kind of conservation legislation aimed at self-preservation.

Both air-pollution and water-pollution legislation was significantly strengthened. A "Clean Air Bill," in one of its major sections, directs the government to establish standards for controlling emission of pollutants by new-motor-vehicle engines and other machinery. In a second section it underwrites a program of research and development on better ways to dispose of solid wastes. The main new feature in the amendments to water-pollution legislation is the provision of federal water-quality standards for interstate streams.

Dry reservoirs and advances in the state of the art of desalinization gave impetus to an extension of the federal program for conversion of saline water and a hefty increase in funds (*Science*, 5 March).

A 4-year fight, overhung with the aroma of the pork barrel, ended early this year with a compromise agreement on the location of an environmental health facility. Federal bureaucrats had wanted to locate it in the Washington area. A three-way split was agreed on, with elements of the facility going to North Carolina, Ohio, and West Virginia (*Science*, 15 January).

This session also saw the birth of a new agency designed—according to President Johnson—to provide "a single national focus for our efforts to describe, understand and predict the state of the oceans, the state of the lower and upper atmosphere and the size and shape of the earth."

The Environmental Science Services Administration is a consolidation of two old-line science agencies, the Weather Bureau and the Coast and Geodetic Survey, plus the Central Radio Propagation Laboratory at Boulder, Colorado, all of them Department of Commerce subsidiaries.

Efforts to consolidate or at least coordinate far-flung federal science activities in general, however, did not make conspicuous progress this year. A perennial congressional effort to centralize control in the field of oceanography again went awry. Differing bills to provide a national oceanographic program passed House and Senate. The Senate measure called for creation of a cabinet-level National Council on Marine Science, Engineering and Resources, while the House version left this out. The differences are unresolved. Still another bill, backed by the White House, places with the President the responsibility for planning and carrying out oceanographic programs.

One new program which may be said to have risen phoenix-like from the congressional ash heap is the State Technical Services Act, designed to make the fruits of scientific and technological advances more readily available to business and industry. The new program provides $60 million in matching grants over 3 years to states which establish technical information programs to assist business in applying new developments and techniques. Congress earlier repudiated a broader program (known as the Civilian Industrial Technology) and seems to have accepted the new approach because it follows the familiar university-extension-service pattern.

The record of a Congress, of course, cannot be judged on the basis of legislation alone, and the present Congress has displayed considerable liveliness in exercising its investigatory powers in sectors that concern science.

The Daddario subcommittee of the House Science and Astronautics Committee turned its attention to particulars in the second year of its existence and examined the programs and the operation of the National Science Foundation. The tone of the hearings was far from hostile, but the subcommittee appears to have some recommendations for changes both in NSF's organic law and in the Foundation's administration. The hearings have been published, and a report is under preparation. It is expected that a bill embodying recommended changes in the NSF law will be put into the hopper at the beginning of the new session, and hearings will be held on that bill.

Another House space committee subcommittee, at the close of the session, issued a report highly critical of the conduct of the Surveyor soft-lander program; the Surveyor is to follow the Ranger series in unmanned exploration of the moon. A NASA oversight-subcommittee "Surveyor panel," headed by Representative Joseph E. Karth (D–Minn.), commented harshly on the role of NASA, the Jet Propulsion Laboratory (the project manager), and the Hughes Aircraft Company (the major contractor on the project). A similarly stinging report preceded changes in the management of the Ranger project, which had suffered a succession of failures until Ranger VI reversed the trend.

A House Government Operations subcommittee headed by Representative Henry S. Reuss (D–Wis.) examined federally sponsored research and education programs and came up with a report which showed some fairly serious debits as well as credits in estimates of the effects of federal programs on the universities (*Science*, 22 October).

Representative H. L. Fountain (D–N.C.), sometime scourge of the National Institutes of Health, shifted his sights to the Food and Drug Administration. The impact of his intergovernmental operations subcommittee's investigation of the safety of drugs on the market has been greater than some observers had anticipated.

The questions of patent-law and copyright-law reform, which have been under serious study for years, again did not quite come before the Congress for action. Drastic changes in both patent and copyright policy have been proposed, and Congress appears to be close to the point of decision on both matters. In each case, however, nothing like consensus has been achieved, and Congress may avoid—as it might like to in other matters—an election-year showdown.—JOHN WALSH

Speaker Ban (II): Controversial Law Endangers U.N.C.'s Standing; Move To Abolish It Expected Soon

Chapel Hill, N.C. Once written into law, North Carolina's ban against Communists' speaking on state campuses has been hard to get rid of, and so controversial as to hinder calm discussion. Even the legislator who introduced the "speaker-ban" bill, which was hurriedly passed without hearings in June of 1963, seems to have conceded that all of its consequences were not foreseen and that the manner of its enactment was imprudent.

The speaker ban, which poses an imminent threat to the University of North Carolina's accreditation, has become a rallying point for superpatriots and ultraconservatives. Moreover, a good many people who are neither patriotic zealots nor members of the John Birch Society find it hard to understand why a law banning Communist speakers from the campus should be repealed. And any legislator seeking to explain why may find himself exposed to right-wing attack.

When Governor Dan Moore began counting votes in the General Assembly

President Friday (on left) of the University of North Carolina addressing the speaker-ban commission.

last spring he found the legislators sharply divided and the prospects for abolishing the law in doubt. Even if successful, an effort to ram a repeal measure through the Assembly by a narrow vote could have created ill will for the university. Despite the heat of the speaker-ban controversy, U.N.C. thus far has been generally well treated on appropriations; one of the legislators most effective in getting money for the university is a leading proponent of the speaker ban.

The trick is to abolish the ban without incurring lasting resentment. U.N.C. will need all its friends against the time when new controversies arise. Potential problems lurk nearby. Alumni become annoyed at tighter admission standards that screen out many of their sons and daughters. The annoyance of these taxpayers is not lessened when they learn that nearly a third of the U.N.C. student body is from out of state. The university's own need for money continues to mount, yet lesser state institutions, such as East Carolina College, which now seeks to establish a 2-year medical school, are competing harder for available funds and sometimes envy U.N.C. its preeminent role. Such points of friction can always spark legislative battles.

Governor Moore took the most politic course that seemed open to him and had the General Assembly authorize the appointment of a commission to study the speaker ban (a law unique to North Carolina, although in recent years, or months, speaker-ban bills have been considered by the legislatures of Ohio, Florida, South Carolina, Georgia, New Hampshire, Virginia, and Alabama). The nine-member commission was duly created, the chairman and four other members being named by the Governor, and the remaining four by the Lieutenant Governor (who presides over the Senate) and the Speaker of the House. The appointments were generally well received, although some speaker-ban proponents regarded the commission as stacked against them.

The commission held 4 days of televised hearings in August and September, then withdrew from public view to prepare its report, which is expected within the next week. There has been an urgency about the commission's work because at the end of November the Southern Association of Colleges and Schools (SACS) is to review U.N.C.'s accreditation. University officials confidently await a commission recommendation that the speaker ban be abolished by an amendment which would permit the ban's proponents to make a graceful retreat. They believe the Governor will immediately call the Assembly into special session and urge that the commission's recommendation be carried out.

A Leftish Tinge

The speaker-ban hearings are believed to have produced a growing awareness that the ban is hurting U.N.C. and the state as a whole. Some of the early witnesses viewed the law almost as holy writ, however. A retired Army colonel who appeared as "chairman of Americanism" for Chapel Hill's American Legion Post indicated that, even with Communist speakers banned from the campus, an unsavory condition exists at U.N.C. "You could get students to tell you that to pass their work and get good grades they have to take a leftish tinge," the colonel said. This alarming charge was rebutted by later testimony indicating that a leader of the ultraconservative Young Americans for Freedom was graduated Phi Beta Kappa without ever having to renounce Barry Goldwater. Pro-speaker-ban witnesses accused the university of showing laxity in its oversight of student affairs by having allowed Communists to speak, though such appearances occurred infrequently before the ban and none have occurred since.

U.N.C. mounted a massive counter-offensive, which demonstrated that even in a state that is still provincial in many respects and beset by such divisive problems as racial integration, a university with a strong tradition is a formidable political force. University officials from the four campuses (Chapel Hill, Raleigh, Greensboro, and Charlotte) and prominent alumni appeared before the commission in strength. Some of the alumni were names to be reckoned with in state politics. Former governor Luther H. Hodges, who for 5 years was U.S. Secretary of Commerce, warned that, by hurting the university, the ban could hinder the state's economic growth. Vermont Royster, editor of the *Wall Street Journal*, came back to plead U.N.C.'s case. He said the speaker ban was futile, foolish, and bad. Long before the hearings began, nearly all of the North Carolina newspapers were denouncing the ban as contrary to the state's and the university's tradition. The hearings generated a new wave of editorial denunciations of the law.

The university officials were unsparing in their criticism of the speaker ban. President William Friday noted that, in encroaching on the trustees' authority to govern the university, the General Assembly was weakening a board whose members it elects. Paul F. Sharp, chancellor at Chapel Hill, described the unrest among the faculty caused by the threat to the university's independence. "We have already lost faculty members because of this act, and we expect an accelerated attrition if it remains in force," Sharp said.

He said that, in resigning, a faculty member in the School of Medicine had written: "I am sorely disturbed that in the enlightened state of North Carolina the university has become subject to political whims. In the past the university has derived great strength from its relative independence from outside controls. To see this crumble is a bitter disappointment."

The chancellor said that, like the universities of Mississippi and Alabama,

U.N.C. was "increasingly in the national eye as a 'raidable' institution." Moreover, the recruitment of new faculty is being hampered, Sharp added. For example, a Harvard professor in computer science declined U.N.C.'s offer, accepting one from Cornell instead; in doing so, he mentioned "fears . . . of the environment in North Carolina" and the university's possible loss of accreditation.

Many witnesses who appeared before the commission underscored the harm that would come to the university and to other state institutions from disaccreditation, while a few minimized it. Some speaker-ban proponents have suggested that state accreditation alone is all that is needed. But Frank G. Dickey, executive director of the National Commission on Accrediting, indicated that state accreditation programs are most useful when they are coordinated closely with the activities of a regional accrediting association. "This kind of state accreditation . . . is totally different from the concept of 'state accreditation only,' which can hang like an ivy curtain thick enough to bar the entry into the classrooms of all ideas and people except those deemed worthy by the power center of the individual state," said Dickey.

A Downward Spiral

Disaccreditation marks, not a frozen situation, but a deteriorating one. It is a formal declaration that a deplorable condition exists; the fact of the declaration itself may hasten an institution's decline, but it is by no means the sole or even necessarily the principal cause of it. Indeed, many of the ablest members of the faculty may well leave, whether or not disaccreditation occurs, and, as a result, the most promising young Ph.D.'s and graduate students become harder to recruit. Disaccreditation symbolizes and accelerates a downward spiral of events.

Even the direct and immediate effects of being disaccredited (probably after a period of probation) are likely to be bad. Some time ago the National Commission on Accrediting asked the professional associations that accredit various programs within universities what action they would take if an institution were disaccredited by a regional accrediting body. Of the 23 responding, three (including one for engineering) said they would immediately drop the institution from their own "accredited" list, while nine said the situation would call for an automatic review, with removal of accreditation likely; the others said either that a review was probable or that their existing regulations were not definitive enough to show what they would do.

One of the most disturbing early results of disaccreditation might be the loss of federal grants-in-aid. U.N.C. and the other state institutions of higher education in North Carolina expect to receive at least $83 million in federal grants and contracts during the 2-year period ending 30 June 1967; $43 million is to come through programs sponsored by the Department of Health, Education, and Welfare. The U.S. Office of Education has said loss of accreditation would raise "serious questions" as to an institution's eligibility to participate in its programs. The National Institutes of Health has stated that its training grants are made only to institutions on "accredited lists."

The flow of federal funds would not stop immediately, as many research grants and contracts are awarded primarily on the merit of particular proposals and the competence of the investigators. This is the policy, for example, of the National Science Foundation and the National Aeronautics and Space Administration.

Course credits earned by a student at an unaccredited university often are not accepted by other institutions without achievement testing. The importance of this could be overstressed, however. The responses of a number of universities to a poll made by one of the advocates of the speaker ban indicated that applicants for graduate work are usually evaluated largely on their own merit, which, of course, in part reflects the quality of their undergraduate training.

Northwestern University said: "When students approach us from an unaccredited college, we require them to present other evidence of ability than the transcript provides, and I suspect that nothing more than the graduate record examination would be required from North Carolina students if . . . accreditation is dropped. This is no severe penalty inasmuch as virtually all students approaching graduate schools today present the results of the examination."

Massachusetts Institute of Technology replied: "If a college or university were to lose its accreditation because of the low quality of its courses or facilities, this would of course cast a reflection on those of its students who applied for graduate study . . . [But] we have learned to have a high regard for the graduates of the University of North Carolina, and I do not believe we would think any less of them if the University lost its accreditation for the reason you mentioned. Our general practice is to consider all our applicants for admission on their individual merits. . . . In short, we are choosing students, not institutions."

It would appear that if disaccreditation resulted from the speaker ban, U.N.C.'s next few graduating classes would suffer less than later classes. The long-run prospects would be inferior instruction from a weaker faculty, a declining reputation for the university, and more difficulty for students seeking to enter the best graduate schools.

(A decline of U.N.C.'s own graduate programs would be the undoing of the 50 years' work that has gone into building them. An evaluation of graduate programs to be published early next year by the American Council on Education will rate U.N.C., along with Duke and the University of Texas, as the best in the South and among the leading 30 universities in the United States. Allan M. Cartter, who has conducted the study for the Council, says that in the "breadth and diversity" of its programs U.N.C. is probably the South's strongest university. However, the departmental ratings for U.N.C. referred to in this space last week were based only on the number of Ph.D.'s awarded from 1953 to 1962, and not on an overall evaluation of program quality, as *Science* and an earlier newspaper account of the Council's study had reported.)

Exchanges Curtailed

Quite aside from raising the threat of disaccreditation and hurting faculty morale, the speaker ban has interfered seriously with the conduct of academic life. The study commission was told, for example, that U.N.C.'s participation in international exchange programs has had to be curtailed. The National Academy of Sciences, in arranging exchanges of scientists between the United States and the Soviet Union, has told institutions that nominate professors for visits to Russia to be prepared to be host to Russian scientists. U.N.C. finds such terms difficult to reconcile with the speaker ban.

Also, the university has been embarrassed at having to inquire into the

political backgrounds of distinguished scientists before inviting them to the campus. The late J. B. S. Haldane, a world-renowned geneticist and statistician, was invited to speak in 1963, but because he had once written for the London *Daily Worker* the university felt compelled to ask him if he were a Communist. Haldane indignantly refused to answer and substituted appearances at two other leading universities on the dates he would have visited U.N.C. He later said he was not, and had never been, a member of the Communist Party.

Faculty members disturbed by the Haldane incident included those in the department of statistics. George E. Nicholson, the chairman, wondered how many more such incidents it would take to wreck his department. "If you cannot exchange scientific information freely you are not going to be able to retain your people," he told *Science* last month. The incident was on Nicholson's mind early this past summer when the question arose as to whether, under the speaker ban, it would be permissible to invite to the campus V. V. Petrov of Leningrad State University, who has done important work in probability theory.

Russian Invited

Nicholson decided that, if at all possible, he would bring Petrov to U.N.C., ban or no ban. "We have a classified contract here, so I checked with the security office in the Pentagon," he said. "I was told that Petrov was not known to be a member of the Communist Party." Petrov was invited, and duly appeared. "This [episode] was degrading to me," Nicholson observed. "This is a dignified department, not one where you go through such contortions. This is the kind of thing that happens in Russia."

The evidence against the speaker ban is so massive that the study commission would seem to have little choice except to recommend the ban's repeal. The commission is expected to propose an amendment restoring to the U.N.C. trustees the ultimate authority to decide who shall speak at the university; such an amendment might contain cautionary language to encourage close university supervision of any occasions on which Communist speakers appear.

Newspaper polls have indicated that such a proposal would be favored by a majority of the members of the Assembly. A possible complication, however, is a pending legislative reapportionment suit, scheduled for a hearing in federal court on 24 November. University officials hope that by then the General Assembly will have met in special session and abolished the speaker ban. If the Assembly does not act before the court rules on reapportionment, it is conceivable, though perhaps unlikely, that no action on the speaker ban would be permitted until after the state is redistricted and the legislators have stood for reelection.

Another word of caution may be in order, however. Some legislators say that the wave of protests across the country against the Vietnam war reinforces their argument for the speaker ban. Chapel Hill has been quiet during the demonstrations, but 18 members of the university's Student Peace Union recently were escorted off the reservation at Fort Bragg. This minor incident received little public notice, but something noisier and more dramatic could produce a reaction hurtful to the cause of speaker-ban repeal.

Perhaps the worst thing that could happen would be paralysis of the Assembly through a combination of latent fears and unfavorable circumstances. In such a situation, a proposal to submit the speaker-ban issue to a popular referendum could gain favor. Although some legislators have talked of a referendum, no sign of a concerted effort in this direction has appeared.

To soften opposition to speaker-ban repeal, President Friday has indicated that the university is willing to adopt a policy encouraging its chancellors, at their discretion, to require (i) that a senior faculty member preside over a meeting; (ii) that the speaker be subject to questioning by the audience; and (iii) that opposing viewpoints be presented by other speakers, at the same meeting or later.

But the speaker ban poses a fundamental issue difficult to compromise. According to Friday, any proposal to shift the responsibility for banning speakers from the legislature to the U.N.C. trustees or administrative officials will be opposed. Thus far, all groups within the university—students, faculty, administrators, and trustees—have stood solidly against the speaker ban. University officials are aware that this unanimity could be shattered if they, replacing the legislators, became the censor. The speaker ban imposed years ago by the trustees at Ohio State University, and only recently removed, had O.S.U. wracked by dissension.

Failure to eliminate the speaker ban could result in organized student protests by the end of the year. Students are highly conscious of the ban. The petitioners now demanding a recall election for the student government's president, who was reprimanded by a student judiciary council last summer for having taken a girl into a closed fraternity house, denounce him for embarrassing the university at a time of crisis. He, in turn, tells of plans to have student speakers go out into the state and talk against the ban. He says he has restrained some students eager to demonstrate.

Students have been seriously discussing the possibility of bringing a test case against the ban in federal court. The law, which proscribes speeches by persons who have pleaded the Fifth Amendment in loyalty investigations as well as "known communists," is considered of the most dubious constitutionality. But a court ruling against the speaker ban could leave the General Assembly and the university at loggerheads. For that reason, U.N.C. officials regard legal action as a poor alternative to repeal by the legislature.

The ban was established by a hasty political act that stirred controversy and produced an unforeseen crisis. Believing that political actions are best undone by politicians, the university looks to the legislators to remove the speaker ban and resolve the crisis they created.—LUTHER J. CARTER

Regional Pacts: Cooperation Flourishes in Higher Education

There was a time when American colleges and universities jealously guarded their autonomy and shunned any suggestion that they might benefit by sharing facilities, faculty, or programs. But by the 1920's, financial considerations began to impinge seriously upon this desire for independence. Demands for extending and improving the quality and scope of instruction drew attention to the importance of economy, and cooperation among institutions was seen as the most readily available means of meeting these objectives. Before that, informal conferences of administrators had been taking place for many years, but the representative college presidents had never been especially anxious to put collective efforts before independent interests. Some informal,