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Nuclear arms freeze, 1982-1988.

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CDI

Center for Defense Information

October 4, 1985

Rabbi Alexander Schindler
President - Union of
American Hebrew Congregations
838 Fifth Avenue
New York, NY 10021

Dear Rabbi Schindler:

On 6 August 1985 the Soviet Union ceased all nuclear explosions. When making the announcement General Secretary Gorbachev said that the cessation would last until 1 January 1986; however, if the United States stopped testing, the cessation could go on indefinitely. Mr. Gorbachev clearly had a number of reasons, political and military, for this initiative, but whatever his reasons, it is imperative that we capitalize on the fact that the Soviets have stopped testing.

CDI is now participating in an effort to get the United States to end all nuclear explosions for all time by joining the Soviet Union in this initiative. You know as well as I do that it is high time we take this action. I invite you to participate in this effort.

It is proposed that you and 100 other distinguished Americans from many diverse fields sign an open letter to President Reagan and General Secretary Gorbachev. This letter is attached for your consideration. I will send this letter directly to President Reagan and General Secretary Gorbachev and also publish it in major U.S. newspapers with the names of the American leaders who have signed the letter.

Enclosed are copies of the Defense Monitors that contain the text of the letters previously sent to the two heads of state, which outline our position for supporting an end to nuclear explosions. In addition, there is a copy of the proposed open letter as it will appear in newspapers.

If you think this is a worthwhile effort, please sign the open letter, with any identification you would like to appear with your name, and return it to me.

Sincerely,

Gene R. La Rocque
Rear Admiral, USN (Ret.)
Director

Gene R. La Rocque
Rear Admiral, USN (Ret.)
Director

Eugene J. Carroll, Jr.
Rear Admiral, USN (Ret.)
Deputy Director

William T. Fairbourn
Major General, USMC (Ret.)
Associate Director

Kermit D. Johnson
Major General, USA (Ret.)
Associate Director

James A. Donovan
Colonel, USMC (Ret.)
Associate Director

James T. Bush
Captain, USN (Ret.)
Associate Director

Center for Defense Information

Gene R. La Rocque
Rear Admiral, USN (Ret.)
Director

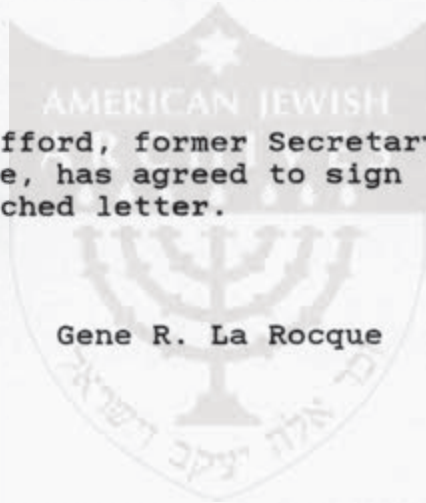
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Kermit D. Johnson
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Associate Director

James A. Donovan
Colonel, USMC (Ret.)
Associate Director

James T. Bush
Captain, USN (Ret.)
Associate Director



Clark Clifford, former Secretary
of Defense, has agreed to sign
the attached letter.

Gene R. La Rocque

END ALL NUCLEAR EXPLOSIONS:

An Open Letter to

PRESIDENT REAGAN AND GENERAL SECRETARY GORBACHEV

Dear President Reagan and General Secretary Gorbachev:

As human beings gravely concerned by the continuing expansion of nuclear arsenals and the growing risk of nuclear war, we call upon you both to make prevention of nuclear war a major issue at your summit meeting in Geneva on 19 November.

At your meeting we urge you to proclaim a mutual moratorium on nuclear explosions effective on or before 1 January 1986 and agree to resume negotiations for a treaty to bring a permanent end to nuclear test explosions in all environments.

The entire world will applaud your historic action if you will take this first, essential step to avert nuclear war.

Signed:

* MR. JOHN JOHNSON,
President, Alpha Inc.

* AMBASSADOR HARRY HYDE
Former U.S. Ambassador

* et. al.

*

If YOU agree with these distinguished leaders that the Summit meeting on 19 November presents a genuine opportunity to bring about a permanent end to nuclear testing, please write to President Reagan and First Secretary Gorbachev to urge them to take this first, essential step to avert nuclear war.

PRESIDENT RONALD REAGAN
The White House
1600 Pennsylvania Avenue
Washington, D.C. 20500

GENERAL SECRETARY
MIKHAIL GORBACHEV
c/o Embassy of USSR
1125 16th Street, N.W.
Washington, D.C. 20036

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THE DEFENSE MONITOR

The Center for Defense Information supports a strong defense. It opposes excessive expenditures for weapons and policies that increase the danger of nuclear war. CDI believes that strong social, economic and political structures contribute equally to the national security and are essential to the strength and welfare of our country.

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SIMULTANEOUS TEST BAN: A Primer on Nuclear Explosions

Defense Monitor in Brief

- The most significant and achievable arms control measure at this time is a Simultaneous Test Ban—the termination of all nuclear weapons explosions.
- The best date for a Simultaneous Test Ban to begin is 6 August 1985, which marks the 40th year since the atomic bombing of Hiroshima.
- A halt to nuclear weapons explosions can be verified to prevent cheating.
- Citizens must be well informed about all aspects of nuclear weapons testing to decide whether or not it should be stopped.

A complete and total halt to nuclear weapons explosions has been sought by every U.S. President since Dwight D. Eisenhower. In numerous arms agreements signed since 1963, the United States and the Soviet Union have pledged their efforts to achieve a comprehensive ban of nuclear weapons tests. Yet, today, 22 years after the signing of the Limited Nuclear Test Ban Treaty, both nations continue to explode nuclear weapons at the rate of 20 to 30 per year.

At a time when existing nuclear arms limitation agreements seem in danger of being abrogated—and prospects for new agreements are fading—an end to the explosive testing of nuclear weapons is the most significant and achievable arms con-

trol measure on the agenda today. This proposal that the U.S. and U.S.S.R. both stop testing nuclear weapons while negotiating a permanent ban on nuclear weapons explosions is called a Simultaneous Test Ban (STB). The date upon which the STB could take effect is a highly symbolic one: 6 August 1985, which marks the 40th year since the city of Hiroshima was demolished by an atomic bomb.

A Simultaneous Test Ban, by itself, could go far in slowing the on-rushing pace of the nuclear arms race. No less important, it could prove to be an essential first step in achieving other important measures to slow, halt and reverse this costly and potentially fatal arms competition.

"Today, relations between the United States and the Soviet Union are at a lower point than they have been for some time—a mountain of mistrust stands between us," Glenn Seaborg, former head of the Atomic Energy Commission, has said, "but I think there is a realization in both countries that steps toward a test ban can be to mutual advantage. Perhaps we need to think in terms of where we will be in another ten years if we don't come to an agreement."

This special issue of *The Defense Monitor* is a primer on nuclear testing and a Simultaneous Test Ban. Its easily referenced question-and-answer format explains how a complete and total halt to all nuclear explosions will make the world a safer and more secure place for all.

LIMITING NUCLEAR EXPLOSIONS: YESTERDAY AND TODAY

What About Early Test Ban Efforts? The first proposal for stopping nuclear weapons explosions was made by the U.S.S.R. in 1955, but became entangled in disagreements about verification. Three years later, the Soviet Union announced a moratorium on nuclear weapons explosions, calling on the U.S. and the United Kingdom to follow suit. After some six months of discussions, agreement on a year-by-year suspension of nuclear explosions was reached, beginning in November 1958. Remarkably, given the Cold War tensions of those times, the voluntary test ban was observed by the three nuclear-armed states for three years.

Although in December 1959 President Eisenhower officially terminated the moratorium by declaring, "We consider ourselves free to resume nuclear weapons testing," the U.S. conducted no tests. In February 1960 France exploded its first atomic weapon. The Soviet Union had stated that its adherence to the moratorium was dependent on no testing by any of the "Western powers," including France. Nevertheless, the U.S.S.R. did not resume testing until September 1961, after France had conducted four nuclear tests. The U.S. followed suit two weeks later.

Thus, while the history of earlier test moratoria is not unblemished, neither is it hopeless. A clearly defined moratorium today could pave the way for negotiations toward a permanent ban on all nuclear weapons explosions.

What is the Limited Test Ban Treaty? A 1963 nuclear explosions moratorium declared by the U.S. yielded enduring results. The Cuban Missile Crisis of October the year before proved a sobering experience for Presidents Kennedy and Khrushchev. Both world leaders emerged from their narrow brush with nuclear war filled with a new determination to secure a ban on nuclear weapons testing.

Much of the preliminary groundwork for test ban negotiations had

already been laid by 1963. In June of that year, President Kennedy made a bold stroke in a now famous speech delivered at American University. "To make clear our good faith and solemn convictions on this matter," he announced, "I now declare that the United States does not propose to conduct nuclear tests in the atmosphere so long as other states do not do so."

The following month, negotiations began in Moscow. It took only 12 days to negotiate the Limited Test Ban Treaty (LTBT), which forbids nuclear explosions in the air, underwater or in outer space. Only a minor, but unresolvable, dispute over the number of seismic detection stations to be placed in each other's territories precluded agreement on a comprehensive ban on *all* nuclear weapons explosions.

In order to gain the support of the military and the nuclear weapons labs for the LTBT, the Kennedy Administration agreed to certain "safeguards," including conduct of a "comprehensive, aggressive and continuing" underground nuclear explosions program and maintenance of facilities to "institute promptly nuclear tests in the atmosphere should they be deemed essential to our national security." Following the LTBT, therefore, the average annual number of U.S. nuclear tests actually increased.

While the treaty did not secure the comprehensive ban many had hoped for, it was still an important step. Above ground nuclear explosions had created a worldwide health hazard by generating dangerous radioactive fallout. By driving nuclear tests underground, the LTBT largely solved the fallout problem. Unfortunately, once the fallout danger was alleviated, public pressure for a comprehensive test ban slackened.

The LTBT pledged its parties to seek "to achieve the discontinuance of all test explosions of nuclear weapons for all time." Twenty-two years later, we are still waiting. It took worldwide public protests to pressure

government officials to abandon nuclear explosions in the air. A similar effort to secure a Simultaneous Test Ban could be equally effective.

What Other Treaties Limit Testing? In 1974, the U.S. and the U.S.S.R. signed the Threshold Test Ban Treaty (TTBT), restricting tests to no more than 150 kilotons. In addition, a protocol to the TTBT provides for the exchange of geological, seismic and other data to allow calibration of both countries' detection networks. Two years later, the Peaceful Nuclear Explosions Treaty (PNET) was signed, similarly restricting so-called "peaceful nuclear explosions"—underground blasts for civil engineering purposes. In 1976, both treaties were submitted to the Senate for ratification. Hearings were held in 1977 and the treaties were favorably reported to the whole Senate the following year. Threats by some Senators to add untenable verification amendments, as well as the Administration's deep involvement with the SALT II and Comprehensive Test Ban treaties, however, led President Carter to abandon the ratification process.

Neither the TTBT nor the PNET has yet been ratified by the U.S., although both countries have pledged to abide by them. The failure to follow through on the data exchange provisions of the TTBT has clouded the debate on future verification of a comprehensive ban on nuclear explosions. More generally, the U.S. practice of signing, but not ratifying, arms control agreements undermines the arms control process.

What About the Comprehensive Test Ban? In 1977 the Carter Administration began negotiating a Comprehensive Test Ban Treaty (CTBT) with the Soviet Union and the United Kingdom to stop all nuclear weapons explosions of all kinds in all environments. To gain the support of the military, the nuclear weapons labs, and others who didn't want a permanent ban on nuclear tests, Carter proposed that the treaty be lim-

ited to three years.

The CTBT negotiations in the late 1970s produced some dramatic breakthroughs. The Soviets agreed to several significant steps facilitating verification including acceptance of a network of seismic monitoring stations on Soviet territory and agreement in principle to the use of voluntary on-site inspections to resolve suspicious events.

As a result of intensive bargaining on all sides a draft treaty was written. The three parties were able to report to the United Nations in 1980 that they had "demonstrated their strong political commitment to completion of this treaty by achieving solutions to problems that for many years made a treaty difficult to attain. Most notable in this regard are the agreements concerning the prohibition of any nuclear weapon test explosion in any environment, the moratorium on nuclear explosions for peaceful purposes, the general conditions with regard to on-site inspections, and a number of important seismic verification issues."

While talks continued through 1980, however, events in Afghanistan and Iran and the troubled course of the still unratified SALT II Treaty killed any possibility of a ban on nuclear explosions during the Carter Administration. Two years later, the Reagan Administration—citing verification concerns—formally abandoned nuclear test ban negotiations.

What Initiatives Today Would Limit Testing? Because of the present Administration's adamant position on continuing nuclear explosions, new initiatives for securing a ban on nuclear testing are originating in the Congress. One such legislative move is House Joint Resolution 3, introduced in January 1985. H.J.Res. 3, like the Kennedy-Mathias Amendment which passed by a vote of 77-22 in the Senate in 1984, calls for ratification of the TTBT and the PNET and the resumption of CTBT negotiations with the Soviet Union. On May 15 H.J.Res. 3, which is a non-binding resolution, was approved by the House Foreign Affairs Commit-

"We All Inhabit this Small Planet"

"Both the United States and its allies, and the Soviet Union and its allies, have a mutually deep interest in a just and genuine peace and in halting the arms race. Agreements to this end are in the interests of the Soviet Union as well as ours—and even the most hostile nations can be relied upon to accept and keep those treaty obligations, and only those treaty obligations, which are in their own interest.

"So, let us not be blind to our differences—but let us also direct attention to our common interests and to the means by which those differences can be resolved . . . For, in the final analysis, our most basic common link is that we all inhabit this small planet. . . .

"To make clear our good faith and solemn convictions on this matter, I now declare that the United States does not propose to conduct nuclear tests in the atmosphere so long as other states do not do so."

President John F. Kennedy
American University Speech
June 10, 1963

tee, and reported favorably to the whole House of Representatives for action.

Another House proposal, introduced in March 1985, is H.R. 1834, called the Simultaneous Nuclear Test Ban Act. The STB Act seeks a mutual U.S.-Soviet three month cessation of nuclear explosive testing beginning 6 August 1985 and calls on the President to seek resumption of Comprehensive Test Ban talks. The STB Act is different from other test ban proposals in that it seeks a cutoff of funding for U.S. testing of nuclear weapons contingent upon a Soviet suspension of testing. The STB Act provides Congress a vehicle with which to bring about a cessation of nuclear weapons explosions.

What do the U.S. & U.S.S.R. Say About a Test Ban? In November 1984, the Center for Defense Information sent a letter to President Reagan suggesting a mutual halt to all nuclear weapons explosions on 6 August 1985. In December the Center received a reply from Lt. General John Chain, USAF, Director of the State Department's Bureau of Politico-Military Affairs. "While it remains a long-term objective," General Chain said, "the U.S. does not intend to pursue negotiations towards a CTB at this time." As reasons, General Chain cited verification concerns and the Administra-

tion's belief that "nuclear testing plays an important role in ensuring a credible U.S. deterrent."

In January 1985, the Center sent a similar letter to the President of the Soviet Union. The Soviet response, received in April, was somewhat more encouraging. "The moratorium on nuclear testing as well as resumption in the near future of negotiations on a comprehensive ban on nuclear weapons tests," the letter from the Presidium of the Supreme Soviet said, "undoubtedly would contribute to constraining the nuclear arms race."

The letter went on to say that 6 August 1985 would be a good time to start and that "given acceptance of other nuclear powers, such a moratorium could be proclaimed even earlier." In a May 19 interview, Soviet leader Mikhail Gorbachev reaffirmed Soviet willingness to halt nuclear weapons explosions on 6 August 1985 while a comprehensive ban is being negotiated.

The Soviet government's response is encouraging. The U.S. government's somewhat less so. What is clear, is that one or the other of the nuclear powers will have to take the bold step of initiating a moratorium and challenging the other to follow suit, or we will never achieve an end to all nuclear explosions.

NUCLEAR TESTING TODAY

How Many Nuclear Weapons Have Been Exploded? From 1945 through the end of 1984 the United States has exploded 756 nuclear weapons: 331 before the 1963 Limited Test Ban Treaty (LTBT) drove testing underground and 425 since. The Soviet Union has exploded 556 nuclear weapons since 1949: 164 before the LTBT and 392 since. Britain has exploded 38 nuclear weapons since 1952: 23 before the LTBT and 15 since. France has exploded 127 nuclear weapons since 1960, China 29 since 1964, and India one in 1974.

Recently, both the U.S. and the U.S.S.R. have been exploding nuclear weapons at an increasing rate. In 1982 the U.S. exploded 19 nuclear weapons, the highest number of tests since 1970. That same year, the Soviet Union detonated 31 nuclear devices, its highest number since the early 1960s. Last year, the five nuclear-armed nations conducted a total of 58 nuclear tests—18 American, 29 Soviet, 7 French, 2 British and 2 Chinese explosions—an average of more than one explosion per week.

In 1983, the Department of Energy, which conducts nuclear testing for the U.S. and monitors all nuclear testing worldwide, reverted to a policy which had been in effect from 1963 to 1975 of not announcing all nuclear explosions. Among the reasons the Department cited was that it

didn't want to help the Soviets "determine the detection limits they have." This action seems designed to impede verification of present and future test limitation agreements.

Where are Nuclear Weapons Exploded? The United States has exploded nuclear weapons in Alaska, Colorado, Mississippi and New Mexico in the U.S.; the Marshall Islands, Christmas Island, and Johnston Atoll in the Pacific; over the South Atlantic Ocean; and twice in Japan. Since 1974 all U.S. nuclear explosions have been detonated at the Nevada Test Site near Las Vegas, an area a bit larger than Rhode Island. The United Kingdom, which used to test its nuclear weapons in Australia and on South Pacific islands, has done all of its tests at the Nevada Test Site since 1962.

The Soviet Union conducts its nuclear weapons tests at three primary sites: the Arctic Island of Novaya Zemlya, north of the Caspian Sea, and Semipalatinsk in Central Asia. The U.S.S.R. has also detonated nuclear devices at other locations in Central Asia, the Ural Mountains and Siberia. In recent years, the Soviets have been conducting "peaceful nuclear explosions" (PNEs) for civil engineering projects in Siberia. Thirteen of 27 Soviet nuclear explosions in 1983, for instance, are presumed to have been PNEs. The U.S. last conducted PNEs, in Colorado, in 1973.

France at first exploded its nuclear weapons in the Sahara desert, but has tested on the South Pacific atoll of Mururoa since 1966. Only in 1975 did France stop exploding nuclear weapons in the atmosphere. China does all of its nuclear testing at Lop Nor in the Gobi desert. China has not exploded nuclear weapons in the atmosphere since 1980, and says that all future testing will be underground. India's 1974 nuclear explosion was detonated beneath the Rajasthan desert. India is not thought to have a nuclear arsenal.

How Much Does Nuclear Testing Cost? Exploding nuclear weapons underground is both costly and complicated. The budget for the U.S. nuclear testing program has doubled in only five years, from \$330 million in 1981 to the \$657 million requested for fiscal year 1986. The entire nuclear explosion program is estimated to have cost over \$7.5 Billion since testing went underground in 1963.

The cost of a single test varies depending on its complexity. One 1980 MX-related test, code-named "Miner's Iron," cost about \$28 million. But, according to the Department of Energy, "as we move towards the 1990s the design and, hence, the testing of nuclear weapons becomes more complex. . . . In particular, the underground tests are more complex because of the need for increased data from each experiment." It can take anywhere from one to two years to prepare for a single test.

How are Nuclear Weapons Tested? Nuclear weapons are tested either in vertical holes or horizontal tunnels. Holes are used for weapons design tests, and range from 600 feet to over one mile in depth. Tunnels—some as long as 8,000 feet—are used for weapons effects tests. The canister containing the nuclear weapon and the instruments for gauging the results of the test is placed into the hole or tunnel. After the device is in place, the shaft is filled with sand and gravel.

When the nuclear weapon is detonated by remote control all the earth

Simultaneous Test Ban "Long Overdue"

"My reaction to . . . a Simultaneous Nuclear Test Ban is one of strong enthusiasm. It is my opinion that a comprehensive test ban treaty is long overdue. We were close to a negotiation of one 9 or 10 years ago . . . and there is every evidence that the Soviet government would like to pursue this possibility at the present time. Negotiations looking to the conclusion of such a treaty would have the advantage of being a way of bypassing the current Geneva stalemate, which is unlikely to be overcome in the near future."

George Kennan
Former Ambassador to U.S.S.R.
Letter to Rep. Patricia Schroeder
April 15, 1985

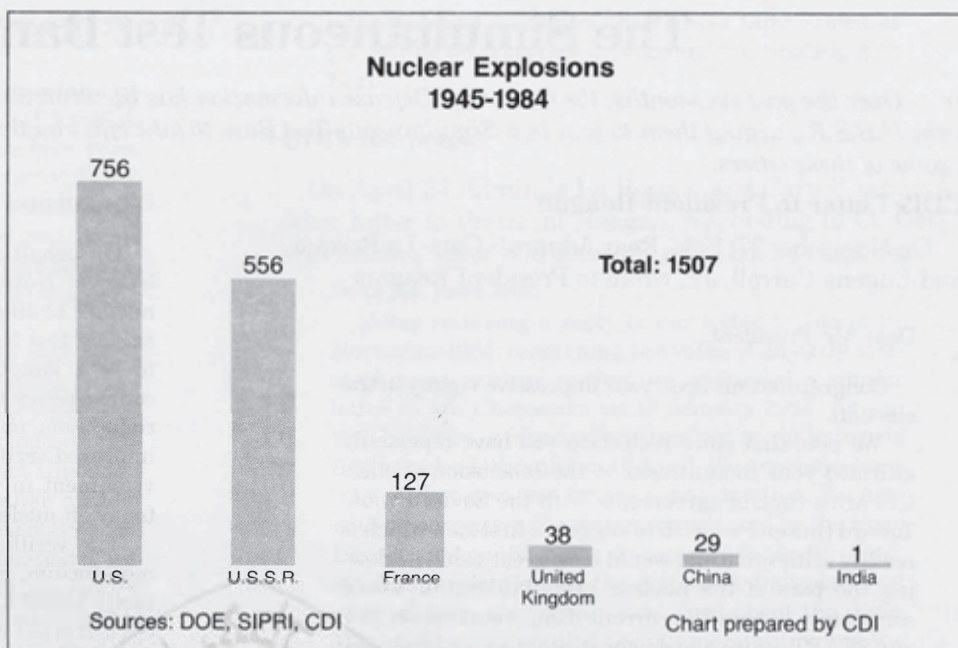
surrounding it is instantly vaporized. The explosive energy compacts the earth to form a large spherical cavity and a layer of highly radioactive molten materials forms around the cavity. This material flows to the floor and solidifies as it cools.

The test holes are drilled to a depth calculated to contain the weapon's explosive energy and minimize "venting" or the escape of radioactive debris. Radioactive fallout has, however, vented from many of these tests and, according to the Department of Energy, has been detected after 228 tests—92 times on-site and 136 times outside of the Nevada Test Site.

Why are Nuclear Weapons Tested? The reasons why the military wants to continue exploding nuclear weapons are perhaps best explained by the officials who manage the U.S. nuclear testing program:

- *Certifying New Designs.* "We cannot design this simple warhead from scratch on the basis of theory and our computational capability today and certify for you that that warhead is going to work as advertised," General William Hoover, then-Director of the Department of Energy's Office of Military Application, testified in 1981. "That is the fundamental reason we need to do testing and see where we have flaws. Quite frankly, we still have to verify a fudge factor after all these years."

- *Designing 'Safer' Weapons.* "We know how to make nuclear weapons more secure, safe . . . and controllable," General Hoover said in 1983.



"By any measure of merit the weapons we produce today are far better than those placed in the stockpile years ago."

- *Assuring Reliability.* "From time to time," Ray Duncan, manager of the Nevada Test Site told Congress in 1983, "a weapon is extracted from the stockpile to assure it will still work in the manner in which it is designed."

- *Arms Racing.* "I think it would be a terrible thing if the Soviets were to get ahead of us in the capability to design their nuclear weapons," Richard Wagner, Assistant to the Secretary of Defense for Atomic Energy, stated in 1982. "I think that the experience of Sputnik would pale in comparison with what would happen if

they got into this new generation of weapons designs before we do."

- *Preparing for Warfighting.* "The underground nuclear test program," Lt. General Richard Saxer, Director of the Defense Nuclear Agency (DNA), testified last year, "is . . . indispensable . . . to assess the survivability of our own military systems in a nuclear environment, predict lethality levels for destruction of enemy assets and develop the technology to enhance the survivability and security of our forces."

It is ironic that these military rationales for continuing testing are also compelling reasons for the U.S. and the U.S.S.R. to enter into an immediate Simultaneous Test Ban if the arms race is ever to be controlled.

SLOWING THE ARMS RACE

Is the Test Ban Too Little, Too Late? Some allege it is too late for a halt to all testing to have a significant effect on the nuclear arms race. Designs for the thousands of nuclear warheads for the MX, Trident and cruise missiles slated to enter the arsenal during the 1980s have already been tested; a ban on testing would not halt these weapons.

Additionally, many of the major developments in nuclear design have

already been made, most important of which is the dramatic reduction in the "yield-to-weight" ratio. A modern 200-kiloton cruise missile warhead, for instance, weighs only 270 pounds, compared to early 20-kiloton atomic bombs, which weighed five tons. These small but potent nuclear devices have made possible the destabilizing multiple independently-targetable reentry vehicle (MIRV).

Further "improvements" in nu-

clear weapons, however, lie ahead. A total nuclear explosions ban would prevent these new, more devastating and—most threatening—more "usable" nuclear weapons designs from being developed. If a comprehensive ban on testing had been signed in 1963, we would not be threatened by the MIRV danger confronting us today. While the Department of Energy cites developments of better "safety"

Continued on page 8

The Simultaneous Test Ban Papers

Over the past six months, the Center for Defense Information has been corresponding with the leaders of the U.S. and the U.S.S.R., urging them to join in a Simultaneous Test Ban, to take effect on 6 August 1985. Following are the texts of some of these letters.

CDI's Letter to President Reagan

On November 27, 1984, Rear Admirals Gene La Rocque and Eugene Carroll, Jr., wrote to President Reagan:

Dear Mr. President:

Congratulations upon your impressive victory in the election.

We note that since reelection you have repeatedly affirmed your commitment to the conclusion of effective arms control agreements with the Soviet Union. Toward this end we wish to suggest a first step which is readily achievable and would be of great value in slowing the pace of the nuclear arms buildup. It would completely bypass the current disagreements on INF and START issues and demonstrate your leadership as a man of peace.

This first, essential step is to propose a moratorium on nuclear testing and early resumption of negotiations on a Comprehensive Nuclear Test Ban. Based upon their Tripartite Report of July 31, 1980, the United States, the Soviet Union and the United Kingdom are already in substantial agreement on the elements of such a Test Ban. Dr. Herbert York, the chief U.S. negotiator, has stated that the Soviets were sincerely committed to concluding a treaty consistent with the terms outlined in the Tripartite Report, including provisions concerning on-site inspections. Your recent calls for the exchange of nuclear test observers appear to be a valuable contribution to meeting this requirement.

We have enclosed a recent *Defense Monitor* which explains the importance of an early end to nuclear testing. Since publishing this report in August, more than 100 organizations have already pledged their support to a world wide campaign to end all nuclear weapons explosions. The proposal will be considered soon by appropriate agencies at the U.N. We are certain that you will be applauded and strongly supported by a great majority of people in the U.S. and around the world, if you take the lead to bring an end to nuclear explosions forever.

It is impossible to conceive of a more dramatic and constructive way to begin your next four years as President of the most powerful nation on earth. By taking this bold initiative, you will dispel all doubts about U.S. commitments to effective arms control; place the onus on the Soviet Union to follow your leadership; and earn the approval of the citizens of the world for your service to the cause of peace.

Dear Admiral La Rocque:

On behalf of the President I am replying to your letter of November 27 concerning a moratorium on nuclear testing and negotiations on a comprehensive nuclear test ban. A comprehensive test ban continues to be a long-term objective of Administration arms control policy, in the context of deep and verifiable arms reductions, expanded confidence-building measures, improved verification capabilities, and a strategic environment in which we would rely less heavily than today on nuclear weapons for deterrence.

The verification of a test ban and especially of a moratorium, remains a major problem. Expert testimony before Congress has indicated that, even in the context of the verification procedures discussed (but not fully agreed) in the CTB trilateral negotiations, there would still be some uncertainty about our ability to detect and identify a potentially significant level of clandestine testing.

The U.S. has supported international discussion of verification and compliance problems related to nuclear testing limitations. Such discussion has usefully taken place in past years at the multilateral Conference on Disarmament (CD) in Geneva where the U.S. continues to support consideration of monitoring and verification issues related to a CTB.

There also are significant concerns about the national security implications of a CTB or a moratorium. The security of the U.S. and our Allies depends on a credible U.S. nuclear deterrent, and nuclear testing plays an important role in ensuring a credible U.S. deterrent, particularly in view of the massive Soviet buildup of nuclear forces.

For these reasons, while it remains a long-term objective, the U.S. does not intend to pursue negotiations toward a CTB at this time.

The Administration is nevertheless determined to make progress in the area of nuclear testing limitations, and will continue to seek ways in which we can correct the serious verification problems associated with the Threshold Test Ban Treaty (TTBT) and its companion Peaceful Nuclear Explosions Treaty (PNET). The President, in his September 24 speech to the UN General Assembly, proposed that "we find a way for Soviet experts to come to the United States' nuclear test site and for ours to go to theirs, to measure directly the yields of tests of nuclear weapons." Although the initial Soviet response was not encouraging, we remain hopeful that we will soon receive a positive official response.

The Soviet Response

On January 18, 1985, Admirals La Rocque and Carroll sent a letter, similar to the earlier one to President Reagan, to the Soviet leadership. On April 15 the following response was received from the Supreme Soviet Pre-

The Administration Response

On December 31, 1984, the following response was received from Lt. General John Chain, Jr., USAF, Director of the State Department's Bureau of Politico-Military Affairs:

sidium, as delivered to CDI by Ambassador Dobrynin at the Soviet Embassy in Washington:

Your statement, which testifies to the growing concern of the American public over the threat of devastating nuclear war, hanging over mankind, has been given a careful consideration in Moscow. The underlying motives of the proposal to undertake steps, which would help everyone to move forward to a desired goal, that of total elimination and prohibition of nuclear weapons for all time, to complete removal of the threat of nuclear war, are understandable.

The moratorium on nuclear testing as well as resumption in the near future of negotiations on a comprehensive ban on nuclear weapons tests, which you have proposed, undoubtedly would contribute to constraining the nuclear arms race. The Soviet Union has repeatedly proposed to the USA and other nuclear powers to put an end to such tests. It is one of the most acute and urgent issues now, since continuation of nuclear weapons testing is linked to their qualitative improvements, upgrading and creation of new types of such weapons and, consequently, whips up the build-up of nuclear arsenals.

To reach an agreement on complete and comprehensive ban on nuclear weapons tests the Soviet Union, and it is widely known, more than once put forward concrete initiatives and conducted negotiations in a constructive way. As you correctly note in your statement, in the course of trilateral negotiations on a comprehensive cessation of nuclear tests between the USSR, USA and Britain a long way was covered and the sides have achieved a considerable degree of agreement. Yet these negotiations were suspended by the United States Administration in 1980.

To create favourable conditions for working out the treaty, the Soviet Union also suggests such a practically feasible measure as declaration by all states, possessing nuclear weapons, of a moratorium on all nuclear explosions, beginning from a mutually agreed date.

The date the moratorium would take effect could be, as you suggest, August 6, 1985, which marks the 40th anniversary since the nuclear bombing of Hiroshima. Given the acceptance of other nuclear powers, such a moratorium could be proclaimed even earlier, so that it be in force until a treaty on complete and comprehensive ban of all nuclear weapons tests is concluded.

Under present circumstances, suspending nuclear explosions could be a very substantial step towards curtailing the nuclear arms race.

The Soviet Union is also prepared to resume immediately negotiations on complete prohibition on nuclear weapons tests. It proposes also to put into force the Soviet-American Treaties on the limitation of underground nuclear explosions, signed in 1974 and 1976, but not yet ratified for reasons that the Soviet side is not to be blamed for.

All these steps pertaining to nuclear tests, can be taken irrespective of the recently started talks in Geneva on issues of non-militarization of outer space, limitation and reduction of strategic armaments and medium-range nuclear weapons. At the same time, such measures would create more favourable conditions for

a fruitful development of the Geneva talks aimed at preventing an arms race in space and terminating it on Earth.

CDI's Response

On April 23 Admirals La Rocque and Carroll sent another letter to President Reagan, responding to Lt. General Chain's letter and discussing the Soviet response:

Dear Mr. President:

After receiving a reply to our letter to you of 27 November 1984, concerning the value of an early moratorium on nuclear testing, we addressed a similar letter to Mr. Chernenko on 18 January 1985. As you may be aware, a response was received to our letter via Ambassador Dobrynin on 15 April. We are enclosing a copy of that response for your consideration. We note with some concern the statement released by the State Department on this issue. As reported in the *Washington Post* on April 18th, the statement indicated that your advisors are "deeply concerned about the desirability of an uninspected testing moratorium and the verifiability of restraints on nuclear tests."

With respect to the second phrase, it is clear that "restraints on nuclear tests" would no longer be an issue if *all* nuclear explosions were banned. The 150 kiloton threshold limit and special provisions for so-called peaceful nuclear explosions would be subsumed in a total ban, thus eliminating any verification problems concerning limits or other restraints.

The question of verifiability therefore would become one of identifying, locating and classifying any low level nuclear explosions after the moratorium. There is a large body of independent scientific research which suggests that it is now virtually impossible to conceal any nuclear explosion, even at levels as low as one kiloton. We recognize that some scientists associated with the U.S. government nuclear laboratories may not agree with this finding and that the matter deserves further evaluation.

We recommend that the Secretary of Defense request that a prestigious body such as the National Academy of Sciences study this question and report their findings to you and the American people as they did on the question of a "nuclear winter." By this action you can obtain an authoritative determination concerning the verifiability of a mutual moratorium on nuclear testing. It is our belief that such a determination will enable you to announce a U.S. moratorium on nuclear testing with full confidence that any subsequent test within the Soviet Union would be detected promptly. If that occurred, the United States would be fully justified in resuming testing just as we did in 1961.

The positive tenor of the Soviet statement of 15 April relative to a moratorium on all nuclear weapons explosions on 6 August 1985 is encouraging evidence that the U.S.S.R. is willing to move ahead in this matter in conformance with an initiative by the U.S. government to end testing. Please consider a moratorium to be effective 6 August 1985 as the first and most important step you can take to slow, stop and reverse the nuclear arms race. The entire world will be safer and more secure if you will take this initiative.

Continued from page 5

features for nuclear weapons as a reason to continue testing, most future "improvements," like those of the past, will prove dangerous. Moreover, necessary safety features can be incorporated into existing warhead designs without resort to nuclear testing.

Even the 1974 Threshold Test Ban Treaty has constrained nuclear weapons designers. "If you want to postulate a future warhead requirement with a yield significantly above 150 kilotons, for which no existing design is adequate," General Hoover has testified, "then we would have much less confidence in our ability to certify such a weapon." Imagine how much more limiting a *total* ban on nuclear weapons test explosions would be.

What New Weapons Would A Test Ban Prevent? Today, nuclear designers are developing a new, "third generation" of nuclear weapons. These weapons, according to one high Pentagon official, "could be the most significant change in nuclear weapons technology since the early days of the nuclear era." Development of this "third generation" is seen as a vital goal in the U.S./Soviet nuclear arms competition.

This "third generation" of nuclear weapons will be able to focus the awesome destructive force of nuclear weapons more selectively. "Neutron bombs," which emphasize deadly radiation over blast and heat, are early "third generation" nuclear weapons. Other new types of nuclear weapons under consideration would be used selectively to destroy electronics and to power laser weapons in space. Because the effects of these weapons will be more focused, they will be considered more usable, making it more likely that any war "goes nuclear."

While laboratory research and development on new weapons designs will inevitably continue under a Simultaneous Test Ban, the inability to actually test those new designs would inhibit the military on both sides from accepting them into their arsenals. "You can do all the calculations and modeling you want," Department of Energy official Troy Wade noted in 1982, "but the final

warm feeling you get in your stomach is when you've built one, tried it and proven that it will work."

How Would a Test Ban Affect Older Weapons? The U.S. regularly disassembles and inspects representative nuclear weapons in the stockpile. Occasionally this "stockpile surveillance" reveals manufacturing irregularities or component deterioration. If the "fixes" for such problems cannot be validated on the basis of previous testing, the redesigned weapon will be exploded to ensure it works as intended.

There are, however, other means available to assure a reasonable degree of stockpile reliability without nuclear explosions. These include explosive testing of the high-explosive trigger and other non-nuclear components, remanufacturing weapons to precisely the original specifications or with minor modifications after thorough review by experts, and replacing the suspect nuclear explosive with one which has previously been rigorously tested.

But the fact that the Department of Energy continues to explode weapons to assure stockpile reliability indicates that actual exploding of nuclear warheads is deemed essential. There is no adequate substitute for such reliability testing if the military is to maintain confidence in its weapons. Thus a ban on all testing would mean that, over a long period of time, there would be a gradual deterioration of confidence in the reliability of nuclear weapons in the arsenal. This lessening of confidence would by no means necessarily be an unwelcome development if we are to ease the "first strike" fears which today drive the nuclear arms race.

How Would a Test Ban Affect First Strike Capability? A gradual reduction in stockpile confidence would discourage either side from contemplating a preemptive "first strike" against the other's nuclear weapons. First strike weapons must perform precisely and reliably for any hope of success. By contrast, the nation launching a retaliatory strike would not need the same level of confidence in the precision and reliability of its weapons to do so effectively.

Non-nuclear explosive methods of maintaining reliability can ensure that a ban on testing would not be followed by a rapid deterioration of the nuclear stockpile which might degrade a country's ability to retaliate to nuclear attack. Any long term stockpile deterioration, of course, would affect both sides equally under a mutual, verifiable cessation of nuclear explosions.

Clearly, a Simultaneous Test Ban would permit the maintenance of retaliatory "deterrence," but would reduce the likelihood of a preemptive first strike.

How Would a Test Ban Affect Nuclear Warfighting? Some of the most important nuclear tests are conducted to gauge the effects of nuclear weapons on warfighting systems. The Pentagon and the Soviet military are both working to reduce the tremendous uncertainty which exists today about the consequences of the use of nuclear weapons.

"Over the years, weapons systems have become much more sophisticated," Edward Conrad, a Defense Nuclear Agency official, observed in 1982. "We started off with relatively simple systems . . . now we have very sophisticated semiconductor electronics. As sophistication grew, we had to look at how susceptible these systems are to enemy nuclear attack."

Far from being undesirable, this uncertainty serves to inhibit the possible use of nuclear weapons in wartime. One of the major uncertainties involves the effects of electro-magnetic pulse (EMP), an electronics-destroying surge of electricity created by nuclear explosions. The existence of EMP was discovered only shortly before the 1963 Limited Test Ban drove nuclear explosions underground. As a result, the military on both sides have almost as many questions as answers about how EMP might affect their ability to wage nuclear war successfully.

Limited study of EMP and other nuclear weapons effects can be conducted through underground nuclear explosions. A complete ban on nuclear weapons explosions would leave unresolved many questions on both

sides about the nuclear susceptibility of their military systems. The resulting uncertainties, in a crisis, may prove the most decisive deterrent to nuclear war.

How Would a Test Ban Affect Proliferation? Halting all nuclear weapons explosions would lend much-needed credibility to the efforts of the nuclear-armed nations to halt the spread of nuclear weapons technology to non-nuclear nations. The 1968 Non-Proliferation Treaty pledges its 127 signers "to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date." The most effective measure that could be achieved at this time is a ban on all nuclear explosions.

By entering into such a ban, the nuclear weapons nations would take the first step to fulfill their 1968 pledge, demonstrating their commitment to disarmament, and at long last setting a positive example for nations trying to develop nuclear weapons. Some nations feel they, too, have a right to possess nuclear weapons as long as the U.S. and the U.S.S.R. are vigorously engaged in an unconstrained effort to develop ever newer and more usable nuclear weapons.

Who Would Benefit from a Test Ban? The importance of a ban on further nuclear explosions should not be underestimated. Without nuclear testing, the compact thermonuclear warheads that make possible multiple independently-targetable reentry vehicles (MIRVs) and long-range cruise missiles could never have been developed. There is near universal agreement that the proliferation of MIRVs and cruise missiles makes the world a far more dangerous place. Thus an STB would benefit *everyone* by reducing first strike capabilities, inhibiting war-fighting strategies, enhancing non-proliferation efforts, and, in general, helping to slow, stop and reverse the arms race.

From the more narrow perspective of the arms competition, a ban on all nuclear explosions would actually work to the advantage of the U.S. To date, the U.S. has conducted 200 more nuclear tests than has the So-

History of Efforts to End Nuclear Explosions

1954	Fallout from U.S. BRAVO test at the Bikini Atoll causes radiation casualties. Public awareness of testing health hazards increases.
1955	Nuclear-weapons states begin to consider limiting nuclear tests, but no action is taken.
1958	Soviet-proposed nuclear explosions moratorium goes into effect.
1961	Nuclear testing, at a very high rate, resumes.
1963	Following American-proposed nuclear explosions moratorium, Limited Test Ban Treaty, driving nuclear explosions underground, is signed and ratified.
1968	Non-Proliferation Treaty, which among other things urges an end to nuclear explosions, is signed, entering into force in 1970.
1974	Threshold Test Ban Treaty, limiting underground nuclear explosions to 150 kilotons, signed but not ratified by the U.S.
1976	Peaceful Nuclear Explosions Treaty, limiting engineering use of nuclear explosives to 150 kilotons, signed but not ratified by the U.S.
1977	Comprehensive Test Ban Treaty talks begin between the U.S., U.S.S.R. and United Kingdom.
1980	Comprehensive Test Ban Treaty negotiations suspended.
1982	Reagan Administration formally refuses further test ban negotiations.
1984	Non-binding Kennedy-Mathias Amendment, calling for ratification of the Threshold and Peaceful Nuclear Explosions Treaties and for resumption of Comprehensive Test Ban talks passes in the Senate by 77-32.
1985	Non-binding H.J. Res. 3, similar to Kennedy-Mathias Amendment, is approved by the House Foreign Affairs Committee (still pending). Binding H.R. 1834 (Simultaneous Nuclear Test Ban Act), to stop nuclear testing by 6 August 1985, introduced (still pending).

viet Union. It is widely agreed that the U.S. still has an edge on the Soviet Union in developing compact, efficient, and reliable nuclear warheads. An end to all testing would preserve this U.S. lead. Continued testing will erode it.

Additionally, because the U.S. is so far ahead of the Soviet Union in computer technology, it is better equipped to perform the simulations required to maintain stockpile reliability. The U.S. may thus actually derive a marginal benefit from a halt to all testing.

After the Test Ban, Then What? One of the most important benefits of a Simultaneous Test Ban is that it would serve as a "confidence building measure," facilitating further constraints on the nuclear buildup.

Once it has been demonstrated that each side is willing to take bold,

decisive measures to stop one type of military nuclear activity—testing nuclear explosives—additional measures can then be addressed. A logical next step, after the nuclear explosion moratorium has been made permanent by an international treaty, might be a similar ban on the flight testing of nuclear missiles, followed by a complete halt to the deployment of new nuclear delivery vehicles.

Usually the best remedy to a difficult situation is to take up the problems involved one step at a time. The drawback to many broad and sweeping arms control proposals is that they are generally not as simple as they first appear. There are many advantages to a step-by-step approach to lessening the danger of nuclear war and the first, essential step is a ban on nuclear weapons explosions.

VERIFYING A SIMULTANEOUS TEST BAN

Is Verification an Obstacle? Verification—the ability to assure that the other side is not cheating—is essential to any arms agreement. Our ability to verify a Simultaneous Test Ban is already excellent. Furthermore, redirection of only a fraction of the Billions of dollars now scheduled for research into space weapons, for instance, would go far towards resolving any lingering uncertainties about seismic detection of nuclear tests. Yet federal seismic research budgets are today being cut.

The Defense Advanced Research Projects Agency's geophysics research budget has been cut by \$1.7 million since the Reagan Administration withdrew from Comprehensive Test Ban negotiations. The Arms Control and Disarmament Agency today spends one-tenth the funds on test ban research it did in 1979. This year, the Senate Armed Services Committee added an additional \$10 million for verification research in 1986, for which the the Department of Energy had not seen fit to ask.

These budget cuts raise questions whether Administration concern about nuclear explosion verification has become more an excuse for political inaction than a valid reason to reject a total ban on nuclear testing.

How are Nuclear Explosions Detected? When a nuclear weapon

is detonated underground, shock waves pass through the earth (as body waves) and along its surface (as surface waves). Highly sensitive seismographic instruments can measure such motion—expressed as “seismic magnitude”—from distances of thousands of miles.

There are now more than 1,000 seismographic stations operating worldwide. Numerous stations operated by the U.S., including some located in countries bordering the Soviet Union, form the Atomic Energy Detection System, which is the U.S.'s primary means of detecting underground nuclear explosions.

Once a seismic signal is detected, the exact location of the event must be determined by comparing data from several different receiving stations. Pinpointing the location of the seismic event permits both a determination of whether or not it could possibly be a nuclear blast and the type of rock through which the signal passed, permitting accurate calculation of the seismic magnitude.

The U.S. ability to identify nuclear explosions is remarkably sophisticated. “We are certain that the state of knowledge of seismology and the techniques for monitoring seismic waves are sufficient to ensure that a feasible seismic network could soon detect a clandestine testing program

involving explosions as small as one kiloton,” geologists Dr. Jack Evernden of the National Center for Earthquake Research and Dr. Lynn Sykes of Columbia University reported in the *Scientific American* in 1982. “In short, the technical capabilities needed to police a comprehensive test ban down to explosions of very small size unquestionably exist.”

Most experts concur that a network of some 25 seismic listening stations within the Soviet Union, plus 15 or so surrounding it, and a similar network in and around the United States would provide high confidence verification of compliance with a Simultaneous Test Ban.

What About Compliance with Existing Test Treaties? The Reagan Administration has charged the Soviet Union with violating the Threshold Test Ban Treaty's 150-kiloton test limit. The allegations, which the Administration admits are based on “ambiguous” evidence, apparently arise from nine instances in which Soviet tests may have exceeded the limit.

U.S. measurement of Soviet tests, however, is based on seismic “yardsticks” derived from the geology of the U.S. test site, not that of Soviet test sites. Thus, Michael May, Associate Director of Lawrence Livermore National Laboratory, has concluded that “there is no evidence that the Soviets had cheated on the Threshold Test Ban Treaty.” David Emery, Deputy Director of the Arms Control and Disarmament Agency, stated in 1983: “I am convinced there is no conclusive proof the Soviets have violated [the TTBT].” According to geologist Dr. Lynn Sykes: “The allegations that the U.S.S.R. has violated the TTBT are based, in my opinion and that of many seismologists, solely on an incorrect calibration formula.”

Because of occasional uncertainty about the yield of new nuclear designs, the two sides agreed that “one or two slight, unintended breaches

“Soviets Would Treat This Initiative Seriously”

“I can think of no more appropriate way to mark the fortieth anniversary of the Hiroshima bomb than for both the superpowers to halt their testing of nuclear weapons.

“I personally feel the Soviets would treat this initiative seriously and constructively. It would be an *American* initiative very difficult for them to refuse. It would demonstrate that America has both the *vision* and the *confidence* to lead this planet in the struggle against the risk of nuclear war.”

Ambassador W. Averell Harriman
Limited Test Ban Treaty Negotiator
Letter to Rep. Patricia Schroeder
April 24, 1985

per year would not be considered a violation of the Treaty." Ratification of the TTBT would allow a seismic data exchange which would ease many of these verification ambiguities. Under a Simultaneous Test Ban, it would be a far simpler task to verify that *no* nuclear tests are being conducted than to determine whether or not explosions are being kept below a certain level.

Can a Simultaneous Test Ban Be Evaded? Opponents of a ban on nuclear tests contend there are several ways the Soviet Union could secretly test nuclear weapons. The method most often cited is "decoupling," whereby a nuclear weapon would be exploded in a large cavity deep underground. The cavity would reduce the compression of the earth that produces seismic waves so that only a relatively small fraction of the energy of the explosion could be detected.

This is more difficult to accomplish than it may sound. Excavation to produce a cavity large enough to muffle the seismic wave effectively would be nearly impossible to conceal from U.S. photo satellites. For instance, the volume of rock that would have to

be dug out to decouple an 8-kiloton explosion would be about the size of the largest Egyptian pyramid. The weapons chamber itself would have to be 300 feet in diameter, 3,000 feet below the surface. Furthermore, any venting of radioactive debris and surface cratering would have to be prevented to avoid detection by satellites and air sampling aircraft.

Other possible methods of evasion mentioned from time to time include: exploding a weapon in the aftermath of a large earthquake to conceal its seismic signal; devising methods to make an explosion mimic a natural geophysical phenomenon; and testing nuclear weapons in deep space. All of these evasion techniques are demonstrably infeasible in practical terms. For example, the U.S.S.R. would have to be ready to test 24 hours a day over an indefinite period in order to take advantage of exploitable—but unpredictable—seismic events such as earthquakes. Even then, the time available to conduct a test is confined to a few minutes at most.

The problem of differentiating earthquakes from nuclear explosions is eased by the fact that, of all earth-

quakes in the world, only about 0.5 percent occur in the U.S.S.R. close enough to the surface to be confused with nuclear explosions. Additionally, there are measurable differences between the seismic signals produced by earthquakes and nuclear explosions, regardless of their size.

Any secret explosions that could be conducted, however, would have to be so small as to be militarily irrelevant. In Congressional testimony, 5-to-10 kilotons has been cited as the threshold for militarily significant tests. Thus, even if a country were able to conduct a series of one-kiloton tests without being detected, it would gain no appreciable military advantage.

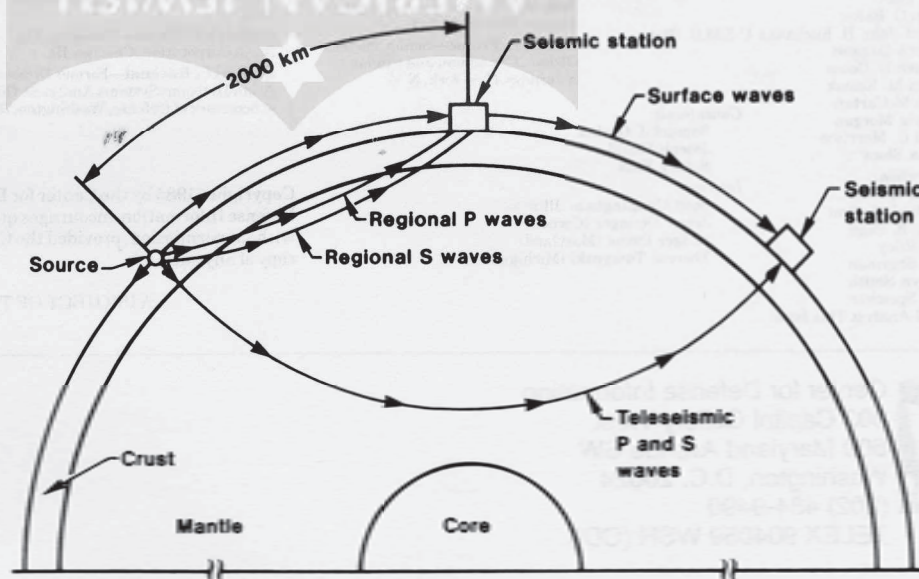
Present U.S. intelligence capabilities are sophisticated, efficient and mutually supportive. They provide us with the technical ability to detect and identify any significant Soviet attempt to violate an STB. Provisions for on-site inspection and in-country seismography—and other cooperative measures that have already largely been worked out in previous negotiations—would further guarantee our monitoring capability.

How to Detect Underground Nuclear Weapons Explosions

Earthquakes and nuclear explosions both generate seismic waves that travel through the earth. At teleseismic distances (i.e., more than 1,200 miles), there are two main types of wave: body waves, which travel through the earth, and surface waves, which move along its surface. Further, there are two main types of body wave: the P or compressional wave and the S or shear wave. One type of surface wave is called a Rayleigh wave. In trying to distinguish a suspected nuclear explosion from an earthquake, seismologists use the ratio of the magnitude of the P wave to that of the Rayleigh wave.

Because a total ban on nuclear weapons explosions will also be verified by seismic monitoring stations located in-country, many of the waves detected will be at regional distances (i.e., less than 1,200 miles). Regional seismic signals travel mainly in the upper mantle and crust of the Earth.

An earthquake generates significant amounts of S-wave and surface-wave energy, whereas a nuclear explosion produces minimal surface waves. The ratio of body-wave magnitude to surface-wave magnitude is thus lower for an earthquake than for a nuclear explosion of similar magnitude. Because a nuclear explosion radiates higher seismic frequencies than an earthquake, the ratio for P-wave amplitudes at different frequencies can also be used to tell the two types of events apart. (Source: Lawrence Livermore National Laboratory)



Finally, verification may not be so much a technical as a political issue. No treaty, however, tightly constructed, can ever be 100 percent verifiable. "If you insist on absolute cer-

tainty," Admiral Bobby Inman, former Deputy Director of the CIA, has noted, "if you insist on the capacity to detect every violation, you'll never have an arms control process. You have to take

some risks. The key is being confident that you will detect any serious cheating." Any large-scale cheating would be detected before it yielded military benefits.

Conclusions

- A Simultaneous Test Ban would go far to slow, stop, and reverse the nuclear arms race.
- A Simultaneous Test Ban would slow the current trend towards first strike capabilities and nuclear warfighting strategies.
- A Simultaneous Test Ban is an essential and achievable step in a series of measures which would restore confidence in the arms control process.

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1985

THE NUCLEAR TESTING MORATORIUM: Nothing to Lose, Everything to Gain

Defense Monitor in Brief

- The Soviet moratorium on nuclear testing which began 6 August is a risk-free opportunity for both sides to stop exploding nuclear weapons and resume negotiations on a permanent test ban.
- Failure to stop exploding nuclear weapons now may well mark the end of any constructive arms control efforts in the future.
- The U.S. should seize on this "window of opportunity" to secure an end for all time to nuclear weapons explosions by initiating a test moratorium on or before 1 January 1986. We have nothing to lose, and everything to gain.

For over a year, the Center for Defense Information, along with scores of other national and international organizations and prominent individuals, has been urging the U.S. and the U.S.S.R. to stop exploding all nuclear weapons on 6 August 1985. During such a nuclear test moratorium negotiations broken off in 1980 to complete a permanent, verifiable ban on all nuclear test explosions would be resumed.

Until now, however, CDI had little cause for hope. In its correspondence with U.S. and Soviet leaders, CDI found the U.S. position to be one of adamant opposition, while the Soviets said they were favorable to the idea but reluctant to take action on their own. Indeed, an 8 July 1985 letter from General Secretary Mikhail Gorbachev reiterated that "the security interests of our country place limits beyond which we cannot go unilaterally."

The surprising Soviet reversal—their unilateral moratorium on nu-

clear explosions beginning 6 August—therefore, represents a significant break in the diplomatic logjam impeding a negotiated end to nuclear explosions. General Secretary Gorbachev said the moratorium runs until 1 January 1986, but "will remain in effect, however, as long as the United States, on its part, refrains from conducting nuclear explosions."

Unfortunately, the U.S. government response to this Soviet policy reversal was to reject it out of hand as a meaningless propaganda ploy. The U.S. proposed, as an alternative, that the U.S.S.R. send a delegation to observe a U.S. nuclear explosion. Under other circumstances such a proposal might have value. In this case, however, it is clearly but an effort to appear reasonable, even though the proposal does not even begin to address the far-reaching implications of Soviet readiness to complete a Comprehensive Test Ban Treaty as signaled by their unilateral action in halting all tests.

Even more unfortunate are specious Administration statements discounting the value of a test ban and distorting recent Soviet actions. If these statements are uncritically accepted, there is a very great danger that the window of opportunity open to us today will slam shut on January 1st. Efforts to achieve a ban on all nuclear explosions will be irrevocably set back. In fact, failure to stop nuclear explosions now may mark the end of any constructive arms control efforts in the future.

This *Defense Monitor* addresses these Administration statements relating to the test moratorium. Correspondence between the Center for Defense Information and the Reagan Administration, excerpted below, addresses the more general issues raised by its position on a nuclear test ban. These questions are also more fully explored in *Defense Monitor* Volume XIV, Number 5, "Simultaneous Test Ban: A Primer on Nuclear Explosions."

Broken Agreement?

The outcome of the 1958 moratorium on nuclear testing is cited by Administration officials and commentators as an overriding reason not to join with the Soviet Union in a moratorium today. The U.S.S.R., it is charged, surprised the United States by unilaterally breaking the test moratorium in 1961.

In November 1958, the U.S., the U.S.S.R. and the United Kingdom agreed to a year-by-year moratorium on nuclear tests while they pursued negotiations on a permanent ban. In August 1959, the U.S. officially extended its voluntary suspension of testing until the end of the year. The U.S.S.R. said in return that it would conduct no tests so long as the "Western powers" also refrained from testing. Four months later in December, President Eisenhower issued a statement that the U.S. moratorium was over as of the end of 1959. "We consider ourselves free to resume nuclear weapons testing," Eisenhower said, but any explosions would be announced in advance.

In February 1960, France conducted its first nuclear test. Although the Soviet Union had made its participation contingent on no testing by the "Western powers"—including France—it conducted no tests until 1 September 1961, after France had exploded a total of four weapons. The United States resumed testing two weeks after the Soviet Union.

Did the Soviets "break" the moratorium? Not according to U.S. officials serving at the time, who agree that the moratorium had been ended by the 1959 Eisenhower statement. "Both sides had freed their hands," according to Philip Farley, Special Assistant for Disarmament Affairs

in Eisenhower's State Department, "and then the Soviets were the first to test, but that's not the same thing as violating the agreement." According to Spurgeon Keeney, Assistant to the President's Science Advisor under both Kennedy and Eisenhower: "The facts are clear. At the time of the Soviet tests, there was no agreement, not even a de facto one."

The 1958-to-1961 experience, therefore, is not the clearcut precedent of Soviet exploitation of moratoria the Administration would have us believe.

Military Advantage

It is further claimed that the Soviet Union gained a unilateral military advantage by resuming testing in 1961, a coup it allegedly seeks to repeat with the current moratorium.

The number of tests conducted by both the U.S. and the U.S.S.R.—as reported by the Department of Energy (DOE) and its predecessor, the Atomic Energy Commission (AEC)—fails to support this argument. From 1 September 1961 to the end of that year, the Soviets exploded 31 nuclear weapons. From 15 September to the end of 1961, the U.S. conducted only 10 tests. But, for the entire year of 1962, the AEC reports a total of 98 nuclear devices exploded by the U.S., compared to only 40 for the Soviet Union (and a handful of other Soviet tests for which the AEC does not cite specific dates). The AEC reports no tests at all for the U.S.S.R. in 1963, while the U.S. exploded another 43 weapons.

It is difficult to conceive how the Soviet Union obtained any kind of military advantage during a period in which the U.S. exploded more than twice as many weapons as the U.S.S.R. This judgment is supported

by a statement made by President Kennedy in a 2 March 1962 address to the nation. While criticizing the Soviets for resuming testing the year before, Kennedy acknowledged that "last fall's tests, in and of themselves, did not give the Soviet Union superiority in nuclear power."

It is no less difficult to conceive what military edge the Soviets could gain if the U.S. joined the current moratorium. Over the decades that both countries have been testing nuclear weapons, the U.S. has exploded some 200 more devices than the U.S.S.R.: 765 U.S. to 564 Soviet.

A recent White House document implies Soviet warhead design is still behind that of the U.S., especially in the ability to pack high explosive power into a small warhead. The White House study says that, through continued testing, the Soviets "could develop efficient miniature warheads with high yield to weight and yield to volume ratios. Such development would allow the Soviets to exploit fully the fractionation possibilities [i.e. increase the number of warheads] of their ICBMs."

This strongly suggests, in turn, that any unilateral advantage from a test moratorium would accrue to the U.S., not the U.S.S.R. "A Comprehensive Test Ban Treaty," Sen. Dave Duranberger (R-Minn.), Chairman of the Senate Select Committee on Intelligence, recently stated, "would stop menacing Soviet developments while preserving the technological edge the United States enjoys in their nuclear warheads."

Kennedy's Moratorium

Another passage from Kennedy's 2 March 1962 speech is cited, usually out of context, as a reason for rejecting the current Soviet moratorium. "We know enough now," he said, "about broken negotiations, secret preparations, and the advantages gained from a long test series never to offer again an uninspected moratorium."

The historical record shows, however, that President Kennedy was not categorically opposed to test mor-

"Politics and Not Technology"

"Politics and not technology have prevented us from concluding a Comprehensive Test Ban Treaty."

House Foreign Affairs Committee
24 July 1985 Report

atoria. Seldom cited is another quote from a later Kennedy speech. On 10 June 1963 at American University, the President disclosed the imminent resumption of discussions with the U.S.S.R. and the U.K. on a test ban. "To make clear our good faith and solemn convictions on the matter," he then announced, "I now declare that the United States does not propose to conduct nuclear tests in the atmosphere so long as other states do not do so. We will not be the first to resume."

This unilateral U.S. moratorium set a positive climate for the talks that followed, resulting in the signing of the Limited Test Ban Treaty only 55 days later. There is no reason a similar moratorium, accompanied by similar talks, could not secure the comprehensive ban on all nuclear explosions that barely eluded negotiators in 1963.

Accelerated Testing

After the Soviet Union announced its test moratorium, National Security Adviser Robert McFarlane asserted that "the reality that this was a contrivance is proven, I think, by the fact that in the past few weeks they've accelerated the number of tests that they've had so they wouldn't need to test for the next five months or so."

Again, the record fails to support the assertion. As of 29 July the DOE announced 9 tests for the U.S. and only 5 for the Soviet Union. We must go further than the DOE, however. That agency reverted in 1983 to the selective announcement policy which had been in effect from 1963 to 1975 of not listing all tests for either the U.S. or the U.S.S.R. (The U.S.S.R., to its discredit, does not announce any of its tests.) DOE's failure to announce all of the nuclear explosions the U.S. monitors worldwide muddies the debate over the verifiability of a test ban, while permitting officials to make unsubstantiated claims about Soviet testing.

The most credible non-U.S. organization monitoring nuclear explosions is the Swedish National Defense Research Institute. According

What You Can Do

If we are to take advantage of this unique opportunity to cease all nuclear weapons explosions for all time, the U.S. will have to order a cessation of all U.S. nuclear tests effective by 1 January 1986 at the latest. When President Reagan and General Secretary Gorbachev meet in Geneva in November, they could agree to resume negotiations for a mutually advantageous formal treaty to permanently end testing.

None of this, however, will happen unless you make your voice heard in Washington. If you support an immediate end to nuclear testing you must telephone, wire, write to the President, your Senators and your Representative—today. Here are their numbers and addresses:

The President
The White House
Washington, DC 20500
(202) 456-7639

Your Senators
U.S. Senate
Washington, DC 20510
(202) 224-3121

Your Representative
House of Representatives
Washington, DC 20515
(202) 224-3121

Enlist your neighbors, friends, fellow workers, church members, everyone you know to act with you. Contact your local press, radio station and TV stations to encourage balanced treatment in the news so that American citizens have all the information needed to consider the merits of a nuclear test moratorium.

Together we can make a difference. We can end nuclear explosions. Time is short. Act now.

to the Institute's Hagfors Observatory, the U.S. conducted 9 tests as of 29 July 1985, and the Soviet Union only 7. Hardly a spurt in testing for the Soviet Union, this is a strikingly low level compared to recent years. In 1984, for instance, the U.S. conducted as many as 18 tests (only 14 announced by DOE), while the U.S.S.R. exploded 27 weapons (10 unofficially described as so-called "peaceful nuclear explosions" for civil engineering purposes). Significantly, even the DOE announced 10 tests for the Soviet Union for the first seven months of 1984, and 17 for the entire year.

The accelerated test rate charge would seem to be no more than a red herring.

Testing and Deterrence

"Nuclear testing," Deputy Assistant Secretary of Defense Frank Gaffney has said, "is indispensable to nuclear weapon development and the maintenance of weapon reliability." According to this argument, a halt to nuclear explosions would actually make the world more dangerous by undermining the very basis of nuclear deterrence.

Undeniably, nuclear explosions are "indispensable to nuclear weap-

ons development." This is precisely why a test ban is also indispensable to arms control. The dangerously destabilizing weapons that could be developed by both sides in the future are possible only if testing is permitted to continue today.

But this does not mean, as Robert McFarlane has claimed, that the Soviet moratorium is designed to "prevent us from doing what they have already done," because "we're only now getting to the point of testing the warheads" for such new U.S. weapons as MX and Trident II. For better or worse, no nuclear explosions moratorium could impede these weapons. Their warhead designs have already been tested. Likewise, the "Midgetman" ICBM, due for deployment in 1992, will use the same Mark-21 re-entry vehicle as the MX, and could just as easily use the same W-87 nuclear warhead.

A test ban would, however, prevent development of the H-bomb pumped X-ray laser, directed plasma weapons and other more "usable" and therefore more dangerous weapons that both sides would be better off without.

The alleged need to continue testing to maintain the reliability of the

nuclear stockpile—and so the integrity of the U.S. nuclear deterrent—was addressed in a 14 May 1985 letter to the Congress signed by eight renowned nuclear weapons experts. “Continued nuclear testing is not necessary in order to insure the reliability of the nuclear weapons in our stockpile,” wrote the letter’s signatories, who included Hans Bethe, Norris Bradbury, Richard Garwin and George Rathjens. “In no case was the discovery of a reliability problem dependent on a nuclear test and in no case would it have been necessary to conduct a nuclear test to remedy the problem.”

Over a long period of time there would likely be a subtle but significant decrease in confidence in overall reliability of the nuclear stockpile. This would affect the very high level of stockpile confidence required for a nation contemplating a “first strike” strategy. The lesser degree of confidence required for retaliation against attack, however, would not be significantly affected.

Cheating

Another concern about joining a test moratorium is that the Soviet Union might test surreptitiously while the U.S. adheres to the moratorium.

There are already more than 1,000 seismographic stations operating worldwide to detect underground nuclear explosions. The U.S. Atomic Energy Detection System, which would enable the U.S. to verify that

the Soviets do not cheat on the moratorium, is a global system with operations in more than 35 countries, many of them bordering on the Soviet Union.

“Seismological techniques for identifying underground weapons tests are highly reliable,” seismologist Lynn Sykes, who was a member of the U.S. delegation that negotiated the 1974 Threshold Test Ban Treaty, reported to Congress this year. “Norwegian seismologists using data from the NORSAR seismic array have shown that high frequency waves are commonly detected from explosions of 1 kiloton or smaller from several parts of the U.S.S.R. Those effects were seen at a distance of several thousands of miles from the explosions.”

Of course, no moratorium would be as verifiable as a negotiated Comprehensive Test Ban, which would establish such verification measures as data exchanges, remote monitoring

Two Important Moratoria

“To make clear our good faith and solemn convictions on the matter, I now declare that the United States does not propose to conduct nuclear tests in the atmosphere so long as other states do not do so. We will not be the first to resume.”

President John F. Kennedy
10 June 1963

“[T]he Soviet Union has decided to stop unilaterally any nuclear explosions starting August 6 this year.... Our moratorium is proclaimed until January 1, 1986. It will remain in effect, however, as long as the United States, on its part, refrains from conducting nuclear explosions.”

General Secretary Mikhail Gorbachev
29 July 1985

stations, and voluntary on-site inspections. But a moratorium, being of limited duration, would also not generate rational motives for cheating. The risk of suffering international censure by getting caught abrogating a voluntary moratorium while negotiating a treaty would far outweigh the short term benefits of violating the moratorium.

Proliferation Review

U.S. failure to seize this opportunity could have serious ramifications for the future spread of nuclear weaponry. According to Article VI of the 1968 Non-Proliferation Treaty (NPT), “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date.”

Obviously, little progress has been made towards this goal. The other 125 signatories of the treaty have grown increasingly unhappy with the U.S. and the U.S.S.R. for continuing their arms-building “vertical” proliferation while seeking to stem “horizontal” proliferation to other countries. Every five years an NPT Review Conference is held. U.S. and Soviet failure to achieve a Comprehensive Test Ban Treaty was severely criticized by other nations at both the 1975 and 1980 NPT Review Conferences.

U.S. refusal to join in a test moratorium and CTBT negotiations

“Concentrate on This as a First Step”

“In my opinion, the initial most effective and easily defined step in this direction [toward arms limitation] is a verifiable ban on all testing of nuclear weapons—a comprehensive test ban. It is a source of frustration to me that so many ardent and well-meaning proponents of arms limitation do not concentrate on this as a first step, but rather lend their efforts to objectives that will require very laborious effort toward much better definition and which should more logically follow as succeeding steps in a longer time scale.”

Glenn T. Seaborg, Former Chairman
U.S. Atomic Energy Commission
16 July 1985

could make the third Review Conference this September very unpleasant for the U.S. delegation. "At the 1980 Review Conference," Sen. Charles Mathias (R-Md.) noted during a 30 July Senate debate on the test moratorium, "the nonaligned Third World nations called for an immediate moratorium on nuclear weapons testing. Not only did the Soviet Union and the United States ignore that plea, but two years later the United States withdrew from the Comprehensive Test Ban negotiations. That decision could well make the United States the focus of international anger at the upcoming conference."

Far more serious than precipitating an international public relations disaster, U.S. inaction on the nuclear testing issue could endanger a non-proliferation regime that has served world peace so well.

"It would be no exaggeration that the entire NPT regime might be in a great jeopardy unless the Article VI obligation to pursue the negotiations on nuclear disarmament is truly implemented sincerely and in good faith," the Japanese Ambassador to the U.N. Disarmament Commission, Ryukichi Imai, noted last year. "Should there be a serious deterioration in the basic credibility of the NPT regime, we would simultaneously lose the so-far effectively functioning system of horizontal non-proliferation."

Simply Propaganda?

One near-unanimous assertion made by U.S. officials and commentators is that the Soviet moratorium is no more than a hollow propaganda ploy, and thus has no substantive merit. If, however, the Soviet moratorium—and accompanying offer to the U.S. to follow suit—is merely a public relations effort, summary rejection of the offer by the U.S. government guarantees that the U.S.S.R. reaps maximum propaganda benefits.

The U.S. position assures the Soviets a no-lose outcome. If the U.S. continues to refuse to initiate a moratorium of its own, and to reject

resumption of negotiations on a Comprehensive Test Ban, the Soviet Union emerges from its moratorium as the more "peace-loving" nation. If the U.S. does join in the moratorium and renewed test ban talks, then the U.S.S.R. achieves the end it has claimed for years it seeks: completion of a Comprehensive Test Ban Treaty.

Should the Soviet Union, in fact, be insincere about seeking that goal, the best means of establishing the truth is to resume negotiations. In Comprehensive Test Ban talks conducted among the U.S., the U.S.S.R. and the U.K. between 1977 and 1980, it should be noted, significant progress was made toward an effective treaty.

If the U.S. government truly believes the moratorium is a propaganda ploy, it should simply call the Soviet "bluff." A mutual halt to nuclear weapons testing will not significantly affect the national security of either nation. But a moratorium followed by successful Comprehensive Test Ban negotiations will immeasurably increase the security of both nations—and the rest of world.

Both in terms of international public relations and national security the U.S. has everything to gain, and nothing to lose, by joining in a moratorium that leads to the end of nuclear explosions.

"An Opportunity that Ought to Be Seized Upon"

"I would hope that the Administration would reassess its position with respect to the Soviet proposal for a moratorium on all nuclear testing. We should not turn down the Soviet offer outright simply because it is deemed to be political posturing on either side, or because it is a difficult issue.

"The truth of the matter is that this is an opportunity that ought to be seized upon seriously. We have been on record for a long time in support of a renegotiated Comprehensive Test Ban Treaty with proper verification. Here is an opportunity to see if we can act positively to stop the escalation which seems to be before us and to move toward a Comprehensive Test Ban Treaty.

"It would be extremely useful, it seems to me, if the Congress would go on record in support of the Administration's offer and also in support of the Soviet offer for a mutual moratorium or nuclear treaty. These efforts would move us toward the suspension of all nuclear testing."

Rep. Dante B. Fascell, Chairman
House Foreign Affairs Committee
30 July 1985

A First Step

Finally, the idea has gained currency that progress in the Geneva arms limitation talks and a nuclear testing ban are mutually exclusive, that the Soviet moratorium is somehow inconsistent with "real" arms control. "Only if talks fail," said the *Washington Post* in a 1 August editorial, "would a testing ban be worth considering."

There are a wealth of items on the arms control agenda today—all of them important. But the single most important and achievable goal today is the cessation of nuclear weapons explosions. Far from precluding agreements in other areas of concern, a bilateral nuclear testing moratorium followed by a Comprehensive Test Ban Treaty could pave the way for further agreements.

This is exactly what John F. Kennedy had in mind when he declared the U.S. atmospheric testing moratorium in 1963. "Such a declaration is no substitute for a formal binding treaty, but I hope it will help us achieve one," President Kennedy said. "Nor would such a treaty be a substitute for disarmament, but I hope it will help us achieve it."

Twenty-two years later this hope is still alive. We owe it to ourselves and posterity not to let cynicism and willful ignorance kill that hope.

DOCUMENTATION:

"Nuclear Testing is Indispensable to Nuclear Weapon Development"

The excerpted correspondence reprinted here, between the Center for Defense Information and the Administration, predates the Soviet test moratorium announcement. It contains, however, the clearest and most current enunciation of the Administration's stance on a nuclear test ban.

17 June 1985 letter to CDI from Frank Gaffney, Deputy Assistant Secretary of Defense, Nuclear Forces and Arms Control Policy:

Thank you for your letter of April 23, 1985 to President Reagan concerning an early moratorium on nuclear testing. . . . As you know, the United States Government has consistently rejected recent Soviet proposals for such a moratorium. A cessation of nuclear testing at this time would not be in the best interests of the United States.

As it has for the last four decades, the security of the United States and its allies today depends upon a credible nuclear deterrent. Nuclear testing assures the credibility of this deterrent. . . . More specifically, nuclear testing is indispensable to nuclear weapon development and the maintenance of weapon reliability. . . . In short, so long as we are obliged to rely on retaliatory nuclear capabilities to safeguard deterrence, nuclear testing and a strong deterrent posture will remain inseparable. Consequently, even if verification were not a concern, under present circumstances, we would be unable to agree to a moratorium on nuclear testing.

That said, it is also true that very real uncertainties exist in our ability to verify with high confidence a moratorium on nuclear testing. Where such uncertainties exist, we must be especially mindful of two realities: first, the expanding pattern of Soviet non-compliance with existing arms control obligations and political commitments, including violations of the Limited Test Ban Treaty and likely violations of the Threshold Test Ban Treaty; second, and of particular relevance to your proposal, our previous experience with the 1958-61 moratorium on nuclear testing. . . .

[Y]ou will recall that the Soviet Union used the 1958-61 moratorium to conceal preparations for the world's largest, most extensive and best planned search for improved nuclear weapon technology. Taking the United States completely by surprise, the Soviets broke the moratorium and the then-ongoing negotiations for a nuclear test ban. Within two days of announcing its intention to do so, the Soviet Union resumed nuclear testing and by year's end had conducted over 40 highly significant developmental and weapons effects tests. In contrast, although the United States was able to respond symbolically within a few days, it was well over a year before a developmental test of any significance could be conducted. . . .

In a subsequent assessment of the damage done to U.S. national security, Congressional hearings revealed that the Soviet breakout and subsequent test series allowed them to advance significantly from a position well behind the United States to one of rough parity in the area of nuclear technology, and well ahead of the United States in the area of weapons effects technology. . . .

President Kennedy's judgment about an unverifiable moratorium is as true today as it was in 1962 when he stated, "We know now enough about broken negotiations, secret preparations, and the advantages gained from a long test series never to offer again an uninspected moratorium. . . ."

With this experience, it should be hardly surprising that—quite apart from the national security issues which argue against a moratorium on nuclear testing at this time—the United States Government considers such a proposal with its unavoidable opportunities for ambiguities, if not violations, for covert preparations for unilateral Soviet breakout to be ill-advised and contrary to our security and that of our allies. . . .

26 July 1985 letter from the Center for Defense Information to President Ronald Reagan:

We have written to you twice recommending a Simultaneous Test Ban on nuclear testing by the United States and the Soviet Union. We have received two replies on your behalf. In both letters the message is clear that the United States intends to continue testing in support of our nuclear modernization program. . . .

For the record, we wish to provide accurate information with the sincere desire that the facts be brought to your attention as Commander-in-Chief so that you may consider the merits of a nuclear test ban on the basis of fact, not myth and misrepresentation. Because Mr. Gaffney was the last respondent on 17 June 1985, it is appropriate to address his assertions, point by point.

"Nuclear testing and a strong deterrent posture will remain inseparable."

This assertion does not comport with the obvious facts. First, the U.S. now has approximately 11,500 strategic warheads available to attack the U.S.S.R., only a small portion of which are needed to provide the assured capability to destroy the Soviet Union. These warheads have been meticulously designed and thoroughly tested for safety and reliability. . . . If we never built nor tested another nuclear weapon, we would retain the clear and certain capability to annihilate the Soviet Union well into the 21st century. If that certainty will not deter a Soviet attack on the U.S., nothing will.

Second, the claim that deterrence depends on continued U.S. testing ignores the effects of an end to Soviet testing on approximately 9,000 strategic warheads in the Soviet stockpile. Even if over time there might be some marginal loss in U.S. weapon efficiency and reliability, the effects would be the same for Soviet weapons. . . . Furthermore, any loss of confidence in weapon performance would be most significant with respect to first strike strategies, not in the adequacy of the retaliatory deterrent. Since the U.S. reportedly does not contemplate a first strike strategy, any loss of confidence in the effectiveness of a preemptive strike would benefit the U.S. and strengthen nuclear deterrence.

"The Soviets are violating the Limited Test Ban Treaty (LTBT) and may be violating the Threshold Test Ban Treaty (TTBT)."

The only U.S. allegation of a Soviet violation of the LTBT in 22 years is that some radioactive material escaped from the Soviet Union after certain tests. It is impossible to conclude that such events were willful or that the Soviets were attempting to evade any treaty provision. . . . According to the DOE, radioactive material has escaped the limits of our Nevada test grounds on 136 occasions. . . . Both sides have violated the letter of the LTBT in this respect, but certainly neither side has done so deliberately nor achieved any advantage in the process.

Similarly, allegations of "likely violations of the TTBT" are wholly misleading and fly in the face of the language of the treaty itself. The U.S. agreed formally with the Soviets that there are technical uncertainties associated with predicting in advance the precise yield of nuclear weapons tests and that occasional indications of explosions larger than 150 kilotons would not constitute a violation of the treaty. Furthermore, we agreed to certain measures to improve our mutual ability to

monitor compliance with the TTBT; but, because of U.S. refusal to ratify the treaty these measures have not been implemented. . . . In fact, some scientists at the Lawrence Livermore National Laboratory have concluded that there is no convincing evidence that the Soviets have violated the TTBT. . . .

"The Soviets broke the 1958-1961 nuclear test moratorium."

There was no moratorium to break in 1961. In December 1959, President Eisenhower formally notified the Soviets, "... we consider ourselves free to resume nuclear weapons testing," thus ending the moratorium. While he promised to provide notification of any U.S. intention to resume testing, the Soviets made no such promise in their response. Their only commitment was not to resume testing so long as "the Western Powers" did not test. France, of course, commenced testing in February 1960. Thus, the Soviets were neither legally nor ethically committed to refrain from testing or to provide advance notice of their plans to resume testing. . . .

"Because of the surprise Soviet resumption of testing, it was more than a year before the United States could conduct a developmental test of any significance."

For this statement to be true, one would have to believe that the United States (according to DOE's own accounting) exploded 83 nuclear devices between September 1961 and September 1962 for symbolic purposes, deriving no significant developmental information in the process. . . . The truth is that although some initial tests were hurried and not fully instrumented, they all yielded useful information, including the first test conducted on September 15, 1961, only 14 days after the first Soviet test. A device intended for use as a guided missile warhead, designed to yield 2 kilotons, actually produced 6 kilotons. It is impossible to ignore the fact that this information was highly significant in our efforts to develop small nuclear weapons for tactical uses. . . .

Despite U.S. political indecision and delay, on 25 April 1962, less than 8 months after the first Soviet test, the United States commenced Operation DOMINIC, an intensive series of 40 nuclear tests which increased the U.S. lead in nuclear testing, numerically and qualitatively. We, of course, have never tested, nor wanted to test, weapons as large as the Soviets were testing in 1961-62.

"The Soviets achieved superiority in weapons effects technology as a result of the test moratorium and their post moratorium test program."

This assertion is entirely without foundation. As Dr. Glenn Seaborg, then Director of the Atomic Energy Commission, stated on October 29, 1961, U.S. scientists were busy throughout the moratorium improving the quality of U.S. weapons based on the results of the final pre-moratorium HARDTACK test series. . . .

The indisputable truth on who came out ahead in the 1961-1963 post-moratorium test series is evident on the scoreboard. According to DOE reports, from 1 September 1961 to the end of 1962, the U.S. conducted 108 nuclear tests while the Soviets conducted 71 tests. In 1963 the Soviets conducted no tests while the U.S. conducted another 27 tests before announcing a moratorium on atmospheric testing on the 10th of June 1963. Thus, between the resumption of testing in 1961 and the Limited Test Ban of August 1963 (23 months), the U.S. conducted twice as many tests as the Soviet Union. . . .

"President John F. Kennedy was opposed to an unverifiable moratorium."

[T]his allegation is typical of the specious and misleading rationales offered to justify continued U.S. nuclear testing.

Surely Mr. Gaffney is aware that it was President Kennedy who announced a U.S. moratorium on atmospheric testing on June 10, 1963, and stated that the U.S. would not be the first to resume testing; and that this moratorium was an important step toward the Limited Test Ban Treaty signed just 55 days later. Why offer the words of President Kennedy in opposition to a test moratorium when he is justly admired for his leadership in using a moratorium to achieve an important arms control agreement?

. . . We already understand the stated reason for continued U.S. testing. The U.S. seems determined to conduct the tests necessary to develop new, more effective nuclear weapons. Why is it impossible to recognize that continued nuclear testing will also permit the Soviet Union to develop new and more effective weapons? We should both stop testing now so that neither can develop the new weapons which will make each side less safe. . . .

We are convinced that careful consideration of the facts supports the conclusion that a Simultaneous Test Ban leading to a formal Comprehensive Test Ban Treaty is the first essential step to reduce the risk of nuclear war. Your leadership is urgently needed to turn the world away from the nuclear abyss which lies ahead.

Soviet Nuclear Test Moratorium

Following are highlights of the statement by General Secretary Mikhail Gorbachev, delivered 29 July 1985:

"It is our conviction that ending all tests of nuclear weapons would become a major contribution to consolidating strategic stability and peace on earth. It is no secret that new, ever more perilous kinds and types of weapons of mass annihilation are developed and perfected in the course of such tests.

"In the interests of creating favourable conditions for concluding an international treaty on a comprehensive ban on nuclear weapon tests, the USSR repeatedly proposed that nuclear states agree on a moratorium on any nuclear blasts, starting from a mutually agreed-upon date. Regrettably, it has not yet been possible to make this important step.

"Striving to facilitate the termination of the dangerous competition in building up nuclear arsenals and wishing to set a good example, the Soviet Union has decided to stop unilaterally any nuclear explosions starting from August 6 this year. We call on the government of the United States to stop, starting from this date which is observed worldwide as the day of the Hiroshima tragedy, its nuclear explosions. Our moratorium is proclaimed till January 1, 1986. It will remain in effect, however, as long as the United States, on its part, refrains from conducting nuclear explosions.

"Undoubtedly, a mutual moratorium by the U.S.S.R. and the United States on any nuclear blasts would be a good example also for other states possessing nuclear weapons.

"The Soviet Union expects that the United States will give a positive response to this initiative and stop its nuclear explosions.

"This would meet the aspirations and hopes of all peoples."

Conclusions

- The test moratorium will not afford the Soviet Union any military advantage, while a mutual test moratorium and successful CTBT negotiations would enhance the security of both nations—and the rest of the world.
- U.S. failure to take advantage of the window of opportunity opened by the nuclear testing moratorium would be a public relations disaster that could impede U.S. diplomacy in other crucial areas.
- A testing moratorium can be adequately verified; negotiation of a formal CTBT would yield even better verification guarantees.
- The U.S. should initiate a moratorium on nuclear explosions by 1 January 1986 before this window of opportunity to ban all nuclear testing slams shut.

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Winchester, Mass.

Eugene M. Lang—President, REFAC
Technology Development Corporation,
New York, N.Y.

Thomas B. Morgan—Author and Editor,
New York, N.Y.

Paul Newman—Motion Pictures,
Los Angeles, Calif.

Major Jubal R. Parten—Oil Producer &
Cattle Rancher, Madisonville, Texas

Lawrence S. Phillips—President,
Phillips-Van Heusen Corporation, New
York, N.Y.

Rudolph S. Rasin—President, The
Rasin Corporation, Chicago, Ill.

Dr. Earl C. Ravenal—Former Director,
Asian Division (Systems Analysis), Office
of Secretary of Defense, Washington, D.C.

John M. Rockwood—Publisher, Chicago,
Ill.

Albert M. Rosenhaus—Organizational
Consultant, Los Angeles, Calif.

Robert P. Schauss—Metallurgical
Engineer, International Consultant for
Industrial Development, Chicago, Ill.

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Joanne Woodward—Actress-Director,
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William H. Wynn—International
President, United Food & Commercial
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American Friends Service Committee

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Nuclear

April 23, 1985

Alleg vote 49/51
called 5/1/85

Rabbi Alexander Schindler
Union of American Hebrew Congregations
838 5th Avenue
New York, NY 10021

Dear Rabbi Alexander Schindler:

Enclosed you will find a copy of a "statement of faith" on Star Wars. By May 7, we hope to secure signatures from twenty or more prominent members of the U.S. religious community, together with several scientists and leaders of national organizations. We plan to release this statement at a press conference at the Capitol in Washington, DC on or soon after May 8, at the time when Congress will be considering the administration's request for \$3.7 billion in Star Wars research and development funds for FY 1986.

We hope you will read the statement carefully and consider adding your signature. In addition to myself, Rev. William Sloane Coffin and Dr. Everett Mendelsohn of Harvard University have already agreed to sign.

You will note that we take issue with claims that Star Wars can protect the civilian population, that it will render nuclear weapons "impotent and obsolete," and that it would "threaten no one." We stress the fact that Star Wars testing and deployment would violate the Anti-Ballistic Missile Treaty, that it would place final decisions about human survival in the electronic circuitry of computers, and that the entire system might well cost as much as one trillion dollars over the next twenty years.

We call upon the Congress to refuse to fund the massive research program into Star Wars which the President has requested. We also urge the President to refrain from testing the new anti-satellite weapon (ASAT) and conclude an agreement with the Soviet Union to ban all flight tests of such weapons. We ask the President or Congress to initiate a moratorium on all testing of nuclear warheads and challenge the Soviet Union to reciprocate, noting that such steps should lead to the conclusion of a Comprehensive Test Ban Treaty. Finally, we call for a "negotiator's pause" in the testing and deployment of new nuclear missiles and warheads during the duration of the Geneva talks.

In addition to this statement, we are preparing a shorter version which could be used as a newspaper advertisement by local organizations. Efforts to place the ad, as well as other forms of distribution of the longer statement which we would undertake, should lead to the collection of many more

signatures. We hope that you would approve of the use of your signature on the ad as well. We would send you a copy of the ad first.

We do hope that you will agree to sign this important statement. Please contact my office if you are willing to do so. This project is being implemented by one of our Disarmament Coordinators, Bruce Birchard, and he will give you a call about this soon.

Sincerely,

Asia Bennett

Asia Bennett



American Friends Service Committee, 1501 Cherry St., Philadelphia, PA, 19102
Contact: Bruce Birchard, 215-241-7018

April 19, 1985

WE HAVE NO FAITH IN STAR WARS

We who sign this appeal are people of faith--but we have no faith at all in the "Strategic Defense Initiative," generally known as "Star Wars." While the term "Star Wars" is humorous, the reality is not. We must be faithful in order to end the arms race and avert nuclear war, but our faith must be directed through other, life-affirming channels.

Some of its supporters insist that Star Wars presents a moral alternative to an ever-escalating arms race. In reality, this plan would lead to the material and spiritual impoverishment of our people, generate an enormous new arms race in both offensive and defensive weapons, further destabilize an already risky strategic situation, and thus increase the likelihood of nuclear war.

We must disagree with the principal premises underlying the three moral arguments made in support of Star Wars.

STAR WARS CANNOT PROTECT THE CIVILIAN POPULATION

In his March 23, 1983, speech the President asked: "But what if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?"

Almost all experts agree that the weapons systems envisioned as part of Star Wars, even under the most optimistic assumptions, could not possibly provide an assured defense for the civilian population. Such a defense would have to be almost perfect, for even a few dozen nuclear warheads would destroy our population centers and our economy, perhaps even creating a "nuclear winter." It would also have to work perfectly the first time, despite the fact that it could never be tested under remotely realistic conditions.

Recognizing this to be true, the backers of Star Wars have now shifted to an old argument: that such a defensive system would protect our land-based missiles and bombers. This is the same argument that was used in the early 1970's in favor of the Anti-Ballistic Missile (ABM) system, and wisely rejected at that time. We unequivocally reject any strategy involving the protection of nuclear missiles while leaving our people exposed.

STAR WARS WOULD LEAD TO A MASSIVE ARMS BUILD-UP

In his March 23 speech, the President said: "I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace: to give us the means of rendering these nuclear weapons impotent and obsolete."

Star Wars will not make nuclear weapons "impotent and obsolete." In

human decision-making in a crisis. Placing our final destiny in the hands of computers is a particularly onerous form of idolatry.

* BARGAINING CHIPS NEVER DIE

Another argument made in favor of Star Wars is that it gives the United States leverage over the Soviet Union for concessions in arms control talks, and is thus morally justifiable regardless of its own merits. Once a few tens of billions of dollars have been invested in Star Wars, however, it will be nearly impossible to stop. Moreover, as development and deployment proceed, the other side always seems to "catch up" by developing a similar system as well as deploying weapons capable of countering the original system.

* STAR WARS COULD COST AS MUCH AS ONE TRILLION DOLLARS

Congress must consider what it would cost to build this system of space-based weapons. The President estimates that research and development alone over the next five years will cost 30 billion dollars. Yet \$30 billion would be only the beginning - the "camel's nose under the tent". Dr. Robert Cooper, Assistant Secretary of Defense for Research and Engineering, has estimated acquisition costs for the Star Wars system to be in the range of \$200 to \$300 billion dollars. Another Pentagon estimate approaches \$500 billion. These estimates do not include funds for placing the system in orbit (requiring dozens if not hundreds of space shuttle trips) and continued operation and maintenance costs (estimated at \$50 billion per year). Several experts, including former Secretary of Defense James Schlesinger, have testified that the costs over the next twenty years could reach one trillion dollars.

One trillion dollars (\$1,000,000,000,000) amounts to \$250 for every man, woman and child living on this earth--over half of whom live on incomes of less than \$500 per year. One trillion dollars is more than the total debt of \$810 billion currently borne by all developing countries in the world--a debt which cripples economic growth in these countries and threatens to wreak havoc in the world economy. Spending such a sum on further refinements in the technology of death and destruction would be a terrible wrong.

One tenth of this one trillion dollars could be spent over the next twenty years to help the world's poor acquire the means to be able to obtain adequate food, shelter and basic health care for their families. Tens of millions of parents would not have to watch their children die of malnutrition, cold, and easily preventable or cureable illnesses. Millions of unemployed people could find work. Our air, water and earth, which nourish us all, could be restored to a less polluted state.

WE STAND AT A TURNING POINT

The world is in crisis. The threat of nuclear holocaust is real. The old solution--to arm ourselves ever more heavily--will not work. Over the past forty years, the development of more and more destructive weapons systems has made us progressively less secure, not more so.

There is no "quick fix" to the nuclear dilemma, no magic technological answer. Our crisis has many causes, including the competition with the Soviet Union, the desire of both superpowers to exert control over much of the

proliferation of nuclear weapons. WE THEREFORE URGE THAT THE PRESIDENT OR CONGRESS INITIATE A MORATORIUM ON ALL TESTING OF NUCLEAR WARHEADS AND CHALLENGE THE SOVIET UNION TO RECIPROCATE. Such an initiative should lead to the conclusion of the Comprehensive Test Ban Treaty, just as President Kennedy's initiative to halt atmospheric testing of nuclear warheads in 1962 led to the conclusion of the Limited Test Ban Treaty the following year. Negotiations for a Comprehensive Test Ban Treaty were suspended by the Reagan administration in 1981, despite the fact that negotiators had reported that all major obstacles to an agreement had been solved.

FINALLY, IN A TRUE EFFORT TO STOP THE ARMS RACE, WE URGE THE PRESIDENT TO INITIATE A "NEGOTIATORS' PAUSE" IN THE TESTING AND DEPLOYMENT OF NEW NUCLEAR MISSILES FOR THE DURATION OF THE GENEVA TALKS. Experts agree that the Soviet Union and the United States are essentially equal in any over-all assessment of nuclear forces. If the arms build-up continues to escalate during years of talking in Geneva, the primary result will be a much less stable, more heavily armed world. Therefore, we urge the United States and the Soviet Union to agree to a moratorium on further testing and deployment of new nuclear missiles for the duration of the negotiations. Such a moratorium would be verifiable by existing "national technical means." It would also give negotiators an opportunity to work out ways of permanently reducing the nuclear threat and give weight to their claims that this is indeed what they seek.

This is the moral course. This is the course we should stay, in which we must place and increase our faith. Let us not curse our children and their children for generations to come by choosing the way of death. Let us heed the call in Deuteronomy 30:19:

I CALL HEAVEN AND EARTH TO WITNESS AGAINST YOU THIS DAY, THAT I HAVE SET BEFORE YOU LIFE AND DEATH, BLESSING AND CURSE: THEREFORE CHOOSE LIFE, THAT YOU AND YOUR DESCENDANTS MAY LIVE.

Nuclear

February 12, 1985

Mr. Alvin J. Karshere
31 Woods Grove Road
Westport, CT 06880

Dear Al:

It was good to learn of the formation of a Westport Weston Wilton Nuclear Arms Forum. This is an important development for the communities and I express my appreciation to you and those with whom you have undertaken to create this Forum.

Thank you, too, for your invitation to me to serve on the Steering Committee. It has long been my policy to avoid joining organizations or enterprises in name only. Once I add my name I do want to be involved. And, of course, this presents a difficulty for my time is very limited and my travel schedule is extremely heavy. So, I am in the predicament of wanting to add my name to this most worthy undertaking even while knowing that there will be very little opportunity for me to attend meetings and to serve the group.

If you feel that there will be value in having my name appear as a member of the Steering Committee I will, of course, give permission to add my name but at the same time underscoring the fact that I will not be able to give much - or any - time to this cause. I also note that if an occasion arises when I find I can be available to be of aid I will certainly want to do so.

You note that you will be calling the week of February 17 and I will be out-of-the country at that time. But I do repeat, if you feel there is worth in placing my name on the Steering Committee roster please feel free to do so.

With kindest greetings, I am

Sincerely,

Alexander M. Schindler

ALVIN J. KARCHER
31 WOODS GROVE ROAD
WESTPORT, CONNECTICUT 06880

2/9

Dear Rabbi Schindler,

Mary Jenkins, Jack Cowden, Kay and Ed See, my wife Ginny and I and some others in the Westport area are organizing a Nuclear Arms Forum. I have enclosed a statement of purpose of the organization. We are following the example of very successful similar organizations in Greenwich and New Canaan.

We are now organizing a Steering Committee who will give general guidance to a working board. The steering committee will give general guidance to the working board, but will meet no more than once a year. Would you be willing to join the Steering Committee?

I have written to you at the suggestion of Rabbi Orkand who is a member of the Steering Committee. I will call you during the week of the seventeenth to answer any questions you may have.

Yours Truly
Al Karcher

THE WESTPORT WESTON WILTON

NUCLEAR ARMS FORUM

The US and the USSR have been attempting to control nuclear arms for at least fifteen years. Despite those efforts the situation has grown more unstable and the total number of strategic war heads in the arsenals of both countries has increased more than three times. The leaders of both countries recognize the danger but have not been able to prevent its development.

The NUCLEAR ARMS FORUM promotes education and discussion of the risks inherent in nuclear weapons and the possible ways arms control can reduce those risks. A principal activity of the FORUM is to organize meetings where these subjects can be discussed.

The FORUM is nonpartisan. It acts through a Steering Committee of leading citizens of the community. People identified with both political parties and many of the areas religious and civic organizations are active in the Steering Committee.

The FORUM is educational not political. The hope of the FORUM is that with increased understanding, citizens will make their individual viewpoints known to the President and to our representatives in the Congress.

1/31/85

Nuclear

December 23, 1983

Dr. William Hermanns
Kingscote Gardens
586 Lagunita Drive, Apt. 36
Stanford, California 94305

Dear Dr. Hermanns:

It was good hearing from you. I appreciate your having shared with me your fascinating paper, "Einstein's Legacy." The Einstein-Hermanns Foundation is a very impressive undertaking and one which is of great importance to the world community.

Unfortunately, while the Union of American Hebrew Congregations is involved in programs of education in regard to the threat of a nuclear holocaust, we are not in a position to take over the leadership of a consortium such as your newly established Foundation. It is a most worthy undertaking but we simply cannot undertake a leadership role at this time.

I regret that my response must be so negative for your program is indeed worthy. However, as an organization whose major purpose is to serve our synagogues in areas of Jewish religious life, education in regard to a nuclear arms is but one area of concern, we simply must use great caution and not undertake more programs than we are able to do well and with proper and sufficient leadership.

I hope you understand our situation and I do express my warm good wishes to you.

Sincerely,

Alexander M. Schindler

William Hermanns, PhD, Prof. em.
The Einstein-Hermanns Foundation



Visiting Scholar
Hoover Institution for
War, Revolution & Peace
Stanford University

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(415) 326-0689

ae
WILLIAM HERMANNS, PhD, Prof.em.
Kingscote Gardens
586 Lagunita Drive, Apt. 36
Stanford, California 94305

December 9, 1983

Rabbi Alexander Schindler
Union of American Hebrew Congregations
838 5th Avenue
New York, New York 10021

Dear Rabbi Schindler,

The Director of the Stanford University Hillel, Rabbi Ari Cartun, asked me to send you the enclosed "Einstein's Legacy", which I have written to show youth the means to avoid the Nuclear Apocalypse, with the request to have you, or one of your influential acquaintances to help me with my newly established Einstein-Hermanns Foundation. Since I am eighty-eight years old, I would like to hand over the leadership to a consortium of people who share Einstein's vision.

At any time I will pay a personal visit to you or to an interesting circle.

Shalom,

William Hermanns
William Hermanns

knh:WH

Alex
The old guy
can write & the
Einstein paper is
really interesting
But he's already
88 and by the time
anything will come of this,
you'll be too
AM

T H E E I N S T E I N - H E R M A N N S F O U N D A T I O N

EINSTEIN'S LEGACY

On November 20, 1983 in the International Student House of Stanford University, together with students from around the world, including Africans and Asians, I saw the television film *The Day After*, whose horror reflected the destruction of Hiroshima, only globally magnified. This film with its graphic despair was afterwards discussed by six prominent Americans, among them Henry Kissinger who said that all the ponderings how to meet the Russian threat are not so important as to analyze the motivations of hate that had invaded the slavic mass mind. Many years ago Einstein emphasized that no analysis of an enemy, be it a religion or a nation, has a beneficial result unless the analyst himself has stripped his ego from his intellect and given himself a "new heart" by his conscience. He would discover that his fundamental unity with the universe is shared by the enemy.

Not long before his death Einstein said to me in Princeton that the apocalypse, in the form of a nuclear war, is approaching, and only one-fourth of the world's population could survive this holocaust. They would then live in caves, and when the fourth world war comes, they will fight it out with clubs. Now, a generation later, Prof. Paul Ehrlich told us in Stanford University: "In a nuclear war those who are not vaporized,

cremated, disemboweled, mashed, or pulped by the nuclear blasts themselves will die slow, agonizing deaths from thirst, starvation, freezing, choking in the smog, and radiation sickness--in the dark." Evgeny Velikhov, Vice-President of the Soviet Academy of Scientists, declared at the same time that the nuclear arms stockpile "must be destroyed before it kills the human race. The only conclusion here is that nuclear arms cannot be weapons of war or tools of politicians. They are suicide."

Precisely this: "Tools of politicians. They are suicide," had alarmed Einstein for many years, since, in spite of his warning, President Truman used the bomb at Hiroshima and Nagasaki. At that time he, as he told me, shut himself away from the world for eight days, refusing to see anyone. He also remarked to me that if he had to live here again he would choose to be a shoemaker and not a scientist. He asked me in our last conversation to mobilize the youth of the world, the communist countries included, to form the World Youth Parliament and prepare them to detach themselves from traditional power politics and exclusive nationalism, racism and religious sectarianism. "We must change the heart of Man," Einstein insisted. "The orthodox religions have failed, as proven by the last two thousand years."

Einstein emphasized that he had chosen me to found the World Youth Parliament, since I had changed my own heart at the Battle of Verdun in 1916, the greatest and bloodiest battle in history, when I made the vow: "God, save me and I will serve You as long as I live." He encouraged me to translate my Verdun manuscript

into English (*The Holocaust--from a Survivor of Verdun*, Harper & Row, NY, 1972) and use it as a means to persuade the youth of the urgency of my mission. "I will not live to see the apocalypse," he said, "but you may, unless you have success in founding the World Youth Parliament, the only effective means, as I see it, for building a world government with members who have a new heart." The properties of the new heart, as Einstein stressed again and again, are based on the new scientific discoveries that Man is the reflection of the universe, that science cannot be separated from spiritual values: "Science without religion is lame; religion without science is blind." "It is easier to smash an atom than a prejudice."

Einstein's warning against traditional politicians had not only personal reasons -- he was labelled a communist under McCarthy -- but also an historical foundation. We both lived through the era of two politicians whose lives proved the interaction of consciousness and the physical world: Kaiser Wilhelm II and Adolf Hitler.

Kaiser Wilhelm II, who honored Einstein by appointing him Director of the Kaiser Wilhelm Institute in Berlin, had always been a lonely man, which was revealed to me during the First World War. When once he was sitting behind the front on a hospital bench alone, in spite of the many wounded soldiers and medical aides, no one sat next to him. What destroyed the inter-relatedness and oneness in the Kaiser? No doubt he suffered from a karmic endowment, manifested in one of his idols, Frederick the

Great, who was homosexual. Although the Kaiser had married and had seven children, his loneliness emphasized by his crippled left arm drove him to embrace General von Schlieffen's war plans in 1908 and to write six years later those meaningful words on the margin of the Austrian ultimatum to Serbia: "Now or never!" The Kaiser, only listening and looking with the outward ear and eye, forbade his court preachers during the war to preach on the theme: Thou shalt not kill. The world was outside of him, and the sermons, to which I, a war volunteer, had to listen behind the front of Verdun, would always end with the words: "We go to battle for God, Kaiser and Fatherland."

The Kaiser's complex nature with his morbid desire to dictate war and peace and go down in history as Wilhelm the Great was, of course, inspired by his aristocratic officers. The commander of our battalion, a baron, told us during the inspection of our loamy uniforms after being relieved from the trenches for eight days, "You look like pigs, and, of course, you are pigs. Man begins with the aristocratic officer." General von Mudra harangued us on Christmas Day 1915 in the Argonne Forest that the shellholes filled with bones were our Christmas beds and the trees torn by shells were our Christmas trees.

May youth of future generations learn from this: Man includes in his own existence the universe. He is not only one with his surroundings but also with the subatomic creation, as well as with the infinite extension of the cosmos. His emotions

related to death may have karmic consequences in this life here and in lives to come. How I was influenced by German proverbs! Over the door of one of my elementary classrooms were written the words in Latin: "Sweet and becoming it is to die for one's country." The song we sang while marching into France began: "Victoriously we shall beat France, die as a brave hero!" And we youths in uniform were taught to chant: "We want to hate because we must hate; we want to hate because we know how to hate; we love together, we hate together, we hate together our archfoe England!"

If Man cannot separate his own existence from the world outside then certainly he cannot separate himself from his conscience, the voice of the Cosmic Law or God. When I, during the Battle of Verdun in 1916 was lying in a shellhole half-buried and surrounded by hecatombs of death, I established mental connections making me one with the universe by crying out: "God, save me and I will serve You as long as I live!" That moment I learned, at least subconsciously, that all the classification and summarization of what we observe in the physical world reflect the urge of Man to divide the world into subjects and objects, mind and matter, but there is no fathomable reality outside ourselves; we are both actors and spectators.

After I had learned about the oneness of creation from the Battle of Verdun, I was to learn from Hitler's "Thousand Year Reich" that the creation is expanding, that the formation of life can be an uphill as well as a downhill event and that true

understanding of what we are cannot be achieved by the rational mind. Hitler, like the Kaiser or anyone else, had karmic drives already revealed in his youth which betrayed abnormal tendencies in him a sexologist may call sadism. He was to witness as a child the abuse of his mother, also sexually, by his drunken father, a uniformed customs official. Moreover, the father was an illegitimate child of a maid who also had been employed in a Jewish household which was to cause Himmler to make an elaborate investigation -- for he coveted Hitler's position -- to prove that Hitler had Jewish blood in his veins, but to no avail. This blemish in his ancestry, which caused the father to change his name from Schicklgruber -- his mother's maiden name -- to Hitler, turned young Adolf into a psychopath. Watching him in the early twenties in Munich addressing the masses, I, as well as many other students, classified this man, with his rolling eyes, foaming mouth and theatrical gestures, as a successful manipulator of the mass mind, who by appealing for violent revenge for the lost war forebode the next war. Hitler was a typical prey of a child's first seven years. Soon German youth, including students, were marching again: "Today Germany belongs to us, tomorrow the world!"

When I happened to be the guest of Einstein in 1930 in Berlin, hundreds of youth in brownshirts with swastika insignia marched in the street below singing: "When Jewish blood spurts from our knives, then it goes twice as well." To protect Einstein's life I sneaked with him down the servants' stairs and

rushed to the police station--no protection. They were already nazified.

About Hitler's psychology I gained some insights from Albert Speer, whom I visited several times in Heidelberg after his release from Spandau Prison, where he had served twenty years for his war crimes. He, the former Armaments Minister of Hitler, revealed to me during long conversations that Hitler's foremost hatred was for German aristocracy, but he needed the generals, whose ancestors earned their titles of barons and counts through fighting wars for their emperors and kings through centuries. His second hate was the Catholic Church, but he needed an army bishop to bless several million Catholic soldiers marching into Poland to conquer land in the east. So Hitler, mass psychologist as he was, chose the Jews, the traditional enemy of the Christians, as the enemy of the Aryan race, declaring them to be subhuman, and gave the smouldering mass instinct an outlet on which to project their frustration and kill. Swastika-adorned students and Gestapo agents searched the houses to haul away manuscripts and books, among them the Jewish Bible, the writings of Einstein, Spinoza, Heine, Voltaire, Zola and my Verdun memoirs and radio transcript about my first conversation with Einstein. These were piled house-high in front of the University of Berlin to be burned, while Goebbels made the inquisition speech to thousands of students circling around the flames with swastika flags. Five years later, in 1938, hundreds of synagogues were

set aflame in most German towns, and again some years later six million Jews were gassed, among them over one million children.

One of the most terrifying features in the Hitler war was the enthusiastic response of the vast majority of the German Christians, Catholic and Protestant, to the blood-dripping march of their youth into Poland, Belgium, Holland and Norway. The German Reichs Chancellor Bruening, a prominent Catholic, told me in Harvard -- we both were refugees -- that the concentration camps were an ignominy to Christian conscience. The South German hierarchy urged each Catholic "to fulfil his duty fully and willingly and loyally" and "to devote your full efforts to the service of the Fatherland and the precious homeland." Two men of Protestant renown, Bishop Lillje and Reinhold Niebuhr, agreed that probably never before in history had nationalistic feelings such a deteriorating impact on the Church. The League for Human Rights, which Einstein and I supported, appealed in vain to the leading clergy of both Christian denominations to alarm their believers to the danger of Hitler being named Reichs Chancellor. The League's office was soon to be closed by the Gestapo and many fellow members were thrown into the concentration camps to die.

If in 1916 I had been driven into the Battle of Verdun to make a mental connection with unseen realities through my vow, so in March 1933 when I barely escaped a mob lynching as Hitler and Hindenburg passed by in their parade from Potsdam on the boulevard Unter den Linden, I made a second vow, this time to myself, not to rest until I had discovered what gives a group mind,

religious or political, the nefarious force throughout the history of mankind to obliterate individual conscience with its inherent law: "Thou shalt not murder."

After many years of observations, I have formulated what I may call the sociological law of group formation. *Any mass structure, political or religious, must conform to two principles: 1) Unite the members by using two or three slogans that the least and the last can understand. 2) Point at an outside power with the words, "There is your enemy." This strategy will gear the members to place their trust and security in the group, to the extreme of killing and dying for the group.*

The American group mind's ignorance of other cultures caused distrust among the Vietnamese yearning for peace and economic justice in their land, which in turn prevented the American soldiers from being able to distinguish between the avowed communist enemy and the frightened people in the towns and villages. In spite of all the military might of the greatest industrial nation on earth backing their efforts, the indiscriminate killing of "gooks" and the massacres of whole villages broke the morale of the Americans at home and on the front, as well as encouraged the Vietnamese to embrace the communist slogans of national unity, socialist brotherhood, and freedom from the landowners and capitalist exploiters. The Americans were seen as just another foreign colonializing power. The American group mind, with its centuries old pioneering spirit and immigrant melting-pot philosophy, made it difficult for individual Americans to adhere to their conscience. Many American veterans are now plagued by

their conscience with pictures of their crimes sanctioned by war. Also, in Vietnam, the law of the group mind was obeyed with simple slogans like "kill the gooks" and "make the world safe for democracy." Higher aspects of conscience are seldom included in the organized mass mind. Einstein said, "The majority of the ignorant is invincible and guaranteed for all time."

Einstein's message to me emphasized the importance of integrating the spiritual and the physical world. There is no purely objective universe, or as Einstein wrote, "I myself am a part of Nature."

Mankind is now in a bewildering impasse. Youth, not yet in the harness of the traditional group consciousness whipped by political or religious zeal, will more easily find a way out from this escalating violence represented in the 20-megaton bomb whose explosion has an initial temperature of 150 million °F, a temperature eight times higher than the center of the sun. The way out is the true understanding in which the rational mind plays a secondary role to conscience. Already Plotinus said in the third century:

See all things, not in the process of becoming, but in being, and see themselves in the other. Each being contains in itself the whole intelligible world. Therefore All is everywhere. Man as he now is has ceased to be the All. But when he ceases to be an individual, he raises himself again and penetrates the whole world.

In 1950 Einstein stated, "The foundation of morality should not be made dependent on myth nor tied to any authority lest,

doubt about the myth or about the legitimacy of the authority imperil the foundation of sound judgment and action."

In this century scholarly investigation of religious scriptures reveals that their accounts are fashioned to fit the authors' faith, which is always adapted to one's personal equation. This is especially true for the Christian New Testament, whose earliest writings date back to a generation after Jesus' death, and did not become canonical until the third century. These findings have produced "doubt about the myth" in the minds of many formerly unquestioning believers.

If a study of religious wars in history is not enough to undermine the legitimacy of religious authority, one has only to look in the newspapers of the past decade to read of the bloody disputes between the Catholics and Protestants in Northern Ireland, the Hindus and Buddhists in Sri Lanka, the Moslems and Christians in Lebanon, the Buddhists and Catholics in Vietnam, the Moslems and Greek Orthodox in Cyprus, the Jews and Moslems in Israel, the Greek Orthodox and the Catholics in Yugoslavia, and the Hindus and Moslems in India.

Having lived now almost a century and having experienced two world wars, the continuing Cold War, including a dozen minor wars, and now approaching what Einstein calls the apocalypse, I should like to suggest to you youth who aspire to be leaders in the world to participate in the World Youth Parliament, thereby endorsing seven leading thoughts:

1. *In the beginning was the word and the word is Unfoldment.* It is established that human beings have lived many millions of years, and probably evolved from creatures beginning in the water. There is no identifiable cause and effect. It is impossible to draw dividing lines in nature between the microscopic/macroscopic, living/nonliving, and conscious/unconscious. Einstein remarked that the analysis of matter depends on the mind of the observer.

2. *The fundamental life process is relatedness and exchange. Nothing exists which is not alive.* What exists needs not only contact between its own kind but with everything that exists. The atoms in a human body have connections with the farthest living entities, the stars. If there were isolation, life would stop. The breath I breathe consists of about 10 sextillion (10^{22}) atoms and the earth's atmosphere can contain about 10 sextillion breaths, which means that each time I breathe I am drawing about one atom from each of the breaths in the atmosphere. With some four billion people each breathing twenty-thousand breaths a day, I breathe in each time about a million atoms breathed personally at sometime by any other person on Earth. There is an endless flow of living entities from one organism to another, from the interaction of subatomic particles to the interaction of galaxies.

3. *There is no discovery of truth with just the rational mind. There is no purely objective universe.* The consciousness of Man may claim, "My thoughts are based on ideals." The unconscious will claim, "My thoughts are based on interests of the three dimensional self

formed in the first seven years, as well as on one's karmic weight from the past."

4. *Every life form represents the cosmic whole. Disease is also a means to evolve to higher levels of understanding and compassion.*

Persons who work with the Cosmic Law move uphill, while those who work with the ego's power drives move downhill. In Genesis the serpent tells Eve to eat the forbidden fruit and become like God, an allegory for trusting in one's isolating ego. This is the first step to nuclear holocaust.

5. *Man's wholeness and therefore holiness is guaranteed by his intention -- Man has a free will -- to realize the unity of spirit and matter. There is no purely objective world. Every created substance, from the subatomic particle to the rock to the human breath to the leaf to the whale to the ocean to the sun, has a dynamic relation to the creative principle or God.*

6. *Every fundamental thought, if not related to allness, can become a tool of propaganda with disastrous consequences as the study of the New Testament reveals. Jesus was a teacher of wisdom and unconditional love, who was influenced by, if not a member of, the Essenes, a semi-monastic order preparing itself physically and spiritually for the imminent apocalyptic battle. The only record of Jesus in the Roman Law was that he was one of two thousand Jews who had died on a Roman cross for the alleged crime of political rebellion against Rome. Jesus belonged to the working class of rebellious Galilee, despised by the Jerusalemites who would ask,*

"What good can come out of Nazareth?" That he, like his father, was a carpenter and the oldest child of his mother Miriam, emphasizes all the more his genius to simplify one's relationship to God to that of a child trusting in his loving father. Since the Gospel of Mark is the earliest and probably the truest account of Jesus, the power of Jesus' intuition and unconditional love, using simple sentence construction, with the verb carrying the central thought, will insure him an eternal role to play in the human conscience. Jesus' teachings in the synagogues and on the land attracted thousands of Jewish workers to be his disciples.

A generation or two later two members of the higher class instigated a movement which was to obey the law of the group mind: Use slogans that every member can understand and point at an entity outside the group: "There is the enemy!" Luke, inspired by Paul, adds to the heritage of Jesus his own cultural values as an educated Greek doctor, portraying the Jews as enemies of the one true religion and elevating Jesus to the God-Man son of a virgin. Luke is the great example that interests and not ideals determine the actions of Man.

Many years ago Albert Schweitzer told me that the presentation of Jesus in the New Testament deals more with wishful thinking than with historical truth. "If you, Willi Hermanns, want to be religious, don't adjust your faith to theories, but come with me to Lambarene in Equatorial Africa, where I have built an hospital, and help me to treat the lepers." My

conscience told me that I should rather fulfil my promise to Einstein by helping avoid a third world war.

7. *The writing of the New Testament should serve as an example to youth to analyze the "personal equation" of the leaders of the group which one is tempted to join.* Without exception, all of Hitler's co-workers, Bormann, Speer, Hess, Himmler, Goebbels and Goering -- I happened to encounter them all -- embraced the ancient German proverb: "Pray to those higher than you, step on those lower than you." In the New Testament the Jews became the out-group for the Christian power structure. As history shows, there were many little Hitlers in the Church, from the Popes to the Holy Roman Emperor. If you, youth, would like to learn of the personal equation of religious leaders, study Ranke's history of the Popes, the book considered besides Nietzsche's works to be the greatest contribution to German literature in the last century. This does not mean that the Christian Church has no guiding values! She has fostered the growth of great spiritual leaders. Francis of Assisi remains a cosmic giant; he embraced the leper and called the sun and moon his brother and sister. And then the modern trend in the Church: Pope John XXIII fought the two-thousand-years group consciousness of the Catholic Church. Shortly before his death he said:

Today we are conscious, that for many centuries blindness covered our eyes, so that the beauty of Your chosen people was no longer to be seen and in their faces the features of our preferred brothers could no longer be recognized.

We understand that a mark of Cain stands written on our foreheads. During the centuries our brother Abel has lain in the blood that we shed or he has wept tears that we have caused, due to our forgetting Your love.

Forgive us the curse which we falsely fastened on their name Jew. Forgive us, that we nailed You in their flesh for the second time on the cross. Because we knew not what we did...

This is an evolutionary admission that a religious group mind can be guilty of crimes and needs to publicly confess them. Some 250 million Jews were slaughtered over the last two thousand years. And Hitler, who sang in the children's choir and was an altarboy, boasted to his close friends, among them Speer, "I learned my anti-Semitism from the Church."

The change of the heart of Man is not achieved by going to church. Solemn ceremonies unfolded on the altar, sermons, and statements of beliefs have not succeeded to tame the beast in Man. When I asked German youth, "Why do you sing: 'When Jewish blood spurts from our knives, then things go twice as well.'? Wasn't Jesus a Jew?" I was answered, "Hitler is our God." On the altar of a German Christian Church, I saw Hitler's book *Mein Kampf* lying beside the Bible. The new heart of Man, which Einstein demands for the security of the future, can only be created through Man's awareness of his true self and not only through participation in ritual. Raymond of Aguilers describes the capture of Jerusalem by the Christian Crusaders in 1099: "They rode in blood up to the knees and the bits of the horses by the just and wonderful judgement of God."

In 1950 when I wanted to address the students of the University of Istanbul, I was told that they would not listen to Christian ethics. The Crusaders, after hearing Mass in the morning, killed the males, raped the women, chased the Jews with their children into the synagogues and burned them. When at the Auschwitz trial in Frankfurt in 1962 I asked one of the defendants whether he had no compunction to gas a million children, he answered, "I went to church, made confessions and was forgiven. I was only obeying orders." When I presented the same question to Dr. Lucas, the medical examiner on the ramp of the Auschwitz train station who picked out the healthy from those to be sent directly to the gas chamber, he replied, "I am a believing Lutheran and at home read the Bible every night with my two daughters."

Youth of the world, accept Einstein's legacy if you want to stop the pernicious slogan of the group mind: "I am better than you, and therefore you are my enemy," a slogan fed by Man's personal equation: "I am endowed with causal and independent qualities to lead my exclusive life." There is no objective world unaffected by human consciousness. What is eternal is the Cosmic Law, which can only be deciphered by Man's conscience. When Einstein said, "We must change the heart in order to understand creation," he rejected the three-dimensional Man. We are not influenced by outside forces according to cause and effect described by the rational mind. We must create images to establish mental connections. "You must," said Einstein to me, "learn to subordinate intellect to intuition. Intellect analyzes what

we already possess; intuition embraces the unknown." He then insisted that intuition must answer to conscience and not, as Hitler used it, be fed by the pseudoconscience of the ego and the group mind. Conscience is an individual endowment connecting Man with the Creative Principle or God, revealing the unique purpose of the individual's cosmic relationship, a purpose that knows no death but unfolds for better or worse in the future lives, according to the spiritual values Man has gained in this life and in past lives.

The Cosmic Law can be read by signposts one's conscience places on crossroads. Man's free will decides which direction he will take. Is his free will fed by spiritual entities living in his flesh or by entities provided by his conscience? This question I had to solve when I, the Kaiser's volunteer in the First World War, was captured by the French at Verdun. Instead of killing me as was customary in the midst of a raging battle, they led me to the German underground fort at Thiaumont to serve as interpreter for the French demanding the surrender of the stronghold. The German commander of the fort pointed his pistol at me, crying, "Traitor!" I, jumping aside, cried, "Have you no conscience?" This word "conscience" opened the eyes of the German commander. He saw the gas bomb, which the French had ready to throw into the fort's entrance shaft to kill the hundreds of Germans below, as well as the machine gun aiming at him and me. He dropped his hand and said, "I surrender."

The Iron Cross which I received on return from French captivity I only wore once, when I needed a passport to cross the border on my flight from the Gestapo. To me this medal was a symbol of the belligerent German mass mind.

History has demonstrated that youth are given identities to support the survival of a group. The instant identity Hitler gave youth by telling them, "You are members of the Aryan Master Race -- Germany!" and pointing to the Jews as the subhuman race and cause of their frustration brought death to millions of German youth. The drug subculture and terrorist groups around the world of the last decade are radical examples of the continued abasement of youth and their future by promising instant identity.

After my experiences on this three-dimensional earth through three generations, I have discovered what the human being should say of himself: "I am soul substance, I am creation individualized. My consciousness has subatomic as well as stellar characteristics. I am indivisible and inscrutable, without beginning, without end. No longer do I seek my identity in the group but in my conscience. The existence of my conscience is revealed in the world's religions, philosophies and cultural treasures, as long as they sponsor the inner Man and not "pomp and circumstance." The first word of creation is being, and being means eternal unfoldment."

After our escape to the police in 1930, Einstein gave me as thanks a card on which he had written: "In memory of this event

March 30, 1930." May these five words he wrote be a testimony to you youth, that no group consciousness, political or religious, can be changed unless the individual heart be changed.

Youth of the world, let us accept Einstein's legacy by founding the World Youth Parliament and the Cosmic Religion uniting all the world's religions and ethical systems in the changed heart of the individual.

In the last conversation I had with Einstein in the Summer of 1954, which is recorded in my book *Einstein and the Poet--In Search of the Cosmic Man* (Branden Press, Brookline Hill, MA, 1983), I saw in Einstein's house in Princeton a serene statue of the Madonna and was impressed. That imagination was more important than intellect to Einstein, was proven by his giving to Miriam the mother of Jesus and "my Jewish Mama" a prominent place in his living room. What would Einstein say, I wondered, if I spoke to him about the reported apparitions of her, about those visions of Swedenborg regarding the existence of heaven and hell, or about my faith in the Twenty-third Psalm, which has empowered me to heal the cancer and asthma of people on their deathbed? Probably what he had said the previous year regarding human rights: "These ideals and convictions, which derived from the experience of history as well as from the craving for beauty and harmony, usually have in theory been readily accepted by men, but at all times been trampled upon by the same people under the pressure of their animal instinct."

Youth, who will realize the cosmic religious feelings in your hearts, work with your intuition and you will discover as I did at Verdun the oneness of Man with creation, visible and invisible. Every person as well as the objects he collects have vibrations. Your conscience will discern the vibrational quality of your daily experiences. In vibrations cosmic laws are involved; as Einstein said, "God is subtle, but He is not malicious."

Not only Einstein, already Stresemann, Briand and Chamberlain, whom I as a student of diplomacy met at the League of Nations in Geneva in 1926, wanted to help create an international student movement in the world as a forerunner of a World Youth Parliament, and Jane Addams invited me in Geneva to use her Hull House in Chicago as a base, but the Nazi terror in Germany and later the anti-communist paranoia in America, which threatened Einstein, Thomas Mann and many other refugees, including me, with the loss of our citizenship, postponed my efforts to realize the legacy of Einstein.

The Einstein-Hermanns Foundation has been established to pass on the legacy to you, the youth of today and tomorrow, and will serve as a center to coordinate the growth and communication of a network of local groups. These groups will sponsor lectures and seminars to change the heart of Man, that individuals in their community can discover the truth of Cosmic Religion within them. They will also help support a youth from the age of 18 to 28, who has participated in a student or worker exchange program

in a foreign land, shows proficiency in speaking a second language and has placed his or her security in their conscience and not in a group, to attend the World Youth Parliament. The Parliament will be hosted by a different country each year, with the international participants staying with families in the nearby area. Each country will have a right to one vote on issues of international concern, all for the purpose of changing the heart of Man, which traditional religious, educational and political systems have neglected due to self-interests.

May these new foundations of a World Youth Parliament and a Cosmic Religion, open the way to one humanity with one parliament to stimulate individuals of each culture to decide from his inner being and thereby grasp the Cosmic Law.

Because of the traditional religions, people for thousands of years have killed people, first with stones and clubs, then with knives, spears and bows and arrows, then in knightly shining armor with swords, then in marching uniform with guns and cannons, and now with tanks, jets and rockets. In the arsenals, under the land and under the sea, are rockets with nuclear warheads, the new tools of the politicians.

The remarks of Henry Kissinger regarding these new "tools of the politicians" -- the very words used by the Russian Scientist Evgeny Velikhov -- caused me not to end this open letter to you, youth of the world, without glancing at Russia and its communistic regime. What moved Marx to take the pen in the hand to write his famous book *Das Kapital*? As a German exile in London,

having witnessed the exploitation of the poor, where even children had to work in factories to make ends meet in their homes, he became a great economic theoretician and the founder of economic history and sociology. That the communism in Russia could become the practical offspring of Marx was conditioned by the exploitation of the workers and peasants for hundreds of years by the Russian nobility, headed by the Czar and assisted by the Russian Church. Tolstoy, Lenin and Trotsky describe the slavery of the Russian masses to give its aristocratic class and the leaders of the army that hate-soaked monopoly that had for centuries sent millions to work in prisons, many to be executed, or sent to Siberia. Dostoyevsky was one of the many thinkers to be sentenced to hard labor in a Siberian penal colony. That the fury of the masses, culminating in the losing war of the Czar in 1917, accepted Lenin, a Marxist, as their leader, confirms the cosmic law, which I may like to coin here in the words: *God is the spiritual reaction to human action.*

I myself had an insight into the Russian inhuman policy of Czarism when in 1921 I helped a young Russian refugee to be accepted in the University of Berlin. His mother, a baroness, told me how the masses burned her castle and she and her children, thanks to a faithful servant, could flee with the sled over the frozen lakes to Finland. She as a young girl had witnessed an incident in Kiev when the masses were told by Russian officials that the Jews were guilty of their misery. Her father, General Rofalsky, an admirer of the Old Testament, had the

cavalry mount their horses and drive the masses out of the Jewish quarters to save thousands of Jewish lives. The Psalms had given this general a new heart, Einstein's formula to save the world. These Russian pogroms against the Jews were as old as the alliance of the Church with the ruling elite, beginning with the Roman Emperor Constantine in the fourth century.

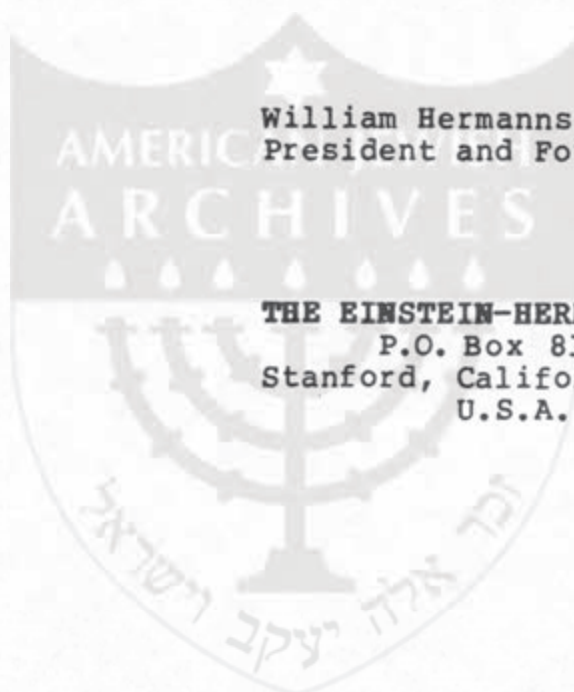
May you, youth, especially Americans, subdue the feeling of superiority when meeting Russian youth, lest the World Youth Parliament splits into I-am-better-than-thou group thoughts, which in the Vietnam War drove the young South Vietnamese into our enemy's camp, the North Vietnamese communists, instead of trying to understand them and earn their friendship.

Come, youth, create your future no longer with your ego but with your conscience, which knows only one family, the earth family living in the eternal now. Let the history books about the patriotic past of your nation be lighthouses marking the hidden reefs of the massmind created by the bloodstained karma of its forebears for thousands of years. Arise, youth of the world, have self-awareness, that speaks: "My free will is affiliated with the cosmic purpose of unfoldment and not with the defense of the three-dimensional status quo of the ego and group mind."

It is my intention that the Einstein-Hermanns Foundation become the valuable means to prevent, what Einstein called the nuclear apocalypse. Einstein's *conditio sine qua non*: the creation of the new heart, lest humanity perishes, or as he once stated, "More and more I come to value charity and love of one's fellow

being above everything else," reflected his knowledge of the Bible. Almost three thousand years ago Job said: "Lo, all these things God works with Man, to bring back his soul from the pit, to be enlightened with the light of the living."

Your inquiries and suggestions are requested.



William Hermanns, PhD, Prof. em.
President and Founding Director

THE EINSTEIN-HERMANNS FOUNDATION
P.O. Box 8129
Stanford, California 94305
U.S.A.

Nuclear

December 22, 1983

Dr. Louis Fridhandler
4551 Sandburg Way
Irvine, CA 92715

Dear Dr. Fridhandler:

Thank you for your letter sharing information on the Peace Havurah formed by members of Shir Ha-Ma'alot Harvor Reform Temple. This is a wonderful idea and while more and more of our congregations are becoming involved in the anti-Nuclear movement I don't recall hearing about the formation of a Havurah dedicated to learning about and sharing information with others on the threat of a nuclear arms race.

My next trip to your area is already booked solid and there is no possibility of my including another meeting or appearance. However, other members of our staff do visit Southern California with some regularity and perhaps arrangements can be made for a meeting such as you suggest. I am sharing your letter with Rabbi David Saperstein, director of our Religious Action Center in Washington, for he and his staff are deeply involved in this particular area of concern. Our vice president and director of the Commission on Social Action, Albert Vorspan, is also especially concerned about nuclear war and I am calling your letter to his attention. Both of these gentlemen visit the West Coast fairly frequently and perhaps they could arrange to share an evening with you and your colleagues.

While I am certain our Pacific Southwest Council director, Rabbi Lennard Thal, is aware of your Peace Havurah is am also sharing your letter with him. There are any number of people on the local scene in the Los Angeles area who would be able to make a superb presentation on the theme of a nuclear threat.

While I regret that I cannot plan on a visit with you, I hope you will understand my situation. I express all good wishes to you and your colleagues.

With kindest greetings, I am

Sincerely,

Alexander M. Schindler

cc: Rabbi David Saperstein
Rabbi Lennard Thal

ael

Irvine, Dec. 16, 1983

Rabbi Alexandler Schindler
President
Union of American Hebrew Congregations
838 Fifth Avenue
New York, N.Y. 10021

Dear Rabbi Schindler,

A group at Shir Ha-Ma'alot Harbor Reform Temple has formed a Peace Havurah to educate ourselves (and anyone who will listen) in the urgent and intricate matter of the terrifying threat posed by the nuclear arms race. I believe with Elie Wiesel that education is the only hope and, it seems, there already has been significant educational effect. It is a small effect, but we have recently heard the President and the Secretary of State finally admit that nuclear war is unwinnable. This is a marked change of this administration's tune, but, on the whole, the sounds coming from government spokesmen are still warlike. The siren lure of DOLLARS FOR DESTRUCTION is apparently irresistible even to those sincerely concerned about their children.

I enclose a couple of write-ups that have been well received by members of our congregation, but the turnouts at our meetings have been sparse. People are worried, but they are reluctant to face the issues, even in friendly company.

I am writing to enlist support by UAHC in taking steps to spur our community to take up this issue in an urgent manner. We have people with many talents. Engaging such people's energies in this effort may make a difference. No matter how small the difference, the efforts are worth it. The children, and their unborn children can't speak and work for themselves yet. We must.

I know you agree. I have heard you speak most persuasively on this matter, and found it impossible to shun your call to urgency. However, many manage to be deaf to such calls, and blindly place their trust in "our leaders" (idolatry still "sells") and the "balance of terror."

We of Temple Shir Ha-Ma'alot share our facility with St. Mark Presbyterian Church. Temple Bat Yahm, another Reform Temple, is very nearby in Newport Beach. The potential audience for a special meeting sponsored by at least these three organizations is substantial. Participation by you, or another representative from UAHC, together with other speakers, should extend our limited progress. With adequate preparation, extensive press coverage may be expected.

I am writing as an individual, but I am confident that a positive response from UAHC would evoke an energetic, productive effort by a number of us in this set of communities.

Sincerely,


Louis Fridhandler, Ph.D.

Member, Peace Havurah
Temple Shir Ha-Ma'alot
2100-A Mar Vista
Newport Beach, CA 92660

Home Address:
Louis Fridhandler, Ph.D.
4551 Sandburg Way
Irvine, CA 92715

EDWARD M. KENNEDY
MASSACHUSETTS

United States Senate

WASHINGTON, D.C. 20510

November 1, 1983

Nuclear

Rabbi Alexander M. Schindler
President
Union of American Hebrew
Congregations
838 Fifth Avenue
New York, NY 10021

Dear Alex:

Thank you so much again for your help in connection with the nuclear weapons freeze. I was delighted that you could join in a joint statement with Bishops Armstrong and Gumbleton following the Senate vote, and I hope that you felt as good as we did about obtaining 40 votes in our first Senate test on the freeze.

My warm personal regards,

Sincerely,

Ed
Edward M. Kennedy

My best

*CC AE ✓
+ with Cohen
(of letters to Stuart)
then file*

NUCLEAR FREEZE FOUNDATION

For Immediate Release
October 31, 1983

JOINT STATEMENT BY RELIGIOUS LEADERS ON
SENATE VOTE ON THE KENNEDY-HATFIELD AMENDMENT
October 31, 1983

The nuclear weapons freeze and reductions initiative is not only a political issue; it is a profound moral issue which reflects the imperative of human survival in the nuclear age.

This is the first of what we expect to be several Senate votes on the Kennedy-Hatfield Resolution in 1983 and 1984. We recall that the House of Representatives passed this initiative by almost two-thirds this year after having defeated it last year. Like the House, the Senate is now accountable to the nation, where an overwhelming majority of Americans of all faiths support this essential step to halting and reversing the nuclear arms race.

Bishop James Armstrong
President
National Council of Churches

Bishop Thomas J. Gumbleton
President
Pax Christi U.S.A.

Rabbi Alexander M. Schindler
President
Union of American Hebrew
Congregations

SENATOR MARK O. HATFIELD

SENATOR EDWARD M. KENNEDY

Statement by Senators Edward M. Kennedy and Mark O. Hatfield
Senate Vote on Kennedy-Hatfield Amendment
October 31, 1983

We have always viewed passage of our nuclear weapons freeze and reductions resolution as an objective that would not come easily or quickly. And so, we are greatly encouraged by the fact that, after 17 Senators joined in co-sponsoring the Kennedy-Hatfield Resolution in 1982, 40 Senators voted for our Resolution today. In 1982, the House of Representatives had defeated the Kennedy-Hatfield Resolution, but in 1983, the House adopted it by an almost two-thirds vote. We will bring up our Resolution again and again until the Senate catches up with the House and the American people in their overwhelming support for this essential step to halt and reverse the nuclear arms race.

Mucleda

July 29, 1983

Mr. Zsuzsa Hegedus
Centre D'Analyse
Et D'Intervention Sociologiques
Cadis
54, Boulevard Raspail
75270 Paris Cedex 06
Poste 427
France

Dear Mr. Hegedus:

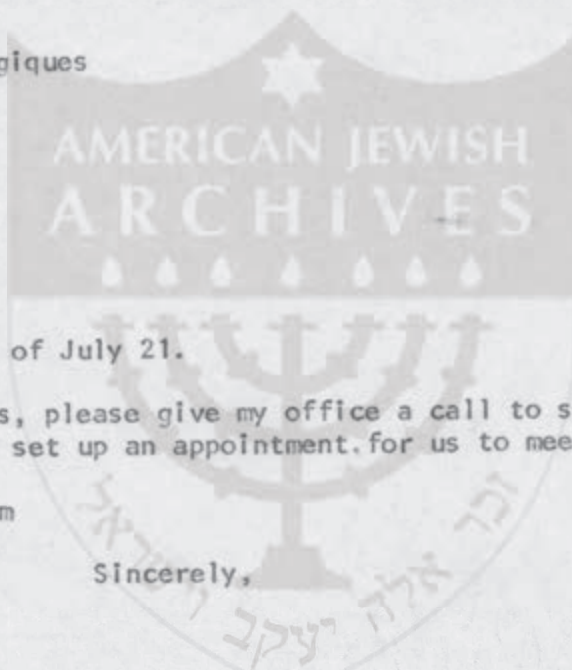
Thank you for your letter of July 21.

When you are in the States, please give my office a call to see
if I am in town so we can set up an appointment for us to meet.

With every good wish, I am

Sincerely,

Alexander M. Schindler



CENTRE D'ANALYSE
ET D'INTERVENTION SOCIOLOGIQUES
CADIS

ECOLE DES HAUTES ETUDES
EN SCIENCES SOCIALES
CNRS

54, BOULEVARD RASPAIL
75270 PARIS CEDEX 06
TELEPHONE : 544-39-79
POSTE 427

Paris, le 21.7.83

Dear Rabbi Alexander Schindler,

Since 1978 I work together in France with anti-nuclear activists committed to the ecology movement (A. Touraine, Zs. Hegedus et al., Anti-nuclear protest. The opposition to nuclear energy in France, Cambridge University Press, 1983). A similar ^{was} study planned in the United States in relation with American ecologists. The peace movement, however, has taken on such a great importance meanwhile, that I want enlarge my thinking to the anti-nuclear military problem.

I intend now to focus on a comparison of the American and German peace movements. Therefore I should like to take up contacts with persons in the peace movement who are the most committed to or particularly interested in it, thus knowing best about the aims, problems and outlooks of the movement. The lack of understanding in France of the movement, its extension and impact in the United States and the important place the Churches occupy in it, let me ask you whether it is possible to meet you between the 1st of October and the 20th of October , when I shall be travelling in the United States.

I should be very glad if you could tell me which dates convene you best and perhaps whom else to see at the same occasion. Is it possible for you to write to me soon, so I can start to organize my voyage ?
I shall be very glad about a positive answer and very happy meeting you.

Sincerely yours,

Zsuzsa Hegedus

Zsuzsa Hegedus

Responsable du projet au CADIS
Chargée de recherches au CNRS
Chargée de conférence à l'EHESS

*Heidi -
tell him to
call off a will be
glad to meet w/
him if I am
in town a*

International Physicians for the Prevention of Nuclear War, Inc.

"We shall require a substantially new manner of thinking if mankind is to survive" ALBERT EINSTEIN

#2

re further
file

no further
file

Nuclear

July 1, 1983

Rabbi Alexander M. Schindler
President
Union of American Hebrew Congregations
838 Fifth Avenue
New York, NY 10021

Dear Rabbi Schindler:

Our 3rd Congress is now over, but the task ahead is undiminished. We have built in a mere two and a half years a world movement. We now have 70,000 members in 44 nations. To do the impossible one needs to see the invisible. Yet our activities have not altered the danger which increases year by year.

I am deeply grateful that you came to our gathering. Arbatov indicated that the meeting with you was worthwhile. Hopefully it will be the first of several future get togethers.

Enclosed are the three documents which have emerged from the Congress.

Have a tranquil summer.

Sincerely yours,

Bernard Lown

Bernard Lown, M.D.
President

N.B. After the Congress I visited Geneva and did some good for Israel! Met a Mrs. Ruth Popper who was ecstatic about you.

/mc
encs.

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identification purposes only

cc: Phil Heat

Physicians' Oaths and Statements of Medical Ethics:

A Proposed Adaptation for the Nuclear Age

Over the millennia, physicians have evolved a long tradition of ethical affirmation, represented originally by the Oath of Hippocrates, and later by many other national and international codes and statements of professional ethical obligations.

Recently, in May 1983, the World Health Organization General Assembly stated that "nuclear weapons constitute the greatest immediate threat to the health and welfare of mankind," and that physicians "have both the right and the duty to draw attention in the strongest possible terms to the catastrophic results that would follow from any use of nuclear weapons."

To our long tradition of ethical statements, we believe there should now be added:

"As a physician of the 20th century, I recognize that nuclear weapons have presented my profession with a challenge of unprecedented proportions, and that a nuclear war would be the final epidemic for humankind. I will do all in my power to work for the prevention of nuclear war."

NOT FOR PRESS RELEASE UNTIL 11:30 A.M. WEDNESDAY, JUNE 22nd, 1983

The "International Physicians' Call for an End to the Nuclear Arms Race" was developed during the Third Congress of International Physicians for the Prevention of Nuclear War (IPPNW) held in the Netherlands from June 17-21, 1983. The petition was approved by the 219 delegates to the Congress from 43 countries and will be circulated for one year, in all countries where physicians are active against the nuclear arms race. The goal will be to obtain the support of hundreds of thousands of physicians. After the Fourth Congress of IPPNW, the completed petition will be presented by an international delegation of physicians to the leaders of the five nations known to possess nuclear weapons.

THE INTERNATIONAL PHYSICIANS' CALL FOR AN END TO
THE NUCLEAR ARMS RACE

As physicians, we wish to express our professional concern over the unprecedented threat to life and health posed by nuclear weapons, a threat that hangs over hundreds of millions of people. The increasing accumulation of destructive power and the development of ever more sophisticated weapons greatly increase the risk of nuclear war.

If even a single nuclear weapon is exploded over one of our major cities, hundreds of thousands will be killed. If many nuclear weapons are exploded, radioactive fallout and disturbance of the biosphere will cause suffering and death - particularly from starvation, radiation illness, infectious disease and cancer - without regard to national boundaries. The remaining medical facilities and personnel will be inadequate to help the wounded. An all-out nuclear war would end our present civilization.

The cost of the arms race is not only the vast sums being diverted to armaments in a world where tens of thousands of human beings die each day of treatable diseases. The cost is also in the great psychological damage that is being done, particularly to young people and children who fear they will have no futures.

We recognize that to reach agreements to end the nuclear arms race and avert the introduction of nuclear weapons into any conflict represents a major political task. We regard such agreements as crucial and urgent since the threat of nuclear war is the greatest challenge to health and survival that humanity has ever faced. As physicians, we believe a nuclear war would be the final epidemic.

Name

Specialty

Country

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AN APPEAL TO THE CHAIRMAN OF THE PRESIDIUM OF THE U.S.S.R. SUPREME SOVIET,
YURI V. ANDROPOV AND TO THE PRESIDENT OF THE UNITED STATES, RONALD REAGAN

We thank you and (Chairman Andropov, President Reagan) for your messages to the Third Congress of International Physicians for the Prevention of Nuclear War.

We represent national groups and individual physicians from 43 countries who have joined in a global movement to combat the greatest threat to life and health. Our name conveys our mission: International Physicians for the Prevention of Nuclear War.

We first met two years ago to assess the medical consequences of the use of nuclear weapons. In this, our Third Congress, we have concentrated on the topic: "Nuclear Illusions: The Human Costs." We write to ask you, as leaders of the two major nuclear powers, to consider our view of these illusions.

The first and greatest of all the nuclear illusions is the assumption that nuclear war is simply one of many alternatives facing humanity, and that nuclear war is but conventional war with magnified consequences. The world stands at the edge of an abyss: humanity now has the technical means for its own destruction.

An all-out nuclear war would kill hundreds of millions of people instantly. World civilization would be devastated, and the future of those surviving the immediate attack would be in doubt. The medical profession would be helpless to provide effective aid to the living.

A kindred illusion is the view that nuclear war -- both its start and its duration -- could be controlled. If nuclear war begins, here in Europe, or anywhere else, it is unlikely to be either "limited" or "prolonged." It would almost certainly escalate rapidly to a massive exchange and a global holocaust. We base this conclusion on our knowledge of the medical consequences of nuclear explosions and of the manner in which human beings make decisions under stress.

Such an all-out exchange would eclipse all ecological catastrophes of recorded history. Coming generations would inherit a violated biosphere, an earth poisoned by radiation. The long-term environmental effects of the nuclear blasts would also afflict children of the future. Indeed, given what is known, and even more important, all that is still unknown about the effects of multiple nuclear explosions, there is the risk that human life on our planet would cease to be.

Still another illusion is that of gaining and using nuclear "superiority." So-called "advantages" in numbers or characteristics of weapons cannot be used to obtain a military victory; an "inferior" nuclear enemy would still destroy the opponent. The notion that one side or another can be "ahead" or "behind" in nuclear arms no longer has meaning, and nuclear weapons have ceased to be a means to achieve rational political goals.

Since the destructive potential of the present USA and USSR arsenals vastly exceeds the possible targets of either side, it is an illusion that the acquisition of more nuclear weapons of any type confers any military or political advantage. Hence there is no justification for the introduction of any additional nuclear weapons into Europe or any other region. Furthermore, since maintenance at this excessive level is unnecessary and dangerous we favor reduction of weapons currently deployed.

The general policy of nuclear deterrence has held hostage vast populations of innocent people. It has led to an ever accelerating arms race. It threatens our children's hope of the future. It weakens our struggle against poverty, famine, and illness. It has fostered war-fighting doctrines which increase the risk of nuclear conflict. What is needed are new peace initiatives from both sides - not new missiles.

The USSR and the USA bear a great responsibility. As the leaders of these two great states, you personally can undertake substantial, specific initiatives to roll back the nuclear threat.

We believe that:

- All nuclear powers should unequivocally agree to refrain from the introduction of nuclear weapons into any conflict. The initiation of nuclear conflict would be tantamount to both genocide and national suicide.

- All powers should agree to a sufficiently verifiable freeze on the development, testing, production, and deployment of nuclear weapons and their means of delivery.

- A freeze should then be followed by reduction and eventual elimination of nuclear weapons from the arsenals of nations.

- Arms control and reductions require a renewed and serious effort to reach agreement on a comprehensive nuclear test ban.

- The negotiations currently in progress should be pursued with diligence, good will and consideration for the interests of both sides. The recent history of arms control negotiations, however, indicates that agreements are falling ever further behind the development and multiplication of nuclear weapons. We wish to emphasize, therefore, that there are routes to progress in addition to negotiation. Both the USA and the USSR have the opportunity to take independent initiatives to reduce tensions, to diminish the risks of nuclear war and to break the deadlock in current negotiations. World attention would then focus on all other nuclear powers to see if such a positive gesture were reciprocated. In such a manner the direction of the arms race would be reversed.

We believe that both the USA and the USSR must learn more about each other. The stereotyped view of each other which now complicates US/USSR relations must be eliminated. This could be accomplished through a large increase in the volume of scientific, technical and cultural exchanges, tourism, and trade. It is essential to increase the information each country has of the other through television, mass media, and other means.

More than two decades have passed since Albert Einstein said: "We shall require a substantially new manner of thinking if mankind is to survive." We must think anew, without the illusions that nuclear war can be averted indefinitely by a policy of deterrence, that we can live safely forever with nuclear weapons deployed, or that nuclear war can be limited, or survived. No East-West dispute is as important as our mutual need to avoid nuclear war.

Facing the problems of his time, Hippocrates promised: "Whatever home I shall enter, I shall do so to heal the sick." In the 20th century, nuclear weapons have presented our profession of medicine with a challenge of unprecedented proportions — one that threatens all homes and all healing.

In that spirit of healing, we are ready to support any effort of yours to halt the arms race and reduce the risk of nuclear war.

Respectfully yours,

Participants in the
Third Congress
International Physicians
for the Prevention of Nuclear War

