

Lecture 5 Part 2: Eisenhower's Atoms for Peace Program

QUESTIONS TO BE ADDRESSED:

- I. Why bother with previous nuclear control initiatives?
 - II. What did the authors of the earliest initiatives—the Acheson- Lilienthal Report, Baruch Plan, and Eisenhower's Atoms for Peace Program—see as the nuclear war threat to be controlled?
 - III. How did their nuclear threat perceptions shape their views of which nuclear activities and materials were safe or dangerous and how they should be controlled?
 - IV. How sound were their nuclear threat perceptions and how best to mitigate them?
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The Next Worry After the Soviets Got the Bomb: When Might Moscow Get Enough Nuclear Weapons to Knockout the United States?



Figure 1: Russia's First Nuclear Test

After the Russians rejected the Baruch Plan, there was far less interest in promoting international control of nuclear energy. Then, the Russians tested their first nuclear device in 1949. Several months later, in April of 1950, the National Security Council in Washington produced a seminal strategy document, NSC 68.¹ This study characterized the nuclear threat facing the United States in different terms than the Acheson-Lilienthal Report. Instead of assuming the aggressor would always win, NSC 68 postulated that Russia

1. U.S. National Security Council, "NSC 68: United States Objectives and Programs for National Security," April 14, 1950, available from <https://www.mtholyoke.edu/acad/intrel/nsc-68/nsc68-1.htm>.

would only attack when it had enough nuclear weapons to knock out 100 of America's top cities. The thinking here was that America's industrial capacity enabled the United States to win against the Axis during WWII, and that it was the military industrial complex operating in these cities that would be the key target of any Soviet nuclear attack. Since U.S. intelligence believed the Soviets could only deliver about 50% of their bombs on target, the "critical date" would be when the Soviet Union got 200 fission weapons, i.e., by mid-1954.²



Figure 2: 100 Largest US Cities by Population (Anchorage, AK and Honolulu, HI not shown on map)

In light of this threat, NSC 68 considered what kind of nuclear arms control might make sense. It noted that if existing stocks of fissionable materials could in some way be eliminated and the future production of fissionable materials limited, the critical date for a Soviet nuclear attack might be put off indefinitely. It immediately noted, however, that such a control plan would effectively require destruction of all plants capable of making large amounts of fissionable material, which, in turn, would force a suspension of "those possible peacetime uses which call for large quantities of fissionable materials." It doubted the Russians would be willing to accept this unless it could be convinced that peaceful nuclear power was impractical.³

Shortly after NSC 68 was penned, the United States was drawn into a massive conventional war in Korea. This, and Soviet assistance to North Korean and Chinese forces, made progress on any nuclear disarmament negotiations remote. UN nuclear disarmament efforts were moved to a commission on general disarmament. The United States continued to push the Baruch Plan even though, with Russia's acquisition of nuclear weapons in 1949, the technical basis for doing so had largely evaporated. Truman, in his last year of office, recognized this and appointed a panel of consultants on disarmament in April of 1952 to recommend some new course of action.

2. Ibid. Section V, Part C.

3. Ibid. Section VIII, Part C.

Chaired by J. Robert Oppenheimer, the panel filed its final report to Secretary of State Dean Acheson in January of 1953.⁴ A key finding—that the nuclear threat had changed since 1946—was built upon the analysis done in NSC 68. As the panel saw matters:

The peculiar danger of the present arms race derives from the growing possibility that the two great Powers may soon be able to strike each other direct and crippling blows, the basic objective of any scheme of arms regulation should be to eliminate this capability. This is not the same thing as eliminating all atomic bombs, since it is now clear—as it was not in 1945 and 1946—that atomic bombs can be decisive only if they are delivered on the target in considerable numbers (The American requirement for a knockout atomic attack on the Soviet Union now runs well into four figures.)...It seems reasonable to say, then, that much would be achieved if it should be possible to get a reduction in the size of stockpiles and bombing fleets such that neither side need fear a sudden knockout from the other. Such a reduction would not give assurance against the use of atomic weapons, but it would give protection against the danger of a surprise knockout blow, and this is the danger which is so critically important in its political meaning for both the United States and the Soviet Union.⁵

When might the Soviet Union acquire enough bombs to knockout America's military industrial complex—its 100 largest cities? The panel could not pinpoint a precise date. It instead recommended continental air defenses be built to increase the number of weapons the Soviets would need to accomplish this task:

it will be a pleasant surprise if the defense is ever able to knock down or deflect as many as four out of five of the attackers, and at present we should be lucky to get one in five...Even a combination of the most optimistic assessments leads to the theoretical conclusion that, if she is willing and able to build a sufficient strategic air force, the Soviet Union may be able to destroy our economy beyond the hope of recovery when she has 15,000 atomic bombs, while she might well have this ability when she has as few as 600. The lower figure might be reached in a few years, and the upper is not out of reach within the next two decades.⁶

This was hardly precise but, as the panel saw matters, it was a start.

4. "Report by the Panel of Consultants of the Department of State to the Secretary of State," Washington, January 1953, in *Foreign Relations of the United States, 1952-1954*, Vol. II, Part 2, National Security Affairs, Document 67, available from <http://history.state.gov/historicaldocuments/frus1952-54v02p2/d67>.

5. Ibid. Annex I: Some Possible Characteristics of a Realistic Agreement on the Regulation of Armaments.

6. Report, Part II, Section A.

The Need for More Nuclear Candor

The panel explained that the worry now was that the Soviets, or even the United States, might be tempted to launch a preventative war to keep the other side from acquiring a decisive “knockout blow” stockpile “only to find out that the time for such a blow had already passed.” Since the “coming of such a world will be gradual and since its coming may or may not be correctly estimated in all countries,” grave miscalculations were quite possible.⁷ Adding to these uncertainties, the panel noted the possibility of the Soviets mastering how to make much more potent thermonuclear weapons. These thermonuclear weapons were two to three orders of magnitude more explosive than fission weapons. For all these reasons, the panel recommended that the next president be more concerned about what America had in the way of nuclear arms and the nature of the new nuclear competition, and share this information with the Soviets and the American public. As for any controls to limit nuclear fissionable stockpiles or production, the panel concluded that these would have to be verified in a nonintrusive fashion, otherwise, like the Baruch Plan, the Russians were likely to reject it.

Upon completion of the report, Oppenheimer briefed Eisenhower's new team. He also published some of the panel's findings in an article that published in the July edition of *Foreign Affairs*.⁸ President Eisenhower instructed his staff to produce a series of presidential speeches to lay out all the key nuclear facts. Preparation of this speech series was code named “Operation Candor.” The effort was headed up by CD Jackson, a former Office of Strategic Services operative and senior official at Time Life who had left his post as publisher of *Fortune* magazine in 1952 to become Eisenhower's advisor for psychological warfare. The operation also was staffed with the assistance of Lewis Strauss, a well-known lawyer who became Eisenhower's pick to run the Atomic Energy Commission. Eisenhower gave the first of this speech series on April 16, 1952. In his “Chance for Peace” address to the American Society of Newspaper Editors, he suggested



Figure 3: C.D. Jackson: Eisenhower's Psychological Warfare Advisor

7. Ibid.

8. Oppenheimer shared an advanced draft of this article with the White House in the spring of 1953. See J. Robert Oppenheimer, “Atomic Weapons and American Policy,” *Foreign Affairs* 31, no. 4, July 1953, available from <https://www.foreignaffairs.com/articles/united-states/1953-07-01/atomic-weapons-and-american-policy>.

reaching a number of arms reduction agreements that included an agreement on the international control of atomic energy that would allow the world to develop nuclear energy only for peaceful purposes. He gave few specifics, however, on how to proceed.⁹

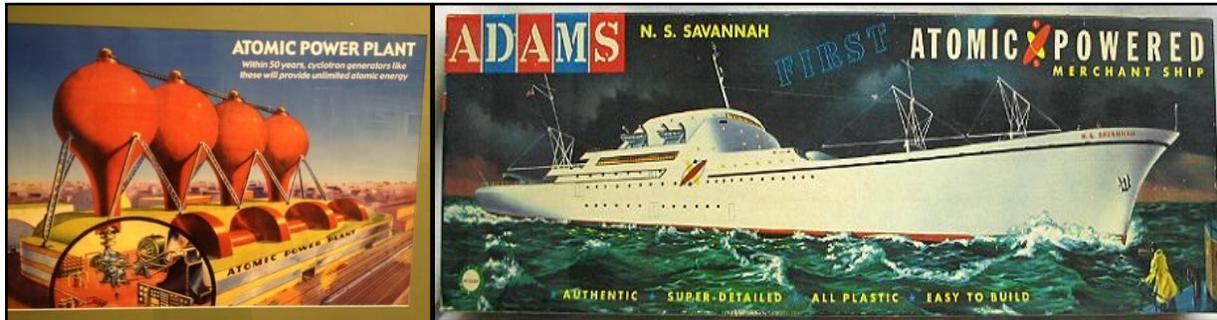


Figure 4: An Imagined Peaceful Nuclear Future

Numerous additional draft speeches were written warning the public of the nuclear dangers that lay ahead, but Jackson and others found them to be too grim—Eisenhower never presented them. Then in August of 1953, the Soviet tested their first large nuclear weapon that attempted a type of boosting. It had a yield of 0.4 megatons, 20 times greater than that of the first weapon the Soviets exploded in 1949. This development put Eisenhower on edge. The Panel of Consultants on Disarmament report noted that the Soviets' development of thermonuclear weapons would only move up the date that Moscow might acquire the ability to knockout 100 of America's top cities. Eisenhower knew that Moscow's development of advanced fission weapons was the first step toward acquiring a true thermonuclear weapon.

In August of 1953, Eisenhower hit upon the idea of creating an international fuel bank that the United States and Russia could both contribute to to help promote civilian uses of nuclear energy globally. What seemed attractive about this approach was that the United States had far more fissionable material and production plants than Russia. As a result, the United States could contribute without losing its nuclear superiority over Russia whereas this plan would force Russia to make large fissionable material contributions to the proposed bank, preventing it from ever acquiring a “knockout blow” capability. Nor did this plan require strict, intrusive nuclear inspections on Soviet or U.S. soil. It was what Eisenhower and, later, his staff, referred to as “Baruch by the backdoor.”¹⁰ Finally, the proposal had the advantage of being so attractive

9. Dwight D. Eisenhower, “The Chance for Peace,” address delivered before the American Society of Newspaper Editors, Statler Hotel, Washington, DC, April 16th, 1953, available from <https://millercenter.org/the-presidency/presidential-speeches/april-16-1953-chance-peace>.

10. Thomas F. Soapes, “A Cold Warrior Seeks Peace: Eisenhower’s Strategy for Nuclear Disarmament,” *Diplomatic History* 4, no. 1, January 1980, pp. 57-72.

to the undeveloped world, that the Soviets would pay a heavy political price if they failed to participate. It seemed a win-win-win proposition no matter what the Soviets actually did.

Atoms for Peace

Eisenhower contacted Lewis Strauss to ask if there might be a way to render any fissionable material contributions to the bank safe against military diversion. Strauss got back with a scheme for diluting the fissionable material in liquids so that it would take a super tanker full of the solution just to make a single bomb. He warned Eisenhower, however, that the bank idea would not put off the knockout blow threat by much if the Soviets perfected true hydrogen bombs. Unlike atomic bombs, hydrogen bombs only need a fraction of the amount of fissionable materials to produce a given number of high-yield nuclear bombs.¹¹

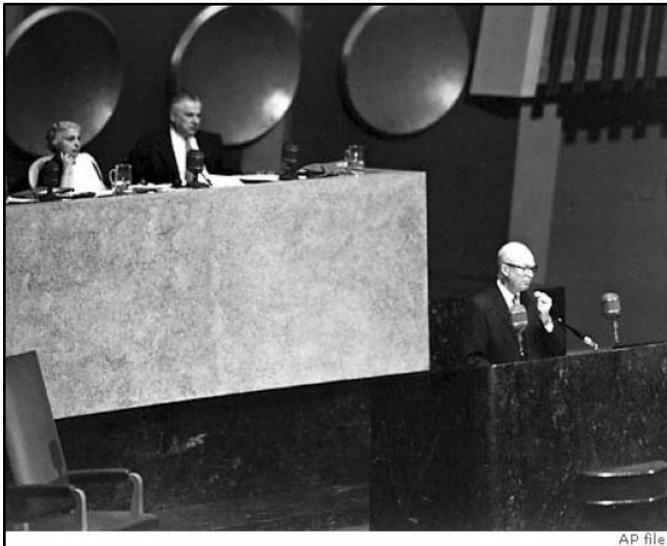


Figure 5: Eisenhower's Atoms for Peace UN Speech

Eisenhower, however, was not deterred. He pushed his staff to develop the idea into a UN General Assembly speech that is now known as the Atoms for Peace Proposal, which Eisenhower gave at the UN on December 8, 1953.¹² In this speech, Eisenhower described how the U.S. arsenal exceeded many times over the total of all the explosives detonated in the Second World War. He then noted that the nuclear secret was now one that the Soviets shared but that even a "vast superiority in numbers of weapons, and a consequent capability of devastating retaliation, is no preventive of itself against the fearful material damage" that would be inflicted by surprise attacks. He also warned that although the United States would push continental air defenses, an aggressor "in possession of the effective minimum number of atomic bombs for a surprise attack" could cause hideous damage even

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11. Sokolski, p. 27.

12. Dwight D. Eisenhower, "Atoms for Peace," address to the 470th Plenary Meeting of the United Nations General Assembly, New York, December 8, 1953, available from <https://www.eisenhowerlibrary.gov/research/online-documents/atoms-peace>.

against the most defended of nations. The United States could surely retaliate, but devastation would only be returned with more devastation.¹³

He then offered his plan. The United States was prepared to engage in disarmament discussions called by the UN, but that was not enough, he argued, to “hasten the day when fear of the atom will begin to disappear from the minds of people.”¹⁴ Instead, he proposed that the governments “principally involved...begin now and continue to make joint contributions from the stockpiles of normal uranium and fissionable materials to an International Atomic Energy Agency.”¹⁵

The IAEA would be established under the UN with the ratios of contributions to be set in private talks. A special purpose of the agency, Eisenhower explained, would be to “provide abundant electrical energy in the power-starved areas of the world.”¹⁶

When U.S. officials entered into private talks with the Soviets in Moscow in March of 1954, though, they encountered considerable skepticism. How, the Russians asked, could the United States expect to reduce the spread of nuclear weapons if it shared the nuclear technology and fuels needed to build and operate power reactor piles that would only produce more plutonium that could be used to make bombs?¹⁷ On this, the Russians had a point.

Eisenhower and Strauss had devised a way to prevent materials contributed to the international agency from being easily diverted to make bombs. But they had given no consideration to how one might prevent the diversion of plutonium from power plants that the agency was supposed to help developing nations build and operate.

13. Ibid.

14. Ibid.

15. Ibid.

16. Ibid.

17. Sokolski, p. 30. Also, on the link between civil nuclear sharing and nuclear weapon proliferation, see, e.g., Matthew Fuhrmann, “Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements,” *International Security* 34, no. 1, Summer 2009, pp. 7-41, available from http://www.belfercenter.org/sites/default/files/legacy/files/IS3401_pp007-041_Fuhrmann.pdf and Albert Wohlstetter, “Spreading the Bomb Without Quite Breaking the Rules,” *Foreign Policy* 25, Winter 1976, pp. 88-94, available from http://www.npolicy.org/userfiles/image/Spreading%20the%20Bomb%20Without%20Breaking%20the%20Rules_pdf.pdf.

To address this additional set of concerns, the State Department's Office of Policy Planning under the direction of Robert Bowie conducted a study.¹⁸ The report recommended that the proposed IAEA create and operate multilateral fuel making centers to keep developing states from separating plutonium from spent reactor fuel and from enriching uranium. This suggestion was sound in theory, but the IAEA had not yet been created, and having it run such centers seemed quite ambitious as only the United States, France, the UK, and the Soviet Union knew how to reprocess or enrich nuclear materials.



Figure 6: Robert Bowie: Led Atoms for Peace Implementation Study

Doubling Down

To encourage the Russians to accept the plan, the United States proposed an international conference in Geneva in 1955 to share and promote peaceful atomic technology. The United States tried to trump the Soviets by displaying a small zero power research reactor at the event. The French, however, bested the United States and the Soviets by sharing all they knew about extracting plutonium from spent reactor fuel. This helped turn the Atoms for Peace Program from a “peaceful” nuclear technology sharing effort into an exchange that subsequently assisted states, in their efforts to make nuclear weapons, including India, Pakistan, Israel, South Korea, North Korea, Iran, Iraq, Syria, and Taiwan.



Figure 7: Atoms for Peace Geneva Conference

18. Ibid., pp. 30-31.



**Figure 8: James Wadsworth:
U.S. Ambassador to the UN**

When it came time to negotiate the creation of the IAEA the following year, U.S. Ambassador James Wadsworth tried to limit such diversions by proposing provisions that would require states that received IAEA power reactor assistance to surrender their plutonium-laden spent fuel over to the IAEA for safekeeping. The Indians, Russians, and other developing nations, however, objected, the talks stalled, and Washington instructed Wadsworth to fold.¹⁹

What was behind this instruction? First, Eisenhower had a clear desire not to do anything to jeopardize the creation of the IAEA in order to keep the momentum of his Atoms for Peace dream going. As a “logical projection and follow through” to the Atoms for Peace program proposal of 1953, the President had just proposed that the United States and Russia agree to a fissile material production cutoff that the IAEA might eventually monitor and verify. Without an IAEA, though, this proposal would seem empty.²⁰

Second, the proliferation problems associated with power production seemed distant at best. Eisenhower himself was doubtful that economical nuclear power was possible and, that even if it was, it was unlikely to be developed for another decade or more. As such, there seemed to be plenty of time to deal with the proliferation problem later.

Third, and most important, was the Eisenhower administration's understanding of what the nuclear threat was, which the IAEA was designed to help prevent. It was not the further spread of nuclear weapons to new states per se, but rather to help put off the date by which existing nuclear states—i.e., Russia—might acquire the hundreds of nuclear weapons needed to strike the United States with a decisive, “knockout blow”—i.e., with enough weapons on target to destroy 100 of America's top urban centers.

As Secretary of State Dulles explained in 1956 before Congress, the main attraction of the Atoms for Peace Program and Eisenhower’s Fissile Material Cut-off Treaty was both would help prevent the Soviets from ever acquiring a fissile stockpile large enough to launch “a completely devastating attack” against America’s mobilization base—a knockout blow against its 100 largest cities. The Secretary of Defense and the Chairman of the Joint Chiefs concurred.²¹

19. Ibid, p. 31.

20. Ibid.

21. Ibid, pp. 31-32.

This high nuclear threat threshold directly affected how tight proposed IAEA safeguards needed to be. Congressional arms control hearings held in 1957 and 1958 on proposed IAEA safeguards actually established that:

- no verification or nuclear safeguard procedures were available to prevent all diversions
- the new IAEA would only likely detect military nuclear diversions sometime **after** they occurred
- as much as 10 percent of nuclear fuel production could easily go unaccounted for even under strict inspections
- as much as two percent of the power and research reactor spent fuel was likely to go unaccounted for
- this would be equivalent to many bombs worth of plutonium and uranium²²

To varying degrees, all of these points are among the current deficiencies of the IAEA inspection system today. Inspection of nuclear bulk handling facilities—fuel fabrication plants, hexafluoride conversion plants, enrichment and reprocessing facilities—all lack the ability to provide timely warning of military diversions, i.e., they are most likely to detect diversions only after they have occurred, too late to afford sufficient time to intervene to prevent bombs from actually being made. Also, for these facilities, inspections are likely to miss many bombs' worth of nuclear material altogether—between one and five percent of production throughout per year.²³

22. Ibid.

23. See, For more on the effectiveness of IAEA safeguards, see, e.g., Henry Sokolski, "Assessing the IAEA's Ability to Verify the NPT," in *Falling Behind: International Scrutiny of the Peaceful Atom*, ed. Henry Sokolski, Carlisle, PA: Strategic Studies Institute, 2008, pp. 3-61, available from <http://www.npolicy.org/userfiles/file/Falling%20Behind-Chapter%201.pdf>; Thomas Cochran, "Adequacy of IAEA's Safeguards for Achieving Timely Detection," in *Falling Behind: International Scrutiny of the Peaceful Atom*, ed. Henry Sokolski, Carlisle, PA: Strategic Studies Institute, 2008, pp. 121-157, available from http://www.npolicy.org/userfiles/image/s%20Safeguard%20for%20Achieving%20Timely%20Detection_pdf.pdf; Edwin Lyman, "Can Nuclear Fuel Production in Iran and Elsewhere be Safeguarded Against Diversion?," in *Falling Behind: International Scrutiny of the Peaceful Atom*, ed. Henry Sokolski, Carlisle, PA: Strategic Studies Institute, 2008, pp. 101-120, available from http://www.npolicy.org/userfiles/image/Can%20Fuel%20Production%20in%20Iran%20and%20Elsewhere%20Be%20Safeguarded_pdf.pdf; Olli Heinonen, "IAEA Inspections in Perspective," working paper, Nonproliferation Policy Education Center, May 21, 2012, available from <http://www.npolicy.org/article.php?aid=1180&rt=&key=olli%20heinonen&sec=article&author=>; Charles Duelfer, "The Inevitable Failure of Inspections in Iraq," *Arms Control Today* 32, no. 6, September 2002, available from https://www.armscontrol.org/act/2002_09/duelfer_sept02; Susan Voss, "Tracking Nuclear Proliferation within a Commercial Power Program," Working Paper No. 1301, Nonproliferation Policy Education Center, January 2013, available from <http://www.npolicy.org/article.php?aid=1191&rt=&key=master%20syllabus&sec=article&author=>; Patrick Roberts, "Can IAEA Safeguards Work if Nuclear Power Grows?" working paper, Nonproliferation Policy

Although few in or outside of government understand this today, back in the late 1950s, more than a few U.S. government officials not only understood this, but also rationalized it, arguing that such nuclear safeguards gaps were tolerable since no country would ever attack the United States unless it had acquired enough nuclear weapons to deal a devastating “knockout blow.” As U.S. UN ambassador Harold Stassen freely admitted in explaining Atoms for Peace and nuclear safeguards before the UN:

It would be perfectly possible, even under the most effective controls, for some...future government...to take away and divert without the knowledge of the inspectors, a quantity of fissionable material from which 20, 40, or even 50 multi-megaton bombs could be fabricated [but having] 100 percent perfection of inspection or accountability [was not necessary as] long as there does exist on various sides of the world a remaining nuclear capability, there would not be the incentive for relatively minor diversion into unauthorized weapons. Nor would there be the terrible consequences if there were relatively minor diversions for a few weapons; because those few weapons would be restrained, canceled out and deterred by the remaining capability in the hands of nations on various sides.²⁴

Mistaken Premises

This view, however, was twice mistaken.

As is the case today, Russia’s and America’s prime nuclear targets were not 100 key American or Russian cities, but instead the strategic nuclear forces of each country. In the United States, Curtis LeMay, head of Strategic Air Command (SAC), assumed that the United States could always deliver a “Sunday Punch” against the Soviets just as soon as it got wind of a possible Soviet attack (in as little as 30 minutes). This quick response bordered on preventative or preemptive war. Yet, it helped sustain the notion that the United States could deter a Soviet attempt to deliver a knockout blow against America’s military-industrial urban complex. So long as the Soviets had a clear reason to believe that the United States could deliver a knockout blow against Russian cities, LeMay reasoned, Moscow might never strike ours.

Education Center, June 14, 2012, available from <http://www.npolicy.org/article.php?aid=1186&rt=&key=patrick%20roberts&sec=article&author=>; and Nonproliferation Policy Education Center, “International Nuclear Inspections: Can the IAEA Safeguard Civil Nuclear Energy from Being Diverted to Bomb-Making?” NPEC Background Memo No. 1, September 2008, available from <http://nuclearpolicy101.org/wp-content/uploads/2012/11/IAEA-Safeguards-Backgrounder.pdf>.

24. Ibid, pp. 32, see, in same, note 36.

As noted in the earlier discussion of deterrence, however, the tornado that hit Carswell air force base on September 1, 1952, demolished these assumptions. The base had nearly two hours warning of the incoming storm, but SAC was unable to get any of its fleet off the ground. Two-thirds of the SAC fleet—more than 80 SAC bombers—were damaged. Any notion that SAC would swiftly deliver a “Sunday Punch” as soon as there was an inkling of a Soviet attack no longer seemed tenable. Worse, SAC began to understand, for the first time, that its own force was vulnerable to a surprise attack.²⁵



Figure 9: Tornado Damaged Carswell Air Force Base

Actually, all the Soviets had to do to defeat the United States was to destroy roughly 30 SAC bases that were operational in the 1950s. Not a Soviet arsenal of hundreds of nuclear weapons targeted against 100 American cities, but perhaps an arsenal of no more than 120 weapons targeted against SAC’s vulnerable bases might produce victory.²⁶ In one study, RAND concluded that the Soviets could destroy two-thirds of the SAC force with as few as 50 bombs. By these measures, as well as the estimates made in NSC 68, the Soviets already had the ability to take the United States out with its nuclear arsenal.

RAND began briefing SAC on how to reduce the vulnerability of America's fleet to surprise attack in the early 1950s and SAC began to take RAND’s key recommendations early on. Several attempts were made to brief Eisenhower and his cabinet on these points, but he never received it (according to the lead RAND briefer, this was due to Eisenhower’s keen interest in playing golf). Had the president or these officials received the brief, they might have dropped their preoccupation with “knockout blow stockpiles” and “critical dates.”

In any case, the Eisenhower administration focused on a mistaken nuclear threat which presumed that the only threatening nuclear force was one that consisted of many hundred warheads aimed against a target set (in this case, cities). This threat was relevant, at best, in the 1930s and 40s, but not the Cold War era. As a result, the authors of the Atoms for Peace Program were willing to tolerate the possible diversion of scores of nuclear weapons from civilian activities or materials to the production of nuclear weapons.

25. Fred Kaplan, *The Wizards of Armageddon*, Stanford, CA: Stanford University Press, 1991, pp. 101-103.

26. Albert Wohlstetter, Frederic Hoffman, Robert Lutz and Henry Rowen, *Selection and Use of Strategic Air Bases*, R-266, Santa Monica, CA: RAND Corporation, April 1954, pp. x, xxiii.

This, in turn, colored the view of what were safe and dangerous nuclear activities. Unlike the Acheson-Lilienthal Report, which viewed plutonium reprocessing and reactors (including heavy water, fast reactors, and graphite moderated piles) as being dangerous and prohibited nations from owning, the Atoms for Peace Program actively spread such technologies. The Eisenhower administration did this mistakenly presuming that if they had a conceivable “peaceful” purpose, their proliferation would produce an arms control dividend. As for uranium enrichment, Atoms for Peace assumed no one would master it. This turned out to be wrong. Compounding these errors, the Atoms for Peace Program’s preoccupation with only massively large diversions of nuclear materials made relatively lax IAEA safeguards goals seem reasonable.

The more military analysts thought about nuclear war, in the mid to late-1950s, though, the more they viewed even the proliferation of one or only a small number of nuclear weapons as worrisome. Ambassador Wadsworth understood this as early as 1956 when he publicly admitted that the proliferation of even one nuclear weapon could “easily ignite a nuclear conflagration” and that the controls initially afforded to the IAEA were insufficient to prevent this.²⁷

What Ambassador Wadsworth was most concerned with was the threat of catalytic war. Under this scenario, two smaller nations allied with larger, opposed nuclear-armed super powers might begin a conventional war between themselves that might prompt the superpowers to resort to nuclear war. Also, if one of these smaller states had just one nuclear weapon and threatened to use it against its opponent or its nuclear armed ally, this could well lead to a major nuclear exchange. Also, there was the threat that accidental or unauthorized nuclear use of only one or a few nuclear weapons might ignite a nuclear World War III. Atoms for Peace was all too blind to either worry.

Conclusion

Having incorrectly assessed the nuclear threat we faced and mistaken what sort of nuclear controls were required to prevent it, Eisenhower’s Atoms for Peace program is perhaps America’s most egregious nonproliferation failure.²⁸ At the time, Oppenheimer assessed the program’s connection to nuclear disarmament to be “allusive” and “sentimental.” Later, in 1966, Leonard Beaton, was less charitable, concluding that Eisenhower’s Atoms for Peace Program was

27. Sokolski, p. 33.

28. For an analysis of the outcome of the Atoms for Peace Program, see, e.g., Joseph Pilat, ed., *Atoms for Peace: An Analysis after Thirty Years*, Boulder, CO: Westview Press, 1985.

one of the most inexplicable political fantasies in history. Only a social psychologist could hope to explain why the possessors of the most terrible weapons in history should have sought to spread the necessary industry to produce them in the belief that this could make the world safer²⁹

As Mr. Beaton noted, more nonproliferation would be needed sooner rather than later because of it.

29. Leonard Beaton, *Must the Bomb Spread?*, Baltimore: Penguin Books, 1966, pp. 88–89.