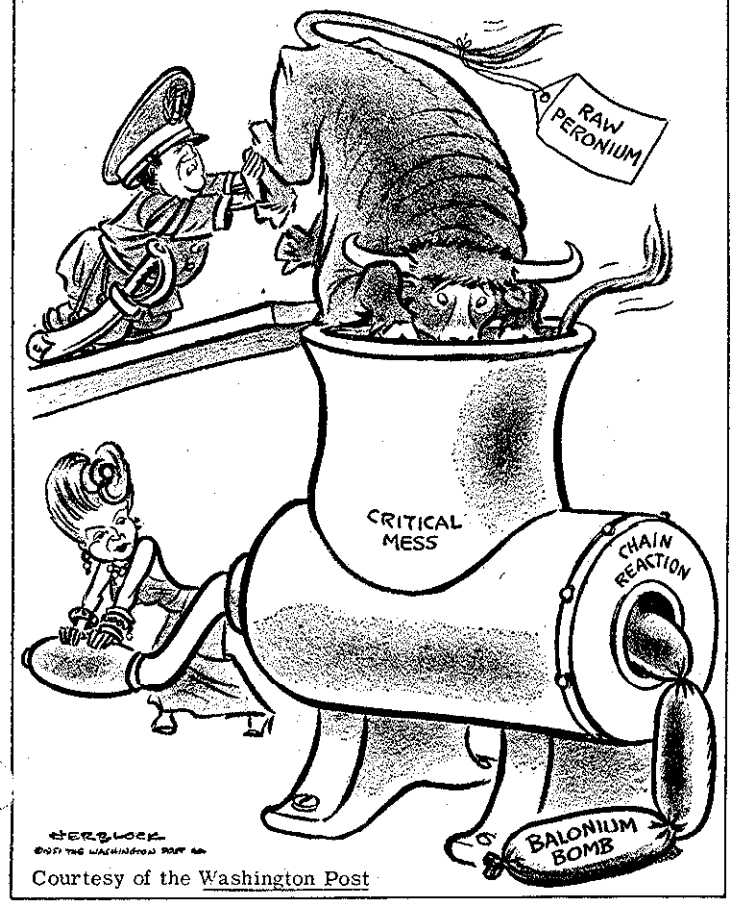
F. A. S. NEWSLETTER

FEDERATION OF AMERICAN SCIENTISTS 1749 L Street, N.W., Washington 6, D.C.
April 3, 1951 51 - 3

Borst Elected FAS Chairman. In the election of officers just completed, Dr. Lyle B. Borst, chairman of the Department of Reactor Science at Brookhaven National Laboratory, was elected Chairman of the FAS for 1951-52. W. A. Higinbotham, present FAS chairman and head of the electronics division at Brookhaven Laboratory, was chosen Vice-chairman. Borst and Higinbotham, together with four other members to be named by the FAS Council at its April 28-29 meeting, will make up the Executive Committee for 1951-52.

Washington Secretariat Chairman Retires. After nearly three years of continuous service, Alan H. Shapley is retiring June 1 from Chairmanship of the FAS Executive Secretariat. During this time, Alan has given time and energy unstintingly to FAS affairs. His hand has been in every Washington office activity. He has sat in on unnumbered meetings, carried the main burden of the Newsletter -- writing copy, editing, and even mailing. In times of financial crisis, he helped FAS survive. Rush communications to the membership, letters to governmental agencies, appeals to the Nation's scientists, all bear his imprint. His leadership and energy have kept the Office going. He retires with the good wishes and gratitude that only sincere devotion can earn. Pending restudy by the Council, Shapley's responsibilities will be divided among three or more members in the Washington area. Clifford Grobstein will temporarily assume the editorship of the Newsletter, George Kamm some of the membership and business chores of the FAS, and a third person, as yet unselected, will tend to external Washington contacts. -- F. L. V.

Science Is Wonderful



Courtesy of the Washington Post

POINT FOUR TO WAR

A Pointless Point Four? Said President Harry Truman in his inaugural address on January 20, 1949: "Fourth, we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. ... I believe that we should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life. ... Our aim should be to help the free peoples of the world, through their own efforts, to produce more food, more clothing, more materials for housing, and more mechanical power to lighten their burdens. ... This should be a cooperative enterprise in which all nations work together through the United Nations and its specialized agencies wherever practicable. It must be a world-wide effort for the achievement of peace, plenty, and freedom."

Few today can remember the three points preceding Point Four in that inaugural address. So great was the impact and hope of Point Four that, in spite of repeated rebuffs and set-backs, it has remained alive both at home and abroad as the fragile but nascent positive side of U.S. international policy. Early in March, however, recommendations contained in a report to the President, "Partners in Progress," by the International Development Advisory Board, indicated that Point Four had transformed while still aborning. The report makes clear that international economic development is now to be regarded as an adjunct, rather than as the positive counterpart of United States mobilization and military defense.

Said the Report, "The Advisory Board recognizes that the first imperative must be to rebuild sufficient military strength to resist aggression. ....strengthening the economies of the underdeveloped regions and an improvement in their living levels must be considered a vital part of our own defense mobilization. ....economic development, when brought within the necessary broad strategy of a total foreign policy, will play an important role in our mobilization for defense." So completely altered is the emphasis of the Point Four program that the Board can remark, "Even if there were no threat of aggression in the world or no danger of subversion, a world-wide task of economic and social development would still remain."

Having thus completely concealed any lingering altruistic motives from a "practical-minded" Congress, the report makes the following major recommendations: 1) Consolidate present foreign aid activities under a United States Overseas Economic Administration with an initial appropriation of a half billion dollars; 2) Facilitate private investment abroad so as to expand it approximately two billion dollars -- chiefly to obtain materials urgently needed for defense; 3) Creation of an International Development Authority to finance essential public works construction in underdeveloped areas -- U.S. subscription to be $200,000 to an initial capitalization of a half billion dollars; 4) Continued export of materials, equipment, and spare parts to underdeveloped areas at 1949 levels; 5) New financial arrangements under the Export-Import Bank and the World Bank to encourage flow of capital by increasing its security.

Although this program can hardly be called wooly-minded, and certainly not unbusiness-like, it faces tough sledding in Congress. Said the New York Times, "it probably will be exposed to more than its share of political sniping in the crucial eighteen months ahead. ... Many in and out of Congress will want to know how even a limited program of assisting underdeveloped areas -- a program involving no more than $1 billion, for example -- can be added to the cost of rearmament without carrying the nation back into deficit financing." Which is only to ask whether there is not something wrong with the theory that the U.S. can simultaneously be armorer and Big Brother to the world.

STUDENT DEFERMENT

Soft on Superior Students. After long delay a policy on student deferment was announced by the President on March 31. Stripped of legal phraseology, the President's directive recognizes the importance of proper utilization of trained human resources. The techniques employed are regarded with misgivings, however, by some observers.

The order provides for the automatic deferment of the brighter students of each year's class in recognized colleges and universities. Students whose grades are near or below the borderline will have a second opportunity for deferment through a special examination, which is to be given on a nation-wide scale on May 26, June 16, and June 30 of this year. The examination, a series of aptitude tests, is devised by the Educational Testing Service of Princeton, N.J. -- a non-profit, non-stock organization -- whose services have in the past been utilized by the Navy, State Department, AEC, West Point, and Annapolis.

There appears to be general applause in Washington for the objectives of this policy. But there is criticism of the lack of provision for bright youngsters whose financial resources do not permit a college education. Some recall Civil War days, when deferments were frankly bought, and wonder whether financial and social status should be permitted even indirectly to determine eligibility for deferment and college training. Others point out that deferment based on top percentage of college classes, although coupled in the directive with a standardizing examination, makes no realistic allowance for wide variation in educational standards. Not only may good talent be lost at higher ranking institutions, but general standards may be lowered through increased "pulling power" of lower ranking institutions. Those who believe in strict equality of sacrifice in any enforced national service are opposed to what they see as "an intellectual elite" too smart for military service. Clearly the mobilization planners are caught in a dilemma. It remains to be seen whether the controversial methods set up in the presidential directive can survive public criticism without endangering the directive's generally sound objectives.

The pertinent section of the President's executive order deals with the redefinition of "necessary employment" for the purpose of Selective Service regulations. Paragraph (A) gives the basis for occupational deferment; medical students are covered in (B 1), present graduate students in (B 2), and college students and graduate school applicants in Paragraph (B 3). The text follows:

"(A) A registrant's employment in industry or other occupation, service in office, or activity in research, or medical, scientific, or other endeavors, shall be considered to be necessary to the maintenance of the national health, safety, or interest only when all of the following conditions exist:

(1) The registrant is, or but for a seasonal or temporary interruption would be, engaged in such activity.

(2) The registrant cannot be replaced because of a shortage of persons with his qualifications or skill in such activity.

(3) The removal of the registrant would cause a material loss of effectiveness in such activity.

"(B) A registrant's activity in study may be considered to be necessary to the maintenance of the national health, safety, or interest when any of the following conditions exist:

(1) The registrant has been accepted for admission to or is a student in a professional school of medicine, dentistry, veterinary medicine, osteopathy, or optometry and the school in which he is enrolled has certified that he is satisfactorily pursuing a full-time course of instruction leading to his graduation.

(2) The registrant is a full-time graduate student seeking a graduate degree and the graduate school at which he is in attendance has certified that he currently is meeting degree requirements and is expected to attain his degree.

(3) The registrant has been accepted for admission to a graduate school for the class next commencing as a candidate for a graduate degree, or has been accepted for admission to a college, university, or similar institution of learning for the class next commencing for a full-time course of instruction or has entered upon and is satisfactorily pursuing such course, and, within such categories as the Director of Selective Service, with the approval of the President, may prescribe, either has maintained a required scholastic standing, or has attained on a qualification test a score, or both such standing and score, to be prescribed by the Director of Selective Service with the approval of the President.

"(C) The Director of Selective Service is authorized to prescribe such qualification test or tests as he may deem necessary for carrying out the provisions of Paragraph (B) of this section and to prescribe the procedures for the administration of such test or tests, for the certification of the results thereof, and for the certification required in carrying out the provisions of Paragraph (B).

"(D) The President may, from time to time (1) designate special categories of occupation, employment, or activity essential to the national health, safety, or interest: and (2) prescribe regulations governing the deferment of individual registrants engaged in such occupations, employments, or activities."

Civilian Defense Information on BW.-- Federal Civil Defense Administration Publication PA-2 (available from the U.S. Government Printing Office, 10 cents) tells "What You Should Know about Biological Warfare." After months of delay -- partly due to the secrecy which surrounds the subject, partly due to disagreement among experts on the potency of BW and how it should be handled for the public -- an official statement is now available for use by civilian defense agencies.

The theme of this moderately pitched pamphlet is stated on the flyleaf in four succinct sentences. "Biological attacks could be made by enemy forces or by secret agents. The attacks could be aimed at people, animals, or food crops. But -- biological warfare is no secret superweapon. There are defenses against it and you should know what they are."

Emphasis is placed on the fact that any BW attack must first meet normal public health defenses, highly effective in the U.S. Major danger is seen in new methods of spreading old diseases -- by means of artificial mists, spraying pathogens into ventilating systems, bombs, etc. Little mention is made of the practical difficulties in accomplishing these theoretical possibilities. The threat of new types of germs or poisons is debunked. "We can be reasonably sure that no enemy could attack us with some new disease germ or toxin that would bring quick illness or death to millions of people." Advice is given on how best to combat possible BW attacks on the local level. This pretty largely sums up to a short lecture on personal and community hygiene, with the special admonishment to cooperate with public health authorities. The total effect is clearly in the direction of quieting public fears about BW by building up confidence in the ability of specialized agencies to handle it.

The general tenor of the pamphlet is in keeping with the more detailed report of a special FAS committee to the Council. Here also the extreme claims of BW danger were rejected, but its potential as an adjunct to other weapons was clearly recognized. To what extent this potential may be realized cannot be estimated without access to whatever body of secret information may exist. The CD pamphlet will have its usefulness, but general public enlightenment on the broad problem of BW will have to await the release of more information on the technical issues which the pamphlet so carefully skirts. On these hinge the importance of inclusion of BW in any system of international control of weapons of mass destruction.

Industrial Application of Fission Products. Constructive uses of fission products are being investigated by the Stanford Research Institute for the Atomic Energy Commission. The scope and objectives of the program are described in a booklet, "Industrial Utilization of Fission Products -- a Prospectus for Management," available from the Institute at Stanford, California.

Fission products are a highly radioactive mixture of elements produced by the splitting of uranium in nuclear reactors. These atoms have no known usefulness for industrial or explosive power, but may be of industrial use because of the energetic radiations they emit. These radiations enable them to kill organisms, induce chemical reactions, ionize gases, and activate phosphors. It may, therefore, be possible to sterilize foods and drugs without heat, produce improved static eliminators and fluorescent lights, as well as luminescent paints. The successful large-scale industrial use of fission products as opposed to the same use of radioactive isotopes should be possible, since the cost per curie of the former is 1/100th to 1/1000th the cost of the latter.

The FAS Newsletter is edited and published in Washington, D.C. by the Executive Secretariat of the Federation of American Scientists. Non-member subscription is $2.00 per year. The FAS is a national organization of scientists concerned with the impact of science on national and world affairs. Application for membership may be made on the coupon on page 3.

THE CULT OF LOYALTY

THE LOYALTY OF FREE MEN, by Alan Barth. Viking Press, 240 pp.; $3.00.

"The national loyalty of free men is not so much to their government as to the purposes for which their government was created."

On this resounding theme, Washington Post writer Alan Barth has developed a study of the rising threats to our free society that everyone may well read and ponder -- and do something about. His approach is mature and practical. He does not attempt to dispose of security problems either by denying that a problem exists or by straining to find merit in the current remedies; but he reminds us relentlessly that freedom and security, as absolutes, are mutually exclusive.

"Security is never an absolute. It is attained in its optimum state not when all risk has been excluded, but when risk has been brought into rational balance with the ends which security is supposed to serve. The government of a free people must take certain chances for the sake of maintaining freedom which the government of a police state avoids because it holds freedom to be of no value."

After commenting on the "cult of loyalty" that has arisen and examining the record of the Communist Party in the United States, Mr. Barth takes up in turn the salient aspects of the campaign for security. His incisive and forthright treatment, in a time of confusion and timidity, is most heartening.

Of the Un-American Activities Committee: "Numerous attempts have been made to correct its commonly acknowledged excesses by reforming its procedure. But the real defect ... is incurable. It is rooted in the purpose for which the committee was created and in the concept that Congress may properly punish, by publicity, activities which it cannot constitutionally declare criminal."

Criticizing the irresponsible criteria employed in loyalty and security proceedings, Mr. Barth quotes the Emperor Trajan's rebuke to Pliny the Younger regarding the prosecution of Christians: " 'Public accusations by anonymous persons should have no place in criminal practice. Such a procedure would be thoroughly bad and out of keeping with the spirit of our age.' " He regards the Loyalty Program as morally wrong and a practical failure, and would abolish it entirely. "Security" would be restored to the good sense and judgment of departmental officials in hiring personnel, with special safeguards in the few really "sensitive" positions. "Absolute security is likely to result in nothing save absolute sterility."

The author acknowledges the well-merited reputation of the FBI. But he notes disquieting tendencies in its loyalty investigations, and warns: "A secret police is a police that operates in secret, that maintains secret dossiers, that uses secret agents and informers. The FBI has come too close to that description."

The dilemma of science and secrecy is well presented, as is the case for freedom in the universities. "Academic freedom and tenure are not privileges extended to the teaching profession, but a form of insurance to society that the teaching profession will be able to discharge its function conscientiously."

Barth sums up: "The loyalty of free men must be freely given.... The premise on which every free society rests ... is that only through such freedom can loyalty be evoked and counted on to endure."

This is an outstanding book. Don't miss it.

- - J. H. Rush

AMONG BOOKS RECEIVED

SCIENTISTS AT WAR, by Wilfrid Eggleston. Oxford University Press, Toronto; 291 pp.

This book is the opposite number of James Phinney Baxter 3rd's "Scientists Against Time." Mr. Eggleston was wartime press censor for Canada, is now again a newspaper correspondent and head of the journalism department at Carleton College. Taken together with Conant's "Science and Common Sense," this book makes an excellent introduction for the layman of what science is all about, what it can and cannot be expected to do -- and so might be tucked into the trunk of anyone departing for Savannah or Kentucky or any other emergency program work where one can expect to deal with administrators, contractors, or plain people. It is also an excellent record of the exciting seesaw of development and counter-development in World War II, in radar, sub warfare, amphibious landing devices, aircraft, etc. Eggleston has had time (in fact one wonders where this book has been since 1946) to hunt up actual combat testimony on the use of instruments to finish off each story of development. The follow-through from a statement of the problem to the answer, complete, incomplete, or outpaced by events, makes his book exceptional among official histories, and therefore much more than a mere chronicle of the National Research Council of Canada.

AN INTERNATIONAL BIBLIOGRAPHY ON ATOMIC ENERGY, Vol. 1 (Political, Economic and Social Aspects), Supplement No. 1, 22-page pamphlet. International Documents Service, Columbia University Press, New York 27, New York.

RADIATION MONITORING IN ATOMIC DEFENSE, by Dwight E. Gray and John H. Martens. D. Van Nostrand, Inc. $2.00. Designed for the lay reader as a ready reference manual.

AEC Fellowships. On March 21, approval of more than 200 AEC fellowships was announced by the Oak Ridge Institute of Nuclear Studies. Names of the candidates are being withheld until security procedures are completed. The Institute was selected to administer the fellowship program for the coming academic year. The National Research Council, which has previously administered the fellowships, had (under the chairmanship of Detlev W. Bronk) terminated this responsibility in response to Congressional requirement of FBI investigation of candidates even in non-classified research programs (see NL 50-10, Dec. 5, 1950).

Fellowship recipients were chosen from among 586 applicants by a 9-man board, appointed March 16, and headed by Dr. George B. Pegram, vice-president emeritus of Columbia University. Serving with Dr. Pegram on the Board are: George H. Boyd, Robert G. Brode, Detlev W. Bronk, Leland J. Haworth, Warren C. Johnson, Homer W. Smith, Elvin C. Stakman, and Louis Whitaker.

NSF -- Another Slow Step. Twelve months after the crucial debate in Congress, 10 months after the bill became law, 4 months after the appointment of the 24-man board, the National Science Foundation finally began to get started on March 21 when Dr. Alan T. Waterman was confirmed as its director. Since 1947, Waterman has been Chief Scientist of the Office of Naval Research and largely responsible for executing the generally applauded policies of ONR's post-war support of basic research. With a budget of $225,000 until June 30, Waterman will plan and organize the larger operations expected of the new federal science agency in coming years. As against the earlier hopes that NSF would be the leader in discovering and developing the Nation's scientific resources, particularly its human potential, the impression now is that NSF, at least in its early stages, will play a significant but not predominant role.

Responsibilities of FAS members include giving moral and financial support to the Federation -- and assistance in enlarging the membership. Among the benefits are the Newsletter and the privilege to subscribe at a special rate to the independent Bulletin of the Atomic Scientists. The FAS maintains its Washington "listening post" and keeps its membership informed on pertinent issues, operating on a budget of $7000 from membership dues alone. The work of the FAS is not duplicated by any other scientific organization. Its continued activity depends on steady, continuing support by the present and potential membership. Please bring this Newsletter and the coupon to the attention of a colleague.

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Annual Newsletter subscription for non-members is $2.

Flanders' Fears. A Baruch plan for all armament is the proposal of Senator Flanders of Vermont for the way out of the present American-Soviet impasse. In a speech in the Senate February 12, Flanders voiced his fear that "we are losing the sympathy and support of other nations in the world" and "are being made to appear as one of two contenders for supreme power in the affairs of the globe." He likened the U.S. to sheep in wolves' clothing, sometimes misleading even our friendly neighbors. "To the outsider our position, our policies, and our actions are difficult to distinguish from an old-style contest for power as between ourselves and the Soviet Government." Urging that we use the UN, not write it off, Flanders proposed to disarm completely and progressively (except for the few small arms required for maintenance of civil order) under the direction and inspection of the UN itself. It is "the American plan (to control atomic energy) extended to cover all major armament instead of one single element of it." His plan calls for a UN control agency, for complete access by that agency to every nation, for prohibiting "manufacture of prohibited arms," for disposal of existing arms, and for sanctions for violations. The right of access and free communication would be the first step, and to start with, Flanders proposes the U.S. impose and continue the same restrictions on the Soviets that they place or may place on us.

He reiterates the need for an expanded Point IV program. "Our rearming has painfully modified our economy and our way of life. It will affect them harmfully to a still greater degree as we get deeper and deeper into the policies and practices of the garrison state. ... We can redirect....ability now concentrated on war to the development of the undeveloped parts of the world." Even if done as a free gift, "it would still be better than the free and destructive expenditure of our blood and treasure in preparation for and carrying out of warfare. We will need this moral and economic equivalent of war if we are to shift our purposes and our direction."

These equivalents are needed on the domestic front as well as in foreign fields, e.g. in the rebuilding and improving of educational facilities. "....we devote (billions) purposefully toward destruction. A part of these funds for an extended period must be directed toward the health, education, and higher satisfactions of the American citizen. The period of liquidation of the garrison state may become a period of constructive rebuilding of American life."

"When and Where do we drop the A-Bomb?" asks the title of David Lilienthal's article in Collier's for March 10. Although it does not explicitly answer these questions, the article is a good discussion of why there are few situations where the use of the bomb might be militarily effective. Lilienthal concludes that "the basic problems we face cannot be solved by A-bombs." "The primary targets in war, apart from direct combat, are things, not people -- oil fields, power stations, steel centers, transportation centers and the other essential means of carrying on. To put it another way, in itself this killing of people is hardly likely to cause vital wounds to countries whose populations number in the hundreds of millions. It would, in fact, probably tend to stiffen rather than lower resistance."

The former AEC chairman reiterates Bacher's criticism of the H-bomb effort as wasteful of technical skills and of fissionable A-bomb material, pointing out that for small industrial targets A-bombs are sufficient. "We ought not to use an elephant gun when a rifle will do." Lilienthal also makes a not indefensible point that the concern of well-meaning citizens over the dire possibilities of the A- and H-bombs has sometimes led to extremes. "Some of the scare stories give the impression that we are waging psychological warfare against ourselves. Trying to frighten the Russians, we are likely to succeed in scaring ourselves." The author's position is that "the prospect of atomic warfare cannot be regarded with equanimity by any people or nation. But the very existence of the danger makes it all the more important that we keep our wits about us."

The Rosy Future? Dr. Vannevar Bush, speaking under the auspices of the Committee on the Present Danger, a non-partisan group of citizens formed to alert the country to the need for prompt action to safeguard our freedom, held out the prospects of an indefinite armed peace in our future relations with Russia. The key to the matter, according to the speaker, lies in our present stockpile of A-bombs. Speaking bluntly, Bush stated that "If Russia sent its armies rolling across the German plains tomorrow, we with our A-bombs and the planes to carry them would destroy Russia. ... We could destroy not only the key centers from which her armies would be supplied, but also political centers and the communications of the armies on the march." As a consequence of Russian realization of this fact, Bush believes that the armies will not roll and that we will achieve a military stalemate until such time as Russia believes she can cope with this threat. Since it is only a matter of time till defenses can be prepared against strategic bombing in Bush's estimate, we must make preparations now to provide the forces to hold a line against the Russian armies in Europe. If enough trained men can be made available, the former OSRD head feels that we can provide them with new weapons and technical innovations so as to enable them to hold a line against vastly superior numbers. The Russians when faced with such a force would again hesitate to strike and we could look forward to an indefinite stalemate with both sides armed to the teeth and eternally vigilant.

WASHINGTON AFFAIR

FAS Meeting scheduled in Washington April 26. The Washington chapter of the FAS is sponsoring an informal social function on April 26, from 8 to 11 p.m., at the AVC Clubhouse, 1751 New Hampshire Avenue, N.W. The meeting is purposely set for Thursday during the Physical Society's meetings in Washington, so that visiting FAS members will be able to meet the members of the Washington chapter and their guests -- and each other. FAS members in Washington on April 26 please take note.

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