6-17-1957

The Atomic Dilemma

Mike Mansfield 1903-2001

Let us know how access to this document benefits you.
Follow this and additional works at: https://scholarworks.umt.edu/mansfield_speeches

Recommended Citation
https://scholarworks.umt.edu/mansfield_speeches/241

This Speech is brought to you for free and open access by the Mike Mansfield Papers at ScholarWorks at University of Montana. It has been accepted for inclusion in Mike Mansfield Speeches by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
Speech of Senator Mike Mansfield (D. Montana)
FOR RELEASE
P.M.S., Monday, June 17, 1957

THE ATOMIC DILEMMA

Twelve years ago the United States detonated the world's first atomic bomb in New Mexico. Since then there have been close to 100 nuclear explosions. The United States has exploded about 65 bombs, the Soviet Union has tested 20 or more, and the United Kingdom has tested at least 7, including its first two hydrogen bombs in the vicinity of Christmas Island in the Pacific. The British have now joined the ranks of those capable of producing thermonuclear weapons, capable of unheard of destruction. Recent tests by the United States, the Soviet Union and the United Kingdom, have added fuel to a growing controversy in this field.

During the last Presidential campaign, the testing of thermonuclear weapons was one of the dominant issues of the campaign, and in the past several weeks the subject has again come sharply into the public eye. The problem of H-bomb tests and radioactive fallout is perhaps the most dangerous problem that confronts the world.

This issue, so important to mankind and for so long shrouded in secrecy, has been brought into the open for discussion. The scientists and leaders of the free world who have had the courage to tell the public of the great risks involved in the continuation of nuclear tests deserve our gratitude. As I have said on a previous occasion, "To accept the thesis that this subject should not be discussed with the American people is to lay open the possibility that history and science may bring about the era of the last man".
The discussion of hydrogen bomb tests and their after effects is not something that can be treated lightly. It is an issue which must be reckoned with seriously and speedily. It is not, I repeat, not a partisan issue.

I believe that we are approaching the saturation point insofar as the number and destructiveness of the large thermonuclear weapons are concerned. If we continue these tests, we will be gambling with future generations of mankind. We will be pushing toward the brink of total destruction.

In 1955, I expressed my views to the Senate on nuclear and thermonuclear weapons, their development, and their part in our domestic and foreign policies.

At that time, I tried to examine in an objective way the various ramifications of the radioactive fallout and destructiveness of these weapons. I discussed the pros and cons of continuing atomic and hydrogen bomb tests and the part those tests play in our defense. I suggested some means by which we might develop an effective program to combat the threat of world-wide destruction in nuclear warfare.

Multilateral Ban on Tests

In the two years that have passed since I first expressed myself on this issue, I have given it a great deal of thought, and everything leads me to feel that a multilateral ban on nuclear tests is an essential first step if mankind is to survive.

Some two weeks ago, Mr. President, in a commencement address at Clarke College in Dubuque, Iowa, I proposed that the President give consideration to the urgent convening of the Heads of State of the Soviet Union, the United
The distinguished Majority Leader, the senior Senator from Texas, Mr. Johnson, in a recent New York address presented what I consider to be one of the finest recent statements on American Foreign policy. It was extremely well timed in view of the current disarmament talks and the world-wide debate over the continued testing of hydrogen weapons.

The Majority Leader has offered a sound, shrewd program to counteract Soviet propaganda. The plan he has put forward calls for the systematic presentation of American views on Soviet-wide uncensored radio and television facilities. This proposal, if followed, would beat --or at least meet -- Khruschchev and the Soviet leaders at their own game.

If adopted by the Administration, this "Open Curtain" idea would effectively put on the Soviets the burden of proof whether they are sincere in their profession for ending the nuclear weapons race.

The senior Senator from Texas proposed that we as a nation take action on five objectives, all leading toward the ultimate of a world-wide agreement on disarmament. I am particularly interested in his third objective, "A frank and open search for a method of suspending tests of the bigger nuclear weapons, under airtight conditions which give full protection against violations."

As the Majority Leader states, "We must create a new world policy. Not just of open skies, but of open eyes, ears, and minds, for all peoples of the world." He insists that the case must be submitted to the people of the world and I am sure that if this great issue is freely discussed the people of the world will demand an end to the testing of large thermonuclear weapons.

Again, I want to say that the speech of the Senate Majority Leader has provided a firm and constructive position on the greatest issue of the day.
Kingdom, France and the United States for the sole purpose of seeking a multilateral agreement for stopping tests of the big hydrogen weapons whose very testing threatens the future of mankind.

Let me make one thing very clear at this point. I do not propose that the United States unilaterally stop testing these big, world-destroying weapons. I propose only that we attempt to reach a multilateral agreement with other nations producing atomic weapons whereby we would jointly agree not to test bombs over a certain size - the bombs which are so large that virtually any nation in the world with scientific talent would automatically know if such a bomb is exploded.

I do not propose that the United States agree to limit or stop such tests unless and until the Soviet Union also agrees.

I do not propose at this time that the agreement extend to small nuclear weapons.

I did not lightly reach the conclusion that the time had come for the President of the United States to make an all out effort to get multilateral agreement to stop testing the big weapons.

I do not now view lightly my repeated request that the time has come when the number one problem of survival requires forthwith a concerted effort to agree on a multilateral basis that the tests of the big ones be stopped.

It has been two years, Mr. President, since the Heads of State met to discuss peace. Much has happened in these two years which might shape the thinking of such a meeting. Britain has a new Prime Minister. President Eisenhower has been reelected by a great majority. The leaders in the Soviet Union have faced the crisis of rebellion in the satellite nations. The Middle
East crisis has warned us that war lurks around the corner for nations not ever mindful of the terrible consequences that might flow from what might start out as a relatively isolated military action.

I believe that another Summit Conference is due and we have one big problem for the agenda. Our ultimate goal in such a conference should be a **multilateral agreement to suspend tests of all nuclear weapons over one megaton in strength.**

A binding agreement of this kind accompanied by reasonable inspection would tend to be self-enforcing. We know from reading the daily press that our detection devices, as well as those of many other countries, can infallibly detect hydrogen test explosions when they exceed a certain strength. It follows therefore that if any party to a multilateral agreement not to test the biggest bombs were to violate that agreement, the violation would instantly be known to the entire world.

I grant that such an agreement would not be without its dangers. But I believe the time has come when the dangers of further uncontrolled big tests outweigh the dangers of agreement to suspend such tests. Surely this is an important enough issue for the heads of state to explore together ways and means of agreeing to limit or stop altogether the testing of hydrogen bombs so large that their fallout of radioactive material seriously threatens mankind.

Let me set forth briefly my reasons for asking for this kind of initiative on our part and then develop in more detail the promises and the admitted dangers in such an approach.
President Eisenhower has been highly acclaimed for the "Atoms for Peace" proposal he presented to the United Nations. I want to commend the President for seizing the initiative at that time in the promotion for world peace.

President Eisenhower has taken an active part in the promotion of the ratification of the Statute of the International Atomic Energy Agency which embodies the basic ideals of his original "Atoms for Peace" plan.

Our President on behalf of all Americans is the foremost champion of peace and a man of tremendous prestige throughout the world. What better way could he attempt to promote his desire to dedicate the miraculous inventiveness of man to the betterment of mankind than to again take the initiative and actively explore, in cooperation with the heads of the other nuclear nations, the feasibility of calling a conference to consider a multilateral international agreement to ban the testing of thermo-nuclear weapons of more than one megaton in strength.

In my opinion such a conference would not hinder the progress of the current disarmament discussions in London. Such an International Conference would cement and make even stronger the results that we all pray will be forthcoming.
The Threat of Continued Tests

Today, as I did two years ago, I note that I am a complete amateur in the field of the nuclear sciences and without access to classified documents. As a layman, I have developed a tremendous interest in atomic energy as it affects the nation's welfare and security. My source material has always been, and continues to be, public sources -- radio, TV, newspapers, magazines, and other printed matter.

On this basis, I feel that a multilateral nuclear test ban would be in the best interests of the United States and the world.

Only a year ago anyone proposing an agreement to limit tests of H-bombs would have been accused of plotting disaster. But each day more people add their voices to the world chorus demanding an end to the testing of super-hydrogen bombs. The brilliant and world renowned Dr. Albert Schweitzer and Pope Pius XII have warned in solemn pronouncements against the menace of nuclear weapons. Pope Pius XII recently noted that increased radioactivity "in the face of the yet unknown margin of biological security" threatens horrors of monstrous offspring and possibly even more dangerous hidden shocks to parental genes.

A recent Gallup Poll reported that "a majority of the American people today believe that this country should agree to stop making more tests of nuclear weapons -- if all nations, including the Soviet Union, agree to do so".

This was the stated point of view of 63 percent of all adults questioned in a nationwide survey. It is interesting to note that in April, 1954, only 20 percent were in favor of abandoning these tests.
The Japanese government has renewed its plea to end such tests, and recently the National Academy of Sciences was told by a leading biologist that total radiation from all sources may now be approaching 50 percent of the permissible dosage for human beings. It is unreasonable to think that all of these pleas -- many from patriotic and eminent scientific sources -- are based on manufactured fears and should be ignored.

In addition to the threat of radioactive fallout, we must consider whether a multilateral large H-bomb test ban would damage our defense.

Weapons for Defense?

It is difficult to understand why we should develop more bombs more powerful than those we now have. We already have more than are necessary to bring utter destruction to the world. Our defense may require testing of small tactical nuclear weapons and devices, but there is serious doubt whether our defense requires more perfect big bombs.

It has been demonstrated that an H-bomb with an explosive power of 10 to 15 megatons or 10 to 15 millions of tons of TNT is capable of wiping out a city of hundreds of thousands of people. This can be done with one bomb successfully dropped from the air.

In May, 1956, the Atomic Energy Commission detonated an H-bomb over a deserted atoll in the Pacific at an altitude of 10,000 feet. According to reports, the bomb was believed to have released energy equivalent to ten million tons of TNT.

At the time this test explosion was reported, the New York Times illustrated the scope of the destruction of such a bomb had it been dropped on a large
"Virtually every building, even those of reinforced concrete construction with 10 inch thick walls and 6 inch thick floors, outward for more than two miles from ground zero, would have been crushed by the smashing blow of the explosion... Even at a distance of more than nine miles, there would have been serious damage to steel frame buildings... Homes like those found in any suburb would have been heavily damaged as far as twelve miles away.

"This would have been the effect only of the blast. Aside from this, the flashing many-thousand-degree heat from the explosion would have set off a 'fire storm' like that which burned Tokyo and Berlin in World War II.

"The instantaneous radiation of the bomb's burst would have produced no visible damage to structures. But any person close to Ground Zero or outward for several miles would have been radiated to the point of early death or lingering illness."

Incidentally, we must keep in mind that this test explosion lacked the force of the Super-bomb exploded in the 1954 Pacific tests.

Need we develop more destructive weapons than these? I sincerely hope not.

A full-scale attack on Russia with these nuclear weapons by American bombers would kill "several hundred million" people, including many in
surrounding Free World countries according to a statement made by Lt. General James M. Gavin before a Congressional Subcommittee. The Army's research and development chief said, depending on "which way the wind blew" the lethal dust would fall on Western Europe or across Asia and hit Japan and possibly the Philippines. Let us not forget that an attack on the United States would wreak similar destruction.

The production of nuclear weapons is not something new. We have been stockpiling and testing the weapons for over ten years. It is reported that this country already has put untested 20-megaton bombs in its stockpile. These are 1000 times or more the size of the bomb which leveled Hiroshima -- equivalent in explosive power to 15 to 20 million tons of TNT.

The development of so-called "clean" thermonuclear weapons has become one of the major points in the justification of additional tests of large nuclear devices. The Atomic Energy Commission is concentrating on efforts to cut the Super-bomb's fission products of radioactivity. There has been some success in this field. However, scientists say so long as fission exists, so long as bursts are big, and so long as earth particles are sucked up into the fireball, there will inevitably be radio-active fallout.

Despite this assertion, there has been little interest shown in "clean bombs" by our defense agencies. In fact, the New York Times reported on May 28, 1957 that a Department of Defense booklet warns that, "with the development of the hydrogen bomb, radioactive contamination has become a new offensive weapon." If there were a nuclear war, I am quite sure the Russians would not use clean bombs unless it were in their own interest to do so. Also,
short of a self-enforcing agreement, there is no way to prevent the Russians from contributing to the radiation hazard with tests of big "dirty" weapons irrespective of what we do.

Winston Churchill has clearly described the relationship of nuclear power to defense. He has stated the inescapable truth that both sides now possess nuclear power to such an extent that the use of heavy nuclear weapons by either side would result in mutual annihilation. Defense for both the United States and the Soviet Union is therefore reduced to a matter of stalemated mutual deterrence. Does this not rule out the need for further testing of heavy weapons?

As President Eisenhower has indicated, the United States is now interested in defense against the aerial delivery of heavy nuclear bombs. It may be presumed that this is also a principal interest of the Soviet Union. Testing weapons for such tactical purposes is relatively harmless compared to testing of the heavy nuclear weapons. Tests for tactical purposes might be continued even though there were a multilateral agreement to ban tests of a magnitude greater than 1 megaton. Under existing circumstances, the testing of nuclear weapons larger than 1 megaton would not seem to be essential to the defense of the United States in view of our existing stockpile of big weapons.

Furthermore, in this day and age, these massive weapons could be used only in the kind of war which no one could risk. It would be a tragic error if our military policy were to lead us into the blind alley in which our only alternatives were massive retaliation or appeasement. An infatuation with big bombs
may put us in just that position.

**Soviet Initiative**

The Soviet Union has seized the initiative in proposing to ban atomic tests and to outlaw the possession of atomic bombs. The Russians made these proposals some time ago, and as recent as May 9, the Moscow radio reported that Russia was willing to halt nuclear bomb tests, if the United States and Britain would do likewise. Premier Bulganin made this overture to a Japanese Peace Committee.

Russia's motives are suspect, but she has seized and held the initiative in the field in which the United States pioneered. Russia is making headway in World opinion.

I am convinced that United States initiative in seeking on a multilateral basis to limit or prohibit future nuclear tests would be in the national interest. It would serve to re-establish a feeling of international confidence in the peaceful intentions of the United States.

President Eisenhower, in his press conference of June 5th set forth in clear distinct terms the official position of the United States. He said, in effect, that fallout results from tests and tests are necessary if we are to continue to maintain an adequate defense. He observed that the United States cannot agree to any ban on tests unless there is a concurrently effective ban on the use of nuclear weapons. In other words, any ban on testing must be linked to an effective disarmament agreement.

I cannot agree with what is in effect a position of all or nothing. We must not rule out the possibility of a step by step attack on the threat posed by bigger
and more bombs. We must not rule out the possibility of agreements upon partial or restricted limitations on testing.

The Effects of Radiation

The strongest argument for suspending tests of nuclear weapons is based on the knowledge that to some extent these nuclear tests have already poisoned the atmosphere. Whether this poisoning has yet reached a dangerous amount we do not know with certainty. However, it is known with certainty that more big nuclear tests will add to the amount of contamination and increase the possibility of genetic damage.

The first witness to appear before the recent Joint Atomic Energy Committee hearings on radiation hazards, Dr. Charles L. Dunham, Medical Director of the Atomic Energy Commission said that production of some undesirable fallout was "an inevitable result of nuclear explosions".

As we know, in this atomic age, nuclear bomb tests create radioactivity which may register its impact virtually any place in the world. The big question is how much the human race can absorb safely and what effect such absorption will have on future generations.

The heaviest fallout of a nuclear bomb occurs within approximately 100 miles of the test site. It produces radiation sickness and death as the radioactive debris gradually settles to earth.

The concern of many of our top scientists today, however, is not with the local fallout but with the remote fallout of radioactive particles which are carried high into the stratosphere by the violence of the explosion. It is only now becoming clear, and increasingly so, that man cannot go on testing more
and more, and bigger and bigger bombs without the stratosphere becoming loaded with radioactivity with consequent unknown damage to life.

Much radioactive debris comes to earth in a short time, some of it brought earthward by rain and snow, as in the case of the radioactive rain which fell on Washington, D.C. on May 14. Even though the radioactive content of that rainfall was not considered dangerous by the Atomic Energy Commission, and even though, as the atomic physicist, Dr. Ralph E. Lapp, has explained, fallout does not necessarily mean that mankind will be bombarded by penetrating rays which might threaten the future of civilization, there is a chemical element called strontium-90 which is spawned by uranium fission. Strontium-90 within a comparatively few years, could become a grievous woe to mankind.

Even Dr. Willard Libby of the Atomic Energy Commission, one of the Federal Government's defenders of the position that continued tests won't hurt too much, has admitted that there is a risk in the tests. He has stated that "excessive dosages" of strontium-90 can cause bone cancer and leukemia in animals, "so we should not casually dismiss the possibility of harmful results from fallout." But the risk appears to be remote according to the findings of Dr. Libby. I can't help asking, "What about people?"

Despite Dr. Libby's optimism, the Federation of American Scientists, a group of 2100 scientists and engineers, has been a strong force in urging agreement on the cessation of H-bomb tests. In addition, the Federation has been seriously concerned about the effect radioactive fallout might have on the genetic makeup of mankind. When Commissioner Thomas E. Murray appeared
before the Senate Foreign Relations Committee several weeks ago he con-
curred in my feeling that continued testing of weapons producing strontium-90
as a by-product presents clear and present danger for us and an even greater
danger for our children.

During the course of this hearing Commissioner Murray summed up
the problem when he stated that "the situation that confronts you and the whole
world and all of us is how much of this strontium-90 can you deposit around
the world and not get yourself into some very serious trouble....."There is
no backtracking".

In this connection, I noted with considerable interest the recent report
by scientists of the U. S. Weather Bureau indicating that there is a greater
hazard to residents of some areas than the AEC has apparently believed to
be the case.

These Weather Bureau scientists concluded that, and I quote:

"Some areas of the U. S., particularly the northern tier of states, have
and will receive
received/two to three times more strontium-90 fallout than Southern states".

Their report also stated that "Strontium-90 fallout patterns are more complex
than the AEC believed, being related to certain intricate wind, rain and other
meteorological factors not previously taken into account."

Even though the present degree of saturation is still below what the AEC
considers a danger point, this information as to fallout patterns does upset
predictions of future dangers.

The future testing of nuclear weapons is a topic of major international
concern. I find it more disturbing that the positions of the opponents and the
proponents of continued testing are hardening.

The American people are entitled to know the risks they face. The iron curtain of the Atomic Energy Commission does not contribute to an understanding of the problem.

The Joint Committee on Atomic Energy has recently conducted hearings on the effects of radioactive fallout. The Committee has performed an enormous service in promoting an intelligent discussion of the subject. I sincerely hope they will give consideration to the views of some of the eminent scientists from other nations of the free world who have done so much pioneering work in atomic energy.

I should hope that this Committee Study will be the first step in a program to bring about a multilateral agreement to halt large nuclear tests.

**Need for Positive Action**

Mr. President, as I urged earlier, the time has come for the President to move with courage and vigor. There can be little doubt of the positive response among the people of the world should the United States assume the leadership in this direction. A multilateral limitation upon testing can be separately negotiated and need not interfere in the slightest with present disarmament negotiations.

The first need is for agreement in broad principle among the heads of the nations advanced in the production of nuclear power, the United States, the Soviet Union, Britain and possibly France. Such a meeting of the heads of state, should concentrate upon an agreement limiting nuclear testing to
weapons of one megaton or more. On this basis there is reasonable hope for agreement. The far-reaching benefits that would accrue from this -- like an atomic chain reaction -- are imponderable. And not the least of these would be restored confidence in the positive leadership of the United States.

At a recent press conference, the President linked proposals to stop tests with the conclusion of an all encompassing disarmament agreement. The President was speaking however of a total ban on testing. The President has left open the possibility for a multilateral agreement limiting tests. Of course, an effective disarmament is to be desired. But to make one agreement unequivocally dependent upon the prior conclusion of the other seems unreasonable to me. It seems evident to me that the blocks to a multilateral limitation upon testing are not unsurmountable. The Soviet Union has voiced a desire for such a limitation. If, in negotiation, the Soviet Union were to block agreement, it would be clear to the people of the World where the responsibility lay.

The International Atomic Energy Agency

Last week the Committee on Foreign Relations unanimously recommended approval of the Statute of the International Atomic Energy Agency. Let this nation follow that action by action in the field of atomic weapons.

The basic purpose of the international agency, as we know, is to advance international development of the peaceful uses of the atom. The approval of this Statute will be the first step in realizing the great benefits to be derived from peaceful consultation and cooperation in the field of nuclear energy.
The International Atomic Energy Agency will begin on a modest scale. But it has a great future in the development of power. It will have a vital role in research, in the disposal of atomic waste, in health, and it will promote the exchange of scientific information among Member States.

The International Atomic Energy Agency is not a cure-all. The provisions of the Statute will however serve to help bring the power of the atom under control and to direct its tremendous energy to peaceful purposes.

This Agency will serve as a world atomic bank, a store-house of the basic nuclear fuels such as U-235 and plutonium. These fuels may be made available to the Agency by the atomically advanced nations and allocated to non-military projects in member nations. The United States has offered to make available to the Agency, when it begins operation, 5,000 kilograms of U-235 and has agreed to match the contributions made by other nations until July 1, 1960.

The details of the Statute of the Agency are discussed fully in the Report of the Committee on Foreign Relations. The point I want to emphasize is that the creation of this Agency gives the world an opportunity to begin to twist the atom from a fearful path of destruction to a path of peace. We cannot expect the Agency overnight to succeed. But the creation of this instrumentality of international collaboration may give mankind a way to wrench itself free from the headlong rush toward sure disaster which has characterized war-born, atomic thinking of the past ten years.

The atomic world has become too large and its possibilities of earthly destruction are too great for us to go it alone.
Eight nations have already ratified the Statute of an Agency conceived by the United States. It is time that we were rid of an attitude of indifference, of fear, of hesitation.

It is my earnest hope that members of the Senate and the American people will support our President as he pushes ahead on the path he charted in 1953 when he submitted his "Atoms for Peace" proposal to the United Nations. He deserves our wholehearted support in this effort to develop the atom as an instrument for the welfare of all mankind.

While supporting the President in this endeavor to help mankind by promoting the peaceful uses of the atom, at the same time I urge him and his advisers to try to help mankind by demoting the fearful threat of the military use of the big bombs. The time has come when the President and his advisers must in a non-partisan, non-political atmosphere examine the premises which seem to underlie a reluctance seriously to embark on negotiations to limit by multilateral agreement the testing of big weapons of mass destruction which are already stored in deadly quantity.

There is no perfect weapon of mass destruction. The most imperfect weapon we could develop would be the one which might hurl into the atmosphere the final debris of full saturation and thus destroy that which God hath wrought.