious difficulty, to thrash out a compromise version. The Senate dropped its insistence on a scholarship clause, which had been a perennial issue of dispute. A major compromise was also reached under which grants were made available to both public and private institutions but federal funds were to be used only for construction in certain "categories"-facilities for teaching science, engineering, mathematics, and foreign languages, and for libraries.

With the compromise fixed, the conferees reported out the college aid bill. It was promptly passed 285 to 92 by the House on 6 November. The Senate, however, busy with the foreign aid bill, took no action, and Senator Wayne Morse (D-Ore.), chairman of the education subcommittee of the Senate's Labor and Public Welfare Committee, let it be known that the college aid bill would not be brought to the floor until a satisfactory agreement had been reached by the conferees on the vocational education bill, strongly implying that he meant on Senate terms.

Differences between the conferees on the bill centered on the allocation formula by which funds were to be distributed to the states. The Senate version weighted distribution according to per capita income to aid poorer states, a so-called "equalization" formula, while the House version based distribution on population in relevant age groups.

The dispute had elements of the chronic city boy versus country boy conflict but the senators, including those from the more urbanized and populous states, hung together on the equalization principle, and a minority of the House conferees joined them.

Congresswoman Edith Green (D-Ore.), chairman of the House subcommittee which deals with higher education, author of the college aid bill, 20 DECEMBER 1963

College Aid Bill

The higher Education Facilities Act of 1963 authorizes \$1.2 billion in grants and loans over 3 years for constructing both public and private institutions of higher education.

Matching grants of \$230 million annually are earmarked for distribution to the states to build facilities for undergraduates. Of this, 22 percent, or \$50.6 million, is to go to public community colleges (junior colleges and public technical institutes). The major portion, about \$179.4 million, would go to institutions with regular 4-year programs. The federal government will pay up to a third of the cost of facilities for the latter institutions and up to 40 percent for public community colleges. In a second category, the Commissioner of Education is empowered to allocate \$145 million in grants over a 3-year period for new construction or improvements in graduate schools. In addition, long-term, low-interest loans, totaling \$120 million a year for 3 years, are authorized for building or rehabilitating undergraduate or graduate facilities.

Grants available for both public and private institutions are limited to financing structures designed for the teaching of physical and natural sciences, mathematics, engineering, and foreign languages, or for libraries. This proviso does not apply to funds for public community colleges.

and perhaps key House member of the conference through most of its deliberations, stoutly opposed the equalization formula. Mrs. Green feels that urgent employment problems in the big cities, the pressure of immigration from rural areas, and the higher costs of education in cities require that more funds flow into urban areas. A majority of the House conferees were similarly inclined.

Mrs. Green also preferred a more thorough overhaul of NDEA than was represented in the Senate bill, and wanted, in addition, a reexamination of impacted areas legislation along lines recommended by a House study group.

Behind the quid-pro-quo politics of the education bills was Senator Lister Hill (D-Ala.), chairman of the Senate Labor and Public Welfare Committee. Hill's position was no secret. He had voted against the college aid bill, and on the other hand, was known to be anxious to see the vocational education bill enacted. As the Senate author of NDEA in 1958, he had a proprietary interest in that as well. As committee chairman he could block progress of the college aid bill to the floor, and block it he did, indicating that when the conferees agreed on a satisfactory vocational education bill, the higher education bill would be turned loose.

The early meetings of the conferees on vocational education proceeded unpromisingly, and in the first weeks of November the pressure began to mount again from organizations opposed to federal aid to private educational institutions of any kind.

In mid-November, for example, legislators received a communication signed jointly by the presidents of the American Association of School Administrators, the Council of Chief State School Officers, and the Division of County and Intermediate Unit Superintendents of the National Education Association. The burden of the messages was that the associations believed that aid to private colleges and universities was unconstitutional and undermined the public and educational policies of the states as expressed in state constitutions and laws.

A similar, but much more broadly based, campaign in the summer of 1962 had contributed directly to the paralysis of action on the college aid bill. This time, significantly, the National Education Association itself took no action, thus adhering to a position at least implied in its support earlier this year of an omnibus education bill which contained a college aid feature similar to the one enacted.

Other associations identified with public education, such as the American Vocational Association, which is influential with Congress, and the National Parent-Teachers Association, also took no overt action in opposition this year.

In this period of uncertainty, some conferees concluded that the college

aid bill might be killed and the vocational education bill substantially delayed by the rise of the church-state issue.

Mrs. Green at one point said regretfully she felt college aid was dead. Representative Albert Quie (R-Minn.) was somewhat less pessimistic but observed, "If the higher education bill is killed this time, it's had it. The states and the universities better find ways to finance expansion because the federal government won't be able to do it in time."

Quie was referring to the population wave, which projections show will double enrollment in colleges and universities in this decade. Visions in Congress of these potential throngs in search of classroom space were among the factors impelling the legislators to find a way to resolve the differences over what had become an educationlegislation package deal.

Strong pressure was also coming from "impacted" public school districts. The federal program actually expired last June, and many districts were literally counting their federal money and spending it before it was hatched. More than 300 congressional districts are affected by the impacted areas legislation, so the pressures were considerable.

The NDEA is also a broadly popular act, affecting both schools and institutions of higher education. The act would have run out next June, and failure to extend it in the next few weeks would have seriously impeded planning for next year and prevented the award of fellowships in March, the normal time.

The provision extending the NDEA, incidentally, also embodies two major changes. Federal funds available for undergraduate loans are increased from \$90 million a year to \$125 million for this year and \$135 million for the next fiscal year. And the ceiling on loan funds for individual institutions is raised from \$250,000 to \$800,000.

President Kennedy's death obviously gave strong impetus to efforts to reconcile the House and Senate bills. Kennedy had, from the beginning of his administration, spoken eloquently and urged action in behalf of a number of federal programs benefitting education. With the single exception of the medical education facilities bill earlier this year, however, Congress had given him no major new education bills.

The college aid and vocational education bills are in a genuine sense posthumous Kennedy bills, although there is little question that some timely telephone calls by President Johnson, in the critical days when the conferees appeared to be deadlocking again, expedited matters.

A compromise proposal on the allocation formula in the vocational education bill by House Education and Labor Committee chairman Adam Clayton Powell on 9 December seems to have set the stage for the final truce and treaty.

House conferees accepted the equalization principle, but instead of the poorest state getting payments of three times as much per person as the richest state, with the other states ranged between, the ratio was compromised at 3 to 2.

The bill authorizes \$1.6 billion over the next 4 years in addition to vocational education measures which now cost about \$57 million a year. Most important, perhaps, the new bill provides new programs and a more flexible approach to problems in vocational education (*Science*, 14 June).

One thing that the recent action on education did not settle is the churchstate issue. A fairly strong effort, spearheaded by Senator Samuel J. Ervin (D–N.C.), was made in the Senate to attach amendments to the college aid bill (i) to deny grants and loans to educational institutions operated by religious denominations, and (ii) to enable any taxpayer to file a suit for judicial review of the constitutionality of any proposed grant or loan.

In the final debate on the college aid bill, Morse headed off a test on a judicial review clause with the explanation that hearings were coming up on a judicial review bill in the House Judiciary Committee and that he and Senator Joseph Clark (D-Pa.) and others were sponsoring a similar measure, which the Senate Judiciary Committee, on which Ervin serves, can take up.

The judicial review question, therefore, could be the next major embroilment for Congress in the area of education legislation. There remains, however, a disinclination in Congress to concede defeat on the problem by so baldly passing the buck to the courts. And among the strongest partisans on both sides of the church-state issue there seems to be a reluctance to force a decision, akin to that of two small boys in an argument who hesitate to press the issue to a showdown because each one feels he might lose.

—John Walsh

COMSAT: Private Satellite Firm Working Out Ties with Government; Basic Decisions Are Still Open

Not surprisingly, the man who turned out to be one of the most far-sighted participants in the 1962 debate on communications satellites was the vicepresident of Western Union, who predicted that if a private satellite company were to be established, "for an appreciable period of time it would sit on its hands." In the 11 months since its official incorporation last February, the Communications Satellite Corporation has not been exactly sitting on its hands, but it has been dealing with a host of backroom problems and organizational decisions of a very preliminary nature, and it is only now beginning to seek out the precise technical information on which the construction of its satellite system will rest.

The reasons for the slowness are not hard to discover. Trying to get a commercial satellite communications system going, one of COMSAT's incorporators told a congressional committee last spring, is like "being required to put in operation a world-wide airline the day that the Wright brothers invented their airplane." The experimental work in satellites done by the military and space agencies, and private industry, since 1958-the Advent, Telstar, Relay, and Syncom satellites-is a start, but only a start, in the direction of a commercially viable system. From the experimental work, it is known that a network of satellites, as reliable as undersea cables but accessible to all parts of the earth, capable of transmitting television as well as voice and telegraphic messages, and greatly increasing the number of channels open for simultaneous communication, is technically feasible. What is not known is how it can best be done and how the political and economic readjustments its existence will bring about can best be accommodated. Accordingly, the basic decisions facing COMSAT-how the corporation itself ought to be organized, what kind of satellite system to use, the relationship of the corporation to the U.S. government and to foreign governments-are all, within certain limits, still open.

The limits, for the most part, are the basic requirements laid down by Congress, which legislated COMSAT into existence in August 1962 as the U.S. participant in, and international mastermind of, a global satellite network. Both the nature of its job and the