

is known to warrant any effort to discourage smoking. In what now must be regarded as a successful effort to head off government action against their advertising, the manufacturers have set up their own policing program and have agreed to discontinue advertising that might be construed as luring young people to smoke. But while taking these measures, they have all along been feeding the public's hope that the Surgeon General's report was scientifically erroneous. Platoons of public relations men have seen to it that the public is quickly apprised of the views of any scientist who dissents from the Surgeon General's report, and when the two congressional committees held their hearings, a long parade of scientific witnesses left the legislators with the impression that there is no more evidence against tobacco than there is against tomato soup.

The question of the social responsibility of the scientific community in such matters is an extremely difficult one. Clearly there are genuine differences of opinion among competent researchers, and the scientific case against tobacco is by no means airtight. But at the same time it must be acknowledged that the evidence against tobacco is extremely weighty, and since the health hazards seem to be so great, the issue boils down to just how much evidence is required before effective steps can be taken to discourage the public from indulging in a pleasurable danger. As science and technology impinge more and more on society, an increasing number of scientists are feeling uneasy about the social effects of their work. And various organizational efforts have been made, such as the committees for nuclear information, to provide a forum for scientists to interpret science for the general public. In a sense the Surgeon General's committee was such a device, but its findings, respectable as they may be, do not stand much of a chance in competition with a \$7-billion industry. Some may feel that the solution lies in better scientific education of the public, so that it will be capable of judging conflicting scientific claims. It is impossible to argue against this goal, but a review of the scientific testimony before the congressional committees suggests that the offense holds a mighty advantage over the defense, and it is going to require a vast amount of education to give the public a fighting chance.

—D. S. GREENBERG

Slicing the Pie: Russian Argues Astronomy in U.S.S.R. Is Neglected While Nuclear Physics Prospers

It isn't only within the American scientific community that covetous looks are being cast upon the seemingly plump budgets of high-energy physics.

According to the *New York Times*, Soviet astronomers, dissatisfied with support for their work, have assailed the financial priority given to nuclear accelerators. And, as is the case in this country, the nuclear physicists have replied that their discipline is on the brink of great and far-reaching discoveries.

The debate, the *Times* reports, is revealed in a recent issue of the Bulletin (*Vestnik*) of the Soviet Academy of Science. It appears that at a meeting of the presidium of the Academy, Lev A. Artsimovich, a physicist, stated that the United States had more large telescopes than the Soviet Union: he charged that the importance of astronomy was being undervalued in the Soviet Union, while unduly generous support was being given to high-energy physics. "At the present time," he was quoted as saying, "expenditures on astronomical work in our country are no more than a few percent of the investments in elementary particle physics. Our progeny will probably be surprised that we divided in such strange proportions the efforts directed to investigate the great world of stars and the artificial world of elementary interactions."

Artsimovich's attack was replied to by V. I. Veksler, a Soviet leader in nuclear physics. Veksler defended the appropriations for high-energy physics and was reported as saying that the field is "on the threshold of a fundamental revolution."

Among laymen and nonparticle scientists, the controversy will undoubtedly stir up the question of whether the U.S. and the Soviets should share the cost of one of the great new accelerators now under consideration in both countries. The subject, it appears, has been touched upon at international meetings, but it seems that neither the Soviets nor the Americans are particularly warm toward the idea. The reasons aren't hard to see. American physicists have had enough of a problem working out the details of sharing U.S. accelerators with each other, and aren't anxious to complicate the matter by bringing the Russians into the pic-

ture. Whether the Russians have similar problems isn't clear, but in both countries, it is unlikely that the political councils would give a high priority to sending vast sums abroad for the esoteric pursuit of new particles. The U.S., with its greater affluence, might come around to the conclusion that Soviet-American cooperation in this field would encourage a politically desirable spirit of togetherness. But the Soviets, who have tended to pick and choose their foreign investments with close attention to political consequences, might be expected to feel that there are better foreign investments than high-energy physics.

In any case, U.S. physicists aren't pushing the matter too hard. The 1963 Ramsey Report on high-energy physics acknowledged that Soviet-American cooperation in this field would be what it described as a "major breakthrough." But having said this, it went on to suggest that if the two countries decide to work together, the costs should be "related to expenses in the foreign-policy field rather than being considered in competition with the national accelerator program." The report didn't explain the differences between national and international particles, but whatever they may be, neither the Russians nor the Americans show any fervor for a joint venture in this field.—D.S.G.

Congress: Legislative Oversight Problem Acquires New Dimensions as Great Society Bills Are Passed

Any doubts that President Johnson could effectively exploit the big Democratic majority in Congress should have been banished by the legislative business transacted in the normally unproductive period before Easter. Appalachia and school-aid bills have been signed into law, Medicare and voting rights bills seem assured of passage, and other legislation is flowing through the pipeline.

When this is added to the record of Congress in Johnson's first year in office—a tax cut, a civil rights bill, aid to higher education, and the poverty program—it is hardly credible that 2 years ago critics were diagnosing the state of Congress as one of legislative catalepsy brought on by the committee system and an irrefragable seniority rule.

The new welfare and education programs involve the spending of sizable

sums, and these expenditures will increase quite sharply in the next few years. So far, however, criticism from antispenders inside and outside Congress has been curiously muted, in part, perhaps, because federal revenues have been mounting sharply. A hue and cry over spending, nevertheless, can be confidently predicted as the time for next year's congressional elections approaches.

A different discontent is stirring in both parties in Congress on the old score of congressional and executive powers. Ever since F.D.R., most legislation enacted by Congress has been drafted "downtown" in the executive agencies and the White House. And not only has there been a loss of initiative by Congress in framing legislation, it is also widely conceded that weakening has occurred in congressional ability to review, assess, and make necessary changes in laws already on the books. Called "oversight of administration" by political scientists—with an unintended ironic double meaning—this function is one of the neglected aspects of the legislative process. It can be argued that a new dimension has been added to the oversight problem by the passage of welfare and education legislation which requires very large sums of money and involves new and, in many cases, untested techniques and intricate relationships among federal, state, and local governments and private organizations.

Recapturing Control

Attempts by Congress to assert or reassert control tend to ignite more fireworks when there is a "strong" President or strong-minded agency administrator in the picture. Defense Secretary McNamara's relationship with Congress, for example, has been the most tempestuous one in years for a solidly entrenched Cabinet officer.

In recent months Congress has had several brushes with regulatory agencies. Last year, for example, the Federal Communications Commission indicated that it planned to set standards governing the length and frequency of radio and television commercials. There ensued the Washington equivalent of the teenagers' game of "chicken." Congressional displeasure was expressed in a bill prohibiting the action, and the bill passed the House. The FCC withdrew its proposal, and the Senate took no action on the bill.

This year the Federal Trade Commission and the House Interstate Commerce Committee are at odds over a proposed FTC requirement for health warnings on cigarette packages and in advertising (see page 478).

The substance of such issues is often important—the broadcasters and the tobacco industry are not friendless in Congress—but unquestionably many legislators are concerned over an erosion of congressional power. Perhaps typical of these is Representative Walter Rogers, a Texas Democrat who usually votes with the conservative wing of his party and, as chairman of the House Interior subcommittee on irrigation and reclamation and, especially, as chairman of the Commerce subcommittee on communications and power, is influentially situated.

Rogers' view of the separation-of-powers doctrine reflects a strain of political Calvinism still important in the attitude of Congress toward the executive. "Many people grasp for power," says Rogers, "and it's true of people who staff the bureaucracy and the boards and commissions." He sees evidence that "we are slipping away from the basic proposition of three-branch government." He thinks the courts have been lax and that people "don't realize what it's doing to the basic political structure," and says that members of Congress must assert themselves to resist the trend. It appears that Rogers may do his part by calling for a review of the status of the FCC—over which his Commerce subcommittee has authority—in view of "new conditions."

Tension between Congress and the executive branch is designed into the federal government, and intermittent flareups seem inevitable. But with the passage of the poverty program, the Appalachia act, and the new school bill, a precedent seems to have been established of giving administrators wide discretionary powers in difficult and controversial fields. The presumption is that Congress will keep such programs under close surveillance and review them carefully. The trouble is that, for the most part, Congress has not shown itself either anxious or well equipped to perform the oversight function.

Squabbles over administration of the poverty program, enacted last year, have broken out at the local level and escalated into a congressional investiga-

tion being conducted by a special subcommittee of the House Education and Labor Committee. Preliminary hearings were held in 11 cities before the Washington hearings began. Representative Adam Clayton Powell (D-N.Y.), chairman of the House committee, provided a curious prologue to the hearings in the capital by describing the program in many cities as "giant fiestas of political patronage," criticizing administrators for not involving the poor themselves in planning and operating the program and for paying excessive salaries to officials running the projects, and then going on to say that the hearings would be brief and that he expected the subcommittee would expeditiously approve the bill authorizing more money for the program.

Administrative Latitude

Representative Charles Goodell (R-N.Y.), a member of the Education and Labor Committee and an ally of Representative Gerald R. Ford (R-Mich.) in the campaign which won Ford the House minority leadership, was a stern critic of the Economic Opportunity Act (Poverty Bill) in committee and on the floor of the House.

In passing the bill, said Goodell, "we really did not legislate a program, but gave broad authority to the agency to carry out a program." This is a serious matter, says Goodell, "especially with precedent-shattering legislation."

While Goodell disapproves in principle and practice, he concedes that "a case can be made to let the administration try new things" with the fewest possible strings attached. But "as the legislation comes of age," he says, "Congress should review it and place priorities."

The new school bill (*Science*, 22 January) shares a common legislative history with the poverty and Appalachia measures in that remarkably few changes were made in the bill either in committee or on the floor of either house. The House Education and Labor Committee did attach a few amendments which clarified or tightened portions of the bill, but the Senate, which ordinarily has views of its own which it insists upon, acquiesced, with minimum resistance, to the House version of the school bill.

The smooth passage can be attributed in large part to the big Democratic

majority and to Presidential persuasion. But proponents of the bill remembered other years when education legislation with seemingly good prospects had met disaster. While the new school bill was acknowledged to be not the best of all conceivable bills, it was constructed to sail safely over the rocks of the church-state and federal-control issues, and this it successfully did, with the help of the Democratic leadership, which decided to pass the bill now and remedy the defects later. Powell even announced that hearings on a new bill containing improvements would be held this spring.

Representative Edith Green (D-Ore.), chairman of the subcommittee which handles legislation on higher education, criticized aspects of the school bill in committee and on the floor. In debate on the floor, her major objection was that the church-state issue had not been settled, but rather brushed aside.

The Oregon Congresswoman not too long ago emerged from an oversight fight after a confrontation with Justice Department officials over the administration of a juvenile delinquency control act which she had sponsored. Mrs. Green objected to what she viewed as too much planning and too little action. She is also one of those who have objected to rapid passage of administration proposals without amendment by Congress.

In an interview she said "Congress is increasingly abdicating responsibility in drafting legislation . . . in carefully considering legislation . . . and in following it up." She says there are exceptions and singles out the House Ways and Means Committee under its chairman Representative Wilbur Mills (D-Ark.) as providing a noteworthy example of what can be done.

A basic difficulty in setting the limits on agencies' power to issue and enforce rules and regulations is that laws seldom clearly define these limits. If Congress does not take positive corrective steps when it feels its intent is being violated, agency actions usually stand.

The oversight function of Congress is not spelled out in the Constitution, but it is strongly implied, primarily in the powers of the purse and impeachment. The Legislative Reorganization Act of 1947 makes the thing definite by stating that Congress shall exercise "continuous watchfulness over administration of the laws."

Congress's main line of defense against erosion of its powers is the standing and special committees of the House and Senate. The oversight chore perhaps falls most naturally to the "watchdog committees," a loosely used term which applies most properly to joint committees of both houses such as the Joint Internal Revenue Taxation Committee or the Joint Committee on Atomic Energy. The effectiveness of the latter committee is enhanced by the legal requirement that the Atomic Energy Commission keep the joint committee fully and currently informed.

Congress does get regular reports from the executive agencies, but these vary greatly in depth of detail. The committees can and do demand special information from the agencies, but the intensity of surveillance depends largely on the interest, vigor, and style of a committee's chairman, members, and staff.

Appropriations Cuts

Over the years, the oversight function has been performed most systematically by the appropriations committees, particularly the House Appropriations Committee. It was the Independent Offices Subcommittee of the House Appropriations Committee, for example, which 2 years ago put the National Science Foundation on the griddle after a decade of growth in which NSF had been permitted fairly broad administrative latitude and given relative freedom in initiating new programs. That year the subcommittee cut sharply into requests for new fellowship funds, ordered a "no-new-starts" policy on programs, and placed fairly tight controls on spending for Project Mohole. These strictures were later, in fact, relaxed, but the message was clear for all to read.

The appropriations committees derive their power from their annual scrutiny of agency budget requests and their influence on appropriations. Because the concern of the committees is primarily fiscal and because their staffs are oriented toward the demanding task of reviewing and analyzing the complex budgets of the agencies, they are not ideally suited to make qualitative evaluations of the programs the agencies administer. But these committees have done the most consistent work in keeping tabs not only on how much money is spent but how.

Of course the exercise of the oversight function by Congress is not guaranteed to be dispassionate or even fair. Investigations in the past have been conducted for partisan or personal purposes and sometimes have turned into hunts for heads or headlines.

On the other hand, leaving it to federal agencies to evaluate their own programs, as now in effect is often done, is very much like making a bookkeeper responsible for auditing his own books.

Those concerned these days with the question of legislative oversight often mention the advisory councils and committees of nongovernmental experts assigned the job of evaluating federal programs. These groups are either called for in new laws or are created through special appointment by the President or agency heads. Both the poverty bill and school bill call for such monitoring groups. Critics suggest that the commitment of these experts to the programs or their ties with executive agencies may be so strong that truly objective analysis and advice may not be forthcoming.

Mrs. Green suggests that these advisory committees might better report to Congress than to the executive.

She also says that Congress does not have the staff, either in numbers or training, to perform the detailed evaluation of programs now necessary, particularly in the new legislation.

The natural protagonists for Congress in performance of the oversight function would seem to be the Government Operations committees, charged with watching efficiency and economy in government, headed in the Senate by Senator John L. McClellan (D-Ark.) and in the House by Representative William L. Dawson (D-Ill.). Some of the subcommittees have made their mark—Representative L. H. Fountain (D-N.C.), with his interest in National Institutes of Health contracting practices, and the then Senator Hubert H. Humphrey (D-Minn.), with drugs, have been active subcommittee chairmen. But the Government Operations bodies have not been the most prestigious committees. Staffs have not been adequate for any sort of panoramic surveillance of the total operations of government, and the committees have tended to be interested in glaring cases of malfeasance or bad administration. Then there is the delicate question, when the major-

ity party in Congress and the President are of the same political denomination, of the mutually embarrassing results of some investigations.

Minority Leader Ford has suggested that the Government Operations committees might be controlled by the party not represented in the White House to assure congressional vigilance. This suggestion apparently has not been received with wide enthusiasm in Congress.

The General Accounting Office, an arm of Congress created to assist in providing legislative control over receipt and expenditure of public funds, has proved to be an effective auditing agency, usually *ex post facto*. It does not perform the evaluative role for Congress which the Bureau of the Budget, for example, has acquired in the executive. The GAO, however, a separate organization which is of, but not in, Congress, may provide a model for a corps of professionals which could help Congress with its surveillance of administration.

Closer oversight of science programs seems certainly to be in congressional minds, as the creation of subcommittees on research and development in the space, armed services, and government operations committees indicates. And House Interior Committee chairman Oren Harris (D-Ark.) recently announced plans for a detailed study of the Department of Health, Education, and Welfare.

The oversight question will certainly be raised during the new study on congressional reorganization authorized to take place this year. It is clear that if Congress doesn't wish to resign itself to being Number 2 behind the executive, it will have to try harder.

—JOHN WALSH

Defense: California Planners Try Novel Approach to Problems of Economic Reconversion

Although the war in Vietnam has managed to make the question of large-scale reconversion seem utopian, adjustments to the closing of bases and the defense economies initiated by the Johnson administration give people plenty to worry about nonetheless. Chief among the worriers is the state of California, where an estimated 30 percent of the state's manufacturing employment is tied directly to defense production. In the area around San

Diego the proportion leaps to about 80 percent. Faced with the prospect of wide unemployment, California has begun an experiment to discover whether its scientific and engineering manpower can be usefully employed in other fields.

The experiment has a particularly novel quality. California's approach is not to offer its vast army of aerospace engineers retraining but to see if other, nondefense, problems will respond to the "systems analysis" approach with which the engineers are already familiar. The hope is not just that the aerospace companies will prove to be competent in diverse areas but that they can demonstrate their competence in ways that will enable them to attract further nondefense business.

State officials began the project by considering a list of problems suggested by theorists of reconversion as likely to provide a fair test of the R & D community's ability to turn its skills to major public problems. Several additional criteria were used, among them the intrinsic importance of the problems to the state of California and the availability of funds to support large-scale undertakings in various fields if such efforts were suggested by the initial studies. From the list of possibilities, four subjects were chosen, and bids were invited from the industry.

The result of the competition, in which about 40 companies participated, is that Aerojet-General Corporation is now studying a long-range system to handle the state's waste-management problems; the Space-General Corporation is studying California's system of criminal justice; North American Aviation is developing specifications for a study of transportation in California through the year 2015; and Lockheed Missiles and Space is considering the requirements of an information system for the state government. "State officials are not so naïve as to believe that the four . . . contracts are going to have any significant economic impact on the research and development community," said a letter from state finance director Hale Champion to the *Los Angeles Times*. "But, should these preliminary studies lay the groundwork for the kind of massive research and development assault that any one of these study areas requires in order to provide significant breakthroughs, then our . . . investment indeed will have been worthwhile—both from the standpoint of research and development

workload for California industry and from the standpoint of the economies and other public benefits to be derived from systems improvement in the areas of study." Each of the contracts is for \$100,000, and all are scheduled to be completed between June and September 1965.

To supervise the contracts, the state has set up a small group under the auspices of the Department of Finance, which has responsibility for most of the state's economic development programs. Although state officials are monitoring the industrial contracts, they are frankly skeptical about their suitability for such a task. "We haven't got any experience along those lines," one official pointed out half-humorously. "Let's face it—we might be completely snowed." To keep from being "snowed" the state has invited the help of another R & D firm, the Systems Development Corporation, to assist in monitoring and evaluating the aerospace studies. "I suppose they could snow us too," the same official commented, "but we've worked with them before on some data processing problems, and we trust them."

So far, except for a minor dispute between the California legislature and the executive branch over the funding of the project, the experiment has aroused no opposition. The project originated entirely in California and has proceeded without outside advice. In Washington, however, federal officials in the Pentagon, the Department of Commerce, and the Disarmament Agency, are watching the experiment with great interest. And, judging by the number of unsolicited cheers from other defense-dependent communities across the nation, California officials feel confident that their efforts are raising hopes elsewhere as well.

—ELINOR LANGER

Announcements

A group transportation arrangement between Amsterdam, Netherlands, and Tokyo has been arranged for persons who plan to attend the international **congress of the physiological sciences**, 1–9 September in Tokyo. A plane will leave Amsterdam 17 August, and will be due in Yokohama 28 August. The trip will include 3 days in Moscow, and a 3-day side trip to Tashkent, Bokhara, and Samarkand. The return trip leaves Yokohama 17 September,