

F. A. S. NEWSLETTER

FEDERATION OF AMERICAN SCIENTISTS
David L. Hill, Chairman

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ATOM WITHOUT PUBLIC UNDERSTANDING = CONFUSION !

KIND WORDS BUT FEW DOLLARS FOR UNESCO

Friends of UNESCO came strongly to its support at sessions of the fourth national conference of the US National Commission for UNESCO held at Minneapolis Sept. 15-17. UNESCO received the warm endorsement of President Eisenhower and Undersecretary of State Walter Bedell Smith, kudos reportedly given only after careful study by the Administration of charges made in the last year or two against the organization by nationalist and super-patriotic groups within the US.

STUDY GROUP REPORTS

A special study group, appointed by the President, found little substance in charges that UNESCO is Communist influenced, advocates world government, seeks to undermine American loyalty, is anti-religious, or seeks to indoctrinate American students with subversive doctrines. Rather, the study group found UNESCO democratic in operation, impartial and eager to promote tolerance among various religious groups, constructive in efforts to bring better ways of living to under-developed nations. "Political influences do not seem to have any noticeable place in guiding the policies or work of UNESCO," the Commission said.

Acknowledging weaknesses in the effort to achieve aims called "to some extent unrealistic, idealistic, and visionary," the presidentially appointed group nonetheless judged UNESCO to have made "encouraging progress." Members (Irving Salomon, retired business man; Elizabeth Heffelfinger, member of the Republican National Committee; and John A. Perkins, Univ. of Delaware President) reached the conclusion that "it serves our own positive self-interest to associate ourselves with other freedom-loving people to further UNESCO's aims, principles and activities."

SCIENCE AND MANKIND

The Minneapolis conference also heard warnings of growing cultural and scientific isolationism in the US. A workshop considering the mobilization of science and technology to improve the living conditions of mankind reported: "Unnecessary and undesirable restrictions on exchange of information and travel of scientists exist in certain countries including the USA. Free exchange of information and facilitation of travel are both essential to scientific progress and human welfare. Any unnecessary restrictions are harmful to the advance of science and to promotion of international understanding and are consequently detrimental to the cause of peace." The FAS delegates pointed out the need for modification of visa policies, insofar as foreign scholars are concerned, in order to make truly international meetings possible in this country.

The report also cited strong tendencies for bibliographies in American publications to concentrate on US research with little mention of that originating abroad. It saw such scientific nationalism as leading to wasteful duplication and a decline of international

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Last week the much-rumored Operation Candor had failed to materialize, and in its absence there developed an unscheduled and obviously unplanned maneuver widely referred to as "Operation Confusion." With mounting public pressure for clarification of the problems posed by the ever-intensifying atomic arms race -- and no administration policy enunciated to satisfy it -- diverse high-level points of view which have been contending under cover broke out in a rash of conflicting public statements.

WHEN EXPERTS DISAGREE

Strategic bombing enthusiasts, civilian defense experts, Defense leaders, and economy advocates vied in estimating Soviet atomic capabilities and suggesting the proper antidote. The estimates were not the same, but each showed a significant fit with the special point of view of the group offering it. If anyone in the US knows what the facts actually are, he must have been aghast at the gap between the voices of authority and the facts. And the someone in the USSR who certainly knows the facts must have been vastly amused as US leaders tripped and contradicted each other, while the people became progressively more confused. Said Stewart Alsop, in a column on Oct. 9, "A serious-minded citizen these days can hardly be blamed for feeling a little like one of those laboratory rats which, exposed to conflicting stimuli, is reduced to a condition of quivering rodential neurosis."

PRESIDENT SPEAKS

Some semblance of order was finally restored when a reportedly piqued President told his news conference that "the Soviets now possess a stockpile of atomic weapons of conventional types, and we must furthermore conclude that the powerful explosion of August 12 last was produced by a weapon or the forerunner of a weapon, of power far in excess of the conventional types. We therefore conclude that the Soviets now have the capability of atomic attack on us, and such capability will increase with the passage of time."

CLEAR IT WITH LEWIS

Not altogether reassuring to those who hope for some long-range relief from "atomic policy jitters" via an "Operation Confidence" directed at the American people, was the President's admonition to members of his administration to make no further comments on Soviet capabilities without first clearing them with the Chairman of the Atomic Energy Commission. The present incumbent, Lewis L. Strauss, while a Commissioner in 1949, was reported -- in the minority report on the Joint Committee investigation of the AEC -- to have "strongly opposed the Commission's desire to exchange atomic information with other nations." He also strongly opposed shipment of radioisotopes abroad to our European allies.

In a speech before the National Security Industrial Association on Sept. 30, Strauss argued against "pressures" (Continued on Page 2, Column 1)



CANDOR OR CONFUSION ?

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for a public statement of the number of our atomic weapons on hand and of our production rates," saying that the information would be of no use to the public but fatally significant to the planning staff of a potential enemy.

SECURITY VIEWS In general, Strauss went on to say that security "is a troublesome thing. Like taxes, I would gladly be rid of it -- but also like taxes, it seems to be a part of an uneasy and armament-burdened world. At times and at places some think we have had too much of it. There is no doubt of the fact that at other times and places we have had too little. It looks as if it ought to be easy to find a proper balance but easy is just what it is not. We do know this: that too much security when realized can be corrected by relaxing it. Too little security, when it is realized, is beyond correction. It is too late by then. There is no use having doors on stables -- not to mention locks, after the horse is stolen."

It is to be noted, too, in assessing what may come from President Eisenhower's assignment of public information clearance responsibility to the AEC, that Commissioner Zuckert last August 25 disagreed sharply with those urging greater public information on atomic matters, saying, "From the standpoint of national security, we are giving the American people all the elements of information that they really need."

OPPOSED There are many, on both sides of what has been called the "Uranium Curtain" of secrecy, who disagree with Zuckert. They note that it is not technical data on weapons design, or absolute figures on effectiveness, which are being sought. Rather it is authoritative statements on the potential scale of destructiveness of the H-bomb, for example, to permit evaluation of such widely quoted "authoritative" reports that an H-bomb exploded over Chicago would also destroy Milwaukee. They urge that such data is what is needed to fill the information vacuum surrounding disarmament issues, civil defense planning and even Allied military planning. It is needed to allow the American people to face, in hard honest detail, the central policy issues of our time, both national and international. What part of the national budget for defense? What reliance to place on retaliatory bombing? To what degree is inspection technically feasible in an international control scheme? What can US atomic energy contribute to power-hungry areas at home and abroad?

QUESTIONS Is Amrine right when he says in the Progressive for October that "the policy of not saying what the bomb is, and not saying what we will and will not do about it, and the resulting fear of the unknown, still makes friends into neutrals and neutrals into enemies..."? Is Lapp right when he speculates in the Reporter for Sept. 1 on the possibility that if the facts were known "men the world over may conclude that the global penalty of an atomic war is too great for mankind to pay"?

If so, what new emphasis should be placed on measures to reduce international tension and to secure limitation of armaments or the power to deliver them? Our entire approach to the problems of our time hinges on knowledge of atomic developments. Yet, says Neal Stanford in the Christian Science Monitor (Sept. 23), "Seldom has a subject been so written about by so many with so little fact to go on."

Secrecy is not the only problem posed by the new level in the atomic arms race. But it is a first problem, because behind it hide many of the others. Operation Confusion must be replaced by Operation Candor -- as a first step toward Operation Confidence for all the world.

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The SENATE ARMED SERVICES COMMITTEE may get the answers to some of the questions on Russia's bombing capabilities and North American defenses. On Oct. 10, Sen. Saltonstall (R, Mass.) revealed that his committee had begun a "highly classified" study, directed by industrialist Robert C. Sprague, aimed at reducing relevant information to non-technical terms. According to the Washington Post, this may pave the way for a full-scale committee investigation of the US defense situation.

A-POWER NOTES

Although public attention is now focused primarily on the implications of the accelerating atomic arms race for military strategy and civil defense, the issue of industrial participation in atomic power development is still making news.

AEC ON PATENTS New AEC Chairman Lewis L. Strauss told a New York audience on Sept. 30 that the AEC "is unanimous on the principle of the recommendation [for more liberal private patent rights] which it will make to the Joint Committee of the Congress in January." He noted that the Commission has already urged Congress to provide "more liberal patent rights than are presently granted."

Although Strauss declined to make predictions on the time scale for "atomic power in the American scene," he emphasized the role of the atomic-powered submarine in speeding the realization of this goal. He said that "before another year rolls around, the USS Nautilus...will be in the list of operating Naval units."

The AEC is "diligently at work" on the preparation and submission of amendments to the McMahon Act for the coming session of Congress, Strauss said. Among the questions being studied are (1) private vs. public ownership of fissionable materials; (2) whether the government will buy by-product plutonium, and if so, at what price; (3) who shall police the compliance with safety regulations; and (4) what changes should be made in the patent provisions of the law.

PURE POWER India has initiated an ambitious atomic energy program aimed solely at the production of electric power.

The program was described at the Theoretical Physics conference at Kyoto, Japan, by Prof. H. J. Bhabha, chairman of the Indian AEC. Prof. Bhabha pointed to the scarcity of coal and oil in India and the unequal distribution of rainfall as strong incentives to the exploitation of nuclear power. The plan is to first construct a pile using thorium-rich soil from South India and initiate the reaction from uranium also available in India.

According to the N.Y. Times (Sept. 18), foreign visitors to the project center in Bombay are impressed by the way it is being handled. They note "that the Indians have the advantage of concentrating all their fissionable resources on a program for industrial use while countries such as the US have stressed the destructive aspects in the production of atomic energy."

BRITISH TOO Rise in demand for electric power and diminishing coal supplies in Britain have also put a sense of urgency into the British quest for large-scale atomic power. B. L. Goodlet of the Harwell laboratory recently described a full-scale experimental power reactor now under construction and expected to produce power at about one penny per kilowatt hours. He said the British were looking hopefully to the breeder reactor as a way of improving reactor efficiency.

PRELIMINARY POLL RESULTS

Preliminary returns to the questionnaire distributed on September 28, as a part of the special Members' Bulletin No. 11, show the following trends:

There is strong opinion that problems related to both the atomic arms race and atomic power development should be of major concern to the FAS, and that on these problems all means should be used to promote FAS' point of view. Efforts to slow or halt the atomic arms race were nearly unanimously judged worthwhile or essential. International control of atomic weapons and more atomic information for the public were overwhelmingly endorsed as FAS objectives. Easement of international tension and general disarmament also gained support from more than a majority.

In the field of A-power development, there is nearly unanimous agreement that less information should be classified, that more information (including classified information) should be exchanged with other countries, and that more private participation in atomic power development is necessary. To accomplish the last, few saw need for changes in the Act "immediately," but most felt changes would be needed "soon" or "eventually."

HAVE YOU RETURNED YOUR QUESTIONNAIRE ?

UNESCO -- Kind Words, Few Dollars (Continued from Page 1). understanding. The group deplored the inadequacy of the UNESCO budget, including the allotment for natural sciences, and the paucity of natural scientists on the US National Commission of 100 persons. The workshop group also noted that to undeveloped lands without western cultural traditions, science and technology tend to be regarded as mere foreign importations; if the scientific spirit is to become a native growth, a cultural climate must be created for the absorption of modern scientific thought and practice.

BUT The brave words of the counter-attack launched at Minneapolis came too late to offset activities of UN opponents in the last session of Congress. Striking where it hurts, at the budget, these opponents have forced a general reduction of the UN technical assistance program. According to the N. Y. Times (Sept. 29 and Oct. 1), the planned 1953 UN program of approximately \$25 million will have to be cut nearly \$2 million. UNESCO will lose \$243,900 of a projected \$3,231,000, the Food and Agricultural Organization \$504,000 of \$6,693,000, the UN Technical Assistance Administration \$400,000 from a proposed \$5,308,000. The World Health Organization is slated for a cut which will necessitate a 27% reduction on 37 projects in 24 countries. In addition, the UN will have to stop hiring experts and providing fellowships until the end of the year.

U.S. LAGS David Owen, executive director of the UN Technical Assistance Board, attributed the cuts to uncertainty about payments to be expected from member nations "including a significant proportion of that pledged by the largest contributor." The N. Y. Times notes that the largest contributor is the US (60% in past years) which has so far paid only a little over \$8 million of its more than \$12 1/2 million pledge. Congress, by reducing the technical assistance appropriation two-thirds, failed to provide enough money to meet this deficit without cutting the amount available for 1954. Operating within this limit Henry Ford II, member of the US delegation to the UN, was able to guarantee only an additional million dollar payment on the US pledge for 1953. Subsequently, however, the US did join with nine other countries in a plea for fulfillment of the 1953 pledges -- which the US itself will have difficulty doing unless President Eisenhower obtains a special appropriation from Congress.

POINT Meanwhile, the US' own technical assistance program, 2 1/2 launched four years ago as a bold new approach and steadily paid lip-service in high places, is being dubbed in some quarters "Point 2 1/2" instead of Point 4. Paul P. Kennedy, in a series of articles in the N. Y. Times (Sept. 24-26), reported that the program "is being radically changed in concept and in scope." Returning from a 45,000-mile inspection tour, Sen. Ellender (D, La.) was quoted (N. Y. Times, Oct. 7) as asserting that the Point 4 program is "going to bog down" because it is being converted to an economic and military assistance program. A sharply critical editorial in the Washington Post (Oct. 3), titled "End of Point 4," charges that "in its subordination of the technical assistance program in the mutual security effort, the Eisenhower Administration is weakening one of its most effective instruments for building toward world peace...The abandonment or engulfment of this program would be a misfortune. The advantage of aiding people for their own sake and without regard to their politics would be lost if technical assistance were used merely as a weapon in the cold war."

In the growing debate over reorientation of US policy in the era of the H-bomb, technical assistance -- with its costs reckoned only in the low millions -- is in the background. To some it appears that sound technical assistance abroad, in its returns of good will alone, could buy more US security dollar for dollar than the high-lighted multi-billions for military offense and defense, however necessary they too may be.

"WE HAVE TAKEN NO STEPS to de-emphasize basic research. ... Except for some [shifts of emphasis] we intend to support basic research this coming year at substantially the same levels as we are now doing. This is somewhere between 25 and 30 million dollars per year."

-- Sec. of Defense Wilson, October 6 press conference

The NEW FEDERAL EMPLOYEES SECURITY PROGRAM is now barely beginning to function on a government-wide basis according to two articles in the Oct. 4 and 5 Washington Post under the by-line of Murrey Marder. The program was announced last Apr. 27 and officially went into effect 30 days later (see FAS Newsletter, Mar. 30). Marder reports that "many of the officials engaged in starting the program now concede that...they have a tremendous problem on their hands in the field of personnel security," and that "it is now apparent it cannot be solved in any matter of months if a fair balance between national security and individual rights is to be reached." * * * * * U.S. ARMED FORCES INSTITUTE contracts for the continuation of correspondence courses to members of the armed services have been declined by 14 universities which refused to agree to a new clause requiring them not to use in the performance of the contract any "persons as are disapproved by the Government." The Defense Department, in response to proposals by the American Council on Education and the Assoc. of Land Grant Colleges and Universities, later revised the clause to limit the Government's prerogative to disapproval "for security reasons."

An FAS COLUMN prepared by an FAS Committee on Publications, newly formed in the Illinois chapter, will be inaugurated in the January Bulletin of the Atomic Scientists. Each column will be devoted to a separate aspect of FAS activity, such as the work of some committee (passport, loyalty, visa, etc.), decisions and policies set forth at Council meetings, activities of the Washington office and perhaps of local chapters. Committee members are Thomas Carver, Geoffrey Chew, Francis Low, and George Salzman. * * * * * A FORUM DISCUSSION ON DISARMAMENT was held by the Washington chapter on October 1. Members of

FAS NEWS BRIEFS several governmental and other organizations concerned with the problem participated unofficially. The general topic of discussion was whether recent world events have produced significant changes in the situation, or require changes in previous conclusions and indicate new approaches to the problem. * * * * * The NEXT COUNCIL MEETING will be held in Chicago on Saturday, Nov. 28, immediately following the meetings of the American Physical Society. Tentative plans are for the meeting to convene at 4:00 PM, recess for dinner, and reconvene for an evening session. An open meeting arranged by the Chicago chapter to take place sometime during the Physical Society sessions is also being planned. * * * * * FAS ADVISORY PANEL has been enlarged by three -- Cyril S. Smith (Chicago), Hans Bethe (Cornell), and Charles C. Lauritsen (Cal. Tech.). * * * * * FAS PHILADELPHIA BRANCH is commencing study of UN technical and UNESCO activities.

The FAS is a national organization of scientists concerned with the impact of science on national and world affairs. This Newsletter is designed primarily to inform the membership and stimulate discussion of relevant issues. The facts and opinions contained do not reflect official FAS policies unless specifically so indicated. The Newsletter is edited by members of the FAS Washington chapter.

- MEMBERSHIP APPLICATION -- Dues: Regular - \$5 (with income below \$2500 - \$3); Supporting - \$10; Patron - \$25. New membership and an introductory subscription to Bulletin of the Atomic Scientists - \$7.50 (with income below \$2500 - \$5.50).
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ASTIN MAKES COMMERCE "TEAM"

On August 22, Commerce Secretary Weeks announced: "I have asked Dr. Allen V. Astin to continue as Director of the National Bureau of Standards and he has agreed to do so. I am taking this action because I am convinced that it is in the best interests of the Bureau and the public."

Besides stating his change of views on Astin, Weeks cited recommendations to be made by the Kelly Committee as justifying (1) recent splitting-off of ordnance research divisions from NBS, (2) taking responsibility himself for decisions as to "non-technical policy and procedural matters on commercial product evaluation at the Bureau," and (3) administrative overhaul of NBS yet to come. Quoting further: "Dr. Astin has expressed his willingness and desire to continue as a key official of this administration and as such he is from here on a member of my team."

LINE-UP SHUFFLED Astin was told to report to Assistance Secretary James Worthy (last season with the Sears Roebucks) instead of Assistant Secretary Sheaffer, who subsequently (Sept. 18) resigned and was waived out of the league. It was Sheaffer who had recommended Astin's dismissal last spring before his popularity with the bleachers became apparent.

COMMITTEES WINDING UP The Kelly Committee report is expected to be released momentarily. It presumably will include the above-cited "leaks" by Sec. Weeks in its recommendations on the future role of NBS. The National Academy of Sciences Committee headed by Zay Jeffries plans to submit a report to Academy President Bronk (thus to Weeks) by the end of the month, but chances for its publication are probably poor. Submission of the report at this time apparently indicates no further testing of AD-X2 was initiated by the committee.

The 800-odd page transcript of the June Senate hearings on "Battery Additive AD-X2" will soon be available through the Senate Committee on Small Business. Its appendices will contain various reports of tests, including NBS Circular 504 which Weeks banned last March. The results of intensive NBS tests specifically of AD-X2, which the Committee pointedly ignored when Astin testified, are not to be included though a copy is said to be available for inspection at the Committee's offices.

DEFENSE BACK IN GAME Following the original insult (firing of Astin), NBS had received added injury when Defense Secretary Wilson banned transfer of funds from Defense sources, except when authorized by his office on special justification project by project. This action is understood to have been rescinded in August at top level, but research funds channelled to industry rather than to NBS may be easier for contracting officers to defend in the present climate.

NSF REPORTS

Last July the National Science Foundation released the first of a projected series of reports on "Federal Funds for Science" (see NL 53-7). Concerned only with funds going to non-profit institutions in the fiscal years 1951 and 1952, the report high-lighted the huge concentration of federal research support in the Defense Department. The second report of the series, subtitled "The Federal Research and Development Budget, Fiscal 1952 and 1953," became available in mid-September. Thinner and less meaty than the earlier study, this installment presents definitive data on total obligations and expenditures of the federal government for research and development in 1952, and estimates for 1953. Interpretations, conclusions, and recommendations are conspicuously minimal.

WAR AND SUPPORT FOR SCIENCE The tremendous (20-fold) growth of federal support to science since 1940 is amply documented. Two peaks are discerned -- one at the culmination of the war effort in 1945, and a second in the present, or the immediate past, related to what is cautiously called "the Korean action." The science-war tie-up is apparent again in the distribution of research budgets among agencies. The top three -- Defense, AEC, NACA -- now account for approximately 90% of the funds. All three "are oriented primarily toward national defense problems at the present time." Also related to war needs is the distribution by fields of research. Physical science, the military's sometimes reluctant but usually available genie, drew 90% of the funds. Life sciences received only 7 to 8%, and the social sciences the remaining pittance.

BASIC RESEARCH Six per cent of the tabulated obligations and expenditures are estimated to go to basic research, defined by the NSF as "that type of research which is directed toward increase of knowledge in science." The relative amounts by agency in 1953 are: AEC - 29%; Defense - 26%; Dept. of Health, Education, and Welfare - 14%; NACA - 13%; Interior - 7%; Agriculture - 5%; ...NSF - 2%.

FUTURE PROSPECTS An NSF press release of Oct. 12 adds estimates for 1954: total research and development obligations, \$2,074 million, compared to \$2,187 million for 1953. Expenditures are estimated at \$2,187 million in 1954 and \$2,205 million in 1953.

CONANT REPLACED On Sept. 16, the President made a recess appointment to the National Science Board. Dr. Laurence M. Gould, geologist, geographer, and President of Carlton College, will fill out the term of James B. Conant who resigned when he became US High Commissioner of Germany.

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