

F. A. S. NEWSLETTER

FEDERATION OF AMERICAN SCIENTISTS
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ON THE USE OF A-BOMBS --

License the Bomb? Faced with a new crisis in Korea, the U.S. last week allowed its hand to rest for a moment on the atomic weapon. The non-Soviet world stiffened with alarm. The Chinese Communists, appearing not to notice, plunged onward down the Korean peninsula. For a second time -- the first when the Korean fighting began -- the question of the use of the Bomb was sharply and immediately posed. If the answer still was "not now," it was a less certain answer than last time. The atomic clock had moved forward perceptibly; no one knew whether to measure the remaining time in minutes, seconds, or milliseconds.

Off-the-record discussion became public after President Truman, at a press conference, indicated that use of the A-bomb on the Chinese Communists had been considered. The impromptu exchange between Mr. Truman and reporters caused considerable confusion, leaving the impression in some minds that decision on use of the Bomb already had been transferred to General MacArthur. A later statement from the White House made it clear that under the Atomic Energy Act, only the President could authorize use of the atomic weapon and that no such authorization had been given. Nevertheless, the President's remarks were widely interpreted, particularly abroad, as a threat to the Chinese Communists to desist or face atomic bombing.

Whether or not intended, this interpretation found support in Congress. Sen. Brewster (R, Me.) said: "We ought to use the A-bomb against Chinese troop concentrations and ammunition dumps." Rep. Steed (D, Okla.) preferred using the Bomb "on top the Kremlin as the source of the trouble." Several other influential Senators made more moderate statements indicating readiness to consider use of the Bomb to stop the Communists. In all such comments, the notion was implicit that through the use of the A-bomb, or even the threat of it, the conflict in Korea could be ended speedily. This appeared to be a popular notion, for the Gallup Poll reported that during November 45% of those asked felt that "if the U.S. does get into a war with Communist China" the atom bomb should be dropped. 38% answered in the negative.

Reaction abroad was of another kind. Dispatches from London to New Delhi told of fear and misgivings in the wake of Mr. Truman's remarks. India was reported to have notified the British Government that the first power to use another atomic bomb against Asians would be finished in the Far East for good. Asians, it was pointed out, have not forgotten that Asians (Japanese) were the first victims of atomic warfare. Prime Minister Attlee told the British Parliament, "The British Government consider that decision (to use the atomic bomb) of such grave import that it could not be taken on behalf of the UN without fullest prior consultation with those member states who are at present participating in the international police action." Reports following the meeting of Attlee with French Premier René Pleven indicated complete French-British concurrence on this point, and it was expected to receive attention in Attlee's scheduled talks with Truman.

In this second debate about use of the Bomb, it became obvious that possession of it is no unmixed blessing for the U.S. Whatever else it may be, it has become for the world a symbol of total war. No one believes that it can be used anywhere, by anyone, without signalling a new world-wide conflict. Despite the editorial plaint of the Washington Post that "one of the neatest tricks of Russian propaganda has been to convince people that it is something morally reprehensible in the atom bomb not in other instruments of warfare," its catalytic power to induce general war, if nothing else, does set it aside from other weapons. Depending on the Bomb in long-range strategy, the U.S. finds itself unable to use it in limited conflict without running the risk of being labelled, in world opinion, the initiator of a general conflagration.

Here is a new fact for U.S. policy-makers to ponder. We

have insisted that the Bomb is a shield against war -- for our allies as well as ourselves. But in limited conflicts, such as that in Korea, our allies fear to see it used lest a general war be precipitated. The question arises whether the Bomb is not already effectively impounded by world opinion, to be released only in the event of general war or previous atomic attack.

To some minds, particularly abroad, this suggests that the U.S. would be well advised to recognize the "situation of fact" and publicly declare that it will not use the A-bomb except under UN sanction. These people point out that the logic of our present position -- as major representative of the UN in Korea -- seems to require it. Such a move might well reduce the danger of impetuous use. Elimination of atomic and other weapons of mass destruction does not seem likely in the near future. Is it not possible at least to use them only under license, subjecting them to what limited international authority is now available?

Approval of Retaliatory Use of the A-bomb was given by a special commission of 16 Protestant theologians and laymen in a report to the Federal Council of the Churches of Christ in America. Speaking with "troubled spirits" and justifying its stand in terms of the otherwise "totally inadequate defense" of the non-Communist world, the commission stated: "If atomic weapons or other weapons of parallel destructiveness are used against us or our friends in Europe or Asia, we believe that it could be justifiable for our government to use them in retaliation with all possible restraint." The group clearly did not believe that the U.S. should be first to use the Bomb under any circumstances. Included among the signers were Chester Barnard, who helped draft American proposals for international atomic control; Arthur H. Compton, a Manhattan District leader; and William Waymack, former Atomic Energy Commissioner.

New Attack on Scientists. Mr. Seth Richardson, Presidential appointee to the Chairmanship of the new Subversive Activities Control Board, established under the McCarran Act, is the latest Government official to attack the loyalty of scientists. In a recent interview, Mr. Richardson said: "There's a damn site more danger from loose-tongued scientists than loose-tongued government employees. Some scientists right here in Washington are shooting off their mouths too much. Every damned man that turns up as a spy now comes out of the scientific world." The former chairman of the President's Loyalty Review Board said he doesn't know what loyalty is. "It's like obscenity," he said. "You can't define it."

An immediate challenge to this statement came from Dr. Howard Meyerhoff, Executive Secretary of the AAAS. In an interview with Science Service, Dr. Meyerhoff declared that "this statement is a pretty complete indication that the man hasn't got the balance necessary for the job he is being asked to do."

"In this very important position, we need above all, a man who doesn't shoot off his mouth about a whole group of people without prior investigation. I challenge Mr. Richardson to put up or shut up -- show us where there are more scientists, proportionately or otherwise -- than government employees whose loyalty has been questioned or who are what he calls loose-tongued."

"Loyal American scientists," Dr. Meyerhoff continued, "are proposing to the government that all scientists up to the age of 50 be subject to draft by the Armed Forces. Few other American groups can say the same."

"In view of Mr. Richardson's intemperate and un-American statement, I do not think that the Senate should confirm him in this very important appointment," Dr. Meyerhoff concluded.

The spectre of apparently responsible government officials making indiscriminate attacks on the loyalty of scientists has become an all-too-frequent occurrence on the national scene. All these events point ever more urgently to the need for a Presidential fact-finding Commission on Science and National Security, as recommended by the FAS over a year ago.

MOBILIZATION PLANS

Science in the Emergency. Rapidly developing international events have accelerated plans and action on mobilization of manpower and resources. Effective use of scientific resources, the focus of FAS interest, is considered a serious matter in Washington, not only by scientists but by the general planners. Present status is not easy to judge, either from what is published or from Washington "scuttlebutt." Under the surface many forces are in play, all with the identical objective of effective utilization of scientific manpower despite increased general manpower requirements. Methods proposed range from voluntary to mandatory, under either civilian or military control.

Manpower requirements for the Armed Services in 1951 were set at 2.8 million by President Truman in his message to Congress on December 1. This is twice the strength of the Services last June. Under pressure of events, the figure may climb further. Until new steps are taken, there will be few deferments for anyone of draft age because of training or work. Inductees who have scientific training may be picked out by the combing program the Army had started before the Korean situation worsened -- if that program continues. They may end up in technical jobs within the Army if the program proves effective. However, low rank will reduce the effectiveness of these people. To ameliorate the situation, the National Research Council has been advising the Armed Services informally on individual cases. Selective Service is no longer insensitive to these problems. The first positive action to stop the wastage of young scientific and technical men may be within the present Selective Service framework. It might involve automatic referral of individual cases to specialist advisors to Gen. Hershey. Possible, too, is a screening policy on reserves subject to recall.

Key agency in mobilization planning is the National Security Resources Board, headed by W. Stuart Symington, whose function is to advise the President on overall plans. Director of manpower for NSRB is Robert L. Clark, and under him, in charge of reviving the national roster is James C. O'Brien. On December 3, Dr. Philip N. Powers moved from the AEC to NSRB and undoubtedly will be a key figure in the operation of any scientific mobilization scheme.

Proposals for a comprehensive science mobilization policy are coming from many directions. The Trytten report (now modified in details from the text published in Science, Oct. 20, 1950) recommends deferment of the military service of some 12% of otherwise draftable college students, selected by scholarship and aptitude, until completion of their training. The Hafstad report (Interdepartmental Committee on Research & Development) calls for the deferment of "a large majority" of science and engineering students, in order that there be at worst no decrease in the number trained. It also recommends the establishment of a "National Scientific Service," to register all scientists and engineers, who would then be placed (by assignment or otherwise) according to plans and decisions of a "Scientific Resources Committee." The Barton report (American Institute of Physics) would divide Selective Service into "Military Service" and "Scientific and Technological Service," the latter to include men of draft age having "achieved a certain degree of competence" in these fields, regardless of physical qualifications. These would form a pool of scientific manpower and it would be the job of a "National Board" to see that these men were engaged in essential activities "with due regard to the suitability of their individual talents." They might be assigned to the Armed Services, sent to graduate school, etc. In an extension of this plan, the Barton report envisages the "National Board" registering all age groups, using persuasion and relying on patriotism rather than "absolute enforcement power" to ensure effective employment in the national interest. According to Science Service, similar plans are being proposed in reports not yet available by the American Chemical Society, the Engineers Joint Council, and the National Research Council. At least one is said to recommend that the "National Board" have power to draft and assign scientists of all ages. (The Trytten, Barton, and Hafstad reports all are scheduled for the December Bulletin of the Atomic Scientists; copies of these and other reports on this subject when available may be obtained from the FAS Washington office.)

A modus operandi for continual full mobilization was advanced by President Conant in the Dec. 19 Look magazine. He calls for 2 years military service for everyone at 18 years of age, with "absolutely no exemptions." Under Conant's well-publicized plan, there would be no deferments or exemptions for "college

students or anyone else." NSRB's director of manpower, Robert L. Clark, raises the objection that that plan means an interruption of skilled manpower production for a 2-year period, which might prove to be critical. Indirect criticism comes in the repeated emphasis by other top officials that a continued high level of scientific activity, especially university research and training, is essential. According to Science Service, however, proponents of Universal Military Service in the Defense Department and elsewhere, regard the Conant plan as a good starting point. The 3-million man army they say is needed can only be raised if deferments are few.

Discussion of these problems by citizens and scientists thus far has been lacking, primarily for lack of opportunity. Some of the reports mentioned have become available only recently; many of the plans are being discussed and decisions reached behind closed doors, with only selected scientists' views represented. The gap between the participating scientists (influenced by "inside dope" from Washington officialdom) and the scientists on the outside was evident at the Chicago meeting of the American Physical Society and the FAS Council. The Council's discussion of mobilization seemed typical of the "outsiders." It was generally agreed that the draft presented many problems for the effective utilization of scientific manpower. The Council went along with the attitude of the Trytten report that student deferment should be based on scholarship regardless of intended or actual specialty. It agreed that, at least for the present, the Armed Services did not provide the best opportunity for the young scientist to make his most effective contribution, that he should be indefinitely deferred from military service as such, and that a special board of some kind should assume responsibility for proper placement of this age group. It was thought that the problems of draft-age scientists and the problems of general scientific mobilization should be treated separately. These were very general, tentative conclusions, based on a brief discussion principally of the Barton report. The advanced stage of Washington deliberations came as a distinct surprise to those present.

The feeling of urgency which pervades official reports on scientific mobilization obviously was not shared by many scientists at the time of the Chicago meeting. Whether because of isolation from Washington and the "inside dope," whether because of greater faith in the voluntary method for getting important and essential research done, or because of fear of premature conversion to a regimented "Science," with resultant weakening of the long-range effort -- there was a definite feeling of caution. A post-meeting sounding of the opinion of the Council is now being taken in a search for a detailed and specific FAS policy. However, the march of events may require decision by the few before there is time for discussion by the many.

National Science Foundation was the subject of two rumors in the Capitol last week. The first, fairly well founded, was that the new National Science Board (see Members' Bulletin No. 1) would hold its first formal meeting on December 12. The second related to the Director of the Foundation, probable first order of business for the Board which is required to suggest nominees to the President although he is not bound to accept them. Several sources reported that Administration circles were seriously considering for the Directorship Senator Frank P. Graham, defeated in the North Carolina primaries last spring. Senator Graham was formerly President of the Univ. of North Carolina and Chairman of the Council of the Oak Ridge Institute of Nuclear Studies.

"The Sinews of Peace." Vannevar Bush, wartime head of the Office of Scientific Research and Development, recently delivered a speech on the above subject to the Economic Club of New York. The speech follows the outline of "Modern Arms and Free Men" and presents the same philosophy of optimism which characterized the book. Recognizing that Russian possession of the A-bomb has altered the previous military balance, Dr. Bush is now imbued with a greater sense of urgency than he showed last year. However, he points out that the second World War was won with weapons that did not exist when the war broke out and that given time we can still solve the problem of defense against strategic bombing. In fact, he still feels that the paramount problem facing the free world is not air defense or the defeat of land armies, but the control of the seas. Unless the submarine menace can be brought under control, Dr. Bush believes all else would be in vain.

Dr. Bush is a man of wide experience, but recent military events have shown how dangerous it is to confuse potential capabilities with present realities.

AEC IN THE NEWS

Declassification of Research Reactors. The governments of Great Britain, Canada, and the U.S. have adopted a revised declassification guide which will permit the publication of information necessary to the design, construction, and operation of low power research reactors. The press release by the AEC gave lattice spacings, total amount of fissionable materials, and the nature and amount of the moderator for the (Chicago) West Stands reactor (the first reactor built, a graphite-moderated pile) and its later modification; the Argonne heavy water reactor (high flux, kilowatt power level); and the Los Alamos water boiler (lower flux, kilowatt power level). General descriptions of construction at experimental facilities were included, and it was announced that detailed information would be published in the technical press. The information should be useful in advanced courses in reactor physics, and makes possible the construction of research reactors on an unclassified basis. Such reactors are not useful for the production of power or of weapons materials.

First Non-AEC Reactor. The first non-AEC nuclear reactor in the U.S. will be built by the Consolidated University of North Carolina, the nuclear fuel being loaned by the AEC. In line with the new policy of having private enterprise participate in the applications of atomic energy, the reactor is to be operated on an unclassified basis and devoted primarily to student training and peacetime research on nuclear processes. The location of the reactor is to be on the campus of the North Carolina State College, Raleigh, N.C. Present design calls for a low-power reactor of 10 kilowatts, using about 1 kilogram of fissionable Uranium 235. The laboratory building is being provided by the Burlington Mills Foundation.

AEC Chairman Talks. Amendments to the Atomic Energy Act, which would liberalize some of its security provisions and declassify additional information about the atomic bomb, are being studied. According to Chairman Gordon Dean, in an interview with U.S. News and World Report, the changes under consideration will have the objective of expediting activity while still maintaining necessary secrecy. When 300,000 to 400,000 technicians are required to manufacture and assemble bomb parts, the time, money, and personnel involved in clearance become truly formidable. The Chairman indicated that the size, shape, and even a picture of an atomic bomb may soon be revealed. Commenting on the Fuchs case, Dean defended the loyalty of scientists and suggested that a mentality such as that of Fuchs could escape detection under any kind of investigation.

With regard to the Joint Congressional Committee on Atomic Energy, Dean stated that with the exception of one incident, the record of the Committee is excellent in keeping secrets. "It is a healthy thing," he said, "to have elected representatives of the people in on it."

A Washington Post editorial on the Dean interview emphasized again that excessive secrecy hinders the exchange of ideas among research workers, thereby inhibiting the essential pollenizing process in science. Above all, the Post said, such secrecy keeps from the people the knowledge necessary for making intelligent decisions.

Toward Less Secret Science. In the November Physics Today, J. H. Manley gives a detailed account of declassification policies of the AEC since 1946. Progress is noted in the manner in which the "dilemma between secrecy to impede a rival and openness to speed our own progress" has been met. A recent policy statement (June 1950) states: (a) Weapons information, including design, production, and stockpiles, should be kept secret. (b) Basic science should be free except where it is directly related to weapons. (c) Until international control is attained, there shall be no information exchanged with other nations on the use of atomic energy for industrial purposes. Of these, (b) is regarded as a significant step.

AEC General Manager. Vacant since Carroll Wilson's stormy resignation in August, the post of General Manager of the AEC was filled October 26 by the appointment of Marion W. Boyer. Under the amendment to the Atomic Energy Act passed a few months ago, the General Manager is appointed by the Commission and does not require confirmation by the Senate. Mr. Boyer is an M.I.T. graduate and was a vice-president of Esso Standard Oil, where he had experience in directing large-scale manufacturing and research operations.

New AEC Clearance Procedures. The Atomic Energy Commission adopted on Sept. 19 a revised Administrative Review Procedure for the Security Clearance Program (Federal Register, Vol. 15, p. 6251); it is a revision of the Interim Procedure issued April 15, 1948. This revised procedure, together with the AEC "Personnel Security Clearance Criteria for Determining Eligibility" (Fed. Register, Vol. 14, p. 42), constitutes the policy for the AEC Security Clearance Program. The policies have been greatly improved over the years; however, the proof will come in the practice.

Applicants for positions, as well as employees of the AEC and its contractors, are covered by the new procedure. In case the security investigation produces information raising doubt of eligibility for security clearance, the individual is provided written notification of the specific findings creating the doubt. He has the right to appear, with counsel, before a Personnel Security Board and to present evidence in his own behalf through witnesses and documents. He has the right to challenge for cause the appointment of any member of the Board, such challenge to be decided by the Manager of Operations concerned, who also appoints the Board. Rules for appointment of the Boards, for conduct of hearings, and for making recommendations are set forth in detail. Confrontation and cross-examination of witnesses may be requested by the Board, but such requests are often not granted because of the confidential nature of the sources or for other reasons.

The Board's recommendations are made to the Manager, who then makes his recommendation to the General Manager. A review hearing before the AEC Personnel Security Review Board may be held if requested by the individual or the General Manager. The General Manager makes a final decision on the basis of the recommendations of the Manager or the Review Board.

The only important change in policy or procedure is the extension of the hearing procedures to applicants for employment. This change has been under consideration for several years (4th and 5th semi-annual reports of the AEC) and represents a major improvement. The lack of safeguards for applicants has been the most serious fault in the AEC Security Clearance Program, and this improvement had been strongly advocated by FAS and the Scientists' Committee on Loyalty Problems. With this change, the security programs of the AEC, the Air Force, and the Industrial Employment Review Board, as well as the Civil Service Loyalty Program, all provide for equal treatment of applicants and employees. It is to be hoped that other Federal Agencies will soon also see the light.

AEC Fellowship Program. The Atomic Energy Commission recently announced that the Oak Ridge Institute of Nuclear Studies has been selected to administer the entire AEC pre-doctoral and post-doctoral fellowship programs for the 1951-52 academic year.

This new arrangement replaces the one adopted last year when the National Research Council objected to administering AEC pre-doctoral research fellowships on the grounds that FBI investigation of the candidates required by the O'Mahoney rider to the Appropriation Act had no place in a non-classified research program. Under this interim scheme the pre-doctoral program was administered by 4 Regional Fellowship Boards and the post-doctoral program by the NRC. In the new scheme, the NRC will assist the Institute in the assessment of academic competence of applicants, but final selection will be made by a National Fellowship Board appointed by the Institute.

AEC General Counsel, Joseph Volpe, Jr., has resigned effective January 15. He has held this post since early last year.

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SECRET, by Michael Amrine; Houghton Mifflin Company, 311 pp; \$3.00. (Mr. Amrine was the Federation's Publications Director in 1946.)

Once when a bull session on atomic problems had descended to the inevitable proposal that scientists should govern the world, Mike Amrine banged his fist on the table and shouted, "I'd rather be bombed."

Scientists -- not science -- have fascinated Mr. Amrine ever since Hiroshima. We intrigue him, but we do not fool him very much. His latest novel, "Secret," is written against the background of the Manhattan Project and the FAS; but it is not about these things. It is about scientists. He is sympathetic but inspiring in his probing into our personalities and motivations, and the inner conflicts which many have felt so acutely these past years.

"Secret" is not a flawless work. Mr. Amrine performs his dissection of the scientists mainly on the person of one B. F. Halverson, who under the strain of serving as a composite of all atomic scientists sometimes fails to be convincing. Sometimes he behaves even more like a writer than a scientist. A favorite myth is repeated: "Not a hundred (at Oak Ridge) knew what was being made." The General (not Groves) in supreme command of the Project is pictured as a half-literate oaf. Halverson never tells his wife, despite her tears, recriminations, and laboratory experience, what the Project is about. And FAS veterans will not be pleased to find the management of the Washington office usurped by a hermaphroditic Miss Wilson.

But Mr. Amrine is really concerned with the struggle of the individual scientist to reconcile the roles he must play as scientist, citizen, and simply man. He epitomizes the moral problem of the scientist entering the atomic Project: "He (Halverson) knew the greatest part of it for him would always be that he was asked to suspend his individual judgment and contribute to something much larger than himself and perhaps in the end much too large for the human race." He has Politzky comment, "One is never loyal to what one knows is right. That is just what loyalty is not. Deciding to do what is right is logic. Deciding to do what is wrong, because it involves higher rights, tomorrow, the next day, in the sky....that is loyalty."

And all of us must wince a little at this: "The humility of science? Much of the ritual of science he (Halverson) unwillingly saw was the ritual of pride, the way to be proud without being proud....It was not wrong to be proud of being modest, because that was not pride..."

"Of all those who follow the strange religion of science, not one in ten thousand is equipped to be a saint."

- - J. H. Rush

Government Service. About 200 physicists heard Dr. Louis N. Ridenour, at a brief meeting sponsored by the local FAS chapter in Chicago on November 24, urge that scientists serve government not only through advisory committees in their specialties, but full time, perhaps for 2 years in every 10 of their active careers. Universities should -- according to Ridenour, many would -- cooperate by giving leaves of absence even to their top scientists.

Internal Activities of FAS. Changes in the by-laws adopted at the Chicago Council meeting, Nov. 25, provide a more realistic time schedule for the annual election of officers and of delegates-at-large to the Council. The elections committee will report nominations to the membership by February 1 and ballots are to be mailed by March 10. There will be separate slates for Chairman and Vice Chairman.....The budget for 1951 was set at \$7300, compared with \$6825 for 1950; however only about \$5600 will have been raised by the end of this year. The budget provides for the Washington office, a single secretary, the Newsletter, postage, mimeographed bulletins, telephone and telegrams in times of crisis. The office is headed by four local scientists who serve on the volunteer Executive Secretariat, and economy is attained by training members of the Washington FAS chapter in the art of licking stamps and operating the addressograph.....The membership has increased during 1950, but to raise the still modest 1951 budget, the FAS must be 300 members stronger at the end of 1951. The membership committee will welcome the assistance of all members. Get a colleague to use the Newsletter coupon.....The Mohawk chapter (Schenectady, Troy) continues an active program, especially on atomic education and civil defense.....The Rochester chapter staffs the FAS Committee on Aid to Foreign Science, which continues to be very successful in obtaining fellowships and assistantships for advanced students from abroad. The committee works through the Institute of International Education.....The Washington office averages 50 inquiries a month for atomic educational materials, continuing in a small way and through volunteers the work of the defunct National Committee on Atomic Information.....There will be an open meeting of the Executive Committee in New York, probably on Feb. 3. Interested members may write for details. The Council next meets April 26, 1951.

Science in State Department. Dr. H. A. Spoehr, the plant physiologist, has been appointed consultant to the State Department to help implement the program outlined in the Berkner report (see NL, June 7, 1950; Bulletin of the Atomic Scientists, October, 1950; etc.). The recommended Science Adviser's Office would be responsible for State's interest in international scientific organizations and scientific representation at major embassies abroad.

Re-appraisal of Security Measures? President Truman is reported (Washington Post, Nov. 19) to be considering the formation of a committee of distinguished citizens to examine the effectiveness and operation of existing security and loyalty legislation. The committee would recommend needed changes to the President and the Congress. Studies would be made of the McCarran anti-Communist Act, the Federal Employee Loyalty Program, the security law under which government workers in sensitive agencies can be fired summarily, the FBI, the Central Intelligence Agency, and other agencies responsible for national security. The committee would not be asked to study disloyalty charges against any particular Federal employee. This committee would be similar in purpose to the ones suggested earlier by the Washington Post (see NL, June 7, 1950) and by the FAS (see NL, August 9, 1949).

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