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SURVIVAL FOR THE SIXTIES

primer

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**a nuclear
test ban
treaty now**

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A treaty banning nuclear weapons tests

WORLD PUBLIC OPINION forced the U.S.S.R., the U.K., and the U.S. on October 31, 1958 to begin a moratorium on nuclear weapons tests and to start negotiations on a treaty to cease such tests permanently under a system of inspection. These discussions have continued in Geneva ever since, but they continued so long that President Eisenhower on December 30, 1959 gave notice that the U.S. moratorium would lapse. He announced that the U.S. would be free unilaterally to begin tests again, but would in fact not commence any without further notice.

The negotiations have been delayed at times both by the U.S.S.R. and the U.S. They have also involved compromises on the part of all three participating nations. While important differences remain, a treaty initialed by all three governments could be concluded by persistent negotiations within several months.

The advantages of a nuclear test ban

A test ban would make universal disarmament more possible. There is no long-range security for the U.S. or any nation in the "balance of terror" system where each nuclear nation has the immediate capability of destroying the other. The feasible alternative is the elimination of these capabilities for annihilation as rapidly as agreements can be worked out and put into effect, while providing mechanisms for inspection and control, and developing institutions maintaining peace, security, and justice.

A nuclear test ban treaty would contribute vitally important experience in the establishment and operation of inspection systems, preparing the way for further steps in disarmament. Should the test ban negotiations fail, the possibility of successful negotiations for disarmament would considerably lessen.

A test ban would inhibit other countries from entering the nuclear arms race. If a test ban agreement were reached soon, pressure for other nations to adhere to it would be very great. It is estimated that at least a dozen nations, other than the U.S.S.R., the U.K. and the U.S., have the industrial and technical potential to build nuclear weapons. France is building atomic bombs and perhaps China and other nations are now doing so. The very existence of a test ban treaty, which most nations would sign immediately, would place strong pressure on all to halt tests and thus prevent the development of nuclear weapons.

Without testing, no country could independently construct nuclear weapons of efficiency or reliability. If test ban negotiations fail, nuclear tests will probably be resumed by some of the nuclear powers. This will make it easier for other nations to begin their own tests. The resulting instability of an already precarious balance of terror is one of the most urgent reasons for completing the current negotiations for a treaty.

A test ban would help deter the use of nuclear weapons in a limited war. It seems probable that no war between the nuclear powers could be kept restricted to conventional weapons for any length of time. The probability of restraint as to the use and size of nuclear weapons would lessen as one side or the other became more militarily desperate. However, there may continue to be small wars in which the present nuclear powers are only indirectly involved and in which nuclear weapons are not used. In this event, a testing ban would in effect give implicit recognition that nuclear weapons are not "conventional," reinforcing the hope that they might not be used in a limited war.

The leading American opponents of a test ban advocate the resumption of tests by the U.S. so that low-yield nuclear weapons for tactical use in limited wars can be perfected. Tactical weapons are probably now more sophisticated than these people are willing to admit, but if their thesis is valid, then a test ban would have the effect of lessening the continued development and thus restricting the use of tactical nuclear weapons.

A test ban would prevent the exposure of mankind to dangers of new radioactive fallout. The somatic and genetic effects of the nuclear tests made by the U.S., the U.S.S.R. and the U.K. from 1945 to 1958 and by France in 1960 will continue to be felt by humanity for generations. The world's people, through the official resolutions of the United Nations, are demanding—primarily for humanitarian reasons—that a test ban be speedily concluded.

As the example of France shows, smaller nations might launch tests in the atmosphere if a treaty is not signed, even if the existing nuclear powers initially confined future testing to outer space or underground. There is thus no assurance that fallout hazards would be eliminated in the absence of a treaty.

A test ban would symbolize the possibility of greater cooperation between the U.S. and the U.S.S.R. A lessening of international tensions would follow and the cold war could subside. While this may be only temporary, it could be the basis for further meaningful cooperative enterprises which would be to the self-interest of both America and Russia and which would also benefit the rest of the world. If negotiations fail, the resulting frustrations would heighten tensions which, in turn, could increase the risks of triggering a third world war through accident, miscalculation, or design.

Problems of inspection

From the beginning of the negotiations, the U.S. has insisted that any permanent cessation of tests be accompanied by a system of inspection and control. In order that the system be psychologically acceptable to the U.S. and contribute usefully as a step toward general disarmament, the purposes of an inspection system need to be clarified. In addition, an evaluation is needed of the charge that the Russians have been continuing tests clandestinely and that, in any case, they have not agreed to the principle of inspection.

American opponents of a test ban have tried to infer that *inspection for compliance* is the objective. They have gone to great trouble to devise evasion schemes in order to show that this objective—100 percent inspection for total compliance—cannot be achieved. There is, however, a second kind of objective for inspection. This is inspection for *deterrence of evasion*. In this view, only enough probability of detecting

violations need be provided so that the chance of getting caught will outweigh the potential gains from successful evasion.

The most valid basis for judging any disarmament inspection system is whether it meets the needs of national security. Inspection that provides for deterrence of evasion appears at this point to correspond closely to America's security requirements. It is doubtful if U.S. security would be seriously impaired even by unrestricted Soviet testing, if the U.S. did none. But it is doubtful that the gains sought in a test ban agreement could be achieved with an inspection system which did not appear good enough to deter evasion.

Evaluation of the probability of detection must take account of the possibilities—even in a totalitarian society—of information from informers and through other intelligence channels as well as the formal inspection system.

If the test ban treaty were clandestinely violated and the fact became known, the resultant publicity would constitute a major propagandistic setback for the country found cheating. Those leaders in political power would be severely damaged even among their own people. Such testing could signal the acceleration of the arms race and probably a renewal of testing by several nations. It could lead new countries to develop nuclear weapons. Mounting international tensions would result, and the probability of nuclear war would increase.

If a test ban treaty were successfully violated, the gains to the cheating country would be dubious. Evasion is a possibility only with relatively small weapons, well below the megaton range of thermonuclear weapons. Testing of small tactical weapons by Russia, for example, might produce some reductions in the weight and cost of their existing weapons. The gains, however, would not be sufficient to offset America's present greater industrial capacity or affect the balance of nuclear power.

The Russians would probably find it cheaper and easier to double their present missile systems, based on the results of nuclear weapons tests already made, than to double the effectiveness of their existing weapons through clandestine testing. On balance, their incentives for cheating are not sufficiently great to justify the risks.

There have been charges that the Russians have conducted clandestine underground tests in the past 28 months. Those who have made these charges have been able to produce no evidence whatever, only

the assumption that the Russians must be testing small weapons if the West is unable to determine that they are, not. The Russians are certainly not testing large (megaton) weapons because there is no prospect of successful concealment even underground. The political risks to Russia of detection are probably too great for the military advantages which could be achieved. Russia cannot afford to be exposed to the world as cheating after she has worked for more than half a decade to create the image of a nation demanding the cessation of tests.

The Russians, maintaining a "closed" society, have resisted the concept of inspection. During the 25 months of negotiations in Geneva, however, they have gradually come to accept the principle. The U.S.S.R. understandably wants minimal inspection, while the U.S. as an "open" society understandably wants as much inspection inside Russia as it can negotiate. The two sides are not unreasonably apart and any compromise will be a victory for the principle of inspection. It could be a forerunner for more formidable inspection in the general field of disarmament.

There is a law of diminishing returns in the establishment of inspection systems. Any degree of reliability desired can be technically achieved (short of 100%), but the expense and intricacy of the system increases rapidly after a certain point is reached. The decision on how elaborate a system is required must be based on an evaluation of the lengths to which a violator would go in order to cheat. This is essentially a political, not a scientific judgment. The Russians and Americans have been at the opposite poles of this question while the British view has been much less conservative than the American.

While the possibilities of conducting tests behind the sun or moon, or in gigantic excavations a mile underground, may be theoretically interesting, the expense, effort, and chances of exposure involved in these methods are too great, and the gains too small to require a costly and elaborate inspection system to deter their use.

A Time Limit to Negotiations?

Several Americans have suggested that Russia would prefer an unwritten moratorium on nuclear weapons testing rather than a treaty. They imply that the Russians have successfully stalled the negotiations for two years and are likely to continue to do so for as long as possible. These critics insist that the U.S. cannot forever be a party to an un-

written moratorium and therefore the U.S. must suggest a deadline to Russia for the conclusion of a treaty, beyond which the U.S. will resume tests.

These critics overlook the concessions to the American point of view which the U.S.S.R. has made. Among them might be noted the following:

1. Agreement to accept the findings of the 1958 conference of scientists on how to detect tests as the basis for negotiating a treaty. The Russian view was that tests had been and could continue to be adequately monitored without penetration of the suspected country.
2. Agreement to discuss the technical problems of detecting tests in outer space following revelation of the secret U.S. "Argus" series. A second agreed scientific report was secured. The Russians agreed to the incorporation of the findings in the treaty. The U.S. stated that it would draft appropriate treaty language. To date it has not done so.
3. Agreement to reconsider the basis for the detection of underground tests after stubborn resistance to the new U.S. findings. The results of this conference were not "agreed," but the Russians have agreed to enter into a joint research program to improve underground detection.
4. Agreement to accept nationals of foreign countries as at least half of the staff at inspection posts in the Soviet Union. The U.S.S.R. originally insisted on a staff entirely of Russians.
5. Agreement to allow roving inspections on a quota basis within the Soviet Union, *not* subject to veto. The actual number has yet to be negotiated.

While the negotiations have been protracted, there is no evidence that a deadlock has been reached. The negotiations recessed early in December because of the obvious interregnum in American policy-making between the Eisenhower and the Kennedy Administrations.

Unresolved Issues

There are many issues, only one of which is inspection, which are at present separating Russia and the West at the bargaining table. None

of the issues, including inspection, is beyond the possibility of compromise acceptable to the West. The major unresolved issues remain negotiable. Some of these include:

1. **CONTROL BODY.** The Soviet Union seeks "parity" on this seven-nation body. It would prefer to have three members from Eastern countries, three from the West, and one neutral. The U.S. and U.K. would prefer three Western nations, two Soviet bloc countries, and two neutrals.
2. **STAFFING OF CONTROL POSTS.** The Russians have been brought along to the point at which they now have agreed to accept the Western position—calling for one-third Russian personnel, one-third U.S.-U.K. personnel, and one-third from other countries. However, the composition of the third "third" remains undecided.
3. **ON-SITE INSPECTIONS.** Agreement has been reached on the principle of a yearly quota of roving inspections, not subject to veto. On the basis of a treaty initially covering the larger tests, the U.S. is asking for a quota of 20 such inspections on Soviet soil. The U.S.S.R. is offering three.
4. **MORATORIUM.** The U.S. reluctantly agreed to a moratorium on small tests while a coordinated research program for improving detection techniques proceeds. The U.S.S.R. has suggested that the moratorium be four or five years in duration; the U.S. has offered 27 months.
5. **RESEARCH.** The U.S.S.R. has agreed to the U.S. wishes regarding use of nuclear devices to perfect a detection network, provided it be allowed to inspect the device to insure that it is not a concealed test. The present U.S. Atomic Energy Laws will not permit this, and the issue has not been resolved.

As Senator Hubert Humphrey concluded in his Disarmament Subcommittee report, "The performance of the two sides thus far indicates that with continued efforts, augmented by a modest amount of reasonableness, a test ban treaty that would not detract from the security of the participating nations could be concluded."

At the moment it is enough for the U.S. to declare that it will not tolerate an endless moratorium without a treaty calling for inspection. In view of the progress already made and of the opportunity for success

which clearly exists, it is still too early for the U.S. to set a deadline and declare that it will resume nuclear tests after a specific date unless the treaty is completed by then.

The decision to break off negotiations and to begin nuclear tests again, even underground, would have far-reaching repercussions which could only be likened in importance to the original decision to drop the atomic bomb.

Vigorous attempts are being made to divert public attention from the real issue, which is that it is possible to achieve a nuclear test ban treaty that could be a first step leading in time to the end of the arms race. These efforts to mislead the public should be actively opposed.

A half-treaty or none?

Some critics of a test ban have suggested that a treaty be concluded to outlaw only the testing of nuclear weapons in the atmosphere and of larger weapons underground (above the seismic magnitude of 4.75). A half-treaty of this sort would have severe psychological disadvantages and few political or military advantages. A comprehensive test ban has clarity of meaning and intent not achievable with partial measures. Tests below this threshold are sufficiently detectable so that such a course would not be justified, particularly in the light of the proposed U.S.-U.S.S.R. research program.

Nth country participation

If a nuclear test ban treaty were signed by the three powers now negotiating in Geneva, the problem of inducing other nations to become signatories will arise. Most nations will be only too glad to sign. They have been urging the nuclear nations to sign a treaty for years. However, France may want to build up her nuclear arsenal before giving up testing. China may refuse to participate, or may attach a price for participation, such as taking her seat in the U.N. If it is too late to invite additional powers to participate in the Geneva negotiations at this stage, such a step might have eased the way for France and China. But even they will be subject to strong pressure from the world community as the great majority of nations sign such a treaty. The U.S. should be prepared for difficult bargaining to extend a treaty to these powers.

Recommendations for action

1. The Kennedy Administration should pursue the nuclear test ban negotiations with determination and utmost vigor.
2. The goal should be an inspected cessation of all nuclear weapons tests, with a moratorium on tests in outer space and on small tests underground, one of sufficient duration so that scientists of the participating countries can improve the techniques of detection to bring all tests subsequently within the scope of the treaty.
3. No date should be set at this time on concluding an agreement, although the U.S. could reiterate its declaration that it will not agree to an endless moratorium.
4. France, China, and other nations which are potential nuclear powers should be particularly urged to be signatories of the treaty as soon as it is completed. The treaty should be universal.
5. Concerned American organizations and individuals should begin now to make plans for sufficient public support of a nuclear test ban treaty to assure its ratification by the U.S. Senate.

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Here Is What

1. Write a letter to President Kennedy in your own words urging that the U.S. work vigorously for a treaty banning all nuclear weapons tests.

Send this to: President John F. Kennedy
The White House
Washington, D. C.

If you have time to write two additional letters with the same message, send them to the following:

Secretary Dean Rusk
Department of State
Washington 25, D. C.

Mr. John J. McCloy, Adviser,
Disarmament Administration
Washington 25, D. C.

2. Write letters to both your senators (Senate Office Building, Washington 25, D. C.) and to your congressman (House Office Building, Washington 25, D. C.) urging them to support the policies given in this booklet. Enclose a copy of this primer.
3. Visit key leaders in your community (businessmen, educators, labor officials, etc.), talk to them about this issue of nuclear weapons tests, and give each a copy of this primer.

You Can Do

4. Visit the appropriate editor or editorial writer of your local newspaper and talk to him about this issue and give him a copy of this primer.
5. Discuss this issue with your minister, priest, or rabbi and urge him to deliver a sermon on the topic.
6. Urge appropriate education and action projects on this issue culminating in the adoption of a resolution in the clubs, civic associations, political parties, unions, veterans groups, and church or synagogue to which you belong.
7. Order quantities of this primer (and companion primers on "Disarmament: What Kind? How Much?" and "The Economics of Disarmament") for distribution. There is a special quantity price of 12 primers (all similar or four of each) for \$1.00 postpaid.
8. Keep in close touch with National SANE and other national peace organizations for further developments on this issue.

The following persons have read this primer and have recommended that it be "carefully reviewed" by President Kennedy and members of his Administration with responsibility in this area:

CHRISTIAN B. ANFINSEN, Chief, Laboratory of Cellular Physiology, National Heart Institute, Maryland.

CHARLES D. CORYELL, Professor of Chemistry, Massachusetts Institute of Technology.

WILLIAM C. DAVIDON, Physicist, Argonne National Laboratory, Illinois.

SERGIO DE BENEDETTI, Professor of Physics, Carnegie Institute of Technology, Pittsburgh.

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GEORGE J. YEVICK, Professor of Physics, Stevens Institute of Technology, New Jersey.

To Keep Informed/SANE-USA

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