

# F. A. S. NEWSLETTER

Published by the  
FEDERATION OF AMERICAN SCIENTISTS  
1805 H Street, N.W., Washington 6, D.C.  
Paul M. Doty, Chairman

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No. 58 - 1

January 9, 1958

## EDUCATION AID PROPOSED

President Eisenhower on Dec. 30 approved a \$1.6 billion Federal-State education plan submitted by Health, Education and Welfare Secretary Marion B. Folsom. The 4-year program which will be submitted to the new session of Congress in January, provides for 10,000 4-year scholarships to needy high school students of superior ability in all fields of study, some 1500 graduate fellowships to promote teaching careers, matching grants to states to encourage improved counseling and testing systems and also to raise the salaries of high school mathematics and science teachers. Nothing about school construction was included in the Administration's proposals. The President was reported to feel that the main responsibility for improving US scientific education rests with non-Federal institutions; he urged educators to turn to the Government "only for that which they themselves cannot accomplish at all or so well."

Reacting promptly (Dec. 30) to the new proposals, the executive secretary of the National Education Association, William G. Carr, called the \$1.6 billion figure "far below a realistic appraisal of the needs which our schools confront." He said NEA believed that "not less than \$1 billion a year in additional federal funds for buildings, salaries, scholarships, fellowships and other purposes is needed at once, and that this amount should be stepped up to \$5 billion a year within the next five years." The NEA plans to open an office near the capitol in preparation for "the most vigorous legislative activity in its history;" it will work for large-scale federal aid and for income tax relief for teachers.

**SALARIES** The Civil Service Commission announced (Dec. 10) a \$25.5 million increase in higher salaries for 48,000 scientists and engineers now on the rolls, and for those hired in the next year. On Dec. 18, Jerry Kluttz reported in the Washington Post that the CSC has approved a new and "direct action" plan to recruit scientists, engineers and other persons with scarce skills. Red tape would be cut to a minimum and the clearing process streamlined so that recruiters may hire college graduates to start work on specific jobs at a mutually agreeable date.

Eisenhower's Committee on Scientists and Engineers warned in an interim report, released Nov. 30, that unless the US develops more scientists, the Russians will be ahead of us in most scientific fields in 5 or 10 years. The report said that Russia now has more scientists than the US and is graduating twice as many each year. The Committee of 20 educators, businessmen, labor leaders and state and local government officials warned the President against concentrating on the military threat alone and ignoring other scientific fields.

Alexander Korol, staff member of the Center for International Studies, MIT, in a US Government-sponsored study (released Nov. 27) of Soviet education, said that, in order to save our way of life, "we must find a way to release a large share of our total resources and energy from non-essential uses and devote them to the service of indispensable goals." Director Millikan of the MIT center said the secret of Soviet achievements, such as the satellite launchings, is not primarily large numbers of Soviet technicians with degrees but the power of the totalitarian system to marshal its best brains and resources for top priority projects.

**TEACHING** A Nov. 19th survey by the National Education Association shows that the caliber of college teaching staffs has already begun to deteriorate, and that "colleges today  
(Continued on Page 4, end of Column 2)

## NEW APPROACH NEEDED

In a talk on "Disarmament and the 12th General Assembly," Mrs. Marian McVitty, Vice President of the United World Federalists, told the Washington representatives of various national organizations on December 6 that disarmament is at a "real dead end" on both sides, and a new set of proposals must be thought out. Mrs. McVitty, who has been a full-time observer at the UN for six years, deplored the lack of preparation by the US delegation for the London Conference last spring. She said it took 3 months to present our position there, because of failure to negotiate in advance with our NATO allies.

Similar lack of preparation was evident in the recent General Assembly session, she said. US participation in the UN debate was handled exclusively by our delegation officials, while Stassen, who still holds the title of Special Assistant for Disarmament, sat on the sidelines among the observers. Other informed sources report that Stassen's efforts to continue negotiation with the USSR have been suppressed since his office was moved to the State Dept., and that members of his staff are already seeking other positions. An AP article reported (Dec. 31), however, that Ambassador Bohlen may be appointed to continue directing US disarmament efforts.

**SENATE COMMITTEE** The Senate Foreign Relations Subcommittee on Disarmament, now slated to complete its work by Jan. 31, is again up for an extension. Many have urged that it be made a permanent standing committee of the Senate. The Friends Committee on National Legislation lists the following examples of areas which merit Subcommittee consideration: 1. examination of recent Soviet proposals for resumption of disarmament negotiations; 2. consideration of proposals for possible beginning agreements with the USSR; 3. proposals for an inter-agency body to make recommendations for employment, investment, retraining, and other problems involved in cutting back military expenditures without adverse effect on the US economy; and economic problems involved in possible cutbacks or military withdrawal from countries like Japan, where US expenditures are vital in their economy; 4. proposals for international control of outer space. Those who support an extension of the Senate Subcommittee may wish to write the responsible Congressional officials: Sen. Hubert H. Humphrey, Chairman of the Subcommittee; Sen. Lyndon B. Johnson, Majority Leader; Sen. William F. Knowland, Minority Leader; Sen. Theodore Francis Green, Chairman, Senate Foreign Relations Committee; and your own Senators.

### FAS COUNCIL MEETS in NEW YORK

Saturday, Feb. 1  
4 P M  
Columbia University  
Men's Faculty Club  
400 West 117th St.

The Executive Committee meets here the previous evening.

### DAYTON WINS SUPREME COURT REVIEW

The Supreme Court agreed (Jan. 6) to review the case of Weldon Bruce Dayton (see NL 57-8), a cosmic-ray physicist who was denied a passport in 1954, when he sought to accept a research post at the Tata Institute in Bombay, India. The case will probably decide whether the Secretary of State can legally withhold a passport on the basis of confidential information.

## CONDON REVIEWS HIS CASE

There are encouraging signs that the US is recovering, although slowly, from the paralyzing and degrading effects of McCarthyism. The startling successes of Soviet science in recent weeks have brought home to us, as no amount of discussion could, the self-defeating aspects of any broad-side, fearful loyalty and security system. It has been proposed that J. R. Oppenheimer be cleared of the shadow of suspicion and that the government recant. E. U. Condon, speaking at the Amer. Physical Society banquet in St. Louis on Nov. 24, reviewed his own case:

**SECURITY SYSTEM** "... I want to make some remarks about the political abuse of the personnel security system, which has done so much in the past decade to blight the relations of loyal American scientists and their Government. I hope that this will be the last time that this subject will need to be discussed. The evil consequences of bad policies have now come home to roost in a way that is plain for all to see. It may be that conditions have now become bad enough at last that the Administration will soon seek to remove from itself the badge of dishonor that it has worn for so long.

"During the last two months there has come about a general public awareness that America is not automatically, and effortlessly, and unquestionably the leader of the world in science and technology. This comes as no surprise to those of us who have watched and tried to warn against the steady deterioration in the teaching of science and mathematics in the schools for the past quarter century. It comes as no surprise to those who have known of dozens of cases of scientists who have been hounded out of jobs by silly disloyalty charges, and kept out of all professional employment by widespread blacklisting practices. It comes as no surprise to those of us who have known how good American scientists have had to face vilification by political speechmakers in and out of Congress, and have been falsely prosecuted for perjury, and have been improperly denied passports, or have had their passports seized and invalidated without due process by the State Department, or who have had their telephones tapped or their letters intercepted by government agents. For while we are rich and powerful, we have not been true to the principles of freedom for which we stand."

**CASE HISTORY** Condon then went on to detail the history of his personal experience with the Federal personnel security system. "[Over the past ten years] I have had two full-scale loyalty hearings in the Department of Commerce, a full-field investigation for the Atomic Energy Commission, and finally in 1954 had a hearing under the policies and procedures set up by this Administration. In all of these I received full clearance. All covered essentially the same ground which was no ground at all. The House Committee on Un-American Activities made numerous attacks on me in 1947 and 1948 before its then chairman [J. Parnell Thomas] went off to serve a term in the Federal Penitentiary as a common crook. Finally this Committee staged a political hearing on the same old stale and out-worn material just before the 1952 elections.

"During most of this period I kept on working to develop the scientific strength and stature of the National Bureau of Standards. Happily this work is being carried on by my successor in spite of his having been summarily fired for a time by the present Secretary of Commerce who wanted the free play of the market place to take precedence over careful scientific experimentation.

"Edward Teller told this last personnel security board hearing in April, 1954 that the Bureau's work on the hydrogen bomb which I organized advanced our achievement of that goal by many months, probably a year. If he is correct in the implication that without that work we would have been delayed by about a year, then the lack of that work would have made us come in second in the international rivalry for the hydrogen bomb.

"Nevertheless all the old stuff was reshaped once in 1952 and again in 1954. I was badgered all those years for having been interested in the American-Soviet Science Society, an organization which received a grant from the Rockefeller Foundation ten years ago to foster translation and wider distribution in this country of the Russian scientific literature. Now, a decade

late, we read of crash programs to translate the Russian scientific literature and spread it around in this country. Why, man, you can't do that: that's subversive.

"In July, 1954 I was given complete security clearance by the Eastern Industrial Personnel Security Board. You might think now that I would be allowed to go back to work. Yet, in Oct. 1954, just before the elections, we find Nixon making his twenty-years-of-treason speeches boasting that he got the Secretary of the Navy to suspend my clearance, as was done on October 21.

"It was arbitrarily suspended without any pretense that additional evidence needed to be considered. It was suspended by a Secretary of the Navy who admitted that he had not seen the record. I was told that I would have to go through the same old dreary business again. Three years ago I faced a very difficult decision -- whether to continue to fight for the Government's honor, or whether to yield to the Administration's determination to disgrace itself. Exactly three years ago at Thanksgiving, I was driving from Corning to Washington to take counsel with various friends on what to do.

**MCCARTHY ATTACKS** "Try to picture the situation. I had been under steady political attack for seven years, and had won at every hearing. But now I was told that I would have to go over all the same material again, before a kangaroo court whose members were to be handpicked to do their job by Defense Department officials. Many of my friends had been persecuted by the House Committee on Un-American Activities. Some of them and taken refuge abroad from these political persecutions of our scientists. Our good friend and past president, Robert Oppenheimer, who brilliantly built and led the Los Alamos laboratory during the war, had just been publicly disgraced by an official action of the Government -- largely on the basis of recently developed hysterical attitudes toward things that had happened before the war. The scientific staff of the Signal Corps Laboratories at Fort Monmouth had suffered a blow from which it has not yet recovered through the irresponsible attacks of Joseph McCarthy -- attacks which the President had not resisted until Mr. McCarthy began lobbing his shots toward the White House. Then at last our President acted, but in his own self-interest, not in defense of honor and decency and fair play to scientists, or to any of McCarthy's other victims.

"Under these circumstances ... I decided the situation was hopeless, and that I had done all that could reasonably be expected of me in having resisted these evil dishonorable forces for seven long years.

"In those seven years so much of my nervous energy had gone into the struggle that I was weary unto sickness, and was forced to neglect the proper courtship of our beloved profession. So I decided to withdraw from the struggle, and my resignation from an industrial position for which security clearance was needed was announced in early December.

**FURTHER PROBLEMS** "You might think that now I would be allowed to go back to work. I came East in January 1955 after giving my retiring presidential address to the American Association for the Advancement of Science and was offered the post of chairman of the department of physics in a leading university. In March the chancellor of that university told me that he could not follow through on the appointment because a high government official threatened one of the university trustees that if my appointment went through, that university would lose all of its Federal funds.

"In June of 1955 I was asked to serve on a committee on a non-classified problem of military importance -- and then suddenly asked not to, just before the first meeting of that committee.

"Incidentally I was cleared from July 1954 to October 1954. During that period some navy people came to see me with an urgent problem on the development of a radome for a guided missile. It was highly secret, but I was cleared for it. By the time we had the development models made my clearance had been suspended, "pending further consideration," as Secretary Thomas put it. Some of our cleared young men tried to deliver the radomes but found these navy men in such a state of panic that they would not accept them. A few weeks later -- all this was just three years ago -- they regained their courage and sheepishly asked

## "PEACEFUL ACCOMMODATION"

A portion of a speech by Gen. Omar N. Bradley, given last Nov. 5 at the St. Alban's School convocation in Washington, D.C., is reprinted below. In the Jan. issue of The Progressive, which carried an adaptation of the speech, Bradley is quoted as saying that the views expressed below "in no way compromise my position regarding the need for present equality or superiority over Russia in scientific achievements." He wrote that, while the long-run program must be initiated now, "it is not entirely possible of fulfillment until equality, or superiority in scientific achievements is assured" vis-a-vis "a ruthless nation bent on imposing her ideology on the rest of the world."

The central problem of our time -- as I view it -- is how to employ human intelligence for the salvation of mankind. It is a problem we have put upon ourselves. For we have defiled our intellect by the creation of such scientific instruments of destruction that we are now in desperate danger of destroying ourselves. Our plight is critical and with each effort we have made to relieve it by further scientific advance, we have succeeded only in aggravating our peril.

As a result, we are now speeding inexorably toward a day when even the ingenuity of our scientists may be unable to save us from the consequences of a single rash act or a lone reckless hand upon the switch of an uninterceptable missile. For twelve years now we've sought to stave off this ultimate threat of disaster by devising arms which would be both ultimate and disastrous.

**INCREDIBLE DILEMMA** This irony can probably be compounded a few more years, or perhaps even a few decades.

Missiles will bring anti-missiles, and anti-missiles will bring anti-anti-missiles. But inevitably, this whole electronic house of cards will reach a point where it can be constructed no higher.

At that point we shall have come to the peak of this whole incredible dilemma into which the world is shoving itself. And when that time comes there will be little we can do other than to settle down uneasily, smother our fears, and attempt to live in a thickening shadow of death. Should this situation come to pass, we would have but one single and thin thread to cling to. We call it rationale or reason. We reason that no Government, no single group of men -- indeed, not even one willful individual -- would be so foolhardy, so reckless, as to precipitate a war which would most surely end in mutual destruction.

This reasoning may have the benefit of logic. But even logic sometimes goes awry. How can we assume that reason will prevail in a crisis when there is ordinarily so little reason among men. To those who would take comfort in the likelihood of an atomic peace to be secured solely by rationale and reason, I would recall the lapse of reason in a bunker under the Reich Chancellery in Berlin. It failed before, it can fail again.

Have we already gone too far in this search for peace through the accumulation of peril? Is there any way to halt this trend -- or must we push on with new devices until we inevitably come to judgment before the atom. I believe there is a way out. And I believe it because I have acquired in my lifetime a decent respect for human intelligence.

It may be that the problems of accommodation in a world split by rival ideologies are more difficult than those with which

to have the radomes. They were tested and found to be good and are now in production. Detailed problems about them come up from time to time but I am not allowed to help in their solution.

"... In connection with all the soul-searching that is going on, we hear a good deal being said about asking Robert Oppenheimer back into government service. I hope this is done -- humbly and with apologies for the horrible way he was treated. ... the Government ought to make honorable amends to him and others -- but ... we all must recognize that if basic research is to be done, an excellent job of teaching must go along with it, and ... our very best people are needed for both these things. The very best physicists can make their most worthwhile contribution in these ways rather than in weapon development. ..."

we have struggled in the construction of ballistics missiles. But I believe, too, that if we apply to these human problems, the energy, creativity, and the perseverance we have devoted to science, even problems of accommodation will yield to reason. Admittedly, the problem of peaceful accommodation in the world is infinitely more complex than a trip to the moon. But if we will only come to the realization that it must be worked out -- whatever it may mean even to such sacred traditions as absolute national sovereignty -- I believe that we can somehow, somewhere, and perhaps through some as yet undiscovered world thinker and leader find a workable solution.

**FAITH NEEDED** I confess that this is as much an article of faith as it is an expression of reason. But this, my friends, is what we need, faith in our ability to do what must be done. Without that faith we shall never get started. And until we get started, we shall never know what can be done.

If I am sometimes discouraged, it is not by the magnitude of the problem, but by our colossal indifference to it. I am unable to understand why -- if we are willing to trust in reason as a restraint on the use of a ready-made ready-to-fire bomb -- we do not make greater, more diligent and more imaginative use of reason and human intelligence in seeking an accord and compromise which will make it possible for mankind to control the atom and banish it as an instrument of war.

This is the real and -- indeed -- the most strenuous challenge to man's intellect today. By comparison with it, the conquest of space is of small significance. For until we learn how to live together, until we rid ourselves of the strife that mocks our pretensions of civilization, our adventures in science -- instead of producing human progress -- will continue to crowd it with greater peril.

We can compete with a Sputnik and probably create bigger and better Sputniks of our own. But what are we doing to prevent the Sputnik from evolving into just one more weapons system? And when are we going to muster an intelligence equal to that applied against the Sputnik and dedicate it to the preservation of this Satellite on which we live?

How long -- I would ask you -- can we put off salvation?

[Bradley then discussed education, and urged continued faith in "the ability of an educated mankind to discipline itself so securely" as to put an end to our peril.]

If enough of us believe strongly enough in the ability of intelligent human beings to get together on some basis of a just accord, we might somehow, somewhere, in some way and under some auspices make a start. Unless we soon get started, it may be too late. We can't sit about waiting for some felicitous accident of history that may somehow make the world all right. Time is running against us, and it is running against us with the speed of a Sputnik. If we are going to save ourselves from the instruments of our own intellect, we had better soon get ourselves under control and begin making the world safe for living.

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 D. A. Osgood and I. Shapiro of the Washington Office Staff.

- MEMBERSHIP APPLICATION** -- Dues: Regular - \$5 (with income below \$3000- \$3); Supporting - \$10; Patron - \$25. New membership and an introductory subscription to Bulletin of the Atomic Scientists - \$8.50 (with income below \$3000 - \$6.50).
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## OPPENHEIMER RECALL?

With the increased public concern over the US missile and satellite program, there has been a growing interest in restoring Government security clearance to J. Robert Oppenheimer. Last September, he was made an officer of the French Legion of Honor "because of the esteem and admiration of the French government for a great American scientist."

In November the former Assistant Air Force Secretary for R & D, Trevor Gardner, suggested that James R. Killian, science advisor to the President, "ask himself" whether Oppenheimer should not be brought back into the Government. Describing him as "one of the finest minds in the world," Gardner suggested that the board which termed Oppenheimer a risk be reassembled to determine whether he was needed "in light of today's problems." It is "entirely proper" for the AEC to arrange for a rehearing and a reconsideration, commented Sen. Henry M. Jackson (D, Wash.), a member of the Joint Committee on Atomic Energy.

**SUPPORT** Further support for the present director of the Institute for Advanced Study at Princeton, came from John P. Hagen, head of Project Vanguard. "If we want to keep in first place scientifically," he was asked recently, "can we waste an Oppenheimer?" "Whether we want to stay in first place or last place, we can't afford it," Hagen replied. Adlai Stevenson also expressed hope that Oppenheimer's "genius is re-enlisted in the Nation's service" soon. H.D. Smyth, president of the American Physical Society, commented "I naturally think he should be reinstated -- if he wants to come back. I wouldn't blame him if he didn't want to."

Thomas E. Murray, former AEC Commissioner and the only one who said Oppenheimer was "disloyal" as well as a security risk in the 4-1 vote to rescind clearance, said he saw "no objection" to reopening the case. He explained that his vote against Oppenheimer in 1954 rested "on a precise juridical definition of the concept of loyalty in its application" to an AEC employee. The test for loyalty was fidelity to security regulations; Oppenheimer was not faithful to them, and in that sense was "disloyal."

**SCIENTISTS' POLL** A poll by the Washington Post in December showed a majority (9 of 17) of the members of President Eisenhower's Science Advisory Committee favored the return of Oppenheimer to Government service. I.I. Rabi, Nobel Prize-winning physicist who heads the President's Committee, said Oppenheimer's reinstatement would be a "source of encouragement to the whole scientific community." While he knew of no "organized effort" to bring Oppenheimer back in the Government, Rabi said, "American scientists would look upon it as elementary justice for a man who was smeared to be restored." Rabi also was quoted in the London Times: "It is still too early to judge the long-range effects of McCarthyism, but the exclusion of Prof. Oppenheimer, a man who accomplished so much for his country,

is indication of the failure of this country and the authorities to value correctly such contributions, both intellectual and substantial, to the welfare of the US. Only when he is returned to more active Government service will it indicate that a change of heart has occurred."

### TWO STUDY GROUPS CALL U.S. UNPREPARED

Two groups of experts have reached similar conclusions on US defenses and overall security. Both the independent Rockefeller Studies group (report issued Jan. 5) and the Gaither Committee (report still withheld by the White House, so its contents are only known through leaks to the press) recommended: heavy additional defense spending through the coming years, reorganization of the military, preparation to fight limited as well as major wars, pooling of allied scientific brainpower, and a civil defense warning and shelter program. The Rockefeller group predicted a nuclear attack on 50 major US metropolitan areas would cause "10-15 million dead and 15-20 million injured from blast and heat and another 25-30 million casualties from fallout, or a total of 60-65 million dead and injured." The Gaither Committee, which reported to the National Security Council Nov. 7, is said (Washington Post, Dec. 20) to have also urged increased foreign economic aid, and more funds for research and development and science education. Both reports discourage tax cuts and call for bold, costly programs on several fronts.

### RADIATION REPORTS AVAILABLE

"The Biological Hazards of Nuclear Weapons Testing," a report by the FAS Radiation Hazards Committee, was published in full in NL 57-6. Extra copies are still available from the Washington Office @ 10¢ each, 15 for \$1, and \$5 a hundred.

Hearings on Fallout, 2 volumes (Joint Atomic Energy Committee, May 27-June 7, '57) - \$6.50, Govt. Printing Office, Washington 25, D.C.

### EDUCATION AID PROPOSED (Cont. from Page 1).

and industry tomorrow" will suffer if this present trend continues. Fewer and fewer new doctor's degree graduates become college teachers, the study showed. However, the proportion of new teachers with less than a master's degree is steadily increasing. In 1953-54, for example, 31.4% of new teachers held the doctor's degree. Most recently, this figure declined to 23.5%. The production of Ph.D.'s is four times greater than it was 10 years ago, NEA said, but a greater proportion of those new graduates are accepting jobs in business and industry rather than in teaching.

Science will bear the major brunt of this beginning of a deterioration in the quality of college teaching staffs, according to Paul G. Bulger, president of the Association for Higher Education. "Without an adequate supply of college teachers, the supply of trained youth is soon depleted," and "it is unrealistic to hope for water from the spring that is drying up at its source."

### F A S NEWSLETTER

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