

disclaimed any intention of conferring degrees itself, its charter allowed it the option of doing so. This gave rise to suspicion about the center's ultimate ambitions and no doubt made some university professors in the area less than eager to lend themselves and their students to Berkner's grand design.

Even so, according to a SCAS spokesman, the center's slow progress in the field of graduate education has been due primarily to the fact that institutions in the area simply have not had the financial resources to join with it in large Ph.D. programs. S.M.U. and T.C.U., for example, have rather modest endowments, even though they are the most prominent private institutions in an area abounding with millionaires. In fact, some people at these institutions have regarded SCAS as an unwelcome competitor for the favors of Jonsson and others willing to bestow large sums of money on higher education.

Now, however, SCAS stands at a new juncture. If the University of Texas does take over the center, as the state Coordinating Board has recom-

mended, this will make SCAS somewhat less dependent on private philanthropy and will ease its financial worries. Furthermore, the Coordinating Board has indicated that it will take into account the resources at SCAS before approving new Ph.D. programs at other state institutions in the area, such as the University of Texas at Arlington (U.T.A.), which at the moment offers no degree beyond the masters. This should mean that in fields where SCAS is strong, such as space science and molecular biology, joint Ph.D. programs between it and other public institutions will develop as a matter of course. And, if the state should begin subsidizing private institutions, which seems not unlikely, the Coordinating Board may be in a strong position to encourage these institutions to enter into joint programs with SCAS where appropriate.

SCAS does, it appears, have a fair chance of being taken into the University of Texas system, for, after some travail, Dallas and Ft. Worth business and political leaders, as well as SCAS and the Texas regents, have agreed to

recommend that this be done. However, Dallas and Ft. Worth have a history of rivalry, and agreements between them over regional facilities tend to be precarious. The proposal to bring SCAS into the university system was part of a package which, among other things, called for development of U.T.A. to proceed without predetermined limits as to size and graduate programs. But the Coordinating Board is insisting upon such limits, and this, especially, raises the possibility at least that the Dallas-Ft. Worth agreement on SCAS might come undone.

For their part, the Texas regents and the SCAS leadership see SCAS as the "base upon which to build a great new academic institution to be known as the University of Texas at Dallas." The Coordinating Board looks with no favor on this idea, but the regents and the Dallas leaders will be trying hard next year to sell it to the legislature.

Thus, with luck, SCAS may be on the way to becoming, in one form or another, what Berkner had envisaged—a major graduate research center of the Southwest.—LUTHER J. CARTER

Narcotics and Drug Abuse: The Federal Response

No clearer sign of the changing parameters of the "drug problem" in the United States can be found than the consolidation last spring of the two federal agencies primarily responsible for the enforcement of federal laws on narcotics and dangerous drugs, the Bureau of Narcotics in the Treasury Department and the Bureau of Drug Abuse Control (BDAC) in the Department of Health, Education, and Welfare. The Bureau of Narcotics enforced laws covering hard narcotics, such as heroin and cocaine, and marihuana. BDAC had authority over psychotoxic drugs such as the barbiturates and amphetamines and most hallucinogenics, including LSD. The terms of the merger put the new agency, the Bureau of Narcotics and Dangerous Drugs, in the Department of Justice.

The main official argument for unification was that agents of one agency, in making seizures, increasingly turned up drugs over which they had no juris-

diction. But a contributing motive seems to have been that illegal use of marihuana was becoming a runaway problem with which the Bureau of Narcotics, which had no research authority, was poorly equipped to deal.

Until recently, use of marihuana, like that of hard narcotics, had been mainly confined to large cities, particularly to ghetto minority groups. The narcotics trade was profitably monopolized by organized crime. The Bureau of Narcotics concentrated on efforts to control the flow of narcotics by cracking down on the traffickers. The bureau's philosophy of deterrence was based on heavy prison sentences. Critics of the bureau argued that legislation made too little distinction between sellers, who were often career criminals, and users, who were typically the urban poor.

With the expanded use of barbiturates and amphetamines and the discovery of marihuana and other halluci-

nogenic drugs by the middle class, the enforcement problem diffused. All over the country, local law enforcement agencies with campuses and white-collar enclaves in their territories are finding themselves with drug problems. And the stereotypes of drug users and "pushers" have changed. When the LSD users are the sons and daughters of the middle-class and the pusher turns out to be a bright chemistry major, the result, almost inevitably, is a double standard in crime and punishment.

Over the years, the Bureau of Narcotics and its approach to narcotics had strong support in Congress, compounded of admiration for the narcotics agent's daring undercover exploits and agreement with the bureau's punitive approach to the drug problem.

In this decade, however, Congress has taken note of the growing complexities of the drug scene in the United States and has begun to make adjustments. In 1965, after ignoring the issue for a number of years, Congress passed the Drug Abuse Control Amendments (*Science*, 27 August 1965) urged on it by Senator Thomas Dodd (D-Conn.), which greatly extended federal controls on the manufacture, distribution, and sales of "soft" drugs such as barbiturates and amphetamines and of the

hallucinogenics. As it happened, the legislation was out of date before it went into effect because of what one ex-BDAC official calls the "hallucinogenic explosion"—that is, the LSD vogue and the snowballing use of marijuana.

In a period when the Hippie subculture flowered and a growing number of young people have sought to define their "alienation" in confrontations such as those at Columbia, Chicago, and now San Francisco, drugs have taken on an antiestablishment, anti-authority significance. For a generation who differ with their elders on both values and vices, the use of soft drugs has been elevated by some to a criticism of society.

As public men, members of Congress are self-conscious epitomes of the "straight" society, but as legislators they have shown a mixed reaction to what has been happening in the expanding drug community.

In 1966 Congress left a modest landmark when it enacted the Narcotic Addict Rehabilitation Act, which, for the first time in federal legislation, treated narcotic addiction as a disease rather than as a crime. The key section of the law was a "civil commitment" provision which allowed young narcotics offenders the option of treatment and rehabilitation therapy in place of a prison term.



John E. Ingersoll

In other significant drug legislation Congress this year followed an administration recommendation by stiffening penalties for illegal manufacture and sale of stimulant, depressant, and hallucinogenic drugs and also by providing criminal penalties for illegal possession of such drugs. Possession had not been a punishable offense under the original Drug Abuse Control Amendments of 1965, as it is under laws on hard narcotics. The House Interstate and Foreign Commerce Committee, which reported the bill, noted its opposition to making possession a criminal offense, on the grounds of

the effects of arrest, prosecution, and criminal records on young offenders. The committee reported that it had decided to impose criminal penalties primarily "as a tool to aid in the enforcement of prohibitions against trafficking." It made illegal possession a misdemeanor punishable by a \$1000 fine or up to one year's imprisonment, or both, for the first and second offense and a \$10,000 fine or up to 3 years in prison, or both, for subsequent offenses.

The committee did, however, give courts the option of placing first offenders on probation and of setting aside the convictions of those who did not violate probation, so that they would not be left with a criminal record.

Congress thus followed the dominant punitive theme in federal drug legislation, but did give authorities greater flexibility in handling persons charged simply with possession rather than with illegal manufacture or sale of drugs.

Congressional assent to the creation of the narcotics and dangerous-drug control agencies also revealed a new adaptability. Merger had been urged as long ago as 1949 by the Hoover Commission and was a main recommendation of the Presidential Advisory Commission on Narcotics and Drug Abuse (*Science*, 14 February 1964) but was written off as a reformers' pipe dream on the assumption that the Bureau of Narcotics and its congressional champions would reject consolidation.

The atmosphere has altered, however, in 5 years. The impetus toward merger seems to have come from a legislative task force last year, and early this year President Johnson called for merger. An original proposal to move the Bureau of Narcotics from the Treasury Department into the Food and Drug Administration, with BDAC in HEW, might well have run into trouble, and the marriage contract was probably assured when James L. Goddard, who was FDA commissioner at the time, and others urged that the new agency be lodged in the Justice Department. Not only was Justice neutral ground departmentally, but also is the government's chief enforcement agency, and this reassured those who suspected a move toward "liberalization."

An oblique legislative approach was chosen in the form of a Presidential reorganization plan which would go into effect if Congress did not act negatively

Science Policy Study Group Formed

A study group has been formed to serve the interests of universities with programs in science and public policy. The Science and Public Policy Studies Group is based temporarily at M.I.T. and chaired by Eugene Skolnikoff, head of M.I.T.'s science and public policy program. The purpose of the study group is to serve as a clearing house for information, to organize symposia and conferences of interest to those in the field, to discuss academic curricula, to exchange experiences, and to develop priorities in public policy issues involving science.

The study group was organized by Skolnikoff, Christopher Wright of Columbia, Norman Kaplan of George Washington, Brewster Denny of the University of Washington, Howard Lewis of the National Academy of Sciences, and Robert Kreidler of the Alfred P. Sloan Foundation. The idea for the study group generated from the discussions at last year's annual meeting of the AAAS in New York.

Skolnikoff told *Science* that any university with an active teaching and research program in science and public policy would be eligible for affiliation with the study group, which already has some 50 university affiliates. He said that the estimated \$20,000 needed to meet study group expenses during the first 2 years has been assured through contributions from a number of universities and a matching grant from the Alfred P. Sloan Foundation. The first study group conference will be held in conjunction with the AAAS meeting in Dallas this month.—M.M.

on the proposal. Officials from all the agencies involved—including Bureau of Narcotics commissioner Henry L. Giordano—presented a united front in favor of the merger at hearings, and when the matter did come to a vote in the House it survived by a narrow ten-vote margin.

Not surprisingly, in view of bureaucratic sensitivities, neither Giordano nor John H. Finlator, director of BDAC, were given the top job in the merged agency. Named director of the new Bureau of Narcotics and Dangerous Drugs in July was John Edward Ingersoll, former police chief of Charlotte, North Carolina, and executive director of the International Association of Chiefs of Police. Ingersoll, 38, has an A.B. in criminology from Berkeley and has had 2 years of graduate study in public administration. So far he has avoided the limelight and seems to have moved cautiously in integrating the hierarchies of the two agencies. Giordano and Finlator are associate directors. The Bureau of Narcotics was the elder agency, and its hierarchy seems to have had more seniority and higher civil service ratings than the BDAC counterparts. Consequently, the Bureau of Narcotics may have an edge in headquarters jobs, but BDAC men appear to hold rather more of the top regional jobs.

Before merger, each agency had about 300 agents, and the new bureau is authorized to increase the 600 total by a third. About 100 new agents have been in training, in an 8-week course, recently increased from 6 weeks.

The new bureau has a drug sciences division transferred from BDAC, and a doubling of the division's strength should help it perform its assignment of gaining knowledge of the chemical structure and effects on humans of dangerous drugs.

The division is involved in the control process, and its functions include identification of suspicious substances and a role in determining a drug's potential for abuse. Its interests also extend to such matters as the behavior of drug users and the sociology of the drug community.

Currently the division has 11 professionals and is headed by a clinical psychologist, Jean Paul Smith. These professionals, whose expertise ranges from pharmacology and chemistry to the social sciences (the division has recently added its first physician to the staff) do not function as basic researchers. Most jobs of analysis and identification are done under contract, and mem-

NEWS IN BRIEF

● CANADIAN SCIENCE POLICY:

The Canadian government intends to remove a source of ambiguity in its science policy apparatus by giving its Science Council a staff of its own. The Science Council, a body comparable to the President's Science Advisory Committee (PSAC) in the United States, has shared the science secretariat of the Office of the Privy Council, which corresponds to the U.S. cabinet. Critics have suggested that involvement of the secretariat in both science advisory and actual planning activities places the staff in an ambiguous position (see *Science*, 2 August). Present plans call for the staff to be split and for staff members to work for only one organization.

● ALVIN MUST WAIT:

Recovery operations for *Alvin*, the tiny Woods Hole research submarine, which sank earlier this fall in 4500 feet of water 120 miles south of Cape Cod, have been postponed indefinitely because of continuing high seas and bad weather. Woods Hole officials say that gale winds and rough water foiled attempts to use the DOWB recovery vessel. Scientists say that no new attempts to recover *Alvin* will be made until spring.

● OIL SPILL ACTION:

A federal interagency advisory committee on oil spills has been established to coordinate the mobilization of equipment and manpower at national and regional levels to deal with emergencies, similar to last year's *Torrey Canyon* incident. Administration sources indicated that the President's decision to establish a committee on oil spills resulted from the failure by Congress last session to pass a strong water-pollution measure. The national center for action on oil spills will be operated by the U.S. Coast Guard.

● PNEUMONIA VACCINE:

A vaccine for bacterial pneumonia is being developed by the National Institutes of Health (NIH) in an effort to cut down on the 15,000 to 25,000 deaths per year resulting from pneumonia. Antibiotics have been used to cut the number of deaths by pneumonia, but NIH officials say that antibiotics are only effective in cases where they are administered before the disease reaches advanced stages. The new vaccine will serve as a preventive; it will be given primarily to the high-risk groups—the

aged and chronically ill. NIH plans call for studies to determine which of 12 different bacterial pneumonia strains are most prevalent. The strains will be tested in an effort to prepare a single polyvalent vaccine effective against those strains that cause the most illness. NIH officials estimate the entire pneumonia vaccine developmental program will cost about \$500,000. Pneumonia, together with influenza, ranks fifth among the leading causes of death in the United States.

● STIPENDS TO CUBA:

U.S. academic research in Cuba, severely restricted since Fidel Castro came to power in 1959, may be expanded in the coming year. Noting an "increased willingness" by Cuban authorities to allow academic exchanges with the United States, the Ford Foundation announced a total of \$125,000 in full grants for research in Cuba, including travel expenses, and a number of short-term awards, for scholars who can obtain approval for their studies from the Cuban government and the U.S. State Department. The grants are open to scholars in all disciplines, particularly in the agricultural and social sciences, and in education. The State Department denied any noticeable increased willingness on the part of Cuban authorities to cooperate with U.S. academic exchange proposals.

● MIAMI SCIENCES GIFT:

A gift of \$12 million to the University of Miami—the largest single gift in its 43-year history—has been provided by Lewis Rosenstiel, retiring chairman of Schenley Industries Corporation; the gift will be used for continuing programs at Miami's Institute of Marine Sciences and for construction of a medical sciences building. Earlier this year, Rosenstiel announced a \$19-million gift to Brandeis University for a medical center.

● NEW PUBLICATIONS:

Government Patent Policy Study, Final Report, Vol. 1, which contains the main findings of an 18-month study prepared by Harbridge House, Inc. for the Federal Council for Science and Technology, may be obtained for 50 cents from the Superintendent of Documents, Government Printing Office, Washington, D.C. Volumes 2-4, which contain supplementary data, will be available soon.

bers of the drug sciences division act as contract officers and serve generally as the bureau's contact with the scientific community. Basic research devolves mainly on the National Institutes of Mental Health. NIMH had established a link with BDAC under a memorandum of understanding which is now being renegotiated. (This alliance and expanding NIMH research on marihuana will be the subject of a later article.)

During hearings on the reorganization plan, members of Congress expressed misgivings about possible loss of a solid science base when the new agency was lodged in the Justice Department. BDAC veterans apparently have been reassured by the attitude of Justice officials, particularly of Attorney General Ramsey Clark, who, one such veteran observed, has been "very solicitous of the science and education side of the house."

The impending change in administration, however, seems to have created even more than the usual quadrennial

uncertainty in the new agency. During his campaign, president-elect Richard Nixon promised sterner measures in dealing with the drug problem, and many in the bureau are wondering what is coming under a new Attorney General, because, as one man in the bureau said of Nixon, "He talked as if he didn't know we existed."

Outside the bureau there is some apprehension about a proposed "omnibus" drug law being worked on in Justice. The bill would unify and presumably rationalize the dual structure of narcotics and dangerous-drug legislation. Reportedly the new bill would grade drugs into categories on the basis of their dangers and provide penalties accordingly.

The draft omnibus bill, however, is already being called the "ominous" bill by some researchers who feel that a traditional enforcement approach may so dominate the bill that the law may present an obstacle to use of drugs in research and treatment. The bill is not nearly in final form, but there will

obviously be some active lobbying by scientists and physicians, many of whom feel that the stringencies of the Harrison Act and other narcotics laws scared the scientific community away from research on narcotics at a social cost which is only now being appreciated,

—JOHN WALSH

RECENT DEATHS

Bushrod W. Allin, 69; former chairman of the department of economics in the U.S. Department of Agriculture graduate school; 18 November.

Millicent T. Bingham, 88; a geographer and conservationist who devoted her life to writing, and to the preservation of wildlife; 1 December.

William L. Dolley, 81; emeritus professor of biology at the University of Buffalo; 6 November.

Ellsworth P. Killip, 78; retired head curator of the Smithsonian Institution's botany department; 21 November.

William D. Lotspeich, 48; executive secretary-designate of the American Friends Service Committee and former chairman of the department of physiology at the University of Rochester School of Medicine and Dentistry; 28 November.

George H. Nelson, 46; a microbiologist and staff assistant to the division chief in the technical information division at Fort Detrick; 28 November.

Alvin V. Pershing, 68; former professor of physics at Oklahoma State University and associate of Lockheed Missile & Space Division; 17 November.

Erwin J. Raisz, 75; authority on cartography and former visiting professor at Clark University, the University of Virginia, and the University of British Columbia; 1 December.

Allan E. Settle, 53; director of public relations for the Manufacturing Chemists Association; 27 November.

Mary L. Sherrill, 80; professor emerita of chemistry at Mount Holyoke College; 27 October.

Amos M. Showalter, 76; professor of biology at Madison College; 11 November.

Paul A. Siple, 59; former science adviser in the Office of the Chief of Research and Development, Department of the Army, and noted polar explorer and geographer; 25 November.

William M. Wallace, 56; director of the department of pediatrics, Case Western Reserve University; 9 November.

Ground Broken at Batavia (Weston)

Ground-breaking ceremonies for the first research building for the projected \$250-million 200-Bev proton accelerator near Batavia, Ill., were held on schedule on 1 December. However, the undertaking will have to operate this year on a considerably smaller budget than its partisans had hoped for.

Government officials say that the Atomic Energy Commission (AEC) had originally wanted \$75 million for construction in fiscal year 1969. After some persuasion by the administration, AEC requested \$25 million for 1969, but Congress gave them about half—\$12 million—plus authorization to spend a 1968 carryover of \$2.5 million.

While AEC officials say the cutbacks this year "are not severe" and that plans for the national accelerator laboratory "are on schedule," administration sources say that the AEC will need a much larger appropriation in fiscal 1970 if it hopes to maintain its schedule, which calls for the completion of the entire laboratory by mid-1973. An appropriation near \$100 million next year is hoped for.

The name of the laboratory, which is located about 30 miles west of Chicago, near Batavia, Ill., has been changed from the Weston Accelerator to the National Accelerator Laboratory near Batavia. The official reason is that there is no longer a community of Weston, since AEC administration offices now occupy many of the buildings in the community. The name Weston may also have been expendable because it carries a reminder of the competition over choice of the accelerator site and of a civil rights furor over a lack of open housing in the area.

The first new building will house the 500-foot linear accelerator (LINAC) which will give protons a boost in energy to 200-million electron volts in the accelerator system; it is expected to be completed in about 14 months. Unless funds are seriously curtailed, AEC officials hope to have the whole accelerator in operation by mid-1972.

The National Accelerator Laboratory will be administered by the AEC and operated by the Universities Research Association, which includes 48 member universities.—MARTI MUELLER