

F. A. S. NEWSLETTER

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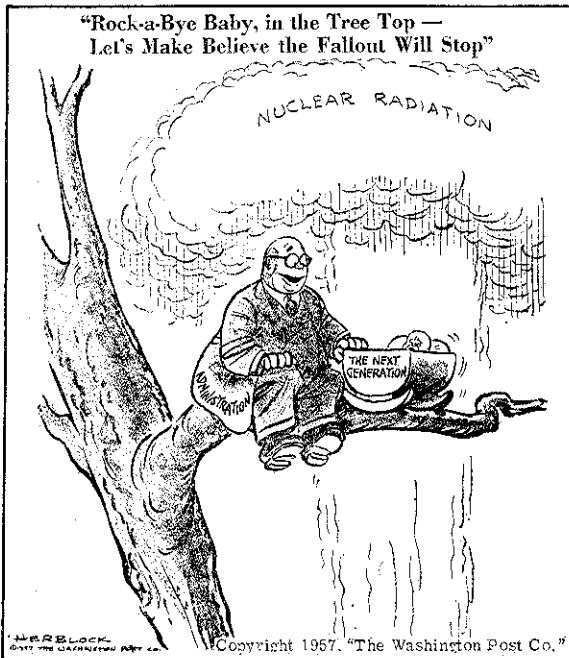
No. 57 - 4

----- to provide information
and to stimulate discussion. Not to
be attributed as official FAS policy
unless specifically so indicated.

April 15, 1957

RADIATION HAZARDS ACCUMULATE

Concern over fallout and testing continues at a high level, marked on the one hand by fruitless Japanese appeals (Washington Post, Mar. 27) for postponement of Russian and British (Christmas Is.) nuclear tests, and on the other by studies such as the 1956 British Medical Research Council's report ("Hazards to Man of Nuclear and Allied Radiation," available at 77¢ from HMSO, Cmd 9780) and one by the UN Economic & Social Council ("Report on the World Social Situation," Feb. 27, 1957, p. 106). Writing in the Assoc. of Scientific Workers Journal (Sept., '56) about the British report, D. G. Arnott states that the accumulating bone radiation is mostly due to the relatively few thermonuclear explosions "from which there is still so much dust to come down that, even if firing stopped today, levels of ingestion must inevitably rise until about 1965." He points out the inconsistency of characterizing the present radiation hazards from testing as negligible when they equal or exceed "those of some other practices which are attacked" (e.g., x-rays for shoe-fitting). The UN



EcoSoc document summarizes material drawn from the British report mentioned above and from UN and US sources.

The US Atomic Energy Commission position on radioactive fallout is unchanged. It was summarized by AEC Commissioner Willard F. Libby in an address at the Univ. of New Hampshire on April 11. He stated that "all life... is measured in terms of risk. ... Would we prefer to run the risk of annihilation... if we surrendered [nuclear] weapons..."

GENERATION'S RIGHTS ? The Washington Post (Mar. 17) also reviews a searching discussion of mutation danger in the Feb. issue of the British magazine, Encounter, in which Wayland Young reports that British scientists (Continued on Page 2, end of Column 1)

FAS OPEN MEETING "SCIENCE EDUCATION"

Speakers:

DR. HARRY C. KELLY, Assistant Director for Scientific and Personnel Education, National Science Foundation
DR. LOUIS N. RIDENOUR, Director, Research and Development, Lockheed Aircraft Corporation

Chairman: DR. EUGENE RABINOWITCH, Editor, Bulletin of the Atomic Scientists

THURSDAY, APRIL 25 WEST BALLROOM
8:00 P.M. Shoreham Hotel

Sponsored by Washington Chapter, F A S

IAEA STATUTE BEFORE SENATE

President Eisenhower submitted the charter of the International Atomic Energy Agency (IAEA) (see FAS Newsletter 56-9) to the Senate for ratification on Mar. 22. The statute is now before the Senate Foreign Relations Committee, which will probably schedule hearings on it sometime in May; members of the Joint Atomic Energy Committee may be asked to sit in on these hearings. The IAEA will become a reality as soon as 18 countries, including 3 of the atomic powers, have ratified the charter; to date, it has been ratified by Byelorussia, Egypt, Guatemala, Russia and Switzerland.

PRESIDENT ASKS RATIFICATION The President stated that "the true promise of the atom is not for destructive purposes but for constructive purposes," and that the IAEA provides "a common ground of cooperative effort among nations." The Senate was assured that participation in the IAEA would not endanger the security of the US. According to the message, "a comprehensive safeguard system is provided by the statute," to ensure that fissionable material will not be diverted to any military purpose. The President, who first proposed establishment of the IAEA in December, 1953, heralded it as "a promise of increased well-being for the people of the world," and urged early ratification by the Senate.

Sen. McCarthy has labeled the statute "a device by which the US can be trapped into building the atomic potential of our enemies" (Washington Post, Mar. 23). Sen. Bricker (R, Ohio) suggested that release of atomic materials to such an agency and the amendment procedure may infringe on US sovereignty.

Individuals and groups can perhaps expedite consideration by Congress if they will urge their Congressmen, and particularly members of the Senate Foreign Relations Committee, to support the IAEA. Chairman and ranking minority member of the Committee, respectively, are: Sens. Theodore F. Green (D, R.I.) and Alexander Wiley (R, Wis.). For a list of all members of Congress, and of their Congressional committees, send 10¢ to General Board of World Peace, Methodist Church, 740 Rush St., Chicago 11, Ill., requesting a copy of "Register Christian Opinion."

FAS COUNCIL MEETS IN WASHINGTON

Session I: Wednesday, Apr. 24 beginning at 7:30 PM
Session II: Saturday, Apr. 27 beginning at 4 (adj. for dinner)

Member observers are welcome

Amer. Psych. Assoc. Conference Rm., 1333 - 16th Street, N.W.

UN DISARMAMENT SUBCOMMITTEE RECONVENES

The UN Disarmament Subcommittee reconvened in London on Mar. 18. The latest proposal of the US is to "limit all production of fissionable materials to non-weapons use" starting Apr. 1, 1958, if an inspection system is in effect by then (Washington Post, Apr. 13). Countries could still continue to make bombs from stocks accumulated before the agreement, and tests could be carried out until the stocks were exhausted. Stassen maintained that an agreement eliminating nuclear weapons now, unlike that involving production, could not effectively be enforced.

On Apr. 8, before the UN Disarmament Subcommittee, Harold Stassen, leader of the US delegation, unveiled a proposal for a trial mothballing of conventional armaments. The proposal is to store 10% of national weapon stocks in central depositories under UN control. This initial deposit, if considered successful by all, would be supplemented by an additional 15%, and the cut in material would be accompanied by a manpower reduction to 2,500,000 for Russia and the US, and 750,000 for Britain and France. Soviet delegate Zorin welcomed the proposal and said Russia would study it carefully (Washington Post, Apr. 9).

BRITISH MILITARY STRATEGY SHIFT On Apr. 4, Britain issued a White Paper setting forth a new defense policy, placing greater emphasis on nuclear weapons and guided missiles. Nuclear weapons have been accepted as the principal deterrent to war with the USSR. Ultimately, it is hoped to replace jet fighters and bombers with ballistic rockets. To relieve the strain on the national economy, the strength of the three armed services, now 690,000, will be reduced by 375,000 by the end of 1962 (Washington Post, April 5).

In West Germany, 18 leading scientists, including Otto Hahn, Max Born, Werner Heisenberg, Max von Lane, and Carl Friedrich von Weizsaecker, issued a declaration that they are unwilling "to take part in any way" in the "production, testing or use" of any atomic weapon -- tactical or strategic (Washington Post, Apr. 13). They stated that "there is no known natural limit to the possibilities of development for strategic nuclear weapons. Each tactical atomic bomb or shell has the same power as the bomb that destroyed Hiroshima." Chancellor Adenauer replied that, if the scientists intended a ban on atomic weapons for all countries, "it would completely coincide with the views of the Government."

The "Report of the Arden House Conference on Disarmament," held at Harriman, N.Y. last Dec. 14-17, is available on request from the Committee for World Development and World Disarmament, 345 E. 46 St., N.Y. 17, and from the Post War World Council, 112 E. 19th St., N.Y. 3. The Conference was attended by 32 individuals including FAS Chairman Price, Senators Flanders and Sparkman and Rep. Brooks Hays, Norman Thomas, R. S. Leghorn, Arthur Holcomb, and David F. Cavers.

RADIATION HAZARDS ACCUMULATE (Cont. from Page 1). feel that the present American permissive level of exposure, based on occupational workers, ought to be reduced 10 to 100 times when applied to whole populations (including children), "where the number of mutant genes would be enormously increased in general exposure to radiation." Young also raises the ethical question "whether this generation has the right to increase artificially the number of mutations that future generations will experience." Commenting editorially, the Post remarks: "What is known is that every new increment of radioactivity is harmful and that some of the effects are cumulative. Meanwhile no one does anything about it. There is no effective limitation on American or British tests, let alone Russian, and no one can predict how soon the level of tolerance will be reached if it has not been reached already." (They also quote the FAS Radiation Hazards Committee to this effect.)

In case of nuclear war, there is no doubt that, in Libby's words, "we would be dealing with excessive radiation." Rep. Holifield feels that our only hope is to construct huge underground shelters at a cost of \$20-\$40 billion. Civil Defense Administrator Peterson claims such a program would save only about 60% of the people. The possible effect of discontinuing nuclear tests by Russia, Britain and the US as a preventive to such a war remains attractive.

A-Power Development Lagging ?

The Atomic Energy Commission's handling of the atomic power reactor program has been subjected to sharp criticism from Congress recently. The storm center of this criticism lies in the Joint Atomic Energy Committee, under the chairmanship of Rep. Carl T. Durham (D, N.C.). On Mar. 14 in Philadelphia, at the Nuclear Congress of the Nat. Industrial Conference Board, Durham asserted that our world atomic leadership is being seriously challenged. He stressed the immediate need for an accelerated program of demonstration power reactors at home and abroad. Expansion of our domestic program to meet competition "will take considerably more private and government funds, risk-taking, and effort by everyone concerned," he stated.

The large-scale programs of Britain and the 6-nation Euratom group (which plans 15 million kw by 1967) were pointed out as great opportunities for US atomic equipment manufacturers to get experience and make sufficient profits from foreign markets to carry them until A-power becomes competitive in this country. But, according to Rep. Durham, we need a much more aggressive program to back up these equipment suppliers in their dealings abroad.

PROGRAM DEFENDED At the same Philadelphia meeting, AEC Commissioner Harold S. Vance defended the present A-power program. He indicated that the accent has been placed on research to find the most promising types of reactors among the types being considered. He said the crash programs being pushed through by Britain and Euratom were the direct result of the serious fuel shortages in Europe. They cannot wait to find out which reactor is most efficient, he said; they desperately need power now. Vance said that his recent conversations with experts representing Euratom led him to believe that, "if they felt they had a choice," they would "prefer to see their countries adopt a program similar to ours, wherein the benefits and results of research are more widely available than they are today, before the construction of any large power installations is undertaken."

Vance said that the Euratom program is, for this reason, divided into two phases, the second and larger phase being timed "to enjoy the benefits of our research program, as such benefits will develop during the next four or five years." Meanwhile, according to Vance, they must without delay proceed with the first phase, to select one or two types of reactors and proceed as quickly as possible to build large power-producing units -- regardless of any penalty they might have to pay from selecting less-than-optimum reactor designs.

The US, on the other hand, has plenty of cheap power and can afford to investigate all types of reactors thoroughly before building many plants of any one type, Vance stated. He concluded that "we are definitely ahead of the rest of the world in the technological development of atomic power, and I am confident that we will remain in this position."

BILLS UNDER CONSIDERATION The Joint Committee is still considering bills introduced in January by Sen. Gore (D, Tenn.) and Rep. Holifield (D, Cal.) calling for the acceleration of the A-power program. These bills would direct the AEC to construct "large-scale prototype power reactor demonstration facilities" to show the practical value of such installations in the production of electricity in industrial or commercial quantities. The power would go to major production facilities being operated by the AEC. The bills also call for increased cooperation with nations abroad in developing reactors, to further the aims of the US atoms-for-peace program.

CORRECTION

John F. McJennett, Jr., Assistant Director of the UNESCO Relations Staff in the US Department of State, informs us of an error in the article entitled "Senate Report Would 'Un-do' Court Decisions," appearing in our last issue (Newsletter 57-3, page 3). Concerning the dismissed UNESCO employees who we reported were reinstated after successful appeals, McJennett writes: "Both the tribunal of the ILO and the Court of International Justice ruled in their favor on this point, and they were awarded damages. However, they were not reinstated, and their dismissal is final."

Government Information & Security

Secretary of Defense Wilson issued orders on March 28th which: (1) established an Office of Declassification Policy, under Assistant Defense Secretary for Public Affairs Murray Snyder; (2) placed responsibility for prompt investigation of security leaks and punishment of those concerned in the hands of Pentagon General Counsel Dechert; and (3) authorized the withholding of non-classified information "which in the public interest should not be given general circulation."

The Office of Declassification Policy is charged with conducting an "active program of declassifying or disposing of the vast backlog of still secret material which no longer needs protection." Recommendations to prevent future overclassification will be expected of the still-to-be-appointed director of this Office. Among the types of non-classified information which may be withheld are "preliminary documents relating to proposed plans or policy development when premature disclosure would adversely affect morale, efficiency or discipline." Presumably this action was intended as a partial answer to the recommendations of the Coolidge (Pentagon) committee on classified information (see NL 56-9). Wilson rejected the Coolidge suggestion for curbing information "leaks" by grand jury questioning of reporters who publicize the "leaks." The House Government Information Subcommittee, under Rep. Moss (D, Cal.), dealt with the Coolidge committee proposals in a hearing on Mar. 11 and continued hearings on Defense information policies on April 10.

HOUSE VOTES The House Appropriations Committee voted **OSI ABOLITION** (Apr. 5) to abolish the Commerce Dept.'s Office of Strategic Information, as also recommended by the Moss Subcommittee (NL 56-7). OSI funds requested in the President's budget were denied. Since the House approved its Committee's action on Apr. 9 without dissent, the fate of OSI rests with the Senate.

In spite of the urging of the AP Managing Editors Assoc., the White House has refused to withdraw President Eisenhower's 1953 directive fixing secrecy standards for government information. The order authorized "certain officials to classify information as top secret or confidential, depending on the degree to which the final disclosure would hurt national security." The Editors Assoc. maintained that the order is being invoked increasingly to withhold information to which the public is entitled (Washington Post, Apr. 5).

FAS CIVIL DEFENSE POLL RESULTS

Replies received from the mail poll on civil defense, distributed by FAS in Members' Bulletin #26 (Feb. 18), show a definite majority in favor both of increased civil defense effort by the US and substantial activity in this field by the FAS. Of over 2200 questionnaires mailed, 258 replies have been tallied to date.

The question concerning FAS activity, and the percentage replies, were as follows: "With regard to the place of civil defense problems in the program of the FAS, check the box that most nearly represents your sentiments:"

1. The FAS should expand its activity in this field - 35%
2. The level of activity of the past three years in is about right - 26%
3. The FAS should not take an active interest in this field except in very special circumstances, but should keep informed through committee activity - 31%
4. The FAS should avoid getting involved in this field - 8%

If one considers the first two responses as being in favor of CD activity by the FAS, and the latter two opposed, one gets 61% in favor, 39% opposed.

The other question asked was: "Regardless of what you think the FAS should do, please indicate whether you think the civil defense effort in this country:"

1. Should be very substantially increased - 39%
2. Should be moderately increased - 24%
3. Should be abandoned - 24%
4. Is all right now - 9%
5. I have no opinion - 5%

If one takes the first two replies together, the percentage is 62% in favor of more CD.

SCIENTIST SHORTAGE -- PRO & CON

To the vivid projection of an inevitable Russian lead in scientific ability by Edward Teller (NL 57-3) is added the voice of Laura Fermi, who in her new book, Atoms for the World, estimates the number of science and engineering graduates for the decade 1950 to 1960 to be 900,000 for the US, against 1,200,000 for Russia. Frederic Terman, Dean of Stanford U.'s School of Engineering, reportedly claims that the shortage of engineers is grossly exaggerated and is partly due to overhiring by defense contractors. He also mentioned that 40% of engineering graduates left their chosen profession for greener fields within 15 years after graduation. Several industrial laboratory managers have recently stated that, although hiring scientists is more difficult than before, they are keeping their laboratories well staffed. Good pay seems to be one prerequisite for this, together with challenging work, good equipment, and good location. Reported problems of older scientists in finding jobs may corroborate Terman's statements to a certain degree.

BETTER REASONS Chester M. Alter, chemist and Chancellor of the U. of Denver, points towards the need for offering better reasons for youth to study science -- rather than the manpower shortage in this field. Walter J. Murphy, editorial director of Chem. & Eng. News (Mar. 25), suggests showing the path to "the golden opportunity of a dedicated career in service of mankind" in place of the popular association of science, death and physical destruction due to two world wars. Other suggestions to stimulate interest in the study of scientific subjects include sponsoring of students' visits to industrial plants and laboratories, and participation of scientific personnel in occasional demonstrations before high school classes or youth organizations (Ind. Labs., April). However, the Amer. Council on Education Bulletin (Mar. 15) maintains that not the recruitment of science students but the provision of adequate facilities and faculty for higher education is the major problem.

The Federal government's scientific establishments face perhaps the most serious manpower problems. According to a paper by J. A. Grand, chairman, Professional Relations and Status Comm., Washington Section, Amer. Chem. Soc. (C & E News, Apr. 1), the government does not get its fair share of recent graduates. In addition, about 1/3 of those leaving its services are in the senior grades. Government salaries are shown to lag \$700-\$3000 per year behind those paid by industry. Many federal employees leave to perform similar work at higher salaries at the laboratories of government contractors working with funds supplied by the very agencies they left.

* * * * *

The FAS is a national organization of scientists and engineers concerned with the impact of science on national and world affairs. This issue of the Newsletter was prepared by the following FAS members, mostly from the Washington area:

A. B. Bestul, editor of this issue;
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- NEWSLETTER SUBSCRIPTION** -- \$2 to non-members (all members receive the Newsletter)

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Missile Breakthrough ?

Recent newspaper reports on the progress of the US program to develop a 1500-mile intermediate range ballistic missile (IRBM) -- such as the Army's Jupiter, the Navy's Polaris, and the Air Force's Thor -- have been somewhat confusing.

Roscoe Drummond reported, in a front-page story in the Washington Post (Apr. 4), that "the US has achieved a sensational scientific break-through in missile development. It is now the informed judgment of many at the Pentagon... that the IRBM can before long be moved out of the prototype stage into production so that in the span of 12 months they can begin to be deployed for combat use." Sen. Symington (D, Mo.) was reported (Washington Post, Apr. 5) as saying that newly designated Deputy Defense Secretary Donald A. Quarles indicated at a closed session of the Senate Armed Services Committee that "... to the best of his knowledge, it was totally untrue..."

After two days of Committee briefings by Gen. Twining, Chief of Staff, and other Air Force officials, Sen. Russell, Chairman of the Senate Armed Services Committee, said that the Air Force expected to have its IRBM ready for use in "a matter of months" (Washington Post, Apr. 6). US intelligence sources report that meanwhile the USSR has test-fired about 50 rockets at ranges of about 800 miles.

NATIONAL SCIENCE POLICY

The following outline of the components of an adequate national science policy is discussed in the Feb. 2 Saturday Review of Literature by Sidney Hyman, Washington Post reporter and a particular student of the Executive branch of the government:

(1) The Executive -- "A strong, firm hand is called for. A Secretary of Science in the Presidential Cabinet ought to be considered. Failing it, the very least we can ask is a Science Commission on the same level of prestige and authority as the Bureau of the Budget, the Council of Economic Advisors, and the National Security Council. On this Science Commission the National Science Foundation should be represented alongside major department heads, including the Secretary of State. And the Secretary of State in that position should be the channel for Science Attaches in American embassies to acquaint the President with impacts of science abroad."

(2) The Legislative -- "As a Congressional offset to the growing autonomy of a science-entrenched Executive one thing is plainly needed. It is a Joint Congressional Committee on Science, backed in depth by a technical staff..."

(3) The scientist -- "Yet it is, in a sense, the tragedy of our times that the scientist, no more than the artist, cannot escape politics any more than he can escape his skin. This means -- to reverse the case -- that he must raise his voice about political questions that have scientific and technological aspects."

F A S NEWSLETTER

Federation of American Scientists
1805 H Street, N. W.
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Time Value: Dated Material

Travel Restrictions

The tentative denial of a new passport to William Worthy, one of the 3 newsmen who entered Communist China last Christmas, emphasizes the question of travel restrictions imposed upon US citizens -- in this instance upon representatives of the press while on reportorial duty. In the past months, newspaper editors and publishers have expressed their dismay at the State Dept.'s restriction of the "freedom of reporters to gather and write news or opinions in any country with which the US is not at war" (Amer. Newspaper Publishers Assoc., in telegrams to the President, Vice President and Speaker of the House; N. Y. Times, Feb. 7). Liberal members of Congress joined them in their indignation. Sen. Humphrey (D, Minn.) denounced the ban on travel of US correspondents to China as "an unwarranted abuse of the right to travel and an intolerable interference with the right to read" (Washington Post, Feb. 10).

RISKS

BOTH WAYS

J. R. Wiggins of the Washington Post, who testified in behalf of the Amer. Soc. of Newspaper Editors, pointed out that there are risks both ways: on the one hand, we have a right to know about conditions in China through our own reporters; on the other hand, the State Dept. would find itself in an awkward position if anything happened to newsmen while they were traveling in China (Washington Post, Mar. 30). The State Dept.'s position is mainly founded upon certain legal aspects of the controversy which might come under test should Worthy decide to take his case to the Passport Appeals Board and to court (W. Post, Apr. 2). As a State Dept. spokesman pointed out, technically a state of war exists between this country and Red China in Korea; as long as the Chinese People's Republic is not recognized by the US, and as long as the US government has no representation in China, it cannot guarantee the protection of US citizens there. Thus, in 1949, when China banned newsmen of countries that did not recognize its new regime, the State Dept. issued a statement condemning this order as a method of pressure for recognition. The State Dept. now finds itself tied by its own regulations at a time when China has relented its ban and has invited our newsmen. The State Department's interpretation that the recent Chinese invitation of newsmen is a form of blackmail connected with the release of US prisoners (N. Y. Times, Feb. 7) further complicates the issue.

One of the first positive steps undertaken in the direction of a solution to the controversy is a resolution (H.Con.Res. 153), introduced by Rep. Celler (D, N.Y.) on Mar. 18, expressing "the sense of the Congress that... the Secretary of State shall grant and issue passports to any duly accredited newspaper man or woman, or radio or television reporter assigned by the information medium by which employed to perform reportorial duties in any country or area abroad."

Sec. 34.66, P. L. & R.
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