

# 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.

## Chinese Announce 3rd Nuclear Test

*The following is the text of an announcement by the Hsin-hua press agency of the 3rd nuclear test conducted by the Chinese. The nuclear device was exploded in Sinkiang Province. It is notable that the Chinese refer to the "United States-Soviet collusion" and declare that they will not be the first to use nuclear weapons, although their accomplishment is an "encouragement" to peoples engaged in revolution.*

At 4 p.m. (Peking time) on May 9, 1966, China successfully conducted over its western areas a nuclear explosion that contained thermonuclear material.

This experimental nuclear explosion is a new important achievement scored by the Chinese people in their efforts to further strengthen their national defense and safeguard the security of their country and the peace of the world.

The complete success of this nuclear test was insured by the Chinese People's Liberation Army and China's scientists, technicians and broad sections of workers and functionaries, who, under the correct leadership of the Communist party of China and holding still higher the great red banner of Mao Tse-tung's thought, gave prominence to politics, adhered to the four firsts, creatively studied and applied Chairman Mao's works, carried out the policy of self-reliance and hard work formulated by the Central Committee of the party and Chairman Mao, and gave play to the spirit of collective wisdom and efforts and wholehearted cooperation by combining the leadership, the experts and the masses and integrating

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## Defense Costs Increase

The cost of defense systems to the nations of the world was more than \$130 billion in 1964, according to a study conducted by the Arms Control and Disarmament Agency. This is \$10 billion more than the comparable figures compiled for 1962, and amounts to a cost-per-person of \$40 for every man, woman, and child in the world.

Public education in 1964 cost only two-thirds of the defense bill. Public education plus public health expenditures still amounted to \$5 billion less than the total spent on defense.

The United States and the Soviet Union accounted for \$90 billion of the total, but the evidence indicates that poorer countries are increasing their defense expenditures at a much faster rate than the economically developed nations. Between 1960 and 1964 the increase was 30% for the developed nations and 50% for the underdeveloped. Because of low per capita income, the individual citizen may pay as high a percentage of defense costs to his government as the citizen of a developed country.

The ACDA named three countries which spend unusually large shares of their budgets on defense, leaving little for other purposes. They were Indonesia, Jordan, and Syria. (*N. Y. Times, 28 May 1966*)

## Senate Supports Nonproliferation Resolution 84-0

The Senate passed Resolution 179, introduced by John O. Pastore of Rhode Island, on May 17, by a unanimous vote. The Resolution commends efforts to reach a treaty of non-proliferation of nuclear weapons with other countries. Prior to the passage of the resolution, however, there was heated debate on the administration's policy toward China, particularly on the question of whether a no-first-use agreement offered by China to the U.S. about a year ago should have been so summarily rejected. China cited the rejection in explaining why it must continue testing nuclear weapons.

Senator Robert F. Kennedy, who led the critical debate, suggested that Americans were "mature enough and concerned enough about the problems of nuclear weapons" to support its government in negotiations with communist China. Dean Rusk later replied that a proposal from the Chinese was not acceptable without "strict, effective international controls." Secretary Rusk also said that the U.S. was willing to sit down with the Chinese to discuss disarmament, but he said that China had shown no indication of interest in such a move.

Senator Clark of Pennsylvania remarked that American negotiators in Geneva are worried that a general move to abandon disarmament efforts will follow another season with no accomplishment. He predicted that the U.S. could conclude a treaty with Russia this year if ownership and control of nuclear weapons were withheld from Germany.

An abridged version of the committee report accompanying Senate Resolution 179 is added below:

"In 1945 the United States was the only nation in the world that possessed the knowledge and capability to produce nuclear weapons. Within 4 years—in 1949—the U.S.S.R. became the second nation to develop this capability. In 1952 the United Kingdom, and in 1960 France, became the third and fourth nations to test nuclear weapons. In 1964 Communist China became the fifth nation to demonstrate nuclear weapon capability. Thus, in less than two decades, five nations have joined the 'nuclear weapons club.'

"From the beginning of the atomic age, the United States has recognized the danger to world peace and order if international controls of nuclear weapons and special nuclear material are not adopted. Beginning in 1946 with the Baruch plan, the United States continually has sought ways and means to control the military uses of atomic energy and to channel this tremendous source of power into peaceful uses.

"During this same period the United States has recognized the importance of promoting stability and safeguarding the freedom of North Atlantic area nations. Accordingly, effective August 24, 1949, the United States joined with 12 other nations of the free world in the North Atlantic Treaty and agreed . . . that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all; and consequently they agree that,

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## LETTER FROM GERMAN SCIENTISTS

The Vereinigung Deutscher Wissenschaftler is sending to the Federation of American Scientists cordial greetings and congratulations on the occasion of its twentieth anniversary.

When, seven years ago, a few scientists in Germany laid the groundwork for the founding of our own society, it was encouraging to know that a corresponding organization had been in existence in the United States for many years. It appeared to us of profound significance that in the one country in which the natural sciences had achieved their highest state of development, and in which each scientist might be thought to be fully occupied with the pursuit of his own specialty, science had been recognized as possessing the gravest importance for society at large, and that scientists accepted an obligation to concern themselves with the effects of their researches. In the ensuing years we have always looked up to your Federation as our model. That the mutual exchange of ideas and publications has not been as active as we hope it will be in the future is because soon after its formation our organization was confronted with numerous problems that arose out of the special situation in our country. Still, through Pugwash meetings and through other personal contacts we have kept ourselves informed about activities of the Federation of American Scientists, and indirectly we have received much stimulation from you for our own activities. In the years to come we should welcome a more regular exchange of ideas, and more frequent personal contacts between the members of our respective federations.

Foremost we wish that in the coming years the Federation of American Scientists will continue to develop as magnificently as in the past, and that its efforts, which are so important for the peace and the future of mankind, will achieve success.

/s/ Prof. Dr. H. Glubrecht  
Authorized Member of Exec. Comm.  
Vereinigung Deutscher Wissenschaftler

*The letter printed above was translated for the Newsletter by Peter Bergmann.*

## RADIATION VACCINE?

Dr. Willard Visek and Dr. Hung Chen-dang of the New York State College of Agriculture report some success with injections of enzymes to protect mice from lethal effects of radiation. The hope that their experiments will lead to a vaccination for people which would allow cancer patients to receive much larger doses of radiation, and in a more long range way decrease the world-wide fear of fallout.

Speculation on the effects of such a vaccine have centered on the devaluation of nuclear deterrence which would result. Estimates of the cost of mass inoculations equal the cost of fallout shelters for everyone: tens of billions of dollars. But the radiation inoculation would almost certainly have greater effect in eliminating the fear of a surprise first strike than the shelter systems. (*Toronto Globe and Mail, 7 May 1966*)

## FAS NEWSLETTER

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The FAS Newsletter is prepared in Washington.  
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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.

## RADIOACTIVE WASTE SUBJECT OF CONFERENCE

A five-day conference in Vienna was the scene of presentation of a variety of papers on the problem of atomic waste disposal. The Soviet Union delegation had prepared a paper urging a complete ban on discharging radioactive wastes into the waters of the world's oceans, but the paper was withdrawn after Western atomic energy specialists argued that such a ban would put existing nuclear power plants out of business. Other papers supported the position that discharge rates are presently innocuous. Water used for cooling reactors is often slightly radioactive when discharged into rivers or bays.

Other papers presented reported that strontium 90 and cesium 137 are concentrated at a depth of 3000 feet in the Atlantic, that these elements are twice as abundant in the Mediterranean surface waters as in the Atlantic, and four times as abundant in the Black Sea. Drainage of large land masses into the Black Sea was suggested as the cause of radioactive concentration there. The water current patterns in the Black Sea are also partly responsible; the movement of water from the surface to the lower depths is reported to take ten years.

R. F. Foster and J. K. Soldat of the United States reported an experiment in which Dr. Foster ate a half pound of radioactive whitefish for a year—the fish being caught downstream from the atomic energy works at Hanford, Washington. Foster claims to carry the heaviest body burden of radioactive zinc of any man in history, but only one-tenth of the amount considered safely permissible for the general public.

Welshmen reported that a delicacy called laverbread, commonly eaten in Wales, which is made of seaweed, is becoming increasingly radioactive due to British atomic plant wastes. The common theme of reports was, however, that such contamination was within permissible bounds. Americans declared that improved processing techniques were causing gradual decline in the radioactive wastes of reactor discharges, and predicted that the trend would continue. (*N.Y. Times, 21 & 23 May, 1966*)

## SCIENCE AND WAR

In remarks at Rensselaer Polytechnic Institute, Walter R. Hibbard, Jr., Director of the Bureau of Mines for the Department of the Interior, commented on the progress of science and technology in war and peace. "In time of war, the importance of technology manifests itself with undeniable force. Whereas, in peaceful environment, technology advances at a moderate pace and over a wide spread of technical areas, under the stress of war the pace is quickened by the drive of urgency, and technological effort is rigorously channeled toward critical objectives. It is important to recognize these differences in laying plans and establishing goals.

"The popular notion that great scientific achievement took place during the years of World War II was completely erroneous. It failed to recognize the difference between technological innovation and scientific research. Under the compulsion of war, technology advances while science rests. . . . The intense technological exploitation for the requirements of war feeds upon accumulated science, which is replenished by less constrained explorations in times of peace."

## OF INTEREST . . .

The Federation of American Scientists' statement on funding for an anti-missile program (see *FAS Newsletter*, May 1966) was read into the *Congressional Record* on May 31 by Jeffery Cohelan of California, in summing up his opposition to the program.

Despite the common impression that Civil Defense has slowed down to a crawl, the news from the OCD is that the U.S. is stocking shelters with food and medical supplies at the rate of 8 million spaces a year, and is locating one million new shelter spaces every month. Civil Defense activity has not, however, increased with involvement in the Vietnam war. Public interest has sagged steadily since 1962. (*Washington Post*, 21 April 1966)

The Administration has asked contractors doing business with the government to review the use of personality tests used in employment, and use them with the same limits and precautions that the Federal government uses for its own employees. Last year the Civil Service Commission banned the use of personality tests except in connection with medical evaluations. (*N.Y. Times*, 25 May 1966)

The Tenth Socialist International Congress called for a halt in the spread of nuclear weapons and urged all governments to work for disarmament. Their resolution stated that it was necessary to the success of disarmament ventures that all nations be involved in the relevant discussions. (*N.Y. Times*, 10 May 1966)

The World Health Organization program committee, by a vote of 64 to 19, defeated a proposal made by the United States and 17 other countries that WHO assume international leadership in developing family planning. The organization chose to uphold its previous policy of being an advisory body to members of the United Nations. A counter-proposal sponsored by France was adopted. The argument that family planning would help promote health services in other fields was countered by a representative of Brazil, who said that family planning was diverting funds from malaria and cholera control. (*N.Y. Times*, 19 May 1966)

A call for a treaty banning military activity and claims to sovereignty on the moon by President Johnson received no immediate answer from the Russians, but was quickly supported by Britain. A Soviet scientist said recently that Russia laid no claim to lunar areas where Soviet rockets had landed. (*N.Y. Times*, 10 May 1966)

Harold L. Barrows of the Agriculture Department's Research Service has reported that soil pollution, which has received little attention, might ultimately make the nation's soil unfit for food production. Besides agricultural chemicals and pesticides, he noted that all the components of air pollution eventually come to rest on the soil, and many types of industrial smoke are toxic to plants. (*N.Y. Times*, 10 May 1966)

The current state of knowledge in the field of genetics is advanced enough to justify pre-marital genetic counseling on a large scale, according to Arthur E. McElfresh of St. Louis University. Persons carrying genes for hereditary diseases could decide not to have children, or evaluate realistically the emotional and financial risks attendant on having them. (*N.Y. Times*, 8 May 1966)

The United States Public Health Service is now requiring that all institutions receiving money from it supporting research involving human subjects have special committees to assess and insure that the rights of the subjects are safeguarded. Expansion in research with human beings, according to a PHS directive, has necessitated more formal attention to the issues raised by such research. (*N.Y. Times*, 20 May 1966)

A preliminary study of scientific research in Indian institutions has resulted in the publication of *Scientific Research*

CONSERVATIONISTS' TAX-EXEMPT STATUS  
SUSPENDED

By a recent action against the Sierra Club of San Francisco, the Internal Revenue Service has implied that any conservation organization which supports or opposes legislation concerning conservation may lose its tax-exempt status. The *New York Times* (12, 13 June) reported that the I.R.S. suspended the Sierra Club's tax-exempt status on the day following the Club's publication of newspaper advertisements opposing legislation which would authorize the building of two hydroelectric dams in the Grand Canyon. The 30,000 member organization published the full-page advertisements in the *Times* and the *Washington Post* on 9 June, just before a House of Representatives subcommittee was to vote on the legislation for one of the dams. The Club contends that the dams "are absolutely unnecessary to water development in the Southwest" and would ruin the scenic beauty of the Grand Canyon. The legislation is supported by the Interior Department and by the influential chairman of the House Interior and Insular Affairs Committee, Wayne Aspinall (D., Colo.).

On 10 June the Sierra Club received from a Federal Marshal a communication from the district director of the I.R.S., containing an official "warning," that there would be an investigation to determine whether the Club had violated the I.R. Codes which prohibit tax exemption of a nonprofit organization that devotes "a substantial part" of its activities to lobbying. The communication cited "evidence of your activities directed toward influencing legislation," and stated that "allowance of deductions for contributions to you after this date will depend upon a factual determination made after an examination of your activities." This section is unusual in two respects: (1) Conservation organizations have in the past taken stands on legislation affecting their areas of concern, as exemplified in recent years by their active support of administration-endorsed legislation to provide permanent reservations of wilderness areas. Such positions have not led to questioning of their tax-exempt status by the I.R.S. In the present situation, however, the conservationists are opposing an administration position. (2) This is the first time that tax-exempt status of any organization has been suspended pending an investigation. The meaning of this suspension is that if the examination by the I.R.S. leads to a revocation of the Club's status, the revocation will be retroactive to the date of the "warning."

## VISA POLICY CHANGED

The State and Justice Departments have announced a new system of processing visas for foreign visitors with former Communist or pro-Communist affiliations. Under the new regulations, a blanket waiver can be issued for a large sports event, international conference, or similar function, without the customary waiting period and individual processing. The new visa procedures will apply only to groups, and have no effect on individual visits to the United States.

The regulations are expected to preclude embarrassments such as occurred when the Mexican novelist Carlos Fuentes was denied permission to see his publisher in New York, and such tremendous loads of paperwork as devolved upon the State Department when every eastern European athlete en route to the Olympics in Tokyo had to get an individual special waiver to change planes in Alaska.

The announcement said that visas will continue to be denied when the individual applicant constitutes a security risk. (*N.Y. Times*, 4 May 1966; *Washington Post*, 4 May 1966)

in Indian Universities, including information on the history and growth of research, and sources of financial support. Copies are available free of charge from: Survey and Planning of Research Unit, C.S.I.R., Rafi marg, New Delhi 1, India. (*Scientific Information Notes*, April-May 1966)

## CHINESE ANNOUNCE 3RD NUCLEAR TEST

(Continued from page 1)

education, research and production. It is a great victory for the three great revolutionary movements of class struggle, the struggle for production, and scientific experiment. It is a great victory for Mao Tse-tung's thought.

[In a footnote to the text, Hsinhua said the "four firsts" or four priorities meant "giving first place to man in the correct handling of the relationship between man and weapons; giving first place to political work in the correct handling of the relationship between political and other work; giving first place to ideological work in the correct handling of the relationship between ideological and routine tasks in political work; and giving first place to living ideas in the correct handling of the relationship between ideas in books and living ideas in ideological work."]

The Central Committee of the Communist Party of China, the State Council and the Military Commission of the Central Committee of the party extend their warm congratulations to all the commanders and fighters of the People's Liberation Army who took part in this test and to all the workers, engineers, technicians, scientists and other personnel who contributed to it, and express the hope that they will redouble their efforts and achieve new and continuous successes in the struggle for the further strengthening and the modernization of our country's defense.

China's purpose in conducting necessary and limited nuclear tests and in developing nuclear weapons is to oppose the nuclear blackmail and threats by United States imperialism and its collaborators and to oppose the United States-Soviet collusion for maintaining a nuclear monopoly and sabotaging the revolutionary struggles of all oppressed peoples and nations. The Chinese people's possession of nuclear weapons is a great encouragement to the peoples who are fighting heroically for their own liberation as well as a new contribution to the defense of world peace.

At the time of the explosion of China's first and second atom bombs, the Government of the People's Republic of China issued statements explaining China's fundamental stand on the question of nuclear weapons and concretely proposed the holding of a summit conference of all the countries of the world to discuss the complete prohibition and thorough destruction of nuclear weapons.

Since then, in disregard of the statements of the Chinese Government, United States imperialism has continued to develop and mass produce nuclear weapons of various kinds, further expanded its nuclear bases all over the world and

stepped up its nuclear blackmail and threats against China and the whole world.

China's sole purpose in developing nuclear weapons is defense, and its ultimate aim is to eliminate nuclear weapons. We solemnly declare once again that at no time and in no circumstances will China be the first to use nuclear weapons. The Chinese people sincerely hope that a nuclear war will never take place.

We are deeply convinced that a nuclear war can be prevented provided that all the peace-loving people and countries work together and persevere in struggle. As in the past, the Chinese people and Government will continue to carry on an unswerving struggle, together with all the other peace-loving people and countries, for the noble aim of completely prohibiting and thoroughly destroying nuclear weapons. (*N.Y. Times, 10 May 1966*)

## SENATE SUPPORTS NONPROLIFERATION

(Continued from page 1)

if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by article 51 of the Charter of the United Nations, will assist the party or parties so attacked by taking forthwith, individually and in concert with the other parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.'

"The United States, as a member of NATO, has committed its military forces, including significant numbers of nuclear weapons, to the defense of its European allies without, however, transferring these weapons to the control of other nations. The U.S. nuclear weapon policy thus has given its allies a powerful defensive shield which relieves them of the need to develop their own independent nuclear weapons capability. It has helped to deter the proliferation of nuclear weapons.

"The snior Government officials who testified before the Joint Committee all supported passage of Senate Resolution 179 and emphasized that the long established U.S. policy of support of the principles of NATO is in consonance with the equally long established U.S. policy of nonproliferation of nuclear weapons. They stated that passage of Senate Resolution 179 will be of assistance to the executive branch of the Government in furthering U.S. policy." (*N.Y. Times, 18 May 1966; Joint Committee on Atomic Energy Report on Senate Res. 179*)

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