Sixty years ago, U.S. Ambassador Bernard Baruch addressed the new UN Atomic Energy Commission and outlined a bold and controversial plan for international control or ownership of all “dangerous” nuclear materials and related facilities.[1] Six months later, the divided commission sent its report to the UN Security Council. Lacking a consensus, the plan appeared dead.

Yet, reports of its death were premature. It has been the subject of doctoral dissertations[2] and at least one masters thesis.[3] Hydrogen bomb pioneer Edward Teller urged its revival.[4] In 2003, International Atomic Energy Agency (IAEA) Director-General Mohamed ElBaradei firmly placed multilateral nuclear controls back on the public agenda.[5] In 2004 he stressed that the global spread of dangerous nuclear facilities “could be the Achilles heel of the nuclear non-proliferation regime.”[6]

The end of the Cold War and growing public concerns about nuclear weapons in anybody’s hands offer grounds for a second look at the Baruch Plan.

Origins

Early proposals for international nuclear cooperation predated the atomic bombings at Hiroshima and Nagasaki. Several scientists urged such cooperation to avert a post-war nuclear arms race and to promote disarmament. On November 15, 1945, President Harry Truman, British Prime Minister Clement Attlee, and Canadian Prime Minister Mackenzie King issued a joint declaration proposing that “a commission should be set up under the United Nations” to prepare recommendations on “entirely eliminating the use of atomic energy for destructive purposes” and promoting peaceful uses.[7]

The declaration stressed that “no system of safeguards that can be devised will of itself provide an effective guarantee against the production of atomic weapons by a nation bent on aggression.” Yet, it also called for the new UN commission to devise “effective safeguards by way of inspection and other means to protect complying states against the hazards of violations and evasions” while cautioning against the “spreading of specialized information” before such safeguards were in place.

The proposal resurfaced in a communiqué issued from Moscow on December 27, 1945, following a meeting of the foreign ministers of the Soviet Union, the United Kingdom, and the United States. It contained a draft General Assembly resolution on establishing a UN commission “to consider problems” relating to atomic energy.[8] On January 24, 1946, the General Assembly adopted a version of this text as its first official resolution (Resolution 1(I)).

The Department of State, meanwhile, continued its efforts to develop a specific proposal for international control. On January 7, 1946, Secretary of State James Byrnes appointed his undersecretary, Dean Acheson, to chair a Committee on Atomic Energy, which appointed a Board of Consultants chaired by David Lilienthal to draft an initial report. The result, known as the Acheson-Lilienthal report, was submitted to Byrnes on March 17 and publicly released a few days later.[9] It became, with significant amendments, the heart of the Baruch Plan.

Acheson-Lilienthal Report
Intended merely as “a foundation on which to build,” this report carried a lot of weight as its authors included some key participants in the Manhattan Project, most notably J. Robert Oppenheimer. Like the Truman-Attlee-King declaration, it stressed that “there is no prospect for security against atomic warfare in a system of international agreements to outlaw such weapons controlled only by a system which relies on inspection and similar police-like methods.”

Instead, the report called for international ownership and operation of all “dangerous” nuclear activities, which covered virtually the entire nuclear fuel cycle, including uranium and thorium mines. The new Atomic Development Authority would also conduct research, even on atomic weapons per se. Less-dangerous activities would be exempted from its mandate, including the operation of reactors using safeguarded “denatured” fuels that could not be used directly in nuclear explosives.

The report stressed that such goals could not be achieved if dangerous nuclear activities were left in “national hands.” It warned of the risks of “national rivalries” in forms of atomic energy that were readily convertible to destructive uses. Although the report lacked a detailed enforcement proposal, it called for the geographic dispersal of Atomic Development Authority facilities to ensure that if a state cheated, others could promptly respond, thereby denying any strategic advantage in such a move. Oversight would come from “some integral organ of the United Nations, perhaps the Security Council itself.” Although the report only briefly discussed “stages” of implementation, the United States would clearly relinquish the bomb only after the controls had been established.

The Baruch Plan

Shortly before the submission of that report, Byrnes appointed his friend, Bernard Baruch, to represent the United States at the newly established UN Atomic Energy Commission, a choice not supported by Oppenheimer, Acheson, or Lilienthal. Baruch, a financier-statesman who was well respected in Congress, assembled his own team, which included his own personal publicist, to develop a concrete plan to present to the commission. He indicated that he had his own ideas for the proposal and that he would not serve as any “messenger boy.”

Baruch’s proposal addressed many issues in Resolution 1(I), including scientific cooperation, nuclear power, disarmament, and safeguards. The plan also borrowed heavily on the Acheson-Lilienthal report.

Yet, it also departed from the report, notably in asserting that “there must be no veto” to protect those who violate the controls. It stated that there must be “immediate, swift, and sure punishment” for violations. It was more ambiguous on whether the Atomic Development Authority should actually own uranium and thorium mines but more explicit about the various “stages” through which the controls would have to evolve before the United States would give up its bombs. Baruch left no illusions that disarmament would be easy: “But before a country is ready to relinquish any winning weapons it must have more than words to reassure it. It must have a guarantee of safety, not only against the offenders in the atomic area but against the illegal users of other weapons—bacteriological, biological, gas—perhaps—why not!—against war itself.”

The Soviet Response

With the Cold War unfolding, the Soviet Union would not accept a plan that would eliminate its veto, deprive it of its option of acquiring nuclear weapons, and open its borders to intrusive international inspection, all in the hope that the United States would eventually relinquish the bomb.

Instead, the Soviet representative on the commission, Andrei Gromyko, submitted an alternative proposal on June 19, which reversed the staging of the Baruch Plan. It began with a convention to prohibit the production, storage, or use of atomic weapons and to require the destruction of all such weapons. Violations would constitute a “crime against humanity,” but penalties would be imposed under domestic legislation. Gromyko stressed that the work of the commission could only be successful if the controls were consistent with the UN Charter, especially the veto authority.

The commission’s December 1946 report, although not representing a consensus—the Soviet Union and Poland abstained—did conclude that international control was technologically feasible. It found
that although a convention to outlaw nuclear weapons was essential, it was not sufficient to ensure the use of atomic energy for peaceful purposes. The report also endorsed the U.S. proposal to eliminate the veto over enforcement.

The commission’s reports in 1947 and 1948 were opposed by the Soviet Union. The 1948 report concluded that the commission had reached an impasse, which continued into 1949, and in September 1949 the United States announced that the Soviet Union had conducted a nuclear test. In January 1950, the Soviet Union withdrew from the discussions, and the General Assembly dissolved the commission in January 1952.[13]

Legacy

The collapse of this initiative soon gave way in the 1950s to a substantially different approach. It sought to implement controls in a highly decentralized regulatory environment while relegating disarmament to, at best, a distant goal.

On December 8, 1953, President Dwight D. Eisenhower addressed the UN General Assembly[14] and offered his Atoms for Peace proposal, which offered peaceful nuclear cooperation in exchange for safeguards over nationally operated nuclear facilities—exactly what the earlier proposals had warned would not work.

By the mid-1950s, several converging trends set the world on this new course. The first was the reaffirmation of the primacy of national sovereignty in setting and implementing controls, which required a smaller role for central international institutions. The second involved a shift from a prohibitive to a regulatory approach; “safeguards” of national activities would replace schemes for direct control at the global level. A third trend was the substitution of “partial measures” for comprehensive disarmament.

Both the global and national regulatory approaches, however, had one element in common: a shared conviction that both plutonium separation and the production of highly enriched uranium (HEU) were legitimate peaceful activities.

Partial Measures

The legacy of partial measures with respect to disarmament requires little elaboration, as the nuclear arms race between the early 1950s and the mid-1980s resulted in the production of well more than 50,000 nuclear weapons worldwide. Although global nuclear disarmament efforts had failed, the partial measures had their own unhappy legacy.

Many of the basic concepts from the Baruch Plan continued to evolve, however, with the IAEA inheriting many of the Atomic Development Authority’s inspection and promotional functions but without the ownership. Between 1975 and 1987, the IAEA explored several multilateral schemes[15] to deal with fissile materials problems, each failing to produce a consensus.

- **1975-1977**: The IAEA considered Regional Nuclear Fuel Cycle Centres.
- **1978-1982**: Two expert groups studied schemes for the international storage of plutonium and spent fuel.
- **1980-87**: The IAEA’s Committee on Assurances of Supply explored methods to ensure guaranteed supplies of nuclear fuel for countries without fuel cycles.
- **1987**: The UN Conference for the Promotion of International Cooperation on the Peaceful Uses of Nuclear Energy considered various multilateral initiatives.
Why Worry?

In 2006, a few states still produce weapon-usable materials for civilian use, adding to security challenges posed by military stocks. One study claims that “enough weapons-usable uranium and separated plutonium exist today [2004] to produce well over 100,000 Hiroshima-sized nuclear devices.”[16] Losses of even very small amounts of such material pose grave concerns; the IAEA estimates that only about 8 kilograms of plutonium or 25 kilograms of HEU are needed for a bomb.

As of December 2004, the IAEA documented “662 confirmed incidents involving illicit trafficking and other related unauthorized activities involving nuclear and other radioactive materials” since January 1993. These included 18 incidents involving trafficking in HEU or plutonium, including a “few” involving “kilogram quantities.”[17]

The anticipated growth in nuclear energy use will greatly expand this security challenge. One study illustrates the staggering safeguards implications if global production of nuclear power grew by a factor of eight by the year 2075 (roughly the amount needed to reduce greenhouse-gas emissions by a modest 25 percent).[18] The study estimated that this would annually produce 600 tons of plutonium (without reprocessing) and require some 200 additional uranium-enrichment plants, as well as the opening of a large nuclear waste repository each year thereafter.

Many security concerns would persist even if sensitive fuel-cycle activities were undertaken only at multilateral facilities. Abdul Qadeer Khan, the architect of the world’s most notorious illicit nuclear network, obtained his sensitive know-how from URENCO, a multinational consortium in the Netherlands.[19] Such technology was later retransferred to North Korea, Iran, and Libya.

Recent Multilateral Initiatives

Nevertheless, in October 2003, ElBaradei offered a multilateral initiative to “restrict” enrichment and reprocessing to “facilities under multinational control,” design nuclear energy systems that do not require or use weapons-usable nuclear materials, and consider multinational approaches to the management and disposal of spent fuel and radioactive waste.[20] He has long stressed the need for further progress on disarmament and nonproliferation, saying that “effective control of nuclear materials is the ‘choke point’ in preventing nuclear weapons development.”[21]

Following up, the IAEA published in 2005 the report of an expert group on “Multilateral Approaches to the Nuclear Fuel Cycle,” which outlined five “suggested approaches” ranging from reinforcing market mechanisms to more centralized multinational arrangements.[22]

The UN Secretary-General’s High-Level Panel on Threats, Challenges, and Change also stressed the need for progress in disarmament, while calling for arrangements to enable the IAEA to meet demands for low-enriched uranium and for reprocessing services from states that did not pursue national fuel-cycle facilities.[23]

President George W. Bush has urged the “world’s leading nuclear exporters” to provide incentives to forgo such capabilities and to prohibit such exports to any state that did not already have full-scale, operational facilities.[24] On May 18, the United States proposed a draft fissile material cutoff treaty, which would prohibit, without verification, the production of separated plutonium or enriched uranium for use in weapons, but it would not outlaw such activities for other purposes.[25]

Quo Vadis?

As ElBaradei has stated, “[T]he [nonproliferation] regime as is right now is not adequate to deal with the increasing challenges.”[26] Many of the most severe challenges arise from the intrinsic properties of weapons-usable nuclear material.

After a long journey and many side excursions, the world now finds itself back at the same crossroads that it faced 60 years ago. To Baruch, the simple choice was between the “quick and the dead.” A more recent assessment frames the choice as between “denial” strategies or multinational fuel cycles.[27]
If the global use of nuclear power grows as expected, the production of such dangerous material, plutonium in particular, will substantially increase even if a treaty banning the production of fissile material for weapons purposes enters into force. Failure to address this challenge will frustrate global efforts to achieve the three most important nuclear security goals: disarmament, nonproliferation, and counter-terrorism.

Most initiatives dealing with fissile materials operate from the assumption that efforts to ban outright the production of HEU or the separation of plutonium are unrealistic. Yet, the prospect of seeking to regulate indefinitely ever-growing quantities of such material under national control seems no less utopian, even with strengthened safeguards. There is a better approach: if stuck in a hole, stop digging.

A treaty to ban the production of weapons-usable nuclear material would not require the international ownership of dangerous facilities, only their conversion to ensure they will not produce such material. Low-enriched uranium would still be produced, although under even tighter international controls to avoid another Khan affair. Such a treaty would contain no double standards. It would facilitate verification. As noted in the Acheson-Lilienthal report, “It is far easier to discover an operation that should not be going on at all than to determine whether a lawful operation is being conducted in an unlawful manner.” It would also reduce terrorism and proliferation risks, while promoting nuclear disarmament.

Reflecting back in early 1948 on the failure of the Baruch Plan, Oppenheimer wrote that “[i]t is necessarily denied to us in these days to see at what time, to what immediate ends, in what context, and in what manner of world, we may return again to the great issues touched on by the international control of atomic energy.” The time to return to these great issues has surely arrived. As Oppenheimer concluded, “This is seed we take with us, travelling to a land we cannot see, to plant in new soil.”

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ENDNOTES


13. UN General Assembly Resolution 502 (VI), January 11, 1952.


29. Acheson-Lilienthal report, p. 34.
