

F. A. S. NEWSLETTER

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

FAS Statement on Vietnam

(Adopted April 26, 1965)

Like many of our fellow citizens, members of the Federation of American Scientists are deeply concerned with United States policy in Vietnam, and are voicing this concern as individuals and through other organizational channels. The Federation itself is confining its official statement to implications of this policy for arms control, disarmament, and measures against proliferation of nuclear weapons.

The threat of nuclear annihilation remains the gravest threat facing the world. Disarmament, coupled with peaceful means for resolving international conflicts, is properly a major goal of American policy. Expansion of the war in Vietnam runs counter to this goal. It increases the possibility of direct confrontation of the major powers and thus of the danger of total war. It increases pressures for accelerating the arms race. It sets precedents for unilateral action which may set back the cause of disarmament by many years. Pre-occupation with the immediate military operations in Vietnam must not divert our attention from the long range moral and political goal of a peaceful world.

On two previous occasions we have warned against the use of chemical and biological agents. Use of nuclear weapons would almost certainly doom any efforts to prevent by international agreement their eventual large-scale employment. We cannot realistically urge India and other nations to forego

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FAO LINKS POPULATION WITH FOOD CRISIS

For the first time in the 20 year history of the Food and Agriculture Organization, its director, B. R. Sen, has directly stated that the problem of feeding the world is related to the need for controlling population growth. Sen declared that "the next 35 years will be a most critical period in man's history. Either we take the fullest measures both to raise productivity and to stabilize population growth or we will face disaster of an unprecedented magnitude."

He called for consideration of "population stability as a social problem" and "a matter of urgent priority." Explaining that the FAO itself has no competence in the birth control field and no desire to enter it, he added that those who are concerned with the world's food problem no longer can overlook the interrelationship involved. He declared that heroic efforts will be needed in the next 15 or 20 years "if large portions of mankind are not to face starvation and famine."

Sen cited figures to show that the gap between the rich and the poor nations is widening rather than narrowing despite the work of FAO, other UN organizations, and private foundations. Unless there are major changes, he foresees a prospect for Latin America "nothing less than frightening." As to the Far East, he repeated earlier warnings that without drastic measures "famine will begin to appear around 1980." (*Washington Post*, 3/25/65.)

Smog Legislation Debated

The nation's automobile manufacturers oppose any Federal legislation controlling car exhaust fumes pending "further research." The views of these firms were summarized by Harry A. Williams, managing director of the Automobile Manufacturers Association in testimony before a Senate subcommittee held in Detroit. Williams told the Public Works subcommittee that proposed legislation requiring exhaust control systems on all new cars could be complied with after reasonable time, but "we believe the combined efforts of government and industry pose questions which should be answered before new legislation is considered." Problems which he said deserved consideration include the extent and nature of the smog problem on a national basis, whether control of vehicle exhaust will significantly reduce air pollution, where funds could best be spent for such reduction, and disparities in present data on the smog problem.

Most government officials involved in the question believe the automobile is a growing pollution menace whose emissions must be strictly controlled if the major metropolitan areas, such as Los Angeles, are not eventually to choke on their own exhaust. The administration's attitude was reflected in President Johnson's conservation message to Congress in February in which he spoke of the need to substantially reduce or eliminate automotive air pollution.

The nation's automobile makers are equally convinced that there is insufficient evidence that cars are a national pollution problem to warrant controls. They argue that the taxpayer would get more for his pollution dollar by spending it to expand controls on pollution from industrial plants and homes instead. But both sides in this argument are reaching the conclusion that national controls are in the process of becoming realities.

Arthur J. Benline, New York City's Commissioner of Air Pollution Control estimates that cars cause one-third of the region's problem, but admits that this estimate is not substantiated by research. Walter E. Jackson, Philadelphia's chief of air pollution control, says studies there indicate the auto causes 25 per cent of the city's problem. James V. Fitzpatrick, director of Chicago's Department of Air Pollution, calculates from fuel statistics that half the organic gases in the atmosphere there come from vehicles.

Nationwide controls on auto emissions would primarily benefit dwellers in metropolitan areas and might impose unnecessary burden on the millions who reside in pollution-free rural areas; however, two-thirds of the population of the nation already lives in metropolitan areas having only 9 per cent of the land area. The Public Health Service says that any place with a population of 50,000 has enough vehicles to create a potential problem.

Gasoline powered vehicles discharge an estimated total of 92 million tons of carbon monoxide into the air annually, besides millions of tons of the smog-forming hydrocarbons and nitrogen oxides that California has been striving to control. The daily output of carbon monoxide from vehicles, if confined over one area, would pollute the air to a concentration of 30 parts of carbon monoxide per million of air to a height of 400 feet over 20,000 square miles—the area

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CANADIANS SEEK PESTICIDE CURBS

The government is introducing in the British Columbia Legislature a bill under which agricultural pesticides and drugs will be sold only by licensed dealers.

If the sellers of the more powerful sprays and drugs are not druggists or veterinary surgeons, they will have to take a month-long course in using the chemicals before being granted a full license. Under the present Pharmacy Act such chemicals are obtainable on the buyer's signature.

Licenses will be needed by sellers of routine preparations for domestic use. Licenses will probably be issued only to outlets where sales are made 30 or more feet from any premises where food is for sale.

WIDE POWERS FOR INSPECTORS

Government inspectors will have wide powers to compel production of sales records, to insist on tests of animals and crops, and to set up acceptable levels of pesticide or drug residue. The inspectors will be able to order, without compensation, the destruction of crops, animals, feeds or other products, and to ban the sale of any product for any period.

Special permits will be required for individuals or companies in the business of applying pesticides. This will take in cropdusters and mosquito-control companies.

The Minister of Agriculture will also have the power to ban the use in British Columbia of any pesticide or drug. He will be advised in this field by a committee to be set up from his own department and the pharmaceutical and veterinary associations. The bill will include regulation over "any substance intended for use as a plant-growth regulator."

Two supermarket managers in Vancouver said they would probably drop the sale of pesticides.

The government action has been prompted partly by a bitter controversy in the Grand Forks area of the province over the discovery of poison in milk and beef and the killing of hundreds of thousands of young trout in a lake near where mosquito spraying had taken place in orchards.

A large section of the Vancouver Island shellfish industry is also threatened with a shutdown because of pollution by sewage discharge carrying pesticide residues. (*N.Y. Times*, March 11, 1965.)

AMENDMENTS TO FAS BYLAWS

(Retained language in roman type; new added language in italics)

RESOLVED:

Art. V, § 2(a) of the Bylaws is hereby amended to read as follows:

"The Elections Committee shall prepare a list of nomi-

nees for Chairman of FAS, for Vice-Chairman of FAS (*who shall be the chairman-elect and shall automatically succeed to the office of Chairman upon completion of the Chairman's term*), and for Council delegates-at-large. For each office to be filled at least 1.5 persons shall be nominated. *Beginning with the election to be held in 1967, no nominations for Chairman shall be made, except as provided in Art. VI, § 1(a) of the Bylaws.*"

FURTHER RESOLVED:

Effective January 1, 1967, references to the "Chairman" in Art. V, §§ 2(b), 2(c), and 2(d) of the Bylaws are hereby deleted.

FURTHER RESOLVED:

Art. VI, § 1(a) of the Bylaws is hereby amended to read as follows:

"A vacancy in the office of Chairman shall be filled immediately by the Vice-Chairman. In this event, the Council at its next meeting shall designate a new Vice-Chairman for the remainder of the term, and in the next subsequent election nominees for Chairman and Vice-Chairman shall be placed on the ballot."

SMOG LEGISLATION DEBATED

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of Massachusetts, Connecticut and New Jersey combined. This level is often reached in California, occasionally in Washington, and sometimes in Chicago and Philadelphia. The carbon monoxide and accompanying hydrocarbons are enough to cause discomfort, eye irritation, plant damage, and reduced visibility.

Dr. Dietrich Hoffman, a biochemist and air-pollution expert at the Sloan-Kettering Institute for Cancer Research in New York, has found that auto exhaust contains particles that, when applied to the skin of mice, have caused cancer. This does not prove that auto exhaust will cause cancer in humans, he explained, but "nobody claims man will benefit from air pollutants."

Surgeon General Luther L. Terry made the following comments on air pollution control in December of 1962: "Much of the speculation and controversy about whether or not air pollution causes disease is irrelevant to the significance of air pollution as a public health hazard. We are accustomed to thinking that a disease state is brought about by a single cause—a carryover from a period in public health history when virtually total emphasis was placed on the bacterial or viral agent which had to be present before a communicable disease could be recognized and dealt with. . . .

"New criteria must be employed in assessing the damage of air pollution—criteria which include statistical evidence that a disease condition exists in a population, epidemiological evidence of the association between the disease and the environmental factor of air pollution, reinforced by laboratory demonstration that the air pollutants can produce similar diseases in experimental subjects. Ideally, all of these observations should be underlined by the ultimate demonstration that protection against air pollution will lessen or remove the severity of the disease.

"There are still great deficiencies in our knowledge. We need to learn more about the pollutants which affect health—and in what amounts and under which conditions. But the qualitative evidence at hand conveys a clear message. There is no longer any doubt that air pollution is a hazard to health." (*Washington Post*, 4/8/65; *N.Y. Times*, 4/5/65; *Scientist and Citizen*, Jan.-Feb. 65.)

FAS NEWSLETTER

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Chairman.....Dr. W. A. Higinbotham
The FAS Newsletter is prepared in Washington.
Editor: Judith Eckerson.

The FAS, founded in 1946, is a national organization of scientists and engineers concerned with the impact of science on national and world affairs.

Sources of information (given at the end of articles in parentheses) are for further reference. Items reprinted directly from other publications are designated as such in an introductory paragraph.

FAS STATEMENT ON HIGHER EDUCATION

(Adopted April 26, 1965)

The Federal Aid to Education Act has now become law. The Federation of American Scientists enthusiastically supports the Act and its objective, to make quality education available to all young Americans.

The present Act deals primarily with elementary and high school education. At the college and graduate school levels also, the needs of our society are outstripping the facilities presently available, and the situation is rapidly deteriorating. From last year to this, applications for college admission have risen twenty-five percent, and similar increases are expected in subsequent years. With their present resources colleges cannot expand at this rate, even though tuition and other student expenses are skyrocketing. Young people who are rejected in spite of careful preparation and in the face of test performances that were previously considered satisfactory are discouraged and confused as they find themselves unable to develop their potentialities. To permit this to happen would be tragic for the individual, whose growth is stunted, and for the country, which can ill afford this loss of talent.

To respond to present and prospective needs we must expand present campuses and organize new ones. The training of college and university teachers, and the design and building of educational and research facilities, takes many years. We must make the best use of all we have now. We must discard antiquated practices which discourage instead of building up, such as rigid retirement rules, anti-nepotism rules, discrimination because of color, sex, creed, age, marital status, and other irrelevant aspects. We must plan well ahead to assure solid growth in the future, rather than merely react to the emergency already upon us.

The Federation of American Scientists calls on the federal and state governments, and on organizations concerned with education, to anticipate and to meet educational needs of the years ahead.

SCIENCE AND SOCIETY CONFERENCE SPONSORED BY ORINS

The following announcement appeared in the Oak Ridge Institute of Nuclear Studies newsletter for April 1965:

A four-week conference on the "Impact of Science on Society" will be held in Oak Ridge July 6 to July 30 for selected faculty members from the sponsoring universities and colleges of ORINS.

The purpose of the conference, according to William G. Pollard, Executive Director of the Institute, is to provide an opportunity for university faculty in the natural sciences, social sciences and humanities to discuss those aspects of science in general and nuclear technology in particular that affect man and his society. "The conference has been designed to include discussion of nuclear energy and social change in a manner suitable for subsequent use in student and adult study groups," Dr. Pollard said. In addition, the program is aimed at developing interdisciplinary cooperation of teaching and research efforts.

The program is being presented by ORINS in cooperation with the U.S. Atomic Energy Commission and the National Science Foundation.

PURDUE IS SITE OF CISV EVALUATION

The fourth Triennial International Conference of Children's International Summer Villages (CISV) will take place in July at Purdue University to confer on and evaluate the results of the Village programs. Since 1951, when the CISV program started with 55 children from nine coun-

tries, more than 2200 children from 45 nations have participated in the summer projects. Villages are established in various countries to bring together 11-year-olds from all over the world. Activities are strictly non-political, stressing cooperation and appreciation of other cultures. The age of 11 was chosen because it is an age at which attitudes have not taken firm hold, but are being formed. The children are old enough to be away from home, but young enough to enjoy activities with other children whose language they do not understand. The child at this age is also old enough to absorb and remember his experiences. Studies are now beginning on how the international summer village experience changed attitudes in the first group of 11-year-olds, who are now 24 or 25, and have already entered their chosen occupations. Nine villages will be sponsored, in eight countries, this summer.

RECENT PUBLICATIONS

WHERE SCIENCE AND POLITICS MEET, by Jerome B. Weisner. New York: McGraw-Hill, 1965. \$6.95. 302 pp.

This is a collection of speeches and published articles, some reworked to avoid redundancy, some abridged to avoid introductions and conclusions in each section. The book is divided into three sections, the first of which discusses science and politics in general terms. The second section deals with Weisner's ideas on education in a technologically advanced society—how things are and how he thinks they should be; the third is concerned very specifically with the scientist's role in accomplishing disarmament.

Many of these chapters will have been read by FAS members in other places—it seems unlikely that the article by Weisner and York which appeared in *Scientific American* last October (and was reprinted in the *FAS Newsletter*) could have been missed by many. The speech delivered to the Federation of American Scientists in May of 1963 is also included. But many of these chapters are speeches which were reported in newspapers, and deserve to be collected under one cover, to be compared for varying emphases and development of Weisner's points of view.

There is little new in this collection, and nothing startling. Yet most of it was new a very short time ago—the involvement of science with policy, government with research, is a revolution which assumed the face of normalcy in record time. Weisner's words, if not still news, form the background for today's developments, and provide a comprehensive view of science and government which perhaps no one else was in a position to oversee.

Criticism of the book has concentrated on individual comments, rather than the broad plan of the book. Donald Mintz, reviewer for the *Evening Star*, observed that:

"Jerome B. Weisner wants "all the brain power of the population" to be "fully developed and widely deployed." There is a barrier—and not a little hostility—between those who, like Weisner, think of brains as disembodied entities that can be positioned on some intellectual battlefield and those who think that brains belong to people, preferably free people."

Mortimer Taub observed, however, that "Weisner is most interesting and convincing in those passages of his book where he deals with arms control."

OF INTEREST . . .

The Du Pont company has published a 32 page book entitled *Clean Air and Water*, which discusses the problem of pollution, and suggests methods by which companies can reduce their contribution. It also touches on local, state, and federal control plans. It is #28 in the Du Pont series.

A new ten-year information exchange program on fast reactor technology has been initiated by the U.S. Atomic Energy Commission and the United Kingdom Atomic Energy Authority. This agreement supersedes a previous arrangement, made in 1956, and will consist of exchanges of research and development data on all types of fast reactors for civil, land-based power stations up to and including construction and operation of prototype reactors, except for details of specific reactor designs and fuel manufacturing techniques. There will be visits, and long-term personnel assignments. (*Scientific Information Notes, NSF, April-May 1965*)

American professors teaching at a U.S. Government supported college in Istanbul, Turkey, are refusing to submit to security checks as required by foreign aid legislation. About 30 per cent of the American faculty at Robert College has signed a petition protesting the requirement and asking for a presidential waiver. The AID, which is paying their salaries, will have to withhold further payment from those who do not submit to a check unless the waiver is granted. Such a waiver was granted last year, and the report that security clearances would be required this year whipped up a storm of indignation among faculty members, who maintain that compliance would cripple their academic and intellectual freedom and compromise their integrity. (*Washington Post, April 4, 1965*)

South Africa's first nuclear reactor, now the most powerful research reactor on the African continent, was reported "critical" for the first time at 6:33 P.M. on March 18. The reactor power will be increased over the next few months to the initial design figure of 6700 kilowatts. Eventually the Director-General of the Atomic Energy Board wants the reactor power increased to 20,000 kilowatts. (*S.A. Scope, May 1965*)

A 1962 law that Congress enacted as a partial block to Communist propaganda mailed into this country is hardly worth the time and expense of enforcement, according to the Post Office's general counsel, Louis J. Doyle. He told a House Appropriations subcommittee also that many citizens had complained, and four had gone to court challenging the law as an unconstitutional invasion of privacy. "The general complaint is to the effect that mail matter should be delivered as addressed without any interference."

The operation of withholding propaganda costs the Post Office Department about \$300,000 per year, said Doyle. He could not estimate the cost to the Bureau of Customs, which decides which mail is propaganda. (*Washington Post, March 25, 1965*)

China is rapidly expanding its chemical fertilizer production, and spending much of its foreign exchange on fertilizers also. The country probably produced more than 4 million tons of chemical fertilizer last year, and bought 5 million tons from Japan and elsewhere. But in order to increase agricultural production to the optimum level, 40 million tons per year are needed. (*Washington Post, April 4, 1965, reprinted from the Toronto Globe and Mail*)

FAS STATEMENT ON VIETNAM

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the development of a nuclear arsenal of their own while affirming publicly our freedom to use nuclear artillery in Southeast Asia. Once more the Federation urges our Government to renounce the first use of nuclear weapons, and to press for corresponding commitments by all other nuclear powers.

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