

NUCLEAR BONDS: ATOMS FOR PEACE IN THE COLD WAR AND IN THE NON-
WESTERN WORLD

THESIS

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By

Craig Doyle Nelson, B.A.

History Graduate Program

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Master's Examination Committee

James R Bartholomew, Advisor

Robert J. McMahon

Kevin Boyle

ABSTRACT

This paper examines the origins of the Atoms for Peace program and its implementation in the non-Western world, with specific case studies of Brazil, India and Japan. It argues that although the program was developed as a means of starting a process nuclear disarmament and improving relations with the Soviet Union, President Eisenhower's inability to control the implementation of the program led to Atoms for Peace being used for propaganda purposes, as a means of securing nuclear raw materials and other Cold War diplomatic objectives, and to improve foreign relations with neutral and allied countries. Ultimately, bureaucratic infighting and Cold War reality made Atoms for Peace fail in its original objectives and actually increased tensions with the Soviet Union.

To my parents,
in case they ever read this.

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VITA

August 23, 1982 Born – Utica, New York
2000 – 2004 B.A., Utica College
2004 – 2005 Japanese language training,
Cornell University
2005 – 2009 Graduate Teaching Associate,
The Ohio State University

FIELDS OF STUDY

Major Field: History

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INTRODUCTION

On December 8, 1953, President Dwight D. Eisenhower, made a major speech to the General Assembly of the United Nations, in which he outlined a policy that would be dubbed “Atoms for Peace” by the press. That December day was the twelfth anniversary of the United States’ declaration of war against Japan, which, in many ways, started the United States on the path to the development of nuclear weapons. The significance of the day was not lost on the President, who invoked that war in explaining the dangers of atomic warfare by commenting, “Today, the United States’ stockpile of atomic weapons, which, of course, increases daily, exceeds by many times the explosive equivalent of the total of all bombs and all shells that came from every plane and every gun in every theatre of war in all of the years of World War II.”¹

But, “to pause there,” the President continued, “would be to confirm the hopeless finality of a belief that two atomic colossi are doomed malevolently to eye each other indefinitely across a trembling world.” To resolve the nuclear stalemate, Eisenhower argued, “It is not enough to take this weapon out of the hands of the soldiers. It must be put into the hands of those who will know how to strip its military casing and adapt it to the arts of peace.” With this speech, the President initiated a major program, which came to share the name of Eisenhower’s speech: Atoms for Peace.

¹ Dwight D. Eisenhower, “Peaceful Uses of Atomic Energy,” in *The World’s Great Speeches*, Lewis Copeland and Lawrence W. Lamm, eds. (New York: Dover Publications, 1973), pp. 607-610.

Atoms for Peace served as shorthand for a number of programs intended to spread the peaceful uses of the nuclear physics around the world by demonstrating its usefulness to the world, particularly in the fields of medicine and energy generation. The program included setting up test reactors in foreign countries, training technicians, and providing nuclear materials for countries without the capacity to refine their own. Its purpose was to facilitate an atmosphere conducive to increased communication between East and West, and to decrease the number of nuclear weapons held by both sides in order to facilitate peace.

Although the Atoms for Peace speech was well received and the program gained wide acclaim throughout much of the world, the program was not so popular with various elements of the United States government, even before its announcement before the General Assembly. In his speech, Eisenhower proposed the concept of an International Atomic Energy Agency (IAEA), which would function as an atomic “bank” to provide access to fissionable materials for nuclear projects around the world. The theory was that the United States and the Soviet Union would make matching contributions to the IAEA; at first these would be small in scale, until the two superpowers became confident in the system, and then contributions would increase in size until each side had to dismantle its nuclear weapons in order to continue. Lewis Strauss, who became the chairman of the Atomic Energy Commission (AEC) in 1953, disapproved of the program upon initially hearing the President’s proposal, asserting that it would never work. The Department of State was supportive of negotiations, but favored a less public approach than that taken by Eisenhower; State argued that private negotiations with the Soviets over disarmament

would be more productive.² The Joint Chiefs of Staff (JCS) and the Department of Defense disapproved of the program because it went against Eisenhower's own emerging military policy, the New Look, which relied on large numbers of nuclear weapons to keep the costs of a standing military to a minimum.

Despite the objections of the Departments of State and Defense, the Atomic Energy Commission, and the Joint Chiefs of Staff, Eisenhower insisted that his advisers continue working on the plan. The President, his special assistant C.D. Jackson, Secretary of State John Foster Dulles, Defense Secretary Charles Wilson, Deputy Defense Secretary Roger Keys of the Department of Defense, and Lewis Strauss developed the Atoms for Peace speech, isolated from their respective agencies. Historian Roger Hewlett argues that since the program was developed secretly, those at the sub-secretarial level who were responsible for implementing the program were left with limited knowledge of the President's plans and purposes. Hewlett uses these facts to argue that President Eisenhower had a great deal of influence over the formation of the Atoms for Peace program, and that it was through his leadership that the Atoms for Peace came to exist in the first place.³ The implementation of Eisenhower's plan, however, allowed mid-level officials with conflicting interests to alter the policy as it was put into practice

² "Eisenhower, Atomic Weapons and Atoms for Peace" by Robert R. Bowie, in *Atoms for Peace: an analysis after thirty years* eds. Joseph Pilat, Robert Pendley, and Charles Ebinger (Boulder: Westview Press, 1985), p. 22.

³ Richard G. Hewlett, "From Proposal to Program" in Pilat, *Atoms for Peace*, p. 150. This argument is carried over to Hewlett's work with Jack Holl; Richard Hewlett and Jack Holl. *Atoms for peace and war, 1953-1961: Eisenhower and the Atomic Energy Commission* (Berkeley: University of California Press, 1989), p. 658.

Although it is clear from the rhetoric of Eisenhower's speech to the General Assembly, and substantiated by evidence from his diary and personal correspondence,⁴ that the President's proposal was designed to increase positive interaction between the United States and the Soviet Union, and eventually to decrease nuclear arms stockpiles, it did not have the intended effects. In reality, Atoms for Peace led to an increase in Cold War tensions. Advisers who focused on pragmatic, Cold War concerns managed to shift American policy, both before and during the implementation of the Atoms for Peace program, away from arms control. Rather than being used to promote disarmament, an aim that was officially abandoned in 1955, the program became primarily a propaganda vehicle, a way to build alliances, and to achieve a variety of foreign policy objectives, most concerning positioning and posturing in the Cold War. This focus on Cold War objectives actually served to increase Cold War tension by increasing the focus on building alliances and providing a site of contestation for the propaganda war. By delegating the actual implementation of the Atoms for Peace program to subordinates with conflicting interests, the President failed to meet his original objectives: disarmament and decreasing Cold War tensions, and actually made these problems even more intractable.

Contemporary observers and scholars have viewed the Atoms for Peace program in several different ways. There are three general categories of interpretation of the program: it was designed to decrease nuclear stockpiles, it was an idealistic giveaway

⁴ Bowie, in Pilat, *Atoms for Peace*, p. 23.

program with no practical application,⁵ or it was a propaganda ploy to counter Soviet arguments that the United States was only interested in the destructive capacity of nuclear technology. As noted above, in his speech to the UN General Assembly and in his private correspondence, President Eisenhower indicated that the program was designed to decrease the number of nuclear weapons in the world by providing an alternative use for uranium and plutonium. This interpretation is at least mentioned in every analysis of Atoms for Peace, and deservedly so, because it was Eisenhower's stated primary concern. But it is often challenged because the program did not have the desired effects.

The argument that Atoms for Peace was strongly rooted in the need for a propaganda victory against the Soviet Union remains popular. Some scholars, however, have attacked the propaganda approach, calling it a myth.⁶ But the propaganda approach is solidly rooted in the documentary evidence, and it is strongly advocated by Kenneth Osgood, Ira Chernus, Martin Medhurst, all of whom argue that policy makers were well aware of the propaganda implications of their actions.⁷ Considering the frequency with which Eisenhower's advisers discussed propaganda issues, the real debate should be over the degree to which propaganda concerns influenced the President and other important decision-makers relative to other goals, such as arms control.

⁵ For example, Senators John Bricker, William Knowland, and Bourke B. Hickenlooper are on the record as being worried that the program was a "giveaway." See Holl, "The Peaceful Atom: Lore & Myth," in Pilat, *Atoms for Peace*, p. 157.

⁶ Holl, "The Peaceful Atom" in Pilat, *Atoms for Peace*, p. 149-151.

⁷ Kenneth Osgood, *Total War: Eisenhower's Secret Propaganda Battle at Home and Abroad*, (Lawrence: University of Kansas Press, 2006); Ira Chernus. *Apocalypse management : Eisenhower and the discourse of national insecurity*, (Stanford : Stanford University Press, 2008); Martin Medhurst, "Atoms for Peace and Nuclear Hegemony: the Rhetorical Structure of a Cold War Campaign," *Armed Forces and Society*, Vol. 23, Nov. 4, Summer 1997, pp. 571-583.

Atoms for Peace has also been characterized as an idealistic giveaway program. This point of view was strongly expressed in the contemporary criticism of Joseph McCarthy, the junior Senator from Wisconsin, whose name was at that same time becoming identified with modern witch-hunts. McCarthy led the Republican charge against Atoms for Peace. He argued that Atoms for Peace would achieve no foreign policy objectives, and was actually dangerous because it would put fissionable material in the hands of foreign entities that could reprocess the spent uranium to produce weapons-grade plutonium. He went so far as to call the program “insane.”⁸ This line of argument was picked up by scholars who fault Atoms for Peace as a failed policy that contributed to nuclear arms proliferation.

There are important holes in the current historiography of Atoms for Peace. There is a strong tendency for Atoms for Peace scholarship to be Eurocentric, with most analyses ignoring American policy toward the non-Western world.⁹ As a result of this approach, the role of important uranium and thorium supplying nations, such as Brazil and India, are shortchanged in the analysis of issues such as the formation of the IAEA. The issue of needing suppliers of raw materials necessary for nuclear research and development is all but dismissed in works such as Holl and Hewlett, who argue that these raw materials were only important during the early years of the program and thus do not deserve attention.¹⁰ This line of reasoning ignores the importance of uranium suppliers to

⁸ “The Voice of America is Changing its Tune” Dana Adams Schmidt. *New York Times* Aug 7, 1955. E4; “Ike’s Atomic Proposal Hit by M’Carthy” Frank Hughes. *Chicago Daily Tribune*. Feb 10 1957, p.1.

⁹ There are, of course, exceptions to this generalization. See, for example, Marcelo Alonso, “The Impact in Latin America” in Pilat, *Atoms for Peace*. Most scholarly works that debate the origins and general policy of Atoms for Peace, however, do not look extensively at the role of the Third World.

¹⁰ Holl and Hewlett, *Atoms for War and Peace*.

the formation of the Atoms for Peace program and the IAEA, and in doing so obscures issues central to American policy.

Discussion of the Atoms for Peace program also touches on issues connected with the historiography of President Eisenhower's administration. There are three main schools of thought concerning Eisenhower's presidency. The traditional school views Eisenhower as a rather mediocre president who accomplished very little and liked playing golf more than working. Starting in the early 1980's, following Stephen Ambrose's widely-read reevaluation of Eisenhower, scholarship on the President tended toward what became known as "Eisenhower revisionism." This school argues that Eisenhower was a strong, effective leader whose "hidden hand" style of leadership allowed him to form American policy without opening himself to public criticism.¹¹ Most of the scholarship on Atoms for Peace was written under the influence of the traditional or revisionist school. Jack Holl and Richard Hewlett, two of the official historians for the Department of Energy, whose books on the Atoms for Peace program and the AEC are among the best scholarship on the subjects, are both avowedly Eisenhower Revisionists. Holl, as mentioned above, goes out of his way to show how significant Eisenhower's leadership was in the formation of American atomic policy. Most notably, he argues that Eisenhower went against the advice of almost all of his advisers to start the Atoms for Peace program.

¹¹ For a more complete analysis of the traditional school and Eisenhower Revisionism, see "Eisenhower Revisionism: the Scholarly Debate" by Stephen Rabe in *America in the World: The Historiography of American Foreign Relations since 1941*, ed. Michael Hogan (Cambridge: Cambridge University Press, 2004).

There has been significantly less work on Atoms for Peace as reflecting the Eisenhower Post-Revisionist school, the perspective which criticizes Eisenhower's policy for being overly focused on Cold War objectives.¹² Tor Egil Forland argues that Eisenhower's famous "hidden-hand" policy meant that he "failed to grasp the reins of power at all levels" leading to a loss of policy control to the bureaucracy, which could divert policy away from the direction that the President intended.¹³ This paper will argue in the Post-Revisionist tradition, contending that Cold War concerns overwhelmed almost all other policy considerations. It also proceeds along the lines of Forland's argument that Eisenhower did not entirely control his foreign policy, suggesting that his lack of control led US atomic policy in directions different from those he originally intended. By utilizing this approach, I am able to show how competing and seemingly contradictory explanations of the Atoms for Peace initiative can be synthesized. It also allows me to examine the limits of power; although Eisenhower was able to force his advisors to adopt his policy, in implementing it, his advisors were able to shape it in such a way as to suit their own purposes. I attempt to trace the influences on the program, and show how it

¹² Peter Hahn, for example, argues that Eisenhower's policy during the Suez Crisis was primarily motivated by a desire to avoid conflict with the Soviets, and was not a principled stand against French and British imperialism. Robert McMahon argues that Eisenhower feared Third World nationalism, which the President often conflated with Communism, and thus supported authoritarian regimes to avoid the spread of Communist influence.

¹³ Tor Egil Forland. "'Selling Firearms to the Indians': Eisenhower's Export Control Policy, 1953-1959." *Diplomatic History* 15 (Spring 1991): pp. 221-244.

shifted from an arms-control plan to one focused on the construction and maintenance of alliances, the acquisition of raw materials for nuclear technology, and the development of a propaganda campaign that was central to the Cold War.¹⁴

¹⁴ This approach is very much in line with Melvyn Leffler's explanation of the course of the Cold War during the Truman administration. Leffler argues that the United States was motivated by issues of power, seeking to control foreign countries in order to obtain "a preponderance of power" because to do otherwise would invite defeat. See Melvyn Leffler, *A Preponderance of Power: National Security, the Truman Administration, and the Cold War* (Stanford: Stanford University Press, 1992). Along those lines, the Eisenhower administration goals of maintaining alliances, obtaining raw materials, and achieving other foreign policy objectives were largely driven by a pursuit of power in order to win position in the Cold War.

CHAPTER 1

THE ORIGINS AND DEVELOPMENT OF ATOMS FOR PEACE

Pre-Atoms for Peace Nuclear Technology Exchange

America's policies on sharing nuclear technology did not, in fact, begin with Atoms for Peace in 1953. The first agreements on the sharing of nuclear technology began an entire decade before Eisenhower's speech, during the Second World War when the United States, the United Kingdom, and Canada signed the Quebec Agreements on August 19, 1943. Under these agreements, the British and Canadians agreed to give the United States all of their research on nuclear technology and allow their programs for developing nuclear bombs to be subsumed by the American Manhattan Project. In return, the United States agreed to make copies of progress reports made to the President of the United States available to the British and Canadian governments. In addition, the United States had the option of sharing whatever technology it saw fit. The nuclear *modus vivendi* that developed between the British, Canadians and Americans during the war was designed to facilitate the rapid development of a nuclear weapon, and not sustained, joint research for the development of nuclear power during a period of peace. The British became increasingly unhappy with this agreement, especially following the American

Atomic Energy Act of 1946, which severely limited the ability of AEC to share information with foreign governments.¹⁵

Following the war, the American, Canadian and British governments in the Agreed Declaration of November 15, 1945 announced their desire to promote scientific advances for the good of all humanity, and asked the UN to set up a commission to regulate nuclear technology and development. According to this proposal, the commission would be responsible for facilitating scientific exchange, the development of peaceful uses of nuclear technology, the elimination of atomic weapons, and the development of safeguards. Following Soviet agreement, the United Nations Atomic Energy Commission (UNAEC) was established on January 24, 1946. The Acheson-Lilienthal Report, an American declaration on how the UNAEC should operate, recommended that the Commission own and manage all fissionable materials because the international climate was ill-suited to safeguards and inspections. The US representative to the UNAEC, Bernard Baruch, expanded on the Acheson-Lilienthal Report and produced the Baruch Plan, which proposed the creation of an International Atomic Development Authority that would be responsible for all dangerous projects. The Soviets, unwilling to accept the American proposals, recommended that all atomic bombs should be destroyed, the building of new bombs banned, and all violations be strongly condemned, though they included no provisions for monitoring compliance. Neither side could agree with the other, and in 1948, since no consensus could be reached, the

¹⁵ See memo by Gordon Arneson arguing that American reluctance to share information with the British hurt the alliance. "Memorandum by the Special Assistant to the Secretary of State for Atomic Energy Affairs (Arneson)," December 3, 1953, *Foreign Relations of the United States (FRUS), 1952-1954*, Volume 2, pt. 2, p. 1251. This memo contradicts Sokolski's claim that interested partners had already found satisfactory ways of obtaining technology prior to Atoms for Peace.

UNAEC decided to stop meeting until there was good reason to believe that the impasse in negotiations could be overcome. In fact, the UNAEC would never be called to order again.¹⁶

Between the failure of the Baruch Plan and the beginnings of Atoms for Peace there were no real attempts at forming another international organization for the development of nuclear power, which is, of course, not to say that the nuclear issue was not a potent one in the interim, especially its use as a weapon. The Department of Defense actively engaged in developing larger and larger atomic bombs, eventually exploding the world's first thermonuclear explosive in November of 1952. The Atomic Energy Commission was to aid the DoD and its primary objective was "to make the maximum contribution to common defense and security by continuing to develop and manufacture atomic weapons."¹⁷ To promote this objective, the AEC was responsible for obtaining the raw materials required for building nuclear weapons, especially uranium.

The US government continued to consider uranium procurement vital, since there was a perceived paucity of the material at the time. The Raw Materials Subcommittee of the Joint Committee on Atomic Energy, in its report in June of 1952, made several recommendations to increase procurement. The first was that the AEC should expand its exploration program to find domestic sources of uranium and thorium. The AEC exploration program started in 1948, but was largely unsuccessful; by 1952, only 2% of the uranium mined in the free world came from the United States. The second

¹⁶ Lawrence Scheinman. *The International Atomic Energy Commission and World Nuclear Order*. Resources for the Future, Washington, DC, 1987.

¹⁷ Lewis Strauss. *Men and Decisions* (Garden City, NY: Doubleday and Co., 1962).

recommendation was that the United States seek access to uranium and thorium supplies from multiple foreign sources. The report noted a sense of urgency for both of these objectives, because there was a feeling that a war could cut off foreign sources at any time.¹⁸ It is worth noting that prior to 1955 the world supply of uranium and thorium was considered to be very limited, and obtaining a steady supply was a top objective for the AEC, JCAE, and the DoD. Starting in 1955, when the AEC's domestic exploration project finally yielded positive results, uranium would become more and more readily available, leading to Eisenhower's assessment in 1957 that the United States "is saturated with uranium."¹⁹ The uranium situation in the years running up to the beginning of the Atoms for Peace program, and the first few years of the program, which were marked with a paucity of materials, were, however, completely unlike that in the years that followed.

When Eisenhower was elected President of the United States in 1952, he inherited a complicated nuclear situation. Soviet nuclear weapons programs were quickly catching up to those of the Americans. There was a perception that there was a shortage of fissionable material, which threatened the United States' security. The Soviets had a great propaganda advantage regarding nuclear issues, since they could claim that the United States was the first country to develop nuclear weapons, was the only country to ever use

¹⁸ "Report of the Raw Materials Subcommittee of the Joint Committee on Atomic Energy," (Washington: United States Government Printing Office, 1952). Also available at: <http://sul-derivatives.stanford.edu/derivative?CSNID=00001546&mediaType=application/pdf>, accessed June 1, 2008.

¹⁹ "Pre-Press Conference Notes, May 22, 1957," Dwight D. Eisenhower, *The Diaries of Dwight D. Eisenhower, 1953-1969*, Robert Lester, Douglas D. Newman, eds (Frederick, Md.: University Publications of America, 1987), Reel 12, Box 24.

them in war, and that it was only interested in the destructive uses of atomic physics.²⁰

Although there were frequent pleas for a nuclear test ban and a ban on atomic bombs altogether, no significant efforts had been made to regulate nuclear arms or energy since the failure of the Baruch Plan and the UNAEC, and there had been no significant changes in the international situation that would lead to the reopening of negotiations. Eisenhower would change all of that in his first year in office.

The Birth of Eisenhower's Atomic Exchange Policy

Scholars disagree on the exact origins of the Atoms for Peace program. Since the origins of any program can provide the context for how officials approached a topic and give insight into their motivations, this point is rather important. Henry Sokolski, placing stress on the arms-control aspect, argues that Atoms for Peace began with the Panel of Consultants on Disarmament's finding that the United States would have trouble preventing a preemptive nuclear strike without international controls, specifically without limitations on nuclear stockpile sizes. This panel was reacting to fears that the Soviets were close to acquiring the capacity to deliver a "knockout blow" to the United States. According to Sokolski's analysis, this finding created the need in the President's mind to reopen negotiations on arms limitations and safeguards. Eisenhower, realizing the dangers of nuclear war, initiated a project in late March of 1953, codenamed Operation Candor, which the President himself would come to identify as the beginning of the

²⁰ Gordon Arneson raised this issue in a memorandum to Dulles. "Memorandum by R. Gordon Arneson to the Secretary of State" March 10, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1127.

Atoms for Peace project.²¹ This operation was designed to gain domestic support for arms limitation through a series of speeches by the President intended to explain to Americans the danger of nuclear weapons and the very real possibility that total nuclear war would break out.²²

The timing of this initiative is especially important. The idea for increased openness regarding nuclear issues originated in March of 1953, the same month as the death of Joseph Stalin, the dictator of the Soviet Union. Stalin's death marked a transition period in the Soviet Union, when no one was quite sure how or if Soviet foreign policy would change as a result of a change in leadership. Starting on March 15, Stalin's initial successor, Georgy Malenkov made a speech where he announced that there was no problem between the United States and the Soviet Union that could not be worked out amicably, and proceeded to initiate a "peace offensive" designed to repair the Soviet Union's image abroad.²³ It seems likely that Operation Candor, with its calendrical proximity to Stalin's death, was in part influenced by Eisenhower's desire to change the dialogue that dominated the post-war Stalin years. According to Vojtech Mastny, the United States, lacking plans for Stalin's death, mostly worked in an *ad hoc* manner in response to Soviet initiatives.²⁴ It is likely that this move to change nuclear foreign policy by disclosing more information both domestically and internationally was partly to

²¹ "Candor-Wheaties Chronology" in *President Dwight D. Eisenhower's Office files, 1953-1961: Part 1, Administrative Series* (hereafter, DDE Files) Robert E. Lester, ed. (Frederick, Md.: University Publications of America, 1990), Reel 4.

²² Henry Sokolski, "The Arms Control Connection" in Pilat, *Atoms for Peace*, pp. 37-40.

²³ Vojtech Mastny, "The Elusive Détente: Stalin's Successors and the West," in Klaus Larres and Kenneth Osgood, eds., *The Cold War after Stalin's Death: A Missed Opportunity for Peace?* (Lanham: Rowman and Littlefield Publishers, Inc., 2006), p. 4.

²⁴ Mastny in Larres and Osgood, pp. 4-5.

position the United States in the new international climate, and offer a less threatening façade.²⁵

As Jackson and Strauss attempted to write the speeches for Operation Candor between April and mid-September, they had great difficulty finding the right balance. They concluded that it would be nearly impossible to convey the necessary information in a way that was not likely to promote panic, and every draft came out “uniformly dull.” The most successful draft, written in mid-September, included the idea that the Soviets would be able to seriously injure the United States, which would lead to a reprisal. Although this draft was “closer to what was wanted,” it was abandoned because it left readers with the sense that there was no hope.²⁶ It is worth noting that the President placed stress on letting the public know the dangers of the Soviets’ ability to devastate the United States within a speech which had the stated purpose of letting the public know about the dangers of nuclear war. Public knowledge of the dangers of nuclear war would likely promote support for nuclear disarmament and safeguards. It would have questionable domestic propaganda value because, after all, it was hard to find a way to publicize the dangers of nuclear war without paralyzing the populace with fear. It is at this point, however, that the President introduced the idea of hope for resolving the dilemma. By proposing hope for the future, such as converting weapons into peaceful ends, as Eisenhower would eventually propose in his speech to the General Assembly, it

²⁵ In their edited volume, Larres and Osgood suggest that Eisenhower was fairly positive about the possibility that the Soviet Union might be moving toward a more amiable foreign policy after Stalin, which might account for Eisenhower’s move toward a more open policy. Ironically, Jackson, who was left to actually write this policy was an adamant Cold Warrior, and argued that the United States should press its advantage in view of a perceived Soviet weakness rather than position diplomatically. See Larres and Osgood, p. XII.

²⁶ “Candor-Wheaties Chronology,” *DDE Files*.

would be possible to disseminate information about nuclear war without providing a sense of hopelessness. The introduction of the idea that the speeches needed to avoid a sense of hopelessness represented an important shift in the development of the program.

By September, Jackson and Strauss were still unable to write a suitable speech and the international situation had changed since March. The Soviet “peace offensive” became a serious concern for many members of the Eisenhower administration as they came to see it as an effort to disrupt the North Atlantic alliance.²⁷ According to Kenneth Osgood, the Eisenhower administration initiated a peace “counter-offensive” designed to show the shallowness of the Soviet peace offensive.²⁸ This peace counter-offensive was a propaganda campaign to counter the deleterious effects of what was perceived as Soviet psychological warfare; it was also an attempt to solidify American alliances in the face of a Soviet threat. Mastny suggests that cracks in the North Atlantic alliance appeared during the Bermuda Summit just prior to Eisenhower’s speech to the General Assembly. Britain and France became especially concerned with America’s increased reliance on nuclear weapons to replace conventional forces which led to an increase of Soviet deployment of nuclear weapons. The French and British would rather have negotiated with the Soviets than attempt to maintain a “position of strength,” which translated to nuclear force, as the Americans did.²⁹ At this point, a shift in focus to disarmament would help to mollify Western European fears of nuclear war, and would give America’s

²⁷ Larres and Osgood, p. XIV.

²⁸ Kenneth Osgood, “The Perils of Coexistence: Peace and Propaganda in Eisenhower’s Foreign Policy,” in Larres and Osgood, p. 28.

²⁹ Mastny, p. 15.

European allies something to rally around, serving to help repair Soviet-inflicted damage to North Atlantic unity.

As a result of Jackson's and Strauss' inability to write a speech appropriate to the President's objectives and the changing international situation, Operation Candor was placed on hold and the President opened the issue to suggestions. Lewis Strauss recommended that all the fissionable material in the world be collected, diluted, and stored in a tank at the bottom of the sea. If all the fissionable material were at the bottom of the sea, Strauss reasoned, then no one could steal it, and if they did, they could not steal enough of it to obtain a monopoly.³⁰ Although there is no evidence that this proposal was ever seriously entertained, Strauss' suggestion would have circumvented the issue of alliances and safeguards altogether, and worked as a form of perfect arms control. Since Strauss proposed this to replace Operation Candor and had consistently worked with Jackson and the President regarding Operation Candor, it follows that Strauss, at least, thought arms control was Eisenhower's primary interest.

Rather than force C.D. Jackson to take another pass at a speech for Operation Candor or adopt Strauss' colorful suggestion, in September of 1953, the President came up with a third plan, which contained the kernel of the idea that would develop into the Atoms for Peace program. Eisenhower suggested the formation of an international agency which would allocate fissionable material to various countries for the development of peaceful uses of atomic energy.³¹ Although at first this does not sound

³⁰ In his memoir, Strauss describes this idea as "a method [that] suggested itself" to him. Strauss, *Men and Decisions*, p. 357.

³¹ "Candor-Wheaties Chronology," *DDE Files*.

like an arms-control project, Eisenhower envisioned the United States and the Soviet Union as making matching contributions to this agency. At first, they would be small, but as trust grew between the two superpowers, they would make larger and larger contributions until finally they would be forced to dismantle their atomic weapons in order to continue. William Golden, Strauss' assistant, suggested that starting the process would be "like getting the first olive out of the jar;"³² that is to say that it would be hard to get the United States and Soviet Union to agree to the first contributions, but it would become easier to encourage larger contributions, until eventually they became so large that atomic weapons would have to be cannibalized in order to keep making donations.

The reactions of Eisenhower's advisors were mixed, with most of his key advisors initially responding negatively. Upon reading the memo about the President's plan, Strauss responded that although it was "novel and might have value for propaganda purposes," it ultimately would not work. He argued that since it was impossible to determine the size of Soviet fissionable material stockpiles *vis-à-vis* those of the United States, it would be impossible to determine what levels of contributions would lead the Soviets to dismantle warheads to continue making donations.³³ If the United States miscalculated its strength with regard to the Soviet Union, it could fatally weaken its position in an arms race. Furthermore, Strauss argued that he, the Joint Committee on Atomic Energy (JCAE), and Secretary Wilson all objected to allowing a foreign entity

³² Quoted in Strauss, *Men and Decisions*, p. 358.

³³ "Strauss to DDE," September 17, 1953, *DDE Files, Pt. I, Administrative Series*. It is worth noting that Strauss dismissed this proposal as only having propaganda value, again suggesting that he thought that propaganda was not the President's purpose in developing Atoms for Peace.

complete control over any amount of uranium or plutonium, arguing that such control would threaten American security.³⁴

The Joint Chiefs of Staff and the Department of Defense were similarly concerned with security. They disapproved of the program primarily because it went against Eisenhower's own military policy, known as New Look, which was based on the concept of massive nuclear retaliation. The New Look policy was an approach to American defense predicated on the use of a large stockpile of nuclear weapons to act as deterrents, allowing the Defense Department to decrease the size of the standing army while still protecting American interests. The policy was formalized in National Security Council (NSC) document number 162/2, and approved by Eisenhower on October 30, 1953.³⁵ As Mark Schaefermeyer observes, the concept of massive retaliation worked as a deterrent, preventing potential Soviet aggression.³⁶ The New Look policy and the Atoms for Peace program seemed completely incompatible, with one aiming to decrease nuclear weapons and the other depending on maintaining those same weapons, both initiated by the same man, President Eisenhower.

The concomitant development of these two diametrically opposed programs, New Look and Atoms for Peace, is something of a mystery. One could look at this contradiction and argue that Eisenhower was not committed to the arms-control aspect of Atoms for Peace or that he was only interested in the propaganda aspects, but to argue this would go against the course of the development of the program, the opinions of his

³⁴ Hewlett and Holl, p. 231.

³⁵ Bowie in Pilat, *Atoms for Peace*, p. 20.

³⁶ Mark J. Schaefermeyer, "Dulles and Eisenhower on 'Massive Retaliation'" in *Eisenhower's War of Words: Rhetoric and Leadership*, Martin J. Medhurst, ed. (East Lansing: Michigan State University, 1994), pp. 30-34.

key advisors, and the fact that he said the program was for disarmament in his own diary and in personal correspondence. He enumerated the reasons behind Atoms for Peace: it would give the United States a reason to talk to the Soviets, involve more small nations in nuclear concerns, decrease nuclear weapons stockpiles without harming the US' strategic position, and would give the United States a method of informing the public about nuclear issues. But, he added, "Underlying all of this, of course, is the clear conviction that as of now the world is racing toward catastrophe—that something must be done to put a brake on this movement."³⁷

The centrality of the disarmament position is further supported by a memorandum from the Secretary of State to the American Embassy in the Soviet Union the day before Eisenhower's speech, wherein Dulles told Charles Bohlen, the ambassador to the Soviet Union, that the "President will... propose a method of allocating from US and Soviet stockpiles atomic material for peacetime purposes and as means of starting total atomic disarming." Further, Bohlen should "stress to Molotov [the Soviet Foreign Minister] that purpose of speech is to initiate serious talks, if possible, and not merely to propagandize."³⁸ Gerard Smith, special assistant to Secretary Dulles for atomic energy matters, wrote a memo on December 9, 1953, the day after Eisenhower's speech, informing all diplomatic missions that the purpose of Atoms for Peace was "to break the disarmament logjam."³⁹ At least officially, the stated purpose of the speech was

³⁷ Dwight D. Eisenhower, *The Eisenhower Diaries*, Robert Ferrell, ed. (New York: WW. Norton & Company, 1981), pp. 260-262.

³⁸ "The Secretary of State to the Embassy in the Soviet Union," December 6, 1953. *FRUS, 1952-1954*, Vol. 2: p. 1287.

³⁹ "The Acting Secretary of State to all Diplomatic Posts (Except Moscow)," December 8, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1293.

disarmament, to move forward past the problems posed to disarmament since the failure of the Baruch Plan.

If the program was dedicated to the concept of disarmament, how do we explain the contradiction between the goals of New Look and Atoms for Peace? One could use this contradiction to argue that the President was more interested in the propaganda aspects of the program,⁴⁰ especially if one considers that he would be unlikely to admit that the program was designed for propaganda because that would negate its propaganda value altogether. It is impossible to reach a definitive conclusion on this point. It is possible, however, that the President was aware of this contradiction, but had a longer timeline in mind for the nuclear disarmament portion of Atoms for Peace. After all, if he did not foresee disarmament for another generation, Atoms for Peace would not necessarily have contradicted the New Look policy. This line of argument is supported by C. D. Jackson's memo to the Operations Coordinating Board, stating, "It will be particularly important to impress upon world opinion the sincerity with which the United States seeks international security through the reduction of the arms burden, while at the same time avoiding any premature stimulation of false optimism *regarding immediately realizable disarmament, which cannot be fulfilled under present conditions of international tensions.*"⁴¹ Regardless of whether Eisenhower wanted to use disarmament

⁴⁰ Ira Chernus, for example, argues for a connection between these two programs, saying that Atoms for Peace was designed specifically to improve relations with allies, particularly in Europe, especially after allies learned of Eisenhower's plans to cut conventional forces in favor of increased presence of nuclear weapons stationed on the Continent.

⁴¹ "Memorandum by the Special assistant to the President (Jackson) to the Operation Coordinating Board," December 9, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1293. Emphasis added. This quote does pose a potential problem for arguing that the President's purpose was not propaganda, since it is a memo to a group whose *sole purpose* is propaganda and its content is regarding the use of the speech as propaganda. It does,

as a propaganda tool or whether genuine disarmament was his earnest intention, Secretary of Defense Charles Wilson thought that Atoms for Peace harmed US security. As we will see below, his opposition had significant ramifications.

Despite these criticisms, Eisenhower pushed his advisors forward, insisting in September and October of 1953 that they continue to work on the atomic bank that would be the centerpiece of the Atoms for Peace proposal. As they did so, some of Eisenhower's advisors were drawn to various elements of the Atoms for Peace program that would allow them to forward American interests that did not always coincide with arms control. Propaganda, uranium development and alliance-building became key goals of people working on the program. Each of these goals represents an important aspect of America's Cold War strategy, even though at various points these goals conflicted with the original aim of Atoms for Peace: arms control. As Eisenhower's advisors worked on the program prior to the President's speech and immediately after, these secondary goals came to dominate the program as the plan for arms control was slowly eviscerated.

Eisenhower administration officials immediately identified the propaganda value of Atoms for Peace, and sought to benefit from it. Although he thought the United States could get further in disarmament talks if such talks were conducted privately rather than publically, Secretary Dulles argued that the United States should be the world leader in nuclear technology, and that Atoms for Peace would show it was just that.⁴² This attitude was a fairly widely held one. The British also had a nuclear power program, one that

however, nicely make the point that Eisenhower, or at least Jackson, realized that immediate disarmament under the international circumstances at the time was impossible.

⁴² "Memorandum of Discussion at the 136th Meeting of the National Security Council, Wednesday, March 11, 1953," *FRUS, 1952-1954*, Vol. 2: p. 1131.

turned to the civilian uses of nuclear power prior to the American program. The British program would result in the world's first civilian nuclear power generating plant, Calder Hall, which went online nearly a year and half before the first American one.⁴³ If the United States lost its position as the leader in atomic sciences to the British, or worse, the Soviets, it would have been a major psychological blow to America.

This concern for propaganda was echoed by C.D. Jackson, one of the chief architects of Atoms for Peace, who wrote a memo to the Operations Coordinating Board (OCB) stating that Atoms for Peace would effectively break the Soviet Union's monopoly on peace propaganda. That is to say, the United States would finally be able to show that it was not just interested in the destructive applications of atomic physics as the Soviets asserted.⁴⁴ Propaganda provided a major site for Cold War contestation, where the United States battled to win the hearts and minds of the people throughout the world, both those whose nations were already allied with the United States as well as those who were not.⁴⁵ Atoms for Peace would provide a significant tool toward these ends.

Procurement of uranium and thorium also played a significant role in the minds of Eisenhower's advisors. However, this contention runs contrary to that of Sokolski, who states that although uranium suppliers had lobbied for an increase in nuclear technology, they had already achieved their goals by the time that Atoms for Peace was rolled out,

⁴³ There is some debate as to whether Calder Hall can properly be considered a civilian plant, since it also functioned as a site for the enrichment of plutonium for military purposes. Calder Hall did, however, produce electricity used by consumers on the public power grid, and so can be considered a civilian plant, at least in part. The Shippingport Atomic Power Station, in Shippingport, Pennsylvania, opened in 1957, and was the world's first fully civilian nuclear power plant.

⁴⁴ "Memorandum by the Special Assistant to the President (Jackson) to the Operations Coordinating Board," December 9, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1293.

⁴⁵ For more on the propaganda uses of Atoms for Peace program, see Kenneth Osgood, *Total War*; Martin Medhurst, *Eisenhower's War of Words*.

thus their influence was not significant.⁴⁶ Sokolski's claim is something of an oversimplification. He was most likely referring to suppliers in the British Commonwealth and Belgian Congo, but this ignores the issue of other suppliers with whom the United States did limited business prior to Atoms for Peace. The United States obtained most of its uranium supplies prior to 1955 from the Belgian Congo and the British Commonwealth, particularly Canada, Australia and South Africa; however, Spain, Portugal and Brazil also provided small amounts. Although the United States had an agreement to share nuclear technology with the United Kingdom and Canada under their nuclear *modus vivendi*, and had promised to share some technology with Belgium as a reward for giving the Anglo-American alliance a monopoly on its uranium exports from the Congo during World War II, these promises were hindered by the restriction of the Atomic Energy Act of 1946. Without a reform of that law, it was illegal to share nuclear technology and materials with foreign governments. R. Gordon Arneson, special assistant to Dulles, was well aware of that issue when he wrote in a memorandum that the British were unhappy with the level of technology that they received under the *modus vivendi*.⁴⁷ The Atoms for Peace program enabled just such a revision, which was carried out in the Atomic Energy act of 1954. Even though the promises were useless without reform, other suppliers of uranium did not gain similar concessions prior to the advent of Atoms for Peace. This is perhaps one reason why Brazil dragged its feet about expanding exploration for mining and exploitation of deposits of uranium in 1952. It seems that the

⁴⁶ Sokolski in Pilat, *Atoms for Peace*, p. 36.

⁴⁷ "Memorandum by the Special Assistant to the Secretary of State for Atomic Energy Affairs (Arneson)," December 3, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1251; "Report to the National Security Council by the Executive Secretary (Lay), December 4, 1953, *Ibid*, pp. 1271-1276.

government of Brazil was largely uninterested in putting money into exploration without some form of nonmonetary compensation in addition to the going rate for the ore.⁴⁸

The issue of nuclear raw materials goes beyond the demands of the suppliers, and the inability to gain adequate amounts of uranium was a pressing issue for the NSC.⁴⁹

One must keep in mind that just the year prior to the Atoms for Peace speech, the JCAE had released a report focused on the dire necessity of obtaining more uranium, both at home and abroad. Whether the suppliers of uranium and thorium successfully lobbied for American nuclear technical assistance or not, Atoms for Peace would allow the United States to exchange technology for the raw materials that administration members thought were vital to American security. Furthermore, the United States was about to expand its nuclear program from a solely arms-based program to one that included civilian uses. It stands to reason that there was a need to increase uranium imports if there was to be an expansion of the nuclear program. According to NSC 151 this would have happened regardless of whether the United States initiated Atoms for Peace or not. It is also important to recall that the United States viewed the Cold War as a zero-sum game. If the United States were able to monopolize exports of fissionable material and substances necessary for nuclear research and development, it would be able to prevent the Soviet Bloc from obtaining them. An example of this mentality is evident in the United States' relations with India. The United States had a contract whereby it would purchase all the beryl produced in India, a contract it chose to renew in 1955, despite not actually needing

⁴⁸ "Minutes of the Meeting of the United States Members of the Combined Policy Committee, Washington, October 9, 1952," *FRUS, 1952-1954*, Vol. 2: p. 1026; "Memorandum by R. Gordon Arneson to Secretary of State," March 10, 1953, *Ibid*, p. 1127.

⁴⁹ "Minutes of the Meeting of the United States Members of the Combined Policy Committee, Washington, October 9, 1952," *FRUS, 1952-1954*, Vol. 2: p. 1026.

that material. The State Department argued that by renewing the beryl contract the United States would deprive the Soviet Union and the People's Republic of China from obtaining this vital resource.⁵⁰ The procurement of nuclear raw materials, therefore, could be used to deny resources to the enemy, as well as to help build alliances based on economic interests. Viewing the world as a zero-sum game, however, likely increased Cold War tensions as the world's two superpowers competed for limited resources.

The issues of propaganda and raw material procurement were inherently tied to the concept of building alliances, another key interest among US officials. When Gordon Dean, AEC Chairman prior to Strauss, raised the issue of developing peaceful uses of nuclear power in NSC 151,⁵¹ R. Gordon Arneson wrote a memorandum to Dulles with the stated purpose of developing a State Department position on NSC 151. He recommended supporting NSC 151 for its propaganda purposes, namely counteracting Soviet claims that the United States was only interested in the destructive uses of atomic energy, so that the United States would remain a leader in nuclear energy. More significantly, however, he argued that through the dissemination of the peaceful uses of nuclear power, "it might... be possible to use such a card to bid our allies closer to us and even influence certain countries presently neutral to be more positively cooperative."⁵²

Although NSC 151 predates Eisenhower's proposal of using an international atomic agency for the purposes of disarmament, NSC 151 was an essential precursor to the

⁵⁰ *FRUS, 1952-1954*, Vol 11, Africa and South Asia, pt.2, p. 1767; *FRUS 1955-1957*, vol. 8, South Asia. Beryl is a source of beryllium, which can be used to shield atomic weapons and reactors, and can be used as a catalyst to increase the yields of atomic devices.

⁵¹ See "Report to the National Security Council by the Atomic Energy Commission," March 6, 1953, *FRUS, 1952-1954*, Vol. 2: pp. 1121-1125.

⁵² "Memorandum by R. Gordon Arneson to the Secretary of State," March 10, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1126.

Atoms for Peace program in that it first reported the AEC's ability to develop peaceful uses for atomic energy. From this memorandum, it is apparent that as early as March 1953, at least one influential player in the State Department was interested in using the peaceful uses of atomic power for building alliances and obtaining uranium prior to the Atoms for Peace proposal, a policy that remained an important part of the Atoms for Peace agenda.

The stress on alliance-building and obtaining uranium through the sharing of nuclear technology is also present in NSC 151/2, dated December 4, 1953, four days before the President's Atoms for Peace speech. This document includes an outline of the reasons for increasing the disclosure of nuclear research to allied governments in a report of the Ad Hoc Committee on Armaments and American Policy on Disclosure of Atomic Information to Allied Countries, a committee chaired by Gordon Arneson. The stated objective of disclosing information to allies was to enable coordination of military planning for defenses, to inspire cooperation, to encourage continued cooperation in US atomic energy programs, especially in regards to uranium procurement, and to increase free world development of nuclear research *vis-à-vis* the Soviet Bloc.⁵³

This statement of American policy locates the focus of sharing nuclear technology on promoting alliances and procuring raw materials, four days prior to Eisenhower's speech, which based atomic sharing on the principle of nuclear disarmament. These two priorities would seem compatible at first glance, but in reality they created considerable contradictions. Eisenhower's program was based on an assumption that contributions to

⁵³ "Report to the National Security Council by the Executive Secretary (Lay)," December 4, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1257.

the proposed nuclear agency would become large enough to require dismantling nuclear bombs in order to keep making those donations, but NSC 151/2 states clearly that nuclear transfer could be used to increase the amount of nuclear raw materials available by facilitating ore procurement. These materials could be used to support an expanding civilian program without limiting the size of the nuclear arsenal. After all, this report was written by a committee chaired by Arneson, who promoted the transfer of nuclear technology in March of 1953 by arguing that “the legislation required to permit industry to participate in the development of useful nuclear power should be so drafted as to enable the United States to deal with certain foreign countries in this area, not only to assure the continuance of the flow of uranium and other raw materials to the United States from present suppliers, but also to stimulate such a flow from other potential producers.”⁵⁴ Clearly, uranium procurement was central to Arneson’s conception of a nuclear exchange program, in spite of the problems this would pose for arms reduction. The use of nuclear technology transfer for the purposes of building alliances was also problematic. The purpose of Atoms for Peace was disarmament and, according to Lewis Strauss, to improve relations between the United States and the Soviet Union.⁵⁵ If it were used, then, to develop alliances and promote common defense among members of the free world, the Soviet Union would think that the program was being used to unite the free world against it. This result would exacerbate Cold War tensions and negate the purpose of the program.

⁵⁴ “Memorandum by R. Gordon Arneson to the Secretary of State,” March 10, 1953, *FRUS, 1952-1954*, Vol. 2: p. 1126.

⁵⁵ “Summary of Meeting with the Secretary of State on Implementation of the President’s December 8th Speech,” January 6, 1954, *FRUS, 1952-1954*, Vol. 2: p. 1326.

These conflicting aspirations make sense if one considers Jack Holl's argument that the President wrote his Atoms for Peace speech without involving anyone other than his closest advisors. Holl points out that the members of the AEC, aside from Strauss, were so upset with being left out of the loop on the President's plan that they nearly resigned *en masse*.⁵⁶ Under these circumstances, the notion of the development of a separate basis for policy by staff members who were not privy to the President's direct thoughts on the subject makes sense. After all, the Ad Hoc Committee that drafted this report contained none of the advisors who aided the President on his Atoms for Peace speech, most of whom were in Bermuda at the time. Since they might not have known that the President's objective for transferring nuclear technology was disarmament, which is, after all, slightly counter-intuitive, it would be logical that they would develop a policy that was firmly rooted in fighting the Cold War. From the perspective of the Cold War, a policy of building alliances and obtaining uranium would have been reasonable, even if it went against the President's as-of-yet unstated aims.

At the time of Eisenhower's speech, there were a number of detractors, both in the administration and elsewhere, who supported the proposal to obtain objectives contrary to the stated purpose of the program. Although the President was vital in pushing Atoms for Peace forward in spite of significant resistance from his advisors, he was not able to direct the development of policy at all levels. JCAE, AEC, and the Department of State's preoccupation with developing uranium supplies ran counter to the President's goal of depleting supplies to reduce nuclear stockpiles. Most State officials seem to have been

⁵⁶ Jack M. Holl, "The Peaceful Atom: Lore and Myth" in Pilat, *Atoms for Peace*, p. 153.

more interested in alliance-building and propaganda than in arms control. Meanwhile, the primary interests of the Department of Defense and the Joint Chiefs of Staff were in security, which, at many points, were at odds with Atoms for Peace.

A memorandum by Defense Secretary Wilson on January 27, 1954 to Dulles and Strauss further attacked the basis of Atoms for Peace. In this memo, Wilson said that the Joint Chiefs of Staff had found, from a military point of view, that several restrictions on the implementation of Atoms for Peace were necessary, most notably, "Implementation of the plan should not result in any appreciable decrease in atomic capability of the United States in the military field relative to that of the USSR." This stipulation would be impossible to assure because, as Strauss commented in September of 1953, there was no certain way of knowing the size of the Soviet stockpile of fissionable materials.

Wilson, commenting on the AEC's proposal for the formation of an International Atomic Energy Agency, further stated that the proposal was acceptable, except for the portion which stated that "the Agency 'would begin to diminish the... world's atomic stockpiles,' which appears to be at variance with the actual facts as I understand them."⁵⁷ These two statements taken together indicate that as far as Wilson was concerned, Atoms for Peace was *not* intended as a disarmament program, a perception which went against both Strauss's understanding and the President's stated purpose of the program. This disagreement is particularly interesting because both Strauss and Wilson were involved in drafting the original Atoms for Peace speech, though Strauss had been involved in the entire process from its beginning in Operation Candor whereas Wilson had only become

⁵⁷ "Memorandum by the Secretary of Defense (Wilson) to the Secretary of State and the Chairman of the United States Atomic Energy Commission (Strauss)," January 27, 1954, *FRUS, 1952-1954*, Vol. 2: p. 1357.

involved during the writing of the final speech. Further, it is not as though Strauss was unaware of the security implications of the IAEA and disarmament; he was a former admiral and had commented on security throughout the drafting of Atoms for Peace and its precursors.

As early as January of 1954, we can see the effect of Eisenhower's advisors driving the implementation of Atoms for Peace. Wilson's memo resulted in the removal of the mention of nuclear disarmament from the stated goals of the formation of the International Atomic Energy Agency, marking a considerable shift in policy. The mere absence of disarmament as a policy objective in a planning outline for the proposed IAEA was not by itself significant, nor was Arneson's focus on uranium procurement in an NSC memorandum. The real issue is that the shift away from the goal of nuclear disarmament became public during the course of the negotiations over the creation of the IAEA. Moreover, when the State Department and the AEC began their program of bilateral agreements for cooperation on the civilian uses of nuclear power, uranium production was one of the clear goals. Once Wilson and the DoD removed the goal of nuclear disarmament was removed entirely from public discourse, the propaganda, alliance building, and ore procurement strategy proposed by the State Department became the driving force behind Atoms for Peace.

The IAEA and America's Fickle Nuclear Policy

It is important to keep in mind that Atoms for Peace was not a single program, but rather a series of initiatives designed to spread nuclear technology. Important elements of Atoms for Peace include: American-sponsored international conferences on atomic issues, declassification and publication of American nuclear research, formation of programs to train foreign researchers and technicians, and research on the medical and technical uses of radiation.⁵⁸ Even the civilian, commercial development of nuclear power by companies like General Electric and Westinghouse could be considered part of Atoms for Peace. Declassification and training programs were most likely a show of good faith to prove that the United States was dedicated to the idea of sharing its science, while they would also help to whet the appetite of aspiring nuclear powers. Atoms for Peace served as an important source of propaganda, showing that the Americans were concerned with non-destructive uses of nuclear power. The first international conference on nuclear power, held in Geneva in 1955, was especially successful in this pursuit, providing a stage to show the world how dedicated America was to peaceful uses of nuclear power.⁵⁹ These approaches, although useful for propaganda and increasing interest in nuclear power, were overshadowed by the international and institutional approaches that dominated American nuclear policy.

⁵⁸ For examples of American propaganda regarding civilian uses of atomic energy, see: John F. Hogerton, ed., *Atoms for peace: U.S.A. 1958; a pictorial survey prepared for the United States Atomic Energy Commission*. (Cambridge, Mass., Arthur D. Little, Inc, 1958).

⁵⁹ Ironically, the conference of 1955 was deemed a success because it revealed the extent of uranium available in the world, diminishing fears that any one country could monopolize its supply. This revelation hurt both the United States disarmament goal as well as its Cold War aim of keeping materials from the Soviets. See Thomas Hamilton, "UN Debate Reflects Atom's Growing Role," *New York Times*, 10/23/1955, p. E3.

The two elements which are most commonly associated with Atoms for Peace are the formation of the International Atomic Energy Agency, and the establishment of bilateral agreements for the development of civilian uses of nuclear power. These two central elements of American atomic policy, although by no means mutually exclusive, grew to conflict with one another as diplomats attempted to implement the Atoms for Peace program. These conflicts were in part the result of numerous policy-makers pushing different agendas, and in part due to conflicts between Eisenhower's desire for nuclear disarmament, the realities of negotiation during the Cold War, and meeting Cold War objectives.

World-wide opinion was largely positive about the Atoms for Peace speech, and the AEC and the State Department worked on a proposal for the creation of the IAEA. When it was presented in March of 1954, however, this proposal was heavily criticized by the Soviets, who argued that Eisenhower's Atoms for Peace program and the IAEA would not lead to nuclear disarmament or slow the arms race. In fact, the Soviets argued it could actually lead to nuclear proliferation, since it was possible that the fissionable material could be diverted from peaceful to military uses. The Soviets continued to put forward a vague disarmament plan, predicated on banning nuclear weapons and condemning any nation that built them. The State Department perceived this response as a delaying tactic.⁶⁰ Assistant Secretary of State Livingston Merchant responded to the Soviet criticisms by claiming that Atoms for Peace was not by itself a disarmament program. He rather stated, "This offer by the United States to join with other nations

⁶⁰ Bernard G. Bechoefer, "Negotiating the Statute of the International Atomic Energy Agency," *International Organization* (Winter 1959), p. 41.

having atomic facilities to furnish ... atomic energy technology for the common benefit, would provide a new opportunity for international cooperation.” He went on to add, “The implementation of the President’s proposal would surely result in an improved atmosphere, which, in turn, could significantly improve the prospects for genuine, safeguarded international disarmament.”⁶¹ By claiming that the program itself was not about disarmament, which is true in that no specifics were actually proposed, negotiators could get around what they saw as Soviet obstruction. This tactic, however, decoupled the issues of disarmament and decreasing Cold War tensions. The Soviets responded in April of 1954 by refusing to consider the IAEA proposal until their proposed nuclear arms ban was discussed.

Faced with Soviet refusal to negotiate further, the Eisenhower administration had to make a decision whether to continue with the IAEA proposal. Initial negotiations had failed, much as the Baruch Plan had, over the issue of safeguards and inspections, but the Eisenhower proposal was fundamentally different from the Baruch Plan in several key ways. The Baruch Plan was predicated on immediately turning all fissionable material over to an international agency. The proposal for the IAEA, however, was based on a gradual approach intended to cultivate trust; rather than handing over all materials at once, nations would contribute small amounts at first until they were comfortable enough to increase the size of their contributions. Further, the IAEA proposal did not ever require any country to hand over the entirety of its fissionable materials. This way, each country could retain its own peaceful program, whose efforts would complement the approaches

⁶¹ Cited in Scheinman, “The International Atomic Energy Agency,” p. 67.

taken by the IAEA. Because of these differences, it would be possible for the United States to start the IAEA with countries who were interested. The Soviets and other countries could then join as they wished.

Several American officials suggested that the United States should go forward, regardless of Soviet involvement. David Wainhouse, Director of the Office of United Nations Political and Security Affairs, argued that failure to go forward with the plan after its proposal would hurt America's image in world public opinion. He further suggested that the IAEA and Atoms for Peace could be used "to help provide balance to various statements on 'massive retaliation', the effect on world opinion of thermo-nuclear tests' 'fall-out' in the Pacific, and the uncertainty of the Indochina situation." He added, "It certainly should help our relations with our allies, as well as stimulating a more favorable attitude on the part of neutral nations, thus enhancing our basic security interests."⁶² Wainhouse clearly promoted the IAEA as a way for the United States to improve its image in the world after making aggressive moves. This line of argument, however, could introduce Atoms for Peace not just as a way to counterbalance the negative, but also to excuse it. To some degree, as long as the United States worked toward peaceful uses of atomic power, it could continue to test bombs while being somewhat protected from world opinion, which might become inured to American aggressive behavior. This way the United States could continue to work on defense issues while sanitizing its public image and obtaining a propaganda victory.

⁶² "Memorandum by the Director of the Office of United Nations Political and Security (Wainhouse) to the Consultant to the Secretary of State for Atomic Energy Affairs (Smith)," May 17, 1954, *FRUS, 1952-1954*, Vol. 2: p. 1434.

Smith echoed Wainhouse's arguments in his memo to Dulles, where he outlined the advantages of forming the IAEA without the Soviets; these advantages were primarily in regards to propaganda. He also argued that it was disadvantageous, however, in that:

The President's proposal had two main aims: (1) to lessen the tensions of the cold war as a first step toward real disarmament negotiations; (2) to siphon off weapon level material from the stockpile of the competitors in the arms race. Without Russian participation, these two purposes of the President's proposal could not be met. In fact, *the opposite result might obtain* (sic). *Cold war tensions might increase as a result of a propaganda coup by the United States*. Diversion of United States weapons grade material to an international agency without corresponding contribution by the Russians would not be a step toward disarmament.⁶³

Here Smith cuts to the heart of the issue: if the United States attempted to achieve a purely propaganda victory after failing to gain Soviet support, it risked antagonizing the Soviet Union and exacerbating the East-West split. The Soviets refused to accept safeguards and the United States refused to engage in nuclear disarmament without them; the two superpowers deadlocked on the issue and nothing was done. Angry notes, posturing, and propaganda in many ways represented the essence of the Cold War, and Atoms for Peace provided plenty of opportunities for all of those things. Perhaps even more importantly, without the Soviet Union and its satellites, the IAEA would have been composed primarily of the United States and its allies, potentially furthering the split.

Regardless of Soviet involvement, the Eisenhower administration decided to go forward with the IAEA, a decision made moot when the Soviets returned to negotiations in September of 1954, and announced their interest in joining the IAEA as long as the

⁶³ "Memorandum by Gerard C. Smith to the Secretary of State," May 22 1954, *FRUS, 1952-1954*, Vol. 2: pp. 1443-1444. Emphasis added.

proposed nuclear pooling function was eliminated.⁶⁴ According to Eisenhower's vision and the US proposal, the IAEA would receive contributions of fissionable materials from member nations and lend them out to members who needed them for specific projects. The Soviets disapproved of this function because it required inspections and safeguards, a point of which the administration would almost certainly have been aware. It is interesting that the American negotiators insisted on safeguards, especially because the logic of the President's initial proposal did not require them to decrease Soviet nuclear stockpiles. Since US officials could safely, though not definitively, assume that the United States possessed more fissionable materials and nuclear bombs than the Soviet Union in 1954, the core idea for disarmament did not require inspections because any Soviet diversion of fissionable materials to peaceful uses would benefit the United States' position. Safeguards, then, were not necessary for Eisenhower's vision of disarmament, but remained desirable for two reasons. First, the United States had long pushed for safeguards and inspections in various forms, since this would give it a way to monitor potentially dangerous activities in the Soviet Bloc. Second, and more importantly, safeguards were necessary to prevent the proliferation of fissionable material that could be used for weapons. The spent, enriched-uranium fuel used in American reactors could be reprocessed into plutonium, which could be used for nuclear weapons, which in turn would exacerbate world tensions. The Americans wanted safeguards and inspections to prevent just such a spread.⁶⁵ In fact, officials like Wilson in the DoD opposed the nuclear

⁶⁴ "Draft of Memorandum by the Consultant to the Secretary of State for Atomic Energy Affairs (Smith)," October 27, 1954, *FRUS, 1952-1954*, Vol. 2: p. 1543.

⁶⁵ Although few countries aside from the United States, the Soviet Union, and the United Kingdom had the infrastructure to reprocess this spent fuel (in fact, the theory that Third World nations would become

pool function all together because it would require the United States to give up rights to some of its uranium, which, as mentioned above, the JCAE and the DoD opposed for security reasons. It is possible that American negotiators pushed for safeguards because they felt that the world climate had changed sufficiently since the failure of the Baruch Plan; and with world opinion at their back, perhaps they thought that they could succeed where they had failed so many times before. Unfortunately, this was not the case, leading to the elimination of the pool function, which had wider ramifications.

As long as the IAEA was built on a multilateral approach, which Eisenhower's pooling proposal would have guaranteed, there remained the possibility that Atoms for Peace could still have worked as originally intended, that is increasing cooperation and decreasing the size of nuclear weapons stockpiles. The elimination of the pooling function, however, effectively ended a multilateral approach to the IAEA, and was replaced with a bilateral approach. The bilateral approach was based on the signing of agreements for cooperation concerning civil uses of atomic energy between two countries. These agreements stipulated the amount of fissionable material to be lent, the safeguards that would be put into place to assure safety, and further stated that the IAEA would serve as a medium through which materials could be exchanged. The United States signed these agreements starting in 1955, eventually producing 39 by 1958.

These bilateral agreements provided the United States with an important tool for obtaining foreign policy objectives. According to Gerard Smith, with a multilateral

dependent on the US for fuel was based on the expense and rarity of these reprocessing centers), fears remained that without sufficient safeguards a nation receiving fuel from the IAEA could use it to start a nuclear weapons program.

approach to the transfer of nuclear technology, “We would make our off-shore raw material procurement job more difficult in that technology and fissionable material would be available to foreign nations from the international agency which otherwise they could only get from the United States in return for their raw material.”⁶⁶ Conversely, a bilateral approach would give the United States significant leverage over states with whom it had agreements, since those states would need to obtain materials like enriched uranium from the United States. With that sort of bargaining power, the United States could force countries to enter into agreements that would assure the sale of uranium, thorium and other raw material to the United States.

Of course, American foreign policy objectives expanded beyond raw material procurement. Perhaps the most important American objective during the Cold War was the development of strong alliances to combat the perceived threat of the Soviet Bloc. The United States could use these agreements in order to reaffirm already-strong alliances, such as its relationship with Brazil. Similarly, it could use the reward of nuclear technology to repair damage to vital alliances, such as the extension of the offer of a bilateral agreement to Japan that was designed to lessen the antagonism generated by the Lucky Dragon incident of 1954, when a group of Japanese fishermen were exposed to fallout from an American hydrogen bomb test in the South Pacific. Or it could use bilateral agreements and exchanges of nuclear power to sway neutral nations, such as India, to side with it. These issues will be discussed at greater length below.

⁶⁶ “Memorandum by Gerard C. Smith to the Secretary of State,” May 22 1954, *FRUS, 1952-1954*, Vol. 2: p. 1444.

The contentious negotiations over the formation of the IAEA continued until 1957. President Eisenhower submitted the treaty for ratification to the Senate on April 21, 1957. It was finally established as an autonomous organization on July 29, 1957. The organization that had evolved from the international negotiations did not contain the atomic pool that Eisenhower originally envisioned, but rather served more as a clearinghouse where member nations could exchange nuclear materials. Safeguards, which held up negotiations due to Soviet and Indian objections, were eliminated, leaving the IAEA as a body that allowed for the discussion of nuclear policy, but with no real enforcement capacity. It was a far cry from the proposal put forward by Eisenhower in his Atoms for Peace speech. In fact, the heated negotiations led one American diplomat to declare, “The Western Powers hold that disarmament has no place in an Atoms for Peace resolution,”⁶⁷ symbolically and publically severing the link between Atoms for Peace and disarmament.

Without a multilateral approach, the IAEA became a contested arena rather than one of conciliation permitting an easing of international tension. Just as the Americans used atomic exchange to support and win allies, the Soviets did the same, announcing their own program, similar to Atoms for Peace, that would share nuclear technology with the People’s Republic of China, Poland, East Germany, Romania, Bulgaria, Hungary, and Czechoslovakia.⁶⁸ These separate, competing programs increased Cold War tension as

⁶⁷ Thomas Hamilton, “Atom Unity Drive Faltering at UN,” *New York Times*, 10/26/1955, p. 3.

⁶⁸ William Sexton, “Red China to Get Soviet Reactor,” *Washington Post and Times Herald*, August 21, 1955, p. A11.

the United States and the Soviet Union started a race to offer nuclear aid to friends, neutrals and potential allies alike. Through this contentious process, the Cold War spread from a nuclear arms race, to an atoms for peace race.

CHAPTER 2

CASE STUDIES – ATOMS FOR PEACE IN BRAZIL, INDIA, AND JAPAN

Discussion thus far has centered on the original objectives of the Atoms for Peace program, how those objectives changed as the Eisenhower administration implemented its policy, and the general effects of the Cold War rivalry on American nuclear exchange policy. This chapter will more closely examine how this program was implemented in specific countries. I present Brazil, India and Japan as case studies. These cases have a variety of advantages. They provide a study of the implementation of Atoms for Peace in the non-Western world. Many studies on Atoms for Peace focus on Europe and the European Atomic Energy Community, more commonly known as EURATOM. This focus represents the importance of Europe and EURATOM's role in the process of forging the European Community.⁶⁹ The use of atomic aid to encourage allies to stand against the Soviet Union has not been as thoroughly studied outside of Europe. Focus on Brazil, India, and Japan also allows for greater attention to the essential issue of raw

⁶⁹ EURATOM is a unique case in the Atoms for Peace program. As a group of scientifically advanced countries that came together to form a regional community for atomic research, it could use its collective bargaining strength to get the most it could out of American offers on Atoms for Peace. Although member countries were able to pursue individual bilateral agreements for cooperation on the civilian uses of nuclear power, few did so prior to the signing of the bilateral agreement between the United States and EURATOM. As a result of their collective influence and its regional importance, EURATOM was able to secure significantly more aid from the United States than countries negotiating on their own. EURATOM, along with the European Coal and Steel Community, the Council of Europe and the failed European Defense Community, are all commonly considered part of the progression toward a unified Europe.

materials in American policy, a matter which was largely unimportant in the European context, aside from the Belgian case.

Moreover, these cases are geographically disperse, allowing for comparisons across different regions which had varying strategic interests and different types of relationships with the United States. Japan, located near three communist countries, was at once a democratic outpost in Asia and a wall against communist encroachment. As a defeated great power that had only recently converted to the American's side, Japan made American policy makers fear it might become neutral and upset military and strategic policy. For those reasons, the Americans went to great lengths to assure that Japan remained an ally. Brazil, another important ally, was isolated from the main fronts of the Cold War since it is in the Western Hemisphere. Policy makers were concerned that Brazil could be overrun by communist insurgents and feared that the Communists might make inroads in America's backyard if they neglected to aid this democracy. These concerns were further complicated by American interest in Brazil's natural resources, which the AEC considered vital. India, on the other hand, was one of the leaders of the Non-Aligned Movement. Her commitment to neutrality worried the United States, and any sign of Indian interest in receiving aid from Moscow or trading with Beijing was enough to send a cold shiver down the spines of American officials. Furthermore, India's precious resources, though not always vital to American production, could not be allowed to fall into the hands of the Chinese or Soviets.

It was in countries like these that American policy was enacted and it is to them that we turn to see how American atomic policy was implemented in a Cold War world.

Brazil

The United States' nuclear relationship with Brazil began during the Truman administration. Brazil was blessed with abundant resources of thorium derived from monazite, and there were indications that it also had considerable uranium reserves. As early as 1952, the JCAE and the AEC considered obtaining these resources a priority. Doing so was necessary in order to both increase the amount of fissionable material available and to diversify the source of imported thorium and uranium as a hedge against disruptions to supply lines in case of a war with the Soviet Union. The Brazilians, however, dragged their feet on negotiations regarding exports of thorium, stating a desire for non-monetary compensation in the form of receiving the relatively small quantities of uranium extracted from Brazilian thorium ore. The Department of State found it difficult to motivate Brazil to explore for uranium deposits prior to the resolution of the monazite-thorium negotiations, and also found the Brazilians reluctant to accept American assistance for exploration.⁷⁰

The procurement of nuclear resources was an essential problem for the United States, and it is easy to see why, when one considers the need for fissionable and ancillary materials in relation to domestic production. In 1952, the National Security Council set a goal of obtaining 12,500 tons of uranium oxide a year. At that point, the largest known deposit of uranium in the United States was located in Colorado, which in that year produced only 800 tons of ore, and was projected to produce 1,000 tons per

⁷⁰ "Minutes of the Meeting of the United States Members of the Combined Policy Committee," October 9, 1952, *FRUS, 1952-1954*, Vol. II, Pt. 2: p. 1029.

annum by 1954.⁷¹ The figure of 12,500 tons annually only represented demand for the military and government research into nuclear technology, and did not represent the need presented by the large-scale civilian development after 1954. The need for fissionable material increased considerably as domestic, civilian development of nuclear power became government policy following the Atomic Energy Act of 1954, and was further exacerbated by the obligation to loan fissionable material to friendly governments under Atoms for Peace. This heightened need for raw materials came when existing need already outstripped domestic production by a large measure. It was not until 1957 that domestic uranium mining and refinement made the United States anywhere near self-sufficient in fissionable material, making importation a vital issue of national security.

As the Atoms for Peace program was being formulated, Strauss immediately recognized that the program could be useful for encouraging ore producers who were reluctant to sell their nuclear materials without receiving access to nuclear technology;⁷² Belgium, which provided uranium from the Congo for the Manhattan Project, and Brazil are prime examples of countries that needed such an incentive. This practice of incentivizing ore sales made its way into official NSC policy. Since only a limited number of countries could participate in the program initially, the NSC proposed that the first round of research reactors should be made available to ore producing countries, such as Belgium, South Africa and Australia, because they have “considerable bargaining power.” The second group that would receive test reactors would be those that have an

⁷¹ IBID, pp. 1026-1032.

⁷² “The Chairman of the United States Atomic Energy Commission (Strauss) to the Special Assistant to the President (Cutler),” June 11, 1954, *FRUS, 1952-1954*, Vol. II, Pt. 2.: pp 1460-1461.

acute power shortage and limited resources with which to address it, such as Sweden and Japan.⁷³

Since it was acknowledged in this same report that nuclear power was not yet competitive with more traditional sources of power, nuclear aid did not have many short term benefits to the countries being aided. The long term benefits included the spreading knowledge of the technology and allowing foreign countries to train engineers so that they might eventually develop successful nuclear power programs. In this regard, prioritizing resource-poor countries with high demands for electricity made a considerable amount of sense. Not only would nuclear power be vital to these nations' long term survival, but nuclear power could compete more easily with conventional technologies because the price for electricity was high to begin with, making it easier for expensive technology to penetrate the market. Once nuclear power was introduced and refined in countries with high energy costs, it would be easier to adapt it to countries that had lower energy costs, such as the United States. Economically, it was in the United States' best interest to have the initial run of nuclear power plants be constructed abroad. In this light, it seems possible that the nuclear power industry might have been developed outside of the United States regardless of the Cold War, however the economic viability of this approach seems to have been another selling point for the Atoms for Peace program, rather than a determining factor. Propaganda and ore procurement ranked higher on most officials' lists than economic feasibility. After all, the NSC report under consideration emphasized rewarding ore producers more than facilitating the

⁷³ "NSC Staff Study on Cooperation With Other Countries in the Peaceful Uses of Atomic Energy," *FRUS*, 1952-1954, Vol. II, Pt. 2: p.1498.

development of energy-starved countries. In fact, the countries without abundant energy resources that were offered aid tended also to have geopolitical or trade significance.

The State Department used a number of tactics in order to encourage Brazil to sign export agreements regarding thorium and uranium. First, the Department of State tied the issue of ore procurement to PL480 wheat loans designed to alleviate starvation, a position deemed inappropriate by Undersecretary of State Herbert Hoover, Jr. in January of 1955.⁷⁴ Later, on May 31, 1955, Brazil signed a bilateral agreement for cooperation on the civilian uses of nuclear power, the second country in the world to do so,⁷⁵ and negotiations regarding uranium exploration were concluded on August 3, 1955, after at least four years of effort. Although there is no direct evidence that one had any connection with the other, it is something of a coincidence that the negotiations for uranium exploration, which the AEC and State Department had complained were going nowhere in 1952, would be concluded just over two months after the signing of a bilateral agreement on nuclear power. Regardless, with both of these agreements in place, the AEC began to move forward with plans to build a research nuclear reactor in Brazil.

These efforts were, perhaps, poorly timed, since the period from 1954 to 1956 was an especially unstable time in Brazilian history. This period began with a failed assassination attempt on the life of President Getulio Vargas that led to a military uprising against the president, who ultimately committed suicide on August 24, 1954.

⁷⁴ "Telegram from the Ambassador in Brazil (Kemper) to the Department of State," January 7, 1955, *FRUS, 1955-1957*, Vol. VII: pp. 627, 627n. Public Law 480, later dubbed "Food for Peace" by President Kennedy, was an Eisenhower initiative designed to sell US food to foreign governments to stave off malnutrition and famine. Hoover deemed it inappropriate to tie these two agreements together because it would "suggest [a] degree of urgency [on] our part [to] obtain atomic energy agreements which is not now in accord with [the] facts... and detract from political good will engendered by alleviation [of] Brazilian food shortage."

⁷⁵ "Brazil, Columbia Join Atom Plan." *New York Times*, 06/01/1955, p. 21.

Between Vargas's death and the election of Juscelino Kubitschek de Oliveira, three interim presidents served, one of whom stepped down due to poor health, another of whom was ousted by a military coup two days into his administration. Strauss, however, expressed his concerns regarding proceeding with negotiations, considering that the results of the presidential election had yet to be certified, and it was still unclear whether the military would allow Kubitschek, the apparent winner, to assume the presidency once the election results were finalized. Furthermore, there remained doubt in State as to Kubitschek's position in the Cold War. Brazil had one of the stronger Communist movements in Latin America, along with an unrelated ultra-nationalist movement. Strauss ventured that it might be better to wait until these issues were resolved before going forward with negotiations. Nelson Rockefeller, Special Assistant to the President, disagreed with Strauss, arguing that the negotiations would give the US government an opportunity to gauge Kubitschek, and that by working with him as much as possible, the United States could "bring him and his followers into the Western Camp."⁷⁶ The NSC quickly ratified this position, making it state policy.

This incident offers a clear example of the use of nuclear exchange to support foreign policy objectives. In this case, not only did the promise of a research reactor reaffirm friendship between allies, but by conducting negotiations during the transition between Brazilian administrations the United States government was able to work with a figure who was relatively unknown in the State Department. This opportunity allowed State and the AEC to assess a potential foe and, if need be, win Kubitschek over as an

⁷⁶ "Memorandum of Discussion at the 262d Meeting of the National Security Council," October 20, 1955, *FRUS, 1955-1957*, Vol. VII: p. 680.

ally. As it turned out, Kubitschek was both pro-American and anti-communist; the work he did on the nuclear negotiations made it easier for the Eisenhower administration to believe him when he said as much after taking office.

The Brazilian agreement to sell the United States fissionable material proved to be problematic for the new Brazilian president. Both the bilateral agreement on nuclear power and the uranium export deal were concluded prior to Kubitschek's assumption of office—indeed, even before his election. After his inauguration, however, Kubitschek came under heavy pressure from ultra-nationalists to abrogate the uranium contracts with the United States. With a weak government under constant attack by communist guerillas, having received only one-third of the popular vote, facing a fractured congress, high inflation and flagging growth,⁷⁷ Kubitschek had little support to begin with, and feared that if he did not abrogate the agreement on thorium sales and uranium exploration his government might be overthrown by nationalist or communist forces.⁷⁸ While privately protesting that he supported the closest of contacts with the United States, Kubitschek cancelled the export and exploration agreements and publicly denounced them on August 30, 1956.⁷⁹

The abrogation of the sales agreement by the new president did not sit well with the AEC and State, both of whom had pursued the agreements for years. Two and a half months after Kubitschek had rescinded the uranium export and thorium sales agreement but not the bilateral agreement on atomic power, Admiral Strauss sat down with Ernani

⁷⁷ "National Intelligence Estimate: NIE 93-57," January 8, 1957, *FRUS, 1955-1957*, Vol. VII: p. 739.

⁷⁸ "Telegram from the Ambassador in Brazil (Dunn) to the Department of State," July 3, 1956, *FRUS 1955-1957*, Vol. VII: pp. 710-711.

⁷⁹ "Memorandum of a Conversation," July 22, 1956, *FRUS, 1955-1957*, Vol. VII: p. 718.

do Amaral Peixoto, the Brazilian ambassador to the United States, on November 21, 1956. At this meeting, Peixoto repeatedly emphasized the “now favorable atmosphere” for cooperation with the United States. He then asked Strauss why the Brazilian government had not yet received the plans for the research nuclear reactor that they had been promised. Strauss replied that the United States was more than willing to work with the Brazilians, but dryly “indicated [that] technical problems arising as a result of [the] uncertain status [of] existing agreements [were] beginning to cause some difficulties.” Peixoto replied that he had already recommended that his government recommence uranium exploration. Upon hearing this news, Strauss indicated that, in that case, the matter should easily be resolved.⁸⁰

This meeting demonstrates a nearly quid pro quo relationship between uranium exploration and export and the research reactor. When Kubitschek abrogated the uranium exploration agreement, one could say that the AEC decided to hold a nuclear power plant, or at least the plans to build one, hostage until the agreements were reinstated. It would be hard to find a clearer example of using Atoms for Peace to achieve a foreign policy objective, in this case raw materials procurement. Not only was this affair a case of extortion, it was conducted in such a way that it potentially threatened the internal stability of an ally. Given the breadth and depth of Kubitschek’s political problems, it is unlikely that the domestic climate had changed to the degree that close alignment with the United States had suddenly become feasible, let alone domestically sustainable. The economy had not recovered, nor had Kubitschek obtained a majority in Congress, and it is

⁸⁰ “Telegram from the Acting Secretary of State to the Embassy in Brazil,” November 21, 1956, *FRUS, 1955-1957*, Vol. VII: p. 723.

unlikely that the Americans had suddenly become popular with the ultra-nationalists or the Communists, though it is possible he had defeated communist forces or had appeased the nationalists somehow.

If anything had changed to the degree that involvement with the United States had become desirable, it was most likely not a domestic development, but rather an international one. Strauss requested a meeting with Peixoto on November 9th to discuss nuclear matters, perhaps not coincidentally during the simultaneous Hungarian Revolution and Suez Crisis. A telegram from the American ambassador to Brazil suggests that the Brazilians were very concerned with their security in light of world events.⁸¹ Acting Secretary of State Hoover suggested to Briggs that in light of the Peixoto-Strauss meeting and Brazilian security concerns, it might be an opportune time to resolve outstanding issues regarding thorium and uranium procurement.⁸²

These tactics show the remarkable level of cynicism with which American foreign policy was conducted. The Eisenhower administration alternately courted and strong-armed Brazil for its resources, depending on the geopolitical situation. The situation in November 1956 could be compared to a protection racket, though one, of course, with the best of intentions. These findings seem to confirm Stephen Rabe's argument that the Eisenhower administration viewed relations with Latin America through the lens of the Cold War, with goals being limited to trade and anti-Communist crusading.⁸³ Kathryn Statler and Andrew Johns argue along similar lines, though they add that the Eisenhower

⁸¹ IBID, p. 723n.

⁸² IBID, pp. 723-724.

⁸³ Stephen Rabe. *Eisenhower and Latin America: the Foreign Policy of Anti-Communism* (Chapel Hill: University of North Carolina Press, 1988), pp. 4-5, 177-179.

administration was also deeply concerned with the threat of nationalism. This concern certainly caught the administration's attention when Kubitschek abrogated the uranium exploration agreements in the Third World because nationalism could lead to neutrality.⁸⁴ A country that became neutral was a potential threat to the Western cause, since that country might trade with or receive aid from the Soviet Union. The Eisenhower State Department under Dulles believed, after all, that receiving aid from the Soviet Union was "the first step toward Communism."⁸⁵

Concerns that allies might become neutral or change sides led to the development of a reactive policy, whereby the United States would match offers of aid to a country that the Soviet Union approached. This policy is apparent from American reactions to a Soviet offer of nuclear development aid to Brazil in 1958,⁸⁶ which led to a renegotiation of Brazil's bilateral agreement on nuclear power with the United States, increasing the amount of fissionable material the United States would loan Brazil, and the offer of a second research reactor installed in 1960.⁸⁷ The fact that AEC's nuclear development aid through the Atoms for Peace program was funded through the Department of Defense's

⁸⁴ Kathryn Statler and Andrew Johns, eds. *The Eisenhower Administration, the Third World and the Globalization of the Cold War* (Lanham, MD: Rowand and Littlefield, 2006).

⁸⁵ See, for example, "Memorandum of Conversation: Underdeveloped Areas of the Sino-Soviet Economic Offensive," February 6, 1959, *FRUS, 1958-1960*, Vol. IV: p. 40; "Memorandum of Conference with President Eisenhower," May 21, 1959, *FRUS, 1958-1960*, Vol. IV: pp. 328.

⁸⁶ "Report to the Council on Foreign Economic Policy: Sino-Soviet Bloc Economic Activities in Underdevelopment Areas," March 6, 1958, *FRUS 1958-60*, Vol. 4: pp. 9-10; "Memorandum Prepared by the Policy Planning Staff: US Policy Concerning Soviet Development Aid to Free Countries," May 5, 1958, *FRUS, 1958-1960*, Vol. IV: p. 20.

⁸⁷ "Letter from the Director of the International Cooperation Administration (Smith) to the Chairman of the Council on Foreign Economic Policy (Randall)," February 7, 1958, *FRUS, 1958-1960*, Vol. IV: p. 6; "Brazil Installs 2D Atomic Reactor," *New York Times*, 11/12/1960, p. 8.

budget⁸⁸ indicates that the government considered atomic aid a matter of national security, an important tool for building alliances and supporting the cause of the free world.

India

Although the State Department was concerned with the threat of neutrality in Brazil, a traditional ally far from the main fronts of the Cold War of the 1950s, State felt the threat even more keenly regarding India. A major nation just born from decolonization, sharing a border with Communist China, and a leader in Third World neutrality, India made American Cold War strategists very uneasy. Its huge population and vast resources, including thorium and beryl, could provide a major boon to the Communist cause, while its neutrality posed a threat to the balance of the Cold War. An ideologically uncommitted, a neutral nation, India could switch sides relatively freely, supporting or receiving support from whichever side benefited it at the time. The United States approached this challenge by attempting to gain India's support and obtain a monopoly on India's resources that could be used for nuclear research and development.

Just like Brazil, India possessed a variety of raw materials necessary to nuclear technology. The two primary Indian nuclear resources that the Americans were interested in were thorium and beryllium. While thorium is a radioactive element that can be used to replace uranium in nuclear reactors, beryllium, though not radioactive by itself, can help to produce a higher percentage of fission during the explosion of an atomic bomb causing a greater explosive yield. Although both materials have industrial applications unrelated

⁸⁸ 'Memorandum of Conference with President Eisenhower,' May 21, 1959, *FRUS, 1958-1960*, Vol. IV: p. 328.

to nuclear technology,⁸⁹ the State Department was highly concerned with the sale of these materials to Communist nations, fearing that they would be used in nuclear technology. Concern with thorium in particular was so strong that the United States listed it as a banned material in the Battle Act of 1950. The Battle Act was an expansion of an embargo placed on the Soviet Union and its allies designed to prevent them from receiving arms and materials. Under the Battle Act, the United States threatened to cut off all trade with any nation that traded the listed items with the Soviet Union and its allies.

The issue of Indian thorium sales became sensitive when India sold a substantial amount of thorium to the People's Republic of China in July of 1953. The United States complained that this action violated the Battle Act and threatened to cut off trade with India if the Indians shipped the thorium to China. The issue was further complicated since the Chinese had already paid for the thorium by the time that the US State Department objected. Jawaharlal Nehru, prime minister of India, explained that his interpretation was that the Battle Act embargo had ended with the end of the Korean War, which was the stated reason for the Act.⁹⁰ Nehru's explanation poses some questions since the ceasefire that ended the war was signed on July 27, 1953 and the State Department's official complaint was filed on the 28th. It is fairly clear that negotiations predated at least the official signing of the ceasefire. Regardless, the United States argued

⁸⁹ Thorium can be used to form alloys, as a chemical catalyst, or in electric lighting and welding. Beryllium has an even broader range of uses, from alloy formation and radiation shielding for X-ray machines to roles in computers and audio speaker equipment. It is not unusual for materials used in nuclear devices to be useful in other industries. After all, uranium's primary use prior to the advent of nuclear physics was as a glaze in pottery.

⁹⁰ "Memorandum by the Acting Executive Officer of the Operations Coordinating Board (Morgan) to the Executive Secretary of the National Security Council (Lay)," July 29, 1954, *FRUS, 1952-1954*, Vol. XI, Pt. 2: p. 1142; "Letter from Allen to Secretary of State," August 14, 1953, *DDE Files*, Pt. 2, Reel 16.

that the end of the war did not end the obligations of the Act. After considerable turmoil, Nehru eventually acquiesced to the Americans, offering to sell the thorium in question to the United States, a deal that the State Department was only too happy to accept. In order to avoid further trouble, the State Department recommended in September of 1953 that the United States sign a deal to buy all of India's exportable surplus of thorium.⁹¹ The Indians, who were skeptical of and unhappy with the strings that were attached to American trade and aid,⁹² agreed to the sale at an above- market price.

Problems generated by the thorium trade also affected the American position on beryllium. The United States initially signed a five-year trade agreement with India for the procurement of beryllium in 1950. The problem posed by the thorium trade led State to take up the question of whether to renew the contract one year in advance of the date when the Department would have to notify the Indians whether they wished to continue the agreement or not. The State Department recommended renewing the contract early to avert the possibility that the Indians in turn would sell the beryllium to the Communists in spite of its status as a restricted substance under the Battle Act. This action was complicated, but by no means precluded, by the fact that the AEC said that there was no longer a need for beryllium that would merit the renewal of the contract, and that it would not be able to pay for more than one year of the five-year renewal. These facts did not

⁹¹ "The Ambassador in India (Allen) to the Department of State," September 8, 1953, *FRUS, 1952-1954*, Vol. XI, Pt. 2: p. 1718.

⁹² See, for example, "The Ambassador in India (Allen) to the Department of State," July 28, 1953, *FRUS, 1952-1954*, Vol. XI, Pt. 2: p. 1701.

dissuade State from its recommendation, and to resolve the issue State Officials ensured funding through the DoD to pay for the other four years.⁹³

These incidents show a number of things about the nature of trade during the Cold War. Acquisition of natural resources for nuclear technology was absolutely vital to the United States, not only for its own value but also for denying those materials to the Communists. In spite of issuing the threat of trade sanctions against India if it sold restricted materials to Communist nations, State remained sensitive to the strain that such a threat placed on the country-to-country relationship, offering to pay above market prices for thorium and buying beryllium that they did not need. India, resentful of the strings attached to American trade, resisted, decrying such restrictions as a form of imperialism. The Indians, unsurprisingly, took advantage of the United States where they could. Such an interaction is not at all surprising when considered in terms of game theory, specifically a competitive game. Since the United States was vying for resources not only for their market value but also to denying them to a competitor, it ascribed an additional value to the material above the price dictated by supply, demand, and labor costs. The United States further placed value on these items because failure to buy them might further damage a fragile relationship. This additional value allowed India to secure a price above its natural level.

The strain shown by these disagreements over trade are emblematic of a wider tension between India and the United States during the early 1950s, especially after the

⁹³ “Memorandum by the Deputy Assistant Secretary of State for Near Eastern, South Asian, and African Affairs (Jernegan) to the Under Secretary of State (Hoover),” September 29, 1954, *FRUS 1952-1954*, Vol. XI, Pt. 2: pp. 1767-1770; “Memorandum by the Deputy Assistant Secretary of State for Near Eastern, South Asian, and African Affairs (Jernegan) to the Under Secretary of State (Hoover),” December 13, 1954, *FRUS 1952-1954*, Vol. XI, Pt. 2: pp. 1792-1795.

United States signed a treaty with Pakistan in 1954.⁹⁴ This strain developed in part due to American conceptions of trade and aid in the context of the Cold War. As shown above, the United States attempted to use aid to encourage its allies to do what it wanted, such as promising a nuclear reactor to Brazil in order to guarantee the expansion of exploration for uranium in Brazil. The Indians saw these tactics, quite understandably, as a form of imperialism, and were wary of giving up control of their policy for aid and trade. Lacking an ideological commitment, the Indians naturally sought the best deal for trade and resented any restrictions.

This suspicion, reinforced by a negative experience with the thorium trade, also manifested itself in India's suspicion of American aid. India was one of the few countries that, though interested in developing nuclear power, declined to sign a bilateral agreement for cooperation on the civilian uses of nuclear power with the United States in 1955. This refusal was motivated by India's dual desire to build a nuclear program on its own initiative and to avoid dependency on the United States in nuclear affairs. The issue of developing an independent nuclear program was not merely an issue of national pride for India, but was part of a wider project of nation-building. As Manu Goswami argues in his study *Producing India*, India was a diverse and heterogeneous land that existed as a legal, formerly colonial entity that needed to make the shift from a colonial space to a national space after declaring independence from Britain. To help develop a national identity, Prime Minister Nehru encouraged a series of national projects in fields like

⁹⁴ For information on US-Indian relations during the 1950s, see Robert J. McMahon, *The cold war on the periphery : the United States, India, and Pakistan* (New York: Columbia University Press, 1994).

heavy engineering machine production, scientific research and electric power that would function as “temples of India’s future.”⁹⁵

The nuclear power project, headed by nuclear physicist Homi Bhabha, was designed to function as one of these “temples.” It was to be a temple to independence, one that could not be profaned by dependence on the United States. Since the goal was to establish an India free of colonial influence, Indian leaders did not relish the idea of throwing off the yoke of one Western power only to assume an informal one from another power. The issue of independence was not only a matter of developing the science and technology independently; after all, science at its heart is a transnational and collaborative endeavor and, in fact, the Indian project made use of the data and plans released for international use under the Atoms for Peace program. Part of India’s problem was that the United States would only fund the building of reactors that were designed to run with enriched uranium.⁹⁶ Since it would be fiscally infeasible and technologically difficult to build the infrastructure to enrich uranium in India, New Delhi objected to being dependent on importing enriched uranium from the United States in order to run its nuclear power stations. Although the issue was debated in 1954, well before commercial nuclear power was competitive, the Indians were wary of building an energy infrastructure that would be vulnerable to the whims of the Americans. If the United States were to threaten to cut off shipment of enriched uranium, India would have little choice but to meet American demands, or move to ally with the Soviets. Rather than

⁹⁵ Manu Goswami, *Producing India: from colonial economy to national space* (Chicago: University of Chicago Press, 2004), pp. 4-5.

⁹⁶ “National Security Council Report: NSC 5431/1,” August 13, 1954, *FRUS, 1952-1954*, Vol. II, Pt. 2: p. 1496-1498.

pursue nuclear agreement that would force research along the lines of an enriched uranium plant, India decided to use natural uranium as fuel instead.

Natural uranium nuclear reactors function similarly to enriched uranium plants, but they require different materials. Natural uranium here refers to uranium-238, which is the prevalent isotope in nature, comprising 99.284% of all naturally occurring uranium. In order to create a sustained fission reaction, a natural uranium plant requires heavy water, D₂O, as a moderator. In a nuclear power plant, a moderator serves to slow down the neutrons that are discharged in the process of fission. These neutrons, once released from the fission of a uranium nucleus, proceed to strike other uranium atoms, causing them to split and in turn release more neutrons. If too many neutrons move too quickly through the fissionable material, the fission process speeds up, becoming uncontrollable. Eventually the reactor could explode, much like the process in an atomic bomb. Normal water, on the other hand, absorbs too many neutrons, slowing the fission process until it is no longer a self-sustaining chain reaction. Enriched uranium, a uranium mixture constituted by at least 5% of Uranium-235, releases more neutrons than the fission of uranium-238, so it possible to use normal water as a moderator.

The United States decided to offer enriched uranium reactors under the Atoms for Peace program for a number of reasons. Although enriching uranium is a technologically complicated process, the United States had developed an infrastructure that allowed it to enrich large amounts relatively easily. Further, the AEC believed that enriched uranium plants were superior for research because they produced a greater neutron flux than natural uranium reactors, thus allowing for a greater variety of testing to be done with a

single reactor.⁹⁷ As a matter of safety and proliferation, the NSC also considered the byproducts of each type of reactor. An enriched uranium reactor's byproducts are non-fissionable and few outside of the United States had the capacity to reprocess them into usable fissionable materials, whereas natural uranium reactors produce plutonium as a byproduct.⁹⁸ So, whereas an enriched uranium plant produced materials that the United States could easily control for recycling purposes, natural uranium plants would make plutonium that could be used for nuclear weapons, potentially contributing to nuclear proliferation.

India decided to use its native reserves of uranium and build plants to produce heavy water in order to build a system that would produce energy independence. Unfortunately for India, its heavy water plants never worked reliably, requiring it to request heavy water from the United States, which gave one-hundred tons of D₂O as a gift to India in July 1956.⁹⁹ This natural uranium reactor cost \$14 million, with half of the funding coming from the Canadians.¹⁰⁰ The fact that the United States offered such a considerable sum to India after its initial offer of a mutual agreement is interesting. As a basis of comparison, the Pakistanis received funding for a reactor worth only \$360,000, only slightly more than the value of the heavy water the United States gave to India, not to mention the \$7 million that the Canadians gave to fund the reactor in the first place. This discrepancy led the Pakistanis to complain bitterly that they, as staunch allies of the

⁹⁷ IBID, pp. 1494-1497. French natural uranium reactors produced a neutron flux from between 10^{10} and 10^{12} , versus 10^{12} to 10^{14} for enriched uranium reactors.

⁹⁸ IBID, pp. 1497-1499.

⁹⁹ "India Gets U.S. Heavy Water for Atom Work: Sale First Under Ike's Peace Plan," *Chicago Daily Tribune*, 02/13/1955, p. 34.

¹⁰⁰ "Memorandum of a Conversation, Karachi," July 9, 1956, *FRUS, 1955-1957*, Vol. VIII: p. 467.

United States, were receiving less for their nuclear program than the Indians, who were avowedly neutral.¹⁰¹ Although it seemed insulting to Pakistan, such a policy made perfect sense. Since one of the primary goals of financing nuclear research was to influence policy, there was a far greater potential reward in influencing a neutral country to join your side than in paying the same country over and over again to continue being your friend. Although the latter remained important, as long as the United States did not snub its allies too often it was unlikely to lose them. Further, there were less high-profile ways to support allies, such as supplying weapons systems, that were imprudent avenues for enticing neutral countries.

America's continued support, warming diplomatic relations between India and the United States, and India's continuing inability to make heavy water plants work, combined to effectively convince India that it was in its best interest to sign a bilateral agreement on nuclear affairs with the United States. In April of 1959, India approached the US embassy regarding such an agreement.¹⁰² This initial contact was followed up by an informal discussion, at a conference in Vienna, between Homi Bhahba and John Hall, the Assistant General Manager for International Activities of the AEC. Dr. Bhahba told Mr. Hall that he had encountered problems with the Indian nuclear program and decided that enriched uranium reactors were the way to go. He proposed that a joint program between India and the United States would be in the interest of both nations, particularly because the United States was more advanced in this line of research than the Soviet

¹⁰¹ IBID, pp. 465-467.

¹⁰² "Telegram from the State Department to the Embassy in India," May 15, 1959, *FRUS*, 1958-60, Vol. XV: p. 490.

Union. He further stated that India would require a long-term, low-interest loan for the project, a somewhat atypical arrangement at the time.¹⁰³ The US ambassador to India, Ellsworth Bunker, supported such an agreement for a number of reasons: he argued that India's lack of other power supplies would become a political problem if not addressed, that atomic development was popular in India and would demonstrate the usefulness of allying with the United States, and prevent the Soviet Union from greater involvement in India. He added that it would provide the needed "impact" within the context of the propaganda war against the Soviet Union.¹⁰⁴ Furthermore, he argued that "because of the prestige involved, in addition to practical reasons, atomic energy means much to [the Indians] and if we could be identified with them in this field there would be much to gain." Although it would be preferable to be India's sole partner in nuclear power, it was incumbent that the assistance in this field should come from free world countries. He concluded that although there were a number of important projects to engage in with the Indians, "this should be high up on the list."¹⁰⁵ In this memo, Bunker suggest that soft power in general is a good way to better relations with India, but singles out nuclear power as a high profile, high "impact" way of doing so. A bilateral agreement was not completed prior to the end of the Eisenhower administration, but it was well underway.

Failure to sign a bilateral agreement did not mean that India declined to participate in Atoms for Peace. To the contrary, the Indians received nuclear aid outside

¹⁰³ "Memorandum of a Conversation, Department of State," June 17, 1959, *FRUS, 1958-1960*, Vol. XV: pp. 499-502.

¹⁰⁴ "Telegram from the Embassy in India to the Department of State," December 27, 1959, *FRUS, 1958-1960*, Vol. XV: p. 527.

¹⁰⁵ "Memorandum of Conversation, Department of State," June 17, 1959, *FRUS, 1958-1960*, Vol. XV: p. 501.

of the scope of an agreement, sent technicians and engineers to train at American facilities, participated in the formation of the IAEA, and sent representatives to international conferences, while receiving assistance in the form of heavy water. Although relations got off to a rocky start, partnership with India in nuclear power was an important way for the United States to gain Indian support. A positive relationship in regard to a prestigious field that India considered a key to the formation of a national identity was important for the United States' effort to nurture support in the Cold War, one that helped to offset aspects of the relationship that were considered exploitative, such as strings attached to aid and trade. Although the United States could not consider India a free world ally, even in regards to nuclear policy,¹⁰⁶ the development of a positive relationship with India helped to prevent the possibility that India would ally with the Soviet Union. It would seem natural that the United States would endeavor to bring neutrals to its side, but eventually the Eisenhower administration resigned itself to the idea that it had to aid India so that it would be "strong enough to remain neutral."¹⁰⁷

Japan

The possibility that Japan might become neutral was also a central concern to the United States. American policy toward Japan at the end of World War II provided for

¹⁰⁶ India, which demanded entry into the IAEA on the basis that it sold thorium to the United States against the principle of neutrality, often proved a wildcard in the IAEA negotiations. As a strong opponent of inspections, which it considered an insult and an invasion of its sovereignty, India often sided with the Soviet Union during discussion of the international agency. See "The United States Representative at the United Nations (Lodge) to the State Department," November 10, 1954, *FRUS, 1952-1954*, Vol. II, Pt. 2: p. 1554; "India Holds Up Vote on Atom Plan," *Washington Post and Times Herald*, 11/20/54, p. 1.

¹⁰⁷ "Memorandum of Discussion at the 269th Meeting of the National Security Council," December 8, 1955, *FRUS, 1955-1957*, Vol. X: p. 47.

something of a Carthaginian peace. The Japanese constitution, written by the American occupiers under the aegis of the Supreme Command Allied Powers (SCAP), expressly forbade Japan from ever rebuilding its armed forces. SCAP even ordered the destruction of Japan's cyclotrons to prevent them from being used for nuclear research, in spite of Japanese physicists' assurances that they would only use the cyclotrons for non-military applications.¹⁰⁸ These policies reflected the initial belief that by dismantling Japan's capacity for war, Japan would become a neutral country with limited capacity for industrial production. Thus the world would be spared further Japanese aggression. These attitudes quickly changed as the Cold War took shape, especially with the Chinese Communist victory in the Chinese Civil War. By the beginning of the Eisenhower administration, American policy was no longer predicated on Japan being neutral; in fact the possibility that Japan might eschew its alignment with the United States and become neutral was a considerable concern for the State Department.¹⁰⁹ It is in this light that one must consider US-Japanese relations during the 1950s.¹¹⁰

One of the most significant international incidents to occur between the United States and Japan during the Eisenhower administration was the Lucky Dragon Incident, known in Japanese as the *Daigo Fukuryūmaru Jiken*. During February and March of 1954, the US Army was testing thermonuclear weapons on Bikini Atoll of the Marshall Island in a sequence of tests called the Castle Series. On March 1, 1954, scientists

¹⁰⁸ Dong-won Kim. *Yoshio Nishima: father of Modern Physics in Japan*. New York: Taylor and Francis Group, 2007, pp. 153-155.

¹⁰⁹ See, for example, "Memorandum from the Director of the Foreign Operations Administration (Stassen) to the Deputy Assistant to the President (Persons)," June 27, 1955, *FRUS, 1955-1957*, Vol. X: p.11.

¹¹⁰ For more information on US-Japanese Cold War relations, see Walter LaFeber, *The clash: a history of U.S.-Japan relations* (New York: W.W. Norton, 1997).

detonated a bomb, the Bravo shot of the Castle series, which resulted in a larger-than-expected explosion; its yield was around 15 megatons while scientists expected it to be around 8. The resulting blast, aided by strong winds, spread a cloud of radiation across hundreds of miles of mostly-empty ocean, well beyond the danger zone the Army had prepared. The Army failed to take the necessary precautions to evacuate people from nearby, and as a result the fallout killed forty-six of the islanders. The Lucky Dragon, a Japanese fishing boat, was located outside of the initial Army danger zone, but was caught by the unexpectedly-wide fallout of the blast. A radioactive cloud deposited what appeared to be snow on the crew of the Lucky Dragon and their boat.

By the time the boat returned to port on March 14, several of the crewmen were exhibiting clear signs of radiation sickness. The twenty-three sick men were taken to the hospital where they were treated for their injuries. By some coincidence, a reporter from the Yomiuri Shimbun happened to be nearby and wrote a piece on the incident. The press quickly became quite taken by this story, and the nation was swept up by it.¹¹¹ It is easy to see why the Lucky Dragon incident would catch the public's imagination and spark anti-nuclear protests around Japan. Not only did the incident involve the testing of nuclear weapons, it also involved the fishing industry. Fish was one of the mainstays of the Japanese diet, and the belief that contaminated fish from the Lucky Dragon had entered the Japanese market led many to panic. This incident seemed to prove that American nuclear weapons not only provided an existential threat to humanity, but also

¹¹¹ Some in the press even alleged that the United States purposely exploded the Bravo shot even though they knew that the Lucky Dragon was in range of the fallout. Other allegations suggested the United States was purposely poisoning Japan's food source. See John Swenson-Wright, pp. 151-154.

constituted a threat to Japan's livelihood. If an existential threat was too obscure for the general populace to understand properly, a threat to the nation's food supply produced a visceral reaction.

The Lucky Dragon incident proved highly damaging to US-Japanese relations. At first the United States did not comment on the incident at all. As the story began to take a life of its own, however, the United States was forced to take a position and offer aid. The offer of aid proved to be problematic, though, since the Army was unwilling to give the Japanese any information that might divulge technical details about the bomb. Rather than provide the vital information, the United States offered to treat the victims themselves. The Yoshida administration found this proposal unacceptable; Prime Minister Shigeru Yoshida was under considerable public scrutiny at the time, and he feared that if he allowed the United States to take over the operation it would look like a cover-up of the whole incident at a time when he could little afford more negative press. The State Department felt that this incident was more hurtful to US-Japanese relations than the unpopular Security Treaty of 1951, a considerable feat considering that treaty's unpopularity.¹¹²

A solution to this problem came from an unlikely place: the Operations Coordinating Board (OCB). The OCB was responsible for coordinating Cold War propaganda, hardly the obvious place for foreign policy to originate. It proposed that the United States offer a bilateral agreement on nuclear power and to build an experimental nuclear reactor in Japan, pointing out that "a vigorous offensive on the non-war uses of

¹¹² "The Ambassador in Japan (Allison) to the Department of State," May 20, 1954, *FRUS, 1952-1954*, Vol. XIV, Pt. 2: p. 1643.

atomic energy would appear to be a timely and effective way of countering the expected Russian [propaganda] effort and minimizing the harm already done in Japan” due to the Lucky Dragon incident.¹¹³ This report was written on March 22, 1954, six days after the Lucky Dragon story first hit the Japanese papers. It indicated that the United States offered participation in the Atoms for Peace program to Japan in order to contain the fallout of an international incident, and to minimize the propaganda damage resulting from it. Undoubtedly the United States would have offered nuclear aid to Japan regardless of international tension; after all, Japan had both a need for new sources of power and a world-class physics community that could enrich nuclear research considerably. The timing of the offer, however, helped substantially to achieve a foreign policy goal.

The need to make such an offer was based on the importance of the United States’ relationship with Japan. As mentioned above, the United States’ anti-Communist strategy in Asia was largely dependent on keeping Japan as an ally. Without Japanese bases, it would be hard for the United States to mount an offensive against the People’s Republic of China or the eastern portion of the Soviet Union. If Japan became neutral, the United States would not only lose a vital strategic position, but the loss of such an important ally would also be a costly propaganda blow. Although the government of Japan was, for the most part, pro-American during the 1950s, or at least saw the United States as essential to Japan’s security, American policies remained unpopular among the public. The Japanese

¹¹³ “Japan and atomic tests,” March 22, 1954, cited in Swenson-Wright, pp 181-182.

public at large often objected to America's insistence on testing nuclear weapons because the Security Treaty placed Japan in an inferior position in the partnership.

The United States faced something of a perception problem in Japan. According to a survey carried out by the United States Information Agency (USIA) in April of 1956, the Japanese public viewed the world in a "paradoxical" manner, at least from an American perspective. While 56% of Japanese approved of President Eisenhower personally, a similar number approved of Prime Minister Nehru of India and at least half the population had a fair opinion or better of Soviet Premier Nikolai Bulganin. Since these three men represented three different approaches to the Cold War, the USIA found these findings confusing: the Japanese public, even its educated segment, showed no strong ideological commitment. Although the United States had a high approval rating in the abstract, a majority thought that the United States did not "treat Japan as an equal partner in affairs that concern them both," half of those surveyed thought that the presence of American bases in Japan was not good for Japan, and only one in four thought that the United States was "making sincere efforts" at nuclear disarmament. Although seven out of ten had heard of peaceful uses of atomic energy, only a plurality of those who had heard about it thought that they would see the benefits of it in their lifetimes. Significantly, 60% believed that atomic energy would, in the long run, "prove more of a curse than a boon to mankind," a finding significantly higher than anywhere else in the world. The summary of the survey concluded by saying, "On the balance, in the present 'short-of-war' situation, the Japanese identify themselves with the anti-Communist side. While this feeling undoubtedly derives, in part, from a genuine and

positive sense of identification with the West, the suspicion arises that many favor Japan's present alignments because of a deep feeling of necessity.”¹¹⁴ It is clear from this survey that the United States had much work to do to convince the Japanese people that they were on the right side of the Cold War. If it did not do so, there was a danger that the general populace of Japan would favor becoming neutral. Since nuclear problems remained a sticking point between the United States and Japan, it was an issue whose image had to be dealt with carefully.

Following World War II, Japan developed something of a “nuclear allergy.” This so-called allergy often manifested itself in the popular protests against nuclear weapons and skepticism toward nuclear issues. John Swenson-Wright argues that the nuclear allergy was selective, with protests of nuclear weapons tests but rapid acceptance of Atoms for Peace.¹¹⁵ This interpretation does not take into account the multitude of opinions in Japan at the time. The government was much more pro-nuclear than the rest of the country. Where government leaders and business elites praised the promise of the peaceful atom,¹¹⁶ the general population and the press were far more skeptical. The opinion poll cited above shows the public was not nearly as supportive of nuclear power as its officials, on the whole seeing almost no benefit to it and believing the world would be a better place if the power of the atom had never been tapped.

In many ways, government policy differed greatly from popular opinion. In 1957, Prime Minister Kishi Nobusuke supported the use of nuclear weapons as a deterrent to

¹¹⁴ “Japanese Public Opinion of International Issues” April 25, 1956, pp. 4-8, 22-24, *DDE Files, Pt. 2*, reel 19. Emphasis in the original.

¹¹⁵ Swenson-Wright, pp. 151-152.

¹¹⁶ “National Security Council Report, NSC 5516/1: U.S. Policy Toward Japan,” April 9, 1955, *FRUS, 1955-1957*, Vol. XXIII, Pt. 1: pp. 55-57.

potential foes. This policy, quite similar to Eisenhower's New Look policy, caused a storm of controversy in the press, nearly forcing Kishi to step down.¹¹⁷ The press had a similar reaction as the Kishi administration came close to signing a bilateral nuclear agreement with the United States. The press, and then the general population, objected to the possibility that the United States might recycle spent nuclear fuel from Japan and then use it for nuclear weapons. The uproar caused by this sensation led to Diet committee hearings regarding this point. Okada Souji, a member of the Diet Foreign Committee, went so far as to ask what assurances Japan could get that the United States would not use its reprocessed fuel in nuclear weapons, or, at least, what could be done to make the press less concerned about this issue.¹¹⁸ This question indicates that Okada was more concerned with popular opinion regarding this issue than with the issue itself. Before the Japanese signed the nuclear agreement, they obtained the guarantee that reprocessed Japanese fuel would never be used in weapons. This stifled protest to the degree that the public would accept the agreement.

Nuclear issues remained a flashpoint in Japan for years. Despite the unpopularity of nuclear power, the United States continued to pursue it, sending a number of exhibits, displays, and movies to improve its popularity. In part through this campaign of education and propaganda, the Japanese eventually accepted nuclear power and mentally separated it from the issue of nuclear weapons, which never gained popularity. Not only did Atoms for Peace restart the Japanese nuclear research program, it served as a way for

¹¹⁷ "Telegram from the Embassy in Japan to the Department of State," May 8, 1957, *FRUS, 1955-1957*, Vol. XXIII, Pt. 1: p. 285.

¹¹⁸ Diet archives

the United States to assist the Japanese government, even though it was not initially popular with the government. The significance of turning atoms to peaceful uses had a very broad propaganda appeal. Since the point of the Atoms for Peace program was to turn atomic swords into plowshares, what better place to do so than Japan, the only country ever to be attacked by atomic bombs? By the mid-1970s, Japan had one of the largest nuclear programs in the world and at present derives around 30% of its electricity from nuclear power. The case of Japan, it would seem, could be considered one of the biggest success stories of the Atoms for Peace program.

These three case studies show a common purpose to the implementation of the Atoms for Peace program. Aside from the general purpose of sharing nuclear technology, the Eisenhower administration pursued specific objectives. In all three countries, Cold War politics played a paramount role. The desire to gain and maintain allies was a decisive factor in offering aid. Although the United States employed many other projects and offers of aid to those ends, nuclear power was a high profile and high “impact” way of showing support. In doing so, the United States sought to keep allies on its side lest they become neutral, and to make neutral countries positively disposed toward it.

This approach had both a propaganda and a utilitarian basis. The positive press the Atoms for Peace program received allowed the United States to boast that it actively sought peaceful uses of nuclear power, rather than strictly military applications. At some points, for example following the Lucky Dragon Incident, Atoms for Peace offers were even used to counteract bad press associated with nuclear weapons. Using the good will

garnered from the peaceful atom, allowed the United States to reinforce and expand its network of allies. The more utilitarian uses center on the issue of ore procurement. This proved to be a sensitive subject in the case of India, where nuclear technology was offered in part to undo the damage done by tension stemming from hard bargaining for raw materials. In Brazil, the issue of nuclear technology and raw materials had an even more direct, perhaps even quid-pro-quo, relationship. All of these considerations, mostly put forward by the AEC, Department of State, and NSC, completely overwhelmed President Eisenhower's initial objective of nuclear disarmament, moving the program in a very different direction than the one imagined by the President.

CONCLUSION

This paper has argued that Eisenhower started the Atoms for Peace program in an attempt to decrease tensions with the Soviet Union and to start the process of nuclear disarmament. The scholarship on this point has been somewhat divided, with older works tending to agree with the disarmament thesis while more recent scholarship, especially that of Osgood, Medhurst and Chernus, has focused on the propaganda aspects of the program. While it is appropriate to question President Eisenhower's sincerity in pursuing disarmament through Atoms for Peace as well as its feasibility, it is problematic to dismiss it out of hand. Eisenhower specifically stated in his private diary that Atoms for Peace was intended to foster disarmament, and his advisors addressed this goal specifically when criticizing the program. Given the corroborating evidence, it is hard to entirely dismiss disarmament as a motive without accusing Eisenhower of dissembling in his own diary, which I can find no compelling reason to do so. While propaganda played a significant role in Atoms for Peace, there is more to this issue than propaganda alone. Accounts such as Osgood's and Chernus's do not account for alternate purposes for the program, ignoring ore procurement and quid-pro-quo all together. They focus on Europe's role in the program, while only rarely venturing into the non-Western world, significantly narrowing their lines of inquiry.

Atoms for Peace did not, however, lead to nuclear disarmament. It failed to live up to its original goals for a number of reasons. Objections from the Department of Defense and the Joint Chiefs of State combined with the realities of Cold War negotiations and an unwillingness to compromise with the Soviets, not to mention increased availability of fissionable materials, doomed the program to fail to lead to disarmament. More immediate goals, espoused by the Atomic Energy Commission and the State Department, involving propaganda, alliance building, ore procurement, and other diplomatic aims came to the fore. Eisenhower's failure to achieve nuclear disarmament is not surprising given the complex relationship between the presidency and a large bureaucracy that is sometimes unwilling to implement the president's agenda. Indeed, all relevant departments did not seem to be on the same page regarding the purpose of the program prior to 1955.

The abandonment of a multilateral approach to the IAEA in 1955 marked the final move away from Eisenhower's original vision of Atoms for Peace. This move was the culmination of two related trends: a general trend away from disarmament as potentially hazardous to American security, and a growing inclination in the Eisenhower administration to place Cold War concerns above all else. Without a goal of disarmament, Atoms for Peace functioned to support Cold War interests such as propaganda, alliance-building, and acquisition of nuclear raw materials. These objectives served to exacerbate Cold War tension by encouraging a mentality that the acquisition of raw materials was a zero-sum game. The situation further widened the split between East and West by solidifying alliances which divided the world and provided a stage on which to expand

the propaganda war. In this light, Atoms for Peace failed with regard to its original two objectives.

That is not to say that the program itself was a complete failure. After all, at the end of his second term, Eisenhower referred to Atoms for Peace as one of his great successes.¹¹⁹ The use of bilateral agreements allowed the United States to control its allies' access to nuclear materials and technology more closely than it would have been able to do through a multilateral IAEA. This control allowed the Americans to achieve specific policy objectives, such as compelling foreign nations to sell their raw materials exclusively to the US or attempting to bind allies closer. It also allowed the United States to implement safeguards and inspections on the recipients of American materials, something the Soviets and the Indians would have been unlikely to approve. This approach, however, only allowed the United States access to nations that it was helping directly; it did not allow the enactment of safeguards that would enable the United States to monitor the nuclear activities of the Soviet Bloc.

Given the realities of negotiation during the Cold War, one can also question whether the Eisenhower administration could have realistically obtained its objectives. Regardless of the fact that Eisenhower's advisors in the Departments of State and Defense had advocated a move toward a bilateral approach, it seems unlikely that the Soviets or the Indians would have agreed to the inspections that would have been necessary to a multilateral approach. At that point, the Eisenhower administration's

¹¹⁹ See Dwight D. Eisenhower, *Waging Peace, 1956-1961: the White House Years* (Garden City, NY: Doubleday, 1965). Eisenhower's argument that the program was successful is clearly not based on measures of success of his original objectives. Based on his claim that it was a great success, it seems likely that Eisenhower did not just allow his advisors to drive his policy, but, at some point, got onboard with their approach.

choice would have been between abandoning the program or using it for the goals laid out by the Department of State. Abandoning the program could have been a serious propaganda blow which could only be alleviated by claiming that the program could not go forward because of Soviet intransigence. Such a strategy, however, would also have exacerbated Cold War tensions, but without the material gains that following through with the program offered. As long as the institution of the IAEA existed, there remained the hope that it could be used to facilitate a decrease in Cold War tensions and a move toward disarmament.

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