Statement of the National Academy of Sciences on the AEC Fellowship Program

The provision for loyalty and security investigation of all Atomic Energy Commission fellows, included in a rider to the 1950 Independent Offices Appropriation Act passed by Congress last August, has far-reaching implications for scientists and scientific freedom. It posed an immediate problem to the National Academy of Sciences: whether or not its National Research Council should continue to administer the AEC fellowship program under the new restrictions. A quasi-governmental body, the NRC accepts an obligation to give any advice it can to a government agency that asks it. But discussions within the Academy and the NRC revealed almost unanimous opposition to the application of clearance procedures to fellows working in nonsecret areas.

When the AEC asked for advice on the future direction of its fellowship program the Academy replied:

We are convinced that by this restriction the value of the broad program has been greatly reduced; we have grave doubts whether [its] continuance . . . thus restricted is in the national interests. . . .

Since we hold these views, we believe that the National Research Council should not accept the responsibility for administering the altered fellowship program.

We hope that, to the extent to which the Atomic Energy Commission continues the program, it will find it possible to administer it without our help. Nevertheless, in the measure in which our advice in one form or another may prove necessary to the Commission, we recognize an obligation to provide such advice.

We would further urge the Atomic Energy Commission to take all proper steps to see that these restrictive provisions be omitted from future legislation. We in turn shall make known to the Government of the United States the reasons for the views here expressed.

The AEC considered and rejected this suggestion that it should take over administration of the program, stating as its reasons:

1. The AEC believes any fellowship program affecting a substantial number of students training in broad and established fields of science should be administered by a scientific or educational organization. While an executive agency of the Government may properly sponsor such a program, it should not administer it.

2. The National Academy of Sciences, the senior agency for cooperation between the Government and the scientific community, has gone on record as opposing FBI investigation of fellows appointed to nonsecret work. It would be extremely difficult to administer an effective fellowship program that did not have the full support of the scientific community.

Further consultation and correspondence between officials of the Academy and those of the AEC led to agreement on a contract for NRC administration of a fellowship program for 1950–51 revised to meet the new conditions. No new predoctoral fellowships will be offered for 1950–51. Postdoctoral fellowships will be limited to work requiring secret information. To fulfill prior commitments, applications for renewal of current nonsecret predoctoral fellowships and postdoctoral medical fellowships will be accepted, subject to the clearance provisions. It is expected that about 75 new awards will be offered and about 175 renewals granted. There are now 421 AEC fellows, 30 engaged in secret work and 391 in nonsecret work.

The statement by the National Academy of Sciences is reproduced here, together with related correspondence between the Academy and the AEC.

IN AUGUST 1949, the Congress passed an amendment to the Independent Offices Appropriation Act of 1950 which requires that holders of Atomic Energy Commission fellowships must be given clearance from the AEC after having been investigated as to character, associations, and loyalty by the Federal Bureau of Investigation. On the basis of the record of the hearings before the Joint Congressional Committee, this enactment is believed to carry the implication that the fellowship program is designed to provide the nation with scientists who are not only trained to utilize knowledge of nuclear energy and fissionable materials in their study of problems in physics, biology, medicine, etc., but who also would be available for work associated with the classified activities of the AEC.

To explore means for meeting this implication and at the same time discharging its statutory obligation to render assistance within its competence to any government agency requesting it, the National Academy of Sciences held discussions within its council and membership and its officials met with those of the AEC. To carry out the decisions thus reached, the Academy has agreed to enter into a contract proposed by the AEC, under the terms of which the NRC will administer during 1950–51 a new program of fellowships, limited in scope and differing in character from that previously in force.

Commitments for renewals for 1950–51 of fellowships awarded for 1949–50, as published in previous NRC announcements, will be fulfilled, subject, however, to the provisions of the new law.

The revised fellowship program was developed after the AEC had been informed of the opinions of the council of the Academy regarding the influence of the new restrictions and of its members' convictions concerning the responsibilities of the Academy to American science, as well as to the Government of the United States. It is described in the following letter.

Letter dated December 9 from Carroll L. Wilson, general manager of the U. S. Atomic Energy Commission, to Alfred N. Richards, president of the National Academy of Sciences:

"The Commission has carefully considered the conditions set forth in your letter of November 30 under which the National Academy is willing to authorize the National Research Council to administer a new and more limited Atomic Energy Commission Fellowship Program. The Commission plans to explore further the desirability of sponsoring in some way a predoctoral fellowship program in fields relating to atomic energy. It intends, of course, to seek the advice of the Academy on this question. In the meantime the Atomic Energy Commission requests the National Academy of Sciences to authorize the National Research Council to administer a program of Atomic Energy Commission fellowships in accordance with the following conditions:

"1. Predoctoral fellowships will not be offered by the National Research Council for the academic year 1950–51.

"2. In order that commitments in announcements of the predoctoral fellowships and of the postdoctoral medical fellowships for 1949–50 shall be fulfilled, applications for renewal of current fellowships in these categories will be solicited by the National Research Council and renewal recommended for those whose progress warrants it. However, because of the amendment to the Independent Offices Appropriation Act of 1950, such recommendations can become effective only after the applicant has been investigated as to character, associations and loyalty by the Federal Bureau of Investigation and clearance given by the Atomic Energy Commission. Hence those whose applications for renewal are approved by the National Research Council will receive from the Atomic Energy Commission a copy of the amendment referred to above and a personnel security questionnaire which must be filled out and returned before the FBI investigation can be initiated. Decisions by AEC, based upon the FBI report, will determine the fellowship awards.

"3. The National Research Council will administer a limited program of postdoctoral fellowships in the physical sciences, biology, biophysics and medicine for advanced training in fields of secret work or in problems which require access to restricted data. For holders of these fellowships, FBI investigation and full security clearance constitute an accepted requirement.

"In the physical sciences, the fields of study will be limited to those closely related to the Atomic Energy Commission program, such as the chemistry and nuclear physics of elements of atomic number 90 and above, the neutron physics of the elements, the effect of high energy radiation on matter, the chemistry of elements in the fission product range, and the separation of isotopes.

"In biology, biophysics, and medicine, the research fields will include experimental aspects related to atomic energy which require the use of the special facilities available in the AEC installations and/or access to restricted data. This work would include studies such as the physiological and toxicological effects of fission products, and the development of radiation instruments as applied to biological and health physics problems of a classified nature.

"4. The administrative commitments set forth in this letter do not extend beyond June 30, 1951.

"We understand from your letter of November 30, 1949 that the National Academy of Sciences agrees to the provisions enumerated above. Members of the staff of the Commission will arrange with the National Research Council for the implementation of this fellowship program and for public announcement of the revised program."

The correspondence that led up to Mr. Wilson's letter of December 9 follows.

Letter dated September 27 from Carroll L. Wilson, general manager of the U. S. Atomic Energy Commission, to A. N. Richards, president of the National Academy of Sciences:

On August 18, 1949, Mr. Carleton Shugg, Deputy General Manager, wrote to you calling attention to the provision of the Independent Offices Appropriation Act which concerns fellowships. At that time the immediate legal obligations particularly in relation to the renewal of present fellowships were emphasized. At this time it seems appropriate to initiate a general consideration of the future scope and character of the fellowship program. The recommendations of the National Academy of Sciences and the National Research Council in these matters will be welcomed.

Letter dated November 2 from Alfred N. Richards, president of the National Academy of Sciences, to Carroll L. Wilson, general manager of the U. S. Atomic Energy Commission:

In your letter of 27 September 1949, addressed to the National Academy of Sciences, you have stated that recommendations of the National Academy of Sciences and the National Research Council concerning future scope and character of the Atomic Energy Commission fellowship program would be welcomed. The question has accordingly been made the subject of lengthy discussion by the Council of the Academy, the opinions of the entire membership of the Academy have been solicited, and at two business sessions of the Academy at its meeting in Rochester, October 24–26, the question was thoroughly debated and the sense of the meeting ascertained.

The attached statement was drawn up by the Council of the Academy and submitted for discussion to those members of the Academy who attended the autumn meeting. It may be regarded as representing the opinion of the Council and of a large majority of the members who have had the opportunity of discussing it.

It might clarify your understanding of the second part of the second sentence of the second paragraph if I tell you that the wording of that sentence is a last-minute change made at an informal meeting of the Council from a sentence which read as follows: "We have grave doubts whether a program thus restricted is more in the national

interest than no such broad AEC fellowship program at all.''

The part of the statement entitled ''Annex'' is to be regarded as an appendix which might be made the subject of discussion with you.

STATEMENT CONCERNING THE AEC FELLOWSHIP PROGRAM PREPARED BY THE COUNCIL OF THE NATIONAL ACADEMY OF SCIENCES AND SUBMITTED BY ITS PRESIDENT

The Council of the National Academy of Sciences has considered the request of the Atomic Energy Commission for advice as to the scope and future of the fellowship program, in the light of the restriction placed upon it by the amendment to the Independent Offices Appropriation Act of 1950.

In our opinion the requirement of FBI investigation and Atomic Energy Commission clearance is ill-advised for those fellows who neither work on secret material, nor are directly preparing for work on Atomic Energy Commission projects. We are convinced that by this restriction the value of the broad program has been greatly reduced; we have grave doubts whether the continuance of the Atomic Energy Commission Fellowship Program thus restricted is in the national interests. In these views we concur with the opinion expressed by the Executive Board of the National Research Council.

Since we hold these views, we believe that the National Research Council should not accept the responsibility for administering the altered fellowship program.

We hope that, to the extent to which the Atomic Energy Commission continues the program, it will find it possible to administer it without our help. Nevertheless, in the measure in which our advice in one form or another may prove necessary to the Commission, we recognize an obligation to provide such advice.

We would further urge the Atomic Energy Commission to take all proper steps to see that these restrictive provisions be omitted from future legislation. We in turn shall make known to the Government of the United States the reasons for the views here expressed.

ANNEX

1. We hope the Atomic Energy Commission will itself operate this program.
2. We regard it as a proper function to advise on setting up Atomic Energy Commission panels to select fellows.
3. If it is not possible for the Atomic Energy Commission to set up panels, the National Research Council will upon request make an assessment of the qualifications of the fellows and a report on the progress of their work.
4. Announcements should be made by the Atomic Energy Commission and the extent of the participation if any of the National Research Council should be made clear.
5. In announcing the fellowships we believe it the duty of the Atomic Energy Commission to see that the prospective fellows are told the nature of FBI investigation and the criteria by which decisions are to be made by the Atomic Energy Commission.
6. Our special misgivings about FBI investigation and Atomic Energy Commission clearance do not apply to candidates for secret work.

October 26, 1949

Letter dated November 17 from Carroll L. Wilson, general manager of the U. S. Atomic Energy Commission, to Alfred N. Richards, president of the National Academy of Sciences:

We have considered your letter of November 2, 1949, and its attached statement prepared by the Council of the National Academy of Sciences. We understand that the Academy does not believe that the National Research Council should accept the responsibility for administering the Atomic Energy Commission fellowship program as altered by the amendment to the Independent Offices Appropriation Act of 1950. We regret that the restrictions imposed by the fellowship rider have made it necessary for the National Academy of Sciences to come to that conclusion. We feel, and we know you must also feel, that fairness to prospective fellowship applicants demands a statement in the near future of the status of the fellowship program. We are therefore writing to inquire if it would be acceptable to the National Academy of Sciences to have the National Research Council administer a fellowship program limited, during the period the restrictions of the amendment apply, by the conditions listed below.

1. No new appointments are to be made to predoctoral fellowships, except possibly for a small number of fellowships in secret fields.

2. The present broad program of postdoctoral fellowships is to be limited to those candidates whose proposed research is such that, in the opinion of the Commission, a high probability exists of subsequent employment requiring access to secret data. Fellows would not be obligated, however, to accept subsequent employment by the Commission or one of its contractors. We would expect this limitation to confine postdoctoral fellowships in the physical sciences to fewer fields than are now open. The present program of postdoctoral fellowships in the bio-

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Growth Failure in School Children as Associated with Vitamin B_{12} Deficiency—Response to Oral Therapy

Norman C. Wetzel, Warren C. Fargo, Isabel H. Smith, and Josephine Helikson[1]

The Children's Fresh Air Camp and Hospital, Cleveland, Ohio

DESPITE ITS ORIGINAL PROPERTY as a growth-promoting agent for certain bacteria (*4*) and subsequent evidence that it stimulates animal growth (*1, 2*), studies of vitamin B_{12} in man have been confined to its hematopoietic, clinical, and neurological effects in disease—viz., pernicious anemia and sprue. Information on its more general nutritional value has thus far had to come from animal work, in which growth could be experimentally held in check as desired, through purified diets, and thus through deprivation of B_{12} or of other food constituents, with or without caloric restric-

[1] With the technical assistance of Dr. Francis Bayless, Edna Chapman, and Barney Tautkins.

(*Continued from page 651.*)

logical and medical sciences would continue at its present level with the indicated redirection of emphasis.

3. Fellows now under appointment are to be candidates for reappointment under the criteria for scientific competence previously applied by the National Research Council, without regard to the additional requirements listed in the previous paragraphs.

4. The National Research Council is to have no responsibility for loyalty determination procedures other than submitting to the Commission the names of fellowship applicants and the names of those applicants judged by the Council to merit fellowships on the basis of scientific promise. Public announcement is to be made that the National Research Council will notify applicants of acceptance or rejection on scientific grounds, and the Commission will notify applicants of acceptance or rejection on grounds of security or loyalty.

It is our opinion that a fellowship program thus reconstituted would make a valuable contribution to the work of the Commission. The administrative experience of the National Research Council, and its established reputation for sound scientific judgment, would guarantee maximum effectiveness of such a program. These arguments have guided us in proposing for your consideration the plan outlined above.

We would like to express to you and to your fellow members of the National Academy of Sciences our gratitude for the attention and study you have given to the fellowship question. It is our sincere wish that an early agreement can be reached.

Letter dated November 30 from Alfred N. Richards, president of the National Academy of Sciences, to Carroll L. Wilson, general manager of the U. S. Atomic Eenergy Commission:

In response to your letter of November 17, amplified by two subsequent memoranda from Dr. Warren, I can now inform you that, should you make the request, the National Academy of Sciences will authorize the National Research Council to administer a new program of AEC fellowships consisting of the following provisions:

1. No new predoctoral fellowships will be offered.

2. In order that commitments in announcements of the predoctoral fellowships and of the postdoctoral medical fellowships for 1949–50 shall be fulfilled, applications for renewal of current fellowships in those categories will be solicited by the National Research Council and renewal recommended for those whose progress warrants it. However, because of the amendment to the Independent Offices Appropriation Act of 1950, such recommendations can become effective only after the applicant has been investigated as to character, associations and loyalty by the Federal Bureau of Investigation and clearance given by the Atomic Energy Commission. Hence those whose applications for renewal are approved by the National Research Council will receive from the Atomic Eenergy Commission a copy of the amendment referred to above and a personnel security questionnaire which must be filled out and returned before the FBI investigation can be initiated. Decisions by AEC, based upon the FBI report, will determine the fellowship awards.

3. The National Research Council will administer a limited program of postdoctoral fellowships in the physical sciences, biology, biophysics and medicine for advanced training in fields of secret work or in problems which require access to restricted data. For holders of these fellowships, FBI investigation and full security clearance constitute an accepted requirement.

In the physical sciences, the fields of study will be limited to those closely related to the AEC program, such as the chemistry and nuclear physics of elements of atomic number greater than 90, the neutron physics of various elements, the effects of high energy radiation on matter, the chemistry of the elements in the fission-products range and the separation of isotopes.

In biology, biophysics, and medicine, the research fields will include experimental aspects related to atomic energy which require the use of the special facilities available in the AEC installations and/or access to restricted data. This work would include studies such as the physiological and toxicological effects of fission products, and the development of radiation instruments as applied to biological and health physics problems of a classified nature.

Since, in this postdoctoral program, considerations of classification policy, security clearance and the AEC program play so great a part, it is deemed inappropriate for the National Research Council to agree permanently to administer it; hence the administrative commitments set forth in this letter do not extend beyond June 30, 1951.

* * * * *

I think you understand that the radical change from the previously existing AEC fellowship program represented by the provisions stated above is the consequence of the belief held by the Council of the National Academy and by the majority of its members who have expressed themselves that FBI investigation of AEC fellows who work in non-classified fields and who do not have access to restricted data is unnecessary from the standpoint of the national security and unwise from the standpoint of the advance of science in the United States.

It is also understood that had the Atomic Energy Commission determined to conduct the administration of a broader fellowship program, the National Academy and the National Research Council would have been glad to assist with scientific advice to the full extent of their competence.