Such development centers would certainly attract invention-minded biologists as well as many of the physicists, chemists, and engineers who are now turning to the field of biology. They could also be of direct service to research biologists, since their elaborate physical and technical equipment might be made available part of the time for fundamental research studies requiring unusual manipulators or microscopes or other equipment too special or experimental to be readily obtainable elsewhere. Our present research institutions—such as the Institutes of Health, the marine biological and oceanographic laboratories, and the medical and academic biology laboratories—might, therefore, find it extremely valuable to be able to carry out some of their own more technically demanding and expensive research projects at such centers.

But the main point I wish to emphasize here is that, in properly equipped biological development centers of this kind, many projects for the development of new biological tools could be explored simultaneously, expeditiously, and competently, whereas such exploration would be difficult or laborious with our present organizational arrangements. And what is perhaps more important, in these centers would be development staffs and leaders who would have the funds, the equipment, the interest, and the definite mission to take the lead in generating other technical ideas and in making an active and continuous search for new methods of biological study.

To create such national research and development centers for biology, to finance and find sites for them, and to staff and equip them properly will require planning and action by biologists, government officials, and others who see what a vital role they can play in our future biological and medical progress. I believe this progress cannot be made at the maximum possible rate unless we begin now to take such steps.

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News and Comment

Federal Pay Reform: Congress Shows Little Enthusiasm for Bill Designed To Raise Specialists' Salaries

The Administration bill that includes higher salaries for government scientists and engineers is becalmed in the Senate and the House.

Both chambers face a massive backlog of legislation before they go off to the autumn political campaign, but neither at present displays any sense of urgency. (This is par for the course, and has been likened by one Senate aide to the student who leaves his term papers to the last week.) Primary campaigns have caused a good number of members to be away from their congressional duties; rivalry and friction between the houses have delayed action on some measures, and the Administration has chosen to concentrate its prodding in areas closer to the New Frontier's major legislative goals: tariff and tax reform and medical care for the aged. These bills unquestionably are aimed at more grievous problems than those assigned lesser priority, but the attention they merit and receive tends to take the heat off other issues, including the pay bill.

The order of priority reflects the view from the administration's upper reaches, where all problems come home to roost. But down below, at the levels specifically concerned with relations between science and technology and the government, there is considerable apprehension about the fate of the pay bill. It appears likely that Congress will deliver some pay increase for federal employees, but the government's science advisers and administrators are concerned that it will be just a pay increase and not the overhaul of pay scales proposed in the Administration bill. The difference is a crucial one, for the Administration is not simply seeking fatter pay checks for federal employees; it wants, basically, to stretch out the pay scale—to widen the difference between the bottom and the top—and thus toe a difficult line between its anti-inflationary policies and the realities of the manpower marketplace.

At the lower end, the present federal pay scales are fairly competitive with business and industry, but at the upper levels—where scientists and engineers are placed—the government finds itself at an extreme disadvantage. It has periodically raised the salaries of its employees, but the raises have been weighted in favor of the lower-paid workers. As a result, the ratio of the highest to the lowest Civil Service salary dropped from 8.8–to–1 in 1939 to the present 5.8–to–1. Precise comparisons between government and nongovernment remuneration are difficult to make, but the consensus of several studies is that the government is not able to compete with the going private scales for specialized, experienced personnel.

In 1960, the Department of Labor surveyed 1606 business firms in 60 metropolitan areas to compare federal and private pay scales for attorneys, accountants, personnel managers, engineers, and scientists. It concluded that a federal employee in General Service grade 15, with a salary of $14,705, would, on the average, receive $20,175 in private business. A Civil Service Commission survey of 21 national corporations went higher on the executive scale and examined salaries of

personnel directors, finance directors, lawyers, research and development directors, and plant managers. Its findings were as follows:

	Federal	*Private*
GS 16	$16,295	$20,000–30,000
GS 17	17,570	27,500–37,500
GS 18	18,500	32,500–45,000

These disparities have had a number of detrimental effects on the federal science establishment. They have produced a flow of government personnel into private industry; have hampered the recruiting of scientists and engineers, who see a richer future outside of government; and have stimulated the growth of the so-called nonprofit research and development firms, which are openly acknowledged to be end runs around the Civil Service pay scale.

The Administration's initial intention was to limit salary increases to the area where the manpower situation was most critical, from the upper portions of the Civil Service scale on through the presidential appointee level. Congress, however, quickly indicated that it was not disposed to look at the issue solely in terms of problem and remedy. With their own salaries set at $22,500 a year, members of Congress have shown little interest in raising salaries of subcabinet presidential appointees above this figure. Proposals for improving the appointee salary scale were therefore dropped before they ever reached Congress. This move was accompanied by a decision to throw in minor increases for the lower levels of the Civil Service scale after government employee unions warned they would fight the measure unless it contained something for their members. The revision was at the expense of the upper end of the scale, which had its proposed increases cut as much as 50 percent. The proposal now before Congress calls for annual increases over 3 years that would ultimately raise the bottom of the scale from $3500 to $3620 a year, and the present top, GS-18, from $18,500 to $24,500—a figure that Congress will find hard to digest. Even less digestible is the proposal to expand the scale to GS-19 and 20, with salaries of $27,290 and $28,000, respectively, at the end of 3 years.

The bill is now the subject of what promises to be a long series of hearings before the House Post Office and Civil Service Committee. The hearings opened early last month, adjourned for several weeks, and were resumed this week; they are destined to go on for a long time, partly because many people have something to say on the subject and partly because the House Committee is somewhat angry with the Senate Post Office and Civil Service Committee. In January the House committee reported out a postal rate increase which was passed by the House, despite the obvious unpopularity of such measures, especially in an election year. The Senate committee has been moseying along with the postal rate at a pace that is said to be related to the primary campaign problems of its chairman, Senator Olin D. Johnston, Democrat of South Carolina. Johnston, who faces Governor Ernest F. Hollings in a closely contested race for a nomination that is tantamount to election, does not care to be burdened with the charge that he raised the price of the mails. His committee is expected to come to life again after the primary, which is next week. Meanwhile, the House Post Office and Civil Service Committee feels that it has kept its nose to the grindstone, and persons close to it say that the pay bill will not emerge from the committee chamber until the Senate committee completes its work on the postal rate bill.

Anti-inflation Argument

If the pay bill reaches the floors of the House and Senate in anything resembling its original form, it will not find the atmosphere encouraging. The time will no doubt be late in the session—possibly July or August—when Washington is hot, the Congress is irritable, the fall campaign is drawing near, and every man up for reelection feels that he is under a microscope. Part of the background against which the bill must move is the Administration's hard anti-inflation line, most emphatically illustrated in the reversal of the steel price increase, but also evident in constant Administration pressure against less visible attempts to raise prices and wages. The Administration has sought to head off this line of resistance to the bill by characterizing it as a "pay reform" measure designed to correct inequities in government salaries and to give the government the means to hire the people it needs.

This would seem to be a fair appraisal of the bill's intention; with its emphasis on the higher paid employees, who number only a few thousand, it cannot be considered a device to woo voters to the Administration. But the difference between pay reform and pay increases is not likely to remain crystal clear in the heat of the fall campaign. For members of Congress with large numbers of federal workers in their constituencies, the Administration bill is politically profitable, although it can be attacked as throwing only a bone to the little fellow in the federal employ.

However, for members who represent urban industrial districts, support of the bill is not likely to sit too well with union constituents whose leaders are under Administration pressure to show restraint in seeking wage increases.

Congressional Scrutiny

The political situation surrounding the bill is replete with irony, for the original proposal—limited to the upper echelons of government executives, scientists, and engineers—would undoubtedly produce a return in more competent personnel and better morale that would more than cover the cost. With scarcely a quibble, Congress has endorsed research and development expenditures that now exceed $10 billion a year, but, like Parkinson's finance committee that hurries through the multimillion-dollar expenditures and engages in lengthy debate over the little ones, it is clutching the purse strings in an area where a little money would do a great deal of good.

In a report prepared for the government by John J. Corson, a former federal executive who is now a management consultant, it was noted:

"If the federal salary scale, for example, were stretched upward by $10,000 at the top to $35,000 a year for cabinet members and a $28,500 ceiling for a few hundred top career people, and proportionately scaled down the ladder, not more than a few thousand persons would get raises and the total annual cost could be less than $80 million. . . .

"This is not as much as two months' storage costs for surplus grain, not as much as the cost of one nuclear-powered missile launching submarine, not as much as two Titan II rockets, about the same as one hundred miles of highway under the federal aid highway program—and not as much as the annual advertising budget of most large corporations."

The answer to this seemingly persuasive argument is that Congress does not always employ the same yardstick when it is contemplating the relative value of proposed undertakings. It will unquestioningly provide funds for the

easily visible hardware of defense, because the need for such hardware is readily comprehended and because, for economic and political reasons, these expenditures attract massive support. But it is a different matter when it comes to salaries that will permit the hiring and retention of men who can make the government a "sophisticated buyer"—the expression used in a recent report, *Government Contracting for Research and Development*, prepared for the President by the heads of the principal agencies engaged in research and development. The need for better salaries can easily be comprehended by anyone who is willing to listen, but the issue does not speak for itself, and the Administration has not chosen to give it the brass-band treatment in Congress.—D. S. GREENBERG

Congress Shrugs at Proposals On Laboratory Animal Welfare

Legislative proposals intended to promote the humane treatment of laboratory animals provide a lively topic for indignant letters to the editor, pro and con, and are the subject of a fairly heavy volume of congressional mail. But through the smoke and noise, one thing is apparent: Congress is not the least bit interested.

The reason is that research, particularly medical research, which uses the bulk of laboratory animals, has Congress's blessing; when congressmen make inquiries among their scientific acquaintances, the almost unanimous opinion is that the proposals would interfere with scientific research.

Two such proposals are now before Congress. The most extreme, offered by Representative Morgan M. Moulder (D.–Mo.), would establish an Agency for Laboratory Animal Control. The Agency would, among other things, be empowered to pass on the use of animals in all laboratories receiving federal funds. Its head would, in effect, become a czar setting the rules for most animal research uses.

A less extreme proposal has been offered by Senator Clark (D.–Pa.) in the Senate and Congresswoman Martha Griffiths (D.–Mich.) in the House. This bill provides for licensing experimenters and for inspection under the direction of the Secretary of Health, Education, and Welfare. Neither measure is likely to come to a hearing in this session.—D. S. G.

Announcements

The U.S. Office of Naval Research and the Air Force Office of Scientific Research have announced joint sponsorship of a **Research Center for Celestial Mechanics**, to be established at Yale University in July. Research at the $90,000 facility will be directed toward new approaches for problems involving earth-circling satellites, lunar and interplanetary probes, and predetermination of trajectories for interplanetary vehicles. The center's initial staff, headed by Dirk Brouwer, director of the Yale Observatory, will consist of 8 to 10 postdoctoral fellows and graduate students. Future plans call for considerable expansion under continued Air Force and Navy support.

The first in a series of **regional primate centers** to be established by National Heart Institute grants was recently completed near Beaverton, Ore., about 10 miles west of Portland. The center will house approximately 800 rhesus monkeys to be used in study of processes in heredity, specialization and functional mechanisms of living cells, and organ systems. All essential laboratory facilities, technical equipment, libraries, and data processing equipment are situated on the 200-acre site. Through affiliation with the University of Oregon Medical School and other local academic institutions, the center also serves as a laboratory for graduate credit in the biological sciences.

Other primate research centers are planned for Washington, Wisconsin, and Georgia.

The National Aeronautics and Space Administration and Sweden's Committee on Space Research have signed an agreement for a **cooperative space-research program** in connection with the planned launch of four Nike-Cajun sounding rockets from the Vidsel Range in Sweden. The main objective of the launch, scheduled for late this summer, will be to recover and analyze sample cloud particles to determine the composition and origin of noctilucent clouds—faintly luminous, very high clouds which occur only in certain regions of the auroral zone for a short period during the summer months.

The U.S. is to supply an appropriate launcher, the necessary telemetry equipment and ground antennas, rockets, and the four scientific payloads and payload checkout equipment. Sweden will provide supplementary payload instrumentation to measure energetic particles, portions of the noctilucent sampling instrumentation, launching pad, a control center, and housing for telemetry equipment and for assembly and testing of rockets and payloads. Data analysis will be performed by scientists of both countries.

The U.S. Atomic Energy Commission has approved the export of **fertilizer containing phosphorus-32** to the Research Institute for Irrigation and Rice Production in Szarvas, Hungary. The material, furnished by the Department of Agriculture, will be used in studies sponsored by the International Atomic Energy Agency to determine the best method of phosphate fertilizer placement in rice cultivation. Similar IAEA-sponsored studies are being undertaken in India, Austria, Pakistan, Burma, Thailand, United Arab Republic, the Philippines, and Indonesia.

A **Society for Tropical Medicine** has been established in Düsseldorf, Germany, to organize training of students from developing countries. The society, headed by Walter Kikuth, professor of tropical medicine and parasitology at Düsseldorf Medical Academy, will continue the tradition of the defunct German Society for Tropical Medicine, founded in 1907.

The U.S. Public Health Service's special **task force on syphilis control**, whose formation last year was prompted by the report of 19,000 cases of infectious syphilis in fiscal 1961, has outlined various control activities which, if continued unabated for at least 10 years, it believes could eliminate syphilis as a public health hazard in this country. The proposals include a national effort providing for at least two visits a year by a qualified health worker to the country's 100,000 general practitioners, and one visit per year to the remaining 130,000 physicians; establishment of a program to insure that all blood-processing laboratories report all positive specimens to health departments by name of patient; extension of current interview-investigation services to cover all infectious cases; development of a comprehensive education program for professional workers and the general public; continuation of research in syphilis immunology, therapy, and laboratory pro-