

nounce any basic historic rights or claims to sovereignty. The treaty would provide that such rights and claims would remain unaffected while the treaty was in force, and that no new claims would be made. "In other words," the President's letter stated, "the legal *status quo* in Antarctica would be frozen for the duration of the treaty, permitting cooperation in scientific and administrative matters to be carried out in a constructive manner without being hampered or affected in any way by political considerations."

Whether the President's plan or the internationalization proposal will be followed is impossible to say at this juncture. Early indications are, however, that Chile and Argentina, for whom the issue is a major one, will insist that suggestions in the President's letter set the framework for the talks. At the opening session, Adolfo Scilingo, head of the Argentine delegation, stressed the point that the conference was not called "to institute regimes or to create structures. It is not its mission to change or alter anything."

Whatever the decision that may result from the conference, there seems little question that all participants are party to the general agreement that scientific work in Antarctica, such as that which is now being resumed, should be continued and expanded.

British Science Attains Cabinet Status

In accordance with his campaign promise, Prime Minister Harold Macmillan has appointed a science minister, Viscount Hailsham, who will serve under the title of Lord Privy Seal. Hailsham leaves the posts of party chairman and Lord President of the Council. Titles such as Lord Privy Seal and Lord President of the Council originated centuries ago. These posts do not carry departmental responsibilities, the titles being retained to allow for appointments of ministers to oversee specific sectors of the national effort. Hailsham will assume responsibility for the Atomic Energy Authority, the Department of Scientific and Industrial Research, and research in medicine, agriculture, and outer space.

Actually, the appointment does not substantially alter Hailsham's previous responsibility, but only extends it. As Lord President, he devoted part of his time to all of the areas listed except

atomic energy, which has been under the direction of the Prime Minister. Now Hailsham will give his full attention to scientific matters. He has already indicated that he intends to concentrate especially on the production of more scientists and on getting the results of research into practical use.

A related appointment is that of Duncan Sandys, former Minister of Defense, as head of a new Ministry of Aviation. He will have charge of the development of guided missiles, radar, and electronics, as well as of the aircraft industry and commercial aviation. Sandys will take over responsibilities borne in the past by the Minister of Transport for Civil Aviation and by the Minister of Supply for research, development, and production of civil and military aircraft, guided and atomic weapons, and radar and electronics.

Press Reaction

The press in this country has paid particular attention to the new emphasis on science in Britain's ruling body, using such terms as "space-age cabinet." However, the British *Economist*, for example, does not give much weight to the trend, saying of Lord Hailsham:

"He now departs bell, book and candle into space: to take ministerial charge of science, a job which was puffed up during the election campaign but which nobody is quite sure really exists." The *Economist* then observes that it would be a great pity if the appointment were the "first step into oblivion" for one of the ablest Conservative ministers, and adds that if Lord Hailsham had been in the Commons he would have been given far greater departmental responsibilities.

The *Economist* article also comments that Sandys has "stepped down" to the new Ministry of Aviation and suggests that the latter is another office which probably should not exist. The article points out that there is an immediate political decision to be taken—whether to give more scope to the private airlines—but that after that the new ministry could "too easily become a collecting place for the pleas of special interests. . . ."

United States observers will study closely the effectiveness of the new cabinet posts. Special interest in the appointments has been generated by the Department of Science bill that is pending before the Congress. The proposed legislation includes a suggestion that there be a secretary for science in the President's cabinet.

Ochoa and Kornberg Win Nobel Prize

The Nobel Prize in physiology and medicine will be shared this year by Severo Ochoa, chairman of the department of biochemistry at New York University, and Arthur Kornberg, executive head of the department of biochemistry at Stanford University. The two men are being honored with the \$42,409 award for discoveries related to the synthesis of ribonucleic acid (RNA) and deoxyribonucleic acid (DNA).

These two complex organic chemicals have been under study for years. DNA is the chemical that functions in most living things as the carrier of hereditary qualities. It has been described as providing the master pattern in each cell, allowing that cell to reproduce itself in its own image. It is thought that it plays some role in the production of RNA, which is believed to be essential in the production of protein, the basic material for all living tissue. Further, it is thought that in some viruses, such as the poliomyelitis virus and the tobacco mosaic virus, RNA also passes on hereditary "instructions." Because of the complexity of living cells, it has been difficult to find ways of studying the two chemicals in isolation.

Kornberg's contribution was the discovery of an enzyme that promotes production of DNA from much smaller organic molecules, which are available commercially. Ochoa found an enzyme that fulfills a like function for RNA. Beginning in 1955, Ochoa obtained his enzyme from *Acetobacter vinelandii*, the bacteria that turn alcohol into acetic acid. In 1956 Kornberg found his enzyme in the common intestinal variety of the bacterium *Escherichia coli*. He put this to work to produce DNA but found that magnesium salts must be present with the primer to start the reaction.

The research, which was conducted independently by Kornberg and Ochoa, has made it possible to use these enzymes for synthesis of compounds that appear to be virtually identical with DNA and RNA physically and chemically, although they have not yet been shown to be biologically active. The work has clarified many of the questions about cellular reproduction and protein formation.

The Two Careers

Ochoa, who is 54 years old, was born in Spain, where he received his medical degree with honors from the University



Two American biochemists will share the 1959 Nobel Prize in physiology and medicine for their separate investigations of nucleic acids: (left) Severo Ochoa, chairman of the department of biochemistry at New York University, and (right) Arthur Kornberg, head of the department of biochemistry at Stanford University.

of Madrid in 1929. He did graduate work in Glasgow, Berlin, Heidelberg, and London. He began his career as an educator at the University of Madrid in 1931. Later he moved to Heidelberg, Plymouth, and Oxford, obtaining his first appointment in the United States in 1941, when he became an instructor and research associate in pharmacology at Washington University, St. Louis. In 1942 he accepted a post as research associate in medicine at New York University, where he has remained ever since. He was named chairman of the department of biochemistry in 1954.

Kornberg was born in Brooklyn in 1918. He received a B.S. degree from the College of the City of New York in 1937 and an M.D. degree from the University of Rochester in 1941. For approximately 10 years he was with the U.S. Public Health Service, where he advanced through grades to become a medical director. During this period he served on the staff of the National Institutes of Health in Bethesda, Md. There he spent 3 years in the nutrition section, then became chief of the section on enzymes and metabolism. In 1952 he was named professor and head of the department of microbiology at Washington University, where he remained until last July, when he accepted his present post at Stanford as professor and executive head of the department of biochemistry.

The Karolinska Institutet in Stockholm makes the annual selection for the

Nobel awards in physiology and medicine. The physics and chemistry prizes will be announced by the Swedish Royal Academy of Science about 26 October. The three scientific awards will be presented in Stockholm on 10 December, Alfred Nobel's birthday.

U.S., Soviet Student Exchange Program Up for Study

The future of the student exchange program between the United States and the Soviet Union, now beginning its second year, will probably be determined during talks in November between U.S. and Soviet officials. The program is conducted under the Lacy-Zaroubin pact, signed last year, which was also the basis for the recently announced exchange of scientists between the two countries' academies of science.

Experience last year, when 21 American graduate students studied in the U.S.S.R. and 17 Russians studied here, indicates that several problems must be overcome before the future of the program, which is now regarded as experimental, is assured.

The major problem, from the American point of view, is the limited access that U.S. scholars are given to laboratories, archives, and other facilities in the Soviet Union. This handicap, which many students reported after last year's experiment, caused such difficulties that the Inter-University Committee on Travel Grants, the coordinating body

for students from American Universities, remonstrated with the Soviet Deputy Minister of Higher Education in a letter sent last month. The letter, sent by David C. Munford, head of the committee, implied that the exchange experiment might be terminated if major improvements were not forthcoming during the current academic year. Although no reply has yet been received from the Soviet minister, M. A. Prokoviev, the American officials are confident that full consideration will be given to problems arising from the exchange. There is often a reluctance on the part of Soviet officials to deal with such problems in correspondence. The approach which has proved most valuable is informal discussions between principals. Such discussions are planned for November. It is expected that either Munford will travel to the Soviet Union, or that a small Soviet delegation will visit the committee's headquarters at Columbia University.

Free Access Given Here

In his letter, Munford stressed the fact that Russian students visiting this country under the plan are given the most free access possible. In addition, American universities go to great lengths to assure the best conditions for the foreign students, including the opening of areas closed to most Russian visitors. On the other hand, according to the reports of American students, the conditions in the U.S.S.R. are quite restrictive. Limited or de-