

office. In past years these confirmation hearings were usually matters of routine. Recently, however, Congress has been nothing less than militant in its attitude toward Eisenhower's nominees for various posts of government. If the Senate does not cause such a furor that the appointee resigns, as Clare Booth Luce did, it rebukes the President for delay, as it did by rushing through its confirmation of Herter as Secretary of State in a matter of hours. This new exercise of power on the part of the Congress compounded Strauss' trials. The question for the immediate future is whether this same combination of positive opposition and a rampant Congress will work against him when the full Senate votes.

### Britain Launches Space Program

Britain has announced the immediate start of a space research program. In an address before the House of Commons in mid-May, Prime Minister Macmillan described the initial plans. He explained that there are two problems to be considered: the nature and design of the instruments to be carried into space and the means by which the containers for these instruments are to be launched. He went on to say that, with regard to the first, a program has been approved and work will begin at once. With regard to the second, he commented that "there may well be scope for joint action with the United States . . . or with other countries."

He then reported that a team of specialists, headed by H. S. W. Massey, professor of physics at University College, London, will visit Washington toward the middle of June to discuss possible Anglo-American cooperation. Simultaneously, consultations are being held with the Commonwealth countries. While these talks are going on, however, studies are under way on means of adapting British military rockets to launch satellites. Macmillan said: "This will put us in a position, should we decide to do so, to make an all-British effort." The instrument program will be supervised by the British National Committee on Space Research, which has been set up by the Royal Society under the chairmanship of Massey.

In discussing the cost of the program, the Prime Minister commented: "I cannot give any figure of the cost of using a British rocket, should it be decided to do so. What we are doing now is to spend substantial, but modest, sums—more in hundreds of thousands of pounds than in millions—first, for the design of the instruments, and, secondly, to make the necessary designs for modification of the military rocket. . . ."

A Labour member of the House asked the Prime Minister if he was "satisfied that there is an intrinsic value in this work from the scientific point of view, rather than just an attempt to keep up with the Joneses." Macmillan replied: "I am not, by nature or by education, very favourably inclined to swallow all that the scientists tell me, because I, alas, do not understand it [laughter]. But I am impressed by the universal opinion of those very distinguished people whom we have consulted, and I feel that certainly upon the scientific instrument work it is clear that Britain should play her part in this advancing scientific effort [Ministerial cheers]."

### Space a Public Issue

The enthusiastic response to these remarks reflects the degree to which a space program has become a public issue in Britain. The Government has long been under pressure from the Labour Party opposition and from a growing number of British scientists to enter the field of space, an area of scientific inquiry that has until now been monopolized by the United States and the Soviet Union. British space research has been postponed primarily because of the great cost involved. Those who have objected to the launching of a space program have pointed out that the results of such research were already available from the United States and, to a lesser extent, from the U.S.S.R.

However, a number of British scientists interested in space have taken jobs in the United States. This, and considerations of national pride, have disturbed some members of Parliament. In replying to a question in the House of Commons on 20 April, according to the 2 May issue of *Nature*, the Minister of Supply acknowledged that the danger of losing Britain's "youngest and ablest scientists to the United States in the absence of occasional opportunities for such research, even if it involved using equipment originally designed for a specific military purpose, was an important consideration."

British scientists have also been stirred by feelings of concern for the nation's prestige, and Sir Harold Spencer Jones, former Astronomer Royal, expressed the view of many when he wrote as follows in a feature article in the *Sunday Times* of 5 April:

"It has been suggested that our scientists might plan experiments and design and construct the instrumental equipment for research with satellites and space-probes and ask for space in vehicles launched by another country. That, however, would not be appropriate to the prestige and standing of Britain in the world today.

"As a matter of national prestige, and because Britain's future depends upon keeping abreast of new developments, I am of the opinion that Britain cannot afford to stay outside this new field, and that she should embark upon a program of space research."

### Scope of Britain's Space Plans

A special dispatch from London to the *New York Times* on 23 April indicated the direction of British space research when it quoted high government officials as saying that Britain's objective in any earth-satellite program would be basic research. This would be in contrast to what Britain regards as the emphasis put on engineering by the United States. Another distinction, the *Times* said, is the preoccupation in the United States with exploring space for the ultimate purpose of space travel, for Britain is more interested in the terrestrial usefulness of space exploration.

An idea of the probable time-scale for the British space research program and of the issues that remain to be decided was provided by a press conference that was held by Lord Hailsham, Lord President of the Advisory Council on Scientific Policy, immediately after the Prime Minister's announcement to Parliament. Conference participants, in addition to Massey, included other principal figures in British space administration: Aubrey Jones, Minister of Supply; Sir Owen Wansbrough-Jones, chief scientist of the Ministry of Supply; and Sir Edward Bullard, chairman of a steering group appointed by Hailsham.

Massey indicated that on his United States trip, in addition to seeking details about U.S. earth satellites, he will discuss an American offer to launch another country's satellite, perhaps one of approximately 150 pounds. A British vehicle of about 1000 pounds was mentioned as a possibility at the conference. The U.S. offer was made to COSPAR, the international committee for space research that was established by the International Council of Scientific Unions.

The *New York Times*, in commenting on the press conference, indicated that the newsmen's questions reflected what appeared to be disappointment that the first British satellite might have to be launched by means of a U.S. rocket. One questioner was reported to have asked Massey if he would say "on the record" whether or not he was satisfied with a satellite launching in which the rocket used was not of British manufacture. Massey was quoted as having replied: "I will go on record as saying that I am not at all dissatisfied with this project."

Sir Edward Bullard discussed the space program time-schedule with the

correspondents, saying, according to the London *Times* for 13 May, that the design of instruments would take not less than a year, but that Britain would be "doing badly" if it took many years.

The London paper reported that Lord Hailsham, in describing the scope of the program, emphasized that the Advisory Council on Scientific Policy had advised against moon launchings. He said, further, that no monkeys or other animals would be sent up in the British satellite.

#### Contrast with U.S. Space Budget

Lord Hailsham is also reported to have emphasized, like Macmillan, that the expenditure for the development of instruments and for the design studies on launching vehicles would be some hundreds of thousands of pounds. This is in striking contrast to the budget for this country's National Aeronautics and Space Administration that was recently approved by the House of Representatives. On 20 May, the House passed H.R. 7007, which authorizes appropriations to NASA for fiscal year 1960 in the amount of \$480,550,000—\$94,430,000 for salaries and expenses, \$333,070,000 for research and development, and \$53,050,000 for construction and equipment.

In his *Sunday Times* article, Sir Harold Spencer Jones indicated how he feels the British Government should view the cost problem.

"The cost of scientific research has increased enormously since the 'string and sealing-wax' days. The large optical telescopes in use today, the much larger radio-telescopes of the radio-astronomers, and the particle-accelerating machines of the nuclear physicist, are expensive tools. But their cost is small compared with even a modest programme of space research. It is already apparent, however, that scientific research *must* extend into space for progress in knowledge in various directions to be made. Should Britain sit back and leave these new, important and exciting fields of investigation to other countries?"

#### Future of Foreign Scientist Program Undecided

The future of the Visiting Research Scientist Program, which allows foreign researchers to work in the United States, continues to remain in doubt pending some indication of continued support from its source of funds, the International Cooperation Administration. The post of director at ICA has been vacant since last February when James H. Smith, Jr., an active supporter of the program, resigned. A new director, James F. Riddleberger, former ambassa-

dor to Yugoslavia, was appointed, but he has yet to assume the post. Meanwhile, the National Academy of Sciences, which administers the program for ICA, continues, on the basis of already authorized funds, to place young foreign scientists in university and governmental laboratories throughout the country. To date, 65 foreign researchers have arrived in this country under recently expanded provisions of the program. During an earlier phase, some 225 scientists, mostly from Western Europe, studied here.

#### Program Expanded

The program was originally conceived in 1953. At that time it was restricted to the 14 European countries which were members of the Organization for European Economic Cooperation. In May 1958, however, after a request by the International Cooperation Administration, the program was expanded to include many non-European countries. As a result, some 44 countries now send research workers to the United States. Of this total, 23 countries, including Indonesia, Iran, and Thailand, are represented by the 65 young scientists now at work at universities throughout the country. The visiting researchers, drawn from universities, governmental scientific facilities, and, in a few cases, industrial laboratories in their respective countries, are doing research on problems in their various fields. Under the program another 85 researchers will arrive in this country after the end of the academic year, for periods of study ranging from 1 to 2 years.

#### Most Stay Two Years

Although as the program was originally set up, each grant was for a period of 1 year, most of the grantees avail themselves of the 1-year extension that is now offered. They are encouraged to do so by the academy, which feels that 2 years' time is needed for any significant research program. At the end of the first year, however, the academy does make an evaluation of the grantees' work. A statement of progress is requested from each visitor. In addition, the grantee's adviser, usually an American scientist at the same laboratory, is asked to comment on his foreign colleague's work. To date, no grants have been terminated because of inadequate work.

#### Advisory Committees Set Up

The National Academy of Sciences has set up advisory committees in the many foreign countries from which the visiting researchers are drawn. These groups, composed of academicians and administrators, recommend candidates to the academy. These candidates are al-

most invariably accepted by the academy, which then corresponds with the individual to determine his field of interest and the particular research problem which he wants to undertake. With this information, the program staff members, headed by Walter F. Colby, survey the university and governmental laboratories in this country to determine where work is being done in the candidate's field. After consultation with the administrators of these laboratories, the candidate is then placed in one of them. To date, according to Academy officials, no placements have been refused, and correspondence from both candidates and advisers indicates that the personal relationships established in this way have been of great value.

When the NAS-ICA program was expanded in 1958, the problem arose of finding ways to maintain the standards that had been established during the period when Western Europe was the source of candidates. Many of the non-European countries did not have "sister academies" with which our National Academy could work. The problem was solved by setting up committees which were staffed by men from the universities of the countries concerned.

#### Program Works Well

Correspondence from grantees and advisers seems to support the view of academy officials that the Visiting Research Scientist Program has been working very well since its inception in 1954. The aims of the program—strengthening scientific activity in the free world, building intimate relationships between American scientists and the leading scientists of the future in the many countries participating, and increasing cooperation between foreign scientific organizations and the U.S. Academy—are being accomplished. There is, however, concern about the future of the program. The great danger, according to academy officials, is that the nominating committees, which were set up all over the free world, will begin to disband, with no work to be done.

The following excerpts from a letter addressed to President Eisenhower by one of the grantees tell of his response to the Visiting Research Scientist Program: "I am a Portuguese biologist who has been in the United States for the last two years. . . . I would like to express to the people of the United States in your person my thanks for the excellent opportunity of working in this country, a stay that has left wonderful and unforgettable memories. I benefited from my contact with American scientists and I have enjoyed marvelous hospitality. My wife and I hope that your country will be able to enjoy forever in peace the prosperity that it built with its own hands."