

# F. A. S. NEWSLETTER

FEDERATION OF AMERICAN SCIENTISTS

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A - 741

**O'Mahoney Rider Passes Senate.** On August 2nd, the O'Mahoney amendment requiring FBI investigation of all Atomic Energy Commission fellows was passed by the Senate by a voice vote. The bill will now go to a conference committee of the House and Senate and almost certainly will be enacted into law. The amendment reads:

"No part of any appropriation contained in this title for the Atomic Energy Commission shall be used to confer a fellowship on any person who advocates or who is a member of an organization or party that advocates the overthrow of the Government of the United States by force or violence or with respect to whom the Commission finds, upon investigation and report by the Federal Bureau of Investigation on the character, associations, and loyalty of whom, that reasonable grounds exist for belief that such person is disloyal to the Government of the United States. ....", followed by a penal clause. Note that it is the Commission which considers the FBI reports, rather than as an earlier version had it, the Attorney General.

Debate on the amendment may be summarized as follows. Senator O'Mahoney argued that AEC fellows should be subject to the same requirements as Federal employees in general. He stated that his amendment is "based upon an amendment which has been carried in every appropriation bill for several years, dealing with the payment of Government salaries to persons who belong to organizations which advocate the overthrow of the Government by force or violence." He referred to the Atomic Energy Act which he said, "specifically requires that no person may be employed by the AEC who has access to restricted data unless the Commission finds, upon investigation and report by the FBI on the character, associations, and loyalty of such person, that reasonable grounds do not exist that such person is disloyal." Under questioning by Senator Morse, O'Mahoney stated that it was not the intention of the amendment that the FBI would decide on the loyalty of a candidate. The AEC would make final decision on the basis of all relevant information supplied by the FBI, and other information available to it. Senator McMahon stated that he did not oppose the amendment. Senator Pepper made a forceful speech, saying, "Any Senator on this floor who votes against the amendment could be made the object of an evil attack by any sinister enemy he had, to the effect that he, the Senator, was protecting the Communists, whereas he was merely trying to protect the rights of Americans in their enjoyment of American liberty." Senator Taylor alone voiced opposition for the record.

The FAS Administrative Committee has recommended the following policy to the Atomic Energy Commission and the National Research Council in the event the O'Mahoney amendment should become law:

1. The AEC should limit its fellowship program to individuals requiring access to classified information. If legally possible under the amendment, FBI investigation should be applied only to fellows appointed subsequent to passage of the legislation. Present fellows should be excluded on the ground that the conditions under which they accepted appointment did not include investigation. If it is not legally possible to exclude present fellows from investigation, they should be given opportunity prior to investigation to withdraw from the fellowship without prejudice.

2. The NRC should discontinue administration of the AEC fellowship program, ceasing to receive applications, to communicate directly with applicants or fellows, or to give publicity to the fellowships in the name of the Council. If requested, the NRC should, however, continue to assist the AEC by giving advice on the general aspects of the program, and by evaluating the scien-

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(NOT FOR RELEASE TO THE PRESS)

## A Presidential Commission on Science and National Security.

The events of the past several months have dramatized the need for a consistent, carefully formulated national policy on the relationship of science to national security. In the Condon affair, on clearance procedures for secret work, on the AEC fellowship issue, there have been no accepted guideposts. Half-understanding and misunderstanding of the requirements for effective scientific research and of the governmental objectives in this area have contributed to the feeling of uncertainty. In each case, scientists have been forced into a negative position: we have loudly protested steps taken in the name of military security as unwarranted. But we have suggested no alternative procedures.

The FAS on July 8th urged President Truman to establish a Special Commission on Science and National Security, in a letter co-signed by 145 prominent scientists. Favorable unofficial comments on the proposal have been received from high officials in Washington. The White House acknowledgment of the letter, however, represented an initial unfavorable reaction.

The text of the letter, which is expected to be published in Science later this month, is given below. Discussion among scientists is encouraged in the hope that additional support will further the project.

"The current controversy over the Atomic Energy Commission has once again focused attention on the problem of security in relation to scientific discovery. We are deeply disturbed by the misconceptions which have been voiced recently on this subject, and by some measures which have been proposed for the prevention of espionage directed at our atomic weapons. We fear that in the heat of controversy important values are being overlooked and may be carelessly sacrificed.

"The dilemma of secrecy vs. long-range security has plagued us since the end of the war. The demonstration of the potency of science as a military adjunct, so dramatically and horrifyingly driven home at Hiroshima, has led to two almost universally accepted conclusions -- first, intensive cultivation of science is essential to national security; second, since scientific knowledge, of certain kinds and in certain circumstances, may have great military significance there are advantages in withholding it from potential enemies. We are slowly becoming aware, as a nation, that ill-considered implementation of these two conclusions can lead to very serious conflicts. For the narrowest interpretation of military security demands that we reveal nothing that might conceivably be useful to a potential enemy, and that the information of possible military significance available to any individual scientist be kept at a minimum. On the other hand, the experience of science is that the withholding of knowledge, or the abridgment of freedom of thought, is a deadly contamination which very rapidly inhibits research. How are we to reconcile these two apparently conflicting requirements? How can we safeguard in existing knowledge what is essential to military security, without so debilitating science as to sacrifice the hope of obtaining additional knowledge?

"You have yourself, Mr. President, pointed out the importance of scientific progress to the national welfare, and the grave danger to science of the continuance of an atmosphere of suspicion and distrust. For five years we have been trying to balance the legitimate security needs of the nation against the equally insistent needs of free scientific inquiry. Largely this has been done by improvisation in individual instances with little attempt to develop or follow a comprehensive national policy.

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O'Mahoney Rider Passes (cont.)

tific and professional qualifications of individual applicants.

3. The AEC, in narrowing the scope of its fellowship program, and the NRC, in withdrawing from its administration, should point out to the Congress and the people the increased importance of establishing a National Science Foundation to make up the deficit thereby created. It should be urged also that, as a matter of policy, the Foundation shall not give continuing support to research requiring security classification, and that no conditions other than those of scientific competence should be imposed on the Foundation's fellowship program.

It was felt by the Administrative Committee that only through these measures can the main body of science be insulated from the philosophy of the O'Mahoney amendment -- that federal support carries with it the power and obligation on the part of the government to investigate the political attitudes and associations of the recipients of federal grants. More and more it is becoming clear that broad policy must be formulated to govern the relations between government and science, and to delineate sharply the areas of classified from those of fundamental research.

The General Advisory Committee of the AEC, headed by Dr. J. Robert Oppenheimer, unanimously denounced the proposal to require FBI investigation for all fellowship applicants. "We should like to register our strong disapproval of any such procedures," the Committee said in a statement drafted on June 6th and released by the AEC on August 5th. "Admittedly, the tensions of the times and the secret nature of atomic energy work require elaborate checks for all who have access to classified material. But to carry over the same security concepts to holders of fellowships who will in no way have access to secret or confidential information seems to us both unwise and unnecessary.

"It is clear that these requirements of FBI investigation of prospective holders of AEC fellowships would be to extend still further the area of federal interference with the private lives of citizens. We use the word 'interference' advisedly, for it is evident that the type of questioning of friends, relatives, and acquaintances required by the investigative procedures of the FBI do constitute an encroachment on the private affairs of many people. To repeat, we grant this to be necessary in these times in those cases where persons are to be employed on secret government matters. But we are horrified by the prospects of moving this whole semi-police apparatus into the realm of youth. ... The results of requiring investigations of candidates of fellowships will have serious repercussions throughout the country; it will almost certainly have a serious adverse affect on both the atmosphere of our educational institutions and the outlook of one age group on the entire nation."

Nursemaids for AEC. Another amendment proposed by Senator O'Mahoney to H.R. 4177, which authorized funds for the AEC, provides for closer supervision by the Bureau of the Budget and Congress over expenditures by the Commission. This amendment was passed by voice vote and now appears certain of enactment. It requires the approval of the Director of the Budget Bureau for certain types of construction projects costing more than \$500,000, which were not in the current budget or whose estimated cost becomes more than the amount budgeted. A detailed explanation must also be submitted to the Appropriations Committees and to the Joint Committee on Atomic Energy. If expected costs are more than 15% above the original estimates, detailed report is again called for. This policy raises the same question as the McMahon-Durham bill (See July 21st Newsletter, p.8 -- the bill is quite definitely abandoned for this year), the question whether the Atomic Energy program still requires more flexibility and looser supervision than other governmental agencies. Said Commissioner Pike recently, "clumsy handicaps" must not be imposed on the Commission's operations, lest "other countries adopting free and more flexible methods would outdistance the U.S. in this uniquely important field."

AEC Investigation by the Joint Committee continues quietly in closed sessions, dealing with personnel security cases. Further publicity is not likely until the Committee report or reports are issued.

Presidential Commission (cont.)

Security decisions have been left to individual government agencies, often subject to various uninformed pressures. Without benefit of full discussion of the issues, public understanding has remained at a low level and, in consequence, public opinion has drifted perilously close to hysterical insistence upon secrecy at whatever cost. The situation has become so threatening, not only to scientific progress but to traditional American political freedom, that we feel that only through action on your part can the problem be brought under control.

"Therefore, we respectfully urge that you appoint, at your earliest convenience, a Special Commission on Science and National Security. We urge that this Commission be composed of foremost scientists and educators, outstanding men of public affairs, and representatives of Congress, the National Military Establishment, and other agencies of the Executive Branch. We urge that this Commission make a full investigation of the entire problem of security requirements in relation to the requirements for maximum development of science. We believe that the Commission should study, among others, the following questions:

- (1) What are the limits where excessive attempts at secrecy diminish instead of preserve our national security?
- (2) What are the areas of science to which security measures can and should be applied?
- (3) What classification procedures give maximum protection of information of military value with minimum restriction of exchange of information of purely scientific value?
- (4) To what extent, and under what conditions, should classified research be conducted outside of military laboratories?
- (5) What types of clearance procedures are effective, and admissible within the bounds of scientific and democratic tradition, in military laboratories, in non-military governmental laboratories, in non-governmental laboratories?
- (6) What would be the effect on the morale of scientists and on our total scientific program of applying political tests for participation in non-secret scientific work through requirement of (a) oaths and affidavits, or (b) investigation and clearance?
- (7) What have been the effects of present security measures and procedures on our scientific research programs, particularly in government?

"We believe that the Commission should study these matters, not only with the objective of reporting to you its conclusions and recommendations, but with the thought as well of providing a factual background on security procedures now in use, specific studies of the effects and effectiveness of these procedures, ways in which similar problems are handled in other countries, etc. We have been too long security-conscious with insufficient security education.

"American scientists differ in no way from their fellow-citizens in their desire to protect the best interests of their country. They seek no special dispensations or privileges. In opposing extreme advocates of military security they are really seeking not less security, but more. Our real strength lies not in the guarded knowledge of the moment, but in our ability to keep in the forefront of advancing knowledge. We recognize that the issue of security vs. freedom of science is one of public policy and that opinions other than those of scientists must enter into its resolution. It is for this reason, and because we are convinced that the matter is of urgent importance, that we ask for the establishment now of a Special Presidential Commission of broad representation and scope."

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An AEC Budget Cut for the current fiscal year, as passed by the Senate, amounts to some \$71 million, but the Commission may be able to make this up in part from a cash carry-over from the last fiscal year and thereby avoid drastic curtailment of its program. The Commission is faced, however, with conflicting instructions on where to apply the cut: the House gave discretion as to programs to be affected by the cut, while the Senate Appropriations Committee recommended curtailment of such activities as biology and medicine, physical research, and the non-weapons part of the reactor program. McMahon spoke firmly against the committee directions, emphasizing the importance of research not now of obvious military value. He also pointed out the impossibility of differentiating between peacetime and military phases of the reactor program.

National Science Foundation. NSF legislation has been bottled up in the House Rules Committee for over two months. With every passing week it appears more probable that opponents of the bill, H.R. 4846, have secured enough key support in the Rules Committee to keep the bill from reaching the floor. Meanwhile, proponents of the legislation have been quiet, patiently waiting for the Rules Committee to complete its "deliberations".

This week, perhaps too late, a move was started in Washington to force the bill to the House floor. The strategy is to bring pressure to bear upon Representatives Adolph J. Sabath, Chairman of the Rules Committee, and Robert Crosser, Chairman of the Interstate and Foreign Commerce Committee. Sabath will be asked to report the bill to the floor, Crosser to initiate the difficult procedure necessary to discharge the Rules Committee from consideration of the bill, thus bringing it directly to the floor. If neither of these tactics succeeds, final consideration of the legislation must go over to the second session of the 81st Congress.

Passage by the Senate of the O'Mahoney rider has re-emphasized the importance of establishing a National Science Foundation. Basic science, now supported in many fields largely by AEC and military funds, is being subjected to semi-police procedures, which, if legitimate at all, are so only in fields of immediate military importance. The only hope of checking the spread of this contamination of fundamental research is to separate its support from that of military research at the administrative level. An amendment to NSF calls for non-subversive affidavits by fellowship applicants even in fields of basic research. (See FAS Newsletter A-731, June 17, 1949).

A National Science Foundation must be created as the civilian agency to support basic, non-classified research without reference to political or other considerations. It may help if scientists write to Representatives Crosser and Sabath explaining this urgency.

UNAEC Closes Shop. The members of the U.N. Atomic Energy Commission have again acknowledged that differences between the American-led majority and the Soviet-dominated minority are "irreconcilable at the Commission level", and that continued discussions would serve only to sharpen these differences.

On July 29th, by the usual 9-2 vote (USSR and Soviet Ukraine opposing), the UNAEC adopted an American resolution calling for a resumption of Commission-level discussions only after some "basis for agreement" is reached through private consultation among the Big Five and Canada. These talks were expected to begin this week (Aug. 9) with the points of disagreement remaining essentially the same as they were in August, 1946: (1) international administration versus national control with limited inspection; (2) the "veto" question; (3) transitional steps prior to full control. Since these obstacles have been insurmountable for almost three years, there seems to be little likelihood of a solution now -- even among the Big Five -- at least until some general rapprochement between the U.S. and the USSR has been achieved.

Quaker Proposals to Ease International Tensions. The American Friends Service Committee, winner of the 1947 Nobel Peace Prize, published July 17th the report of a special group which has worked a year on a study of American-Russian relations. Basic for believing that the relations may be improved are that both capitalism and communism will be in the world for some time, both systems have undergone significant changes, and neither intends to promote its foreign policy now by military aggression. Specific recommendations are made for the relaxation of tension in three fields -- European trade, status of Germany, and U.S. participation in the United Nations.

The aim of the first two proposals is the economic and political development of both Germany and Eastern Europe to allow the progressive withdrawal of all occupation forces.

The third proposal is that the U.S. without jeopardizing fundamental principles, seek more issues on which it can cooperate with the USSR and avoid those having a dividing effect. The U.S. might break the atomic energy deadlock by proposing to put present atomic weapon stocks under U.N. seal and to halt concentration of fissionable material pending UNAEC certification.

The State Department reaction was a polite but firm rejection: "While the State Department welcomes such efforts of

serious-minded groups toward better understanding...with the Soviet Union,...the recommendations deal with very intricate matters on which the U.S. policy is well-known and is believed to be soundly based on realities with which we are confronted."

FAS Administrative Committee Meeting, New York, July 31.

While interim policy and action, as treated in this Newsletter, occupied most of the Committee's time, major organizational problems brought about by the high degree of activity of the FAS in the last two months also were given detailed consideration. The Federation's stand on current issues has received support from a great many more scientists than are dues-paying members. The activity of the Washington office of the FAS has been scaled to this larger endorsement, rather than to the modest budget originally planned. The Executive Secretariat (the committee of volunteers which operates the Washington office) reported the substantial assistance of Higinbotham of Brookhaven and Hill, Bush, and Pines of Princeton, who spent in all about 40 days on their own time in 10 different trips to Washington. More than a thousand hours were contributed by some 75 volunteers in the Washington area to supplement the work in the office by the secretary, the single employee of the FAS. The Secretariat reported that on several items, notably telephone, telegraph, office supplies, and traveling expenses, the budget estimates had had to be far exceeded. It was also noted that dues income was thus far much less than the conservative estimate made at the first of the year. Unless this deficiency is made up, even the minimum, fixed expenditures of the FAS (about \$250 per month) will create a financial crisis in October.

The Administrative Committee was of the opinion that, given better organizational efficiency, the FAS could enroll a large number of scientists who at one time were members or who feel tacitly allied to the Federation. They considered membership dues and small contributions to be the logical source of funds to meet the modest budget and the additional expenditure justified by the events of the past three months. The Administrative Committee decided on two lines of action:

(1) A concerted effort in September to enroll additional and delinquent members, to be carried out by chapters in their areas, and by the FAS membership committee for members-at-large.

(2) Active consideration of the plans for reorganization of the FAS, such as were proposed last winter. There is at present no provision for participation by the increasingly large number of members-at-large in election of the Administrative Committee or Council.

Hugh Wolfe, Chairman, presided at the meeting, which was also attended by Vice-Chairman Grobstein, Secretary-Treasurer Friedlander, and Livingston. The next meeting of the Administrative Committee was scheduled for September 4th at Brookhaven, the next meeting of the Council for November 26th and 27th in Chicago.

Advance Membership Campaign. Recipients of this Newsletter are urged to anticipate the coming drive for members by seeing to it that the coupon below is returned to the national office. If you are not a member (or, being one, have not paid dues this year), use the coupon yourself. Otherwise give it to a colleague who may want to apply for membership or make a contribution. The Newsletter is sent to non-member contributors.

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Aid to Backward Areas. In proposing his "bold, new program" for aid to the undeveloped areas of the world, President Truman stated that "two-thirds of the world live on the verge of starvation all the time". In the past, our concern with the plight of these unfortunates has sprung largely from humanitarian motives. Under present world conditions, however, it is recognized that aid for the backward people is based as much on self-interest as on altruism. Expanding world trade is a source of economic well-being for all nations. If the underprivileged two-thirds could raise their standard of living to half that of the more fortunate third, the volume of world trade, it is estimated, would double.

In the specific legislation proposed by the President, the method of administering the program is not designated, although earlier it was proposed to make the State Department the coordinating agency. It is generally admitted that an independent organization, responsible only to the White House, would be a better means of implementing a plan so novel and sweeping. The freedom of action necessary in the early stages of its development would probably not exist in an already established agency.

The aim of the program -- development of the underdeveloped areas -- requires long-range planning, as well as immediate aid. Modern technical education as well as its product, modern machinery, must be exported. The number of student and teacher exchanges must be increased. Techniques for mass education must be worked out. That investments alone do not necessarily develop the economy of a country has often been demonstrated.

The most suitable type of administration for this project is probably one similar to that of the TVA. David Lillienthal's book on the TVA, "Democracy on the March", is known throughout the world, having been translated into twenty languages. Of American institutions, TVA is one of the most admired, and steps have been taken by Brazil, India, Mexico, and Palestine towards the development of such projects.

The President, to date, has asked only two things of Congress to implement this program -- permission to send technical experts abroad and guarantees by the Export-Import Bank of foreign investments against certain risks. The program is starting on a small scale, but if carried through with energy and vision, may do much towards achieving peace and security throughout the world.

United Nations Conference on Conservation and Utilization of Resources meets at Lake Success starting August 17. Delegates from other UN member nations will join US experts in discussing actual projects for industrialization and development of backward areas. The US representatives are well-known administrators and industrialists.

AEC Progress Report. After the widely publicized and dramatic attacks on the Atomic Energy Commission in May and early June, the Commission as reported in the last Newsletter, was finally allowed a few days for testimony on positive achievements. More such evidence appears in their Sixth Semi-annual Report to Congress (available from the Government Printing Office @ \$.45 per copy), released with little fanfare on July 31. The major part of the report deals with activities in biology and medicine; only 6 of the 203 pages are concerned with weapons application. The contents are a useful reminder of the importance of the AEC's projects in both pure and applied fields.

The report tells of the AEC's project to investigate the effects of radiation on living cells and tissues, on organs of the body, and on the body as a whole. Many different techniques are being used in these studies, which are expected to indicate treatments for radiation sickness and injuries. In genetics, observations of animals and plants exposed to radiation are providing better understanding of mutation and suggesting improved breeding programs. Also financed by the AEC is extensive medical research on the effects of the explosions over Hiroshima and Nagasaki, as well as of after-effects at Bikini and Alamogordo.

Reported in some detail are projects utilizing the low-priced radioactive isotopes of the common elements important in the life processes of plants, animals, and man, e.g. radioactive iodine for over-active or cancerous thyroid, radiophosphorus for accurately locating brain tumors during an operation and reducing excessive production of red and white corpuscles, radioactive isotopes of iron, zinc, chromium, potassium, sodium, and other elements as tracers in biological investigations.

The AEC's expanding activities in cancer research include plans for the construction of two new hospitals, supplying all necessary radioisotopes without charge for any cancer research in the U.S., and sponsoring special studies of radiocobalt which may become a cheap substitute for the expensive radium. AEC projects in agriculture are concerned with radiation effects on plants and cattle, the efficiency of fertilizer, fungicides, and herbicides, photosynthesis in plants, and the absorption of mineral nutrition by animals and plants.

AEC laboratories and other research centers devoted to industrial applications have as major activities such problems as the development of new materials capable of withstanding high temperatures and intensive radiations, how materials corrode under high temperatures, and how they transfer heat.

In a statement issued at the time the report was submitted, President Truman expressed his belief that "we have reason for reassurance and faith" in our atomic energy program and that it "makes us stronger from a military standpoint while at the same time it promotes our peacetime goals". Significantly, there has been no comment from Senator Hickenlooper or other recent critics of the AEC.

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