CHAPTER 4

THE NONPROLIFERATION REGIME AND ITS DISCONTENTS

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Why is it sometimes difficult to get the members of the United Nations (UN), whether states-parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) or otherwise, to enforce the international rules and norms designed to prevent the manufacture of nuclear weapons by non-weapon states? In his chapter,[1] Victor Gilinsky raises this question in the context of the theft of bomb grade nuclear materials that went from the plant of a U.S. Navy contractor in Pennsylvania to Israel. He avers that the reluctance to enforce the rule of law stems from political considerations that render the nonproliferation regime much less effective than advertised.

This conclusion should not be surprising, for political considerations have surrounded the entire nonproliferation regime from its inception, including the creation of the International Atomic Energy Agency (IAEA) and its system of safeguards, of which more will be said later in this paper. But Gilinsky's complaint can be generalized, as he recognizes himself when he writes:

It is a familiar phenomenon in ordinary life that a friend of a violator of the law, or even a victim, is reluctant to report a crime. It also happens on an international level in dealings between states.[2]

The fact is that getting countries to act in the face of violations of signed agreements or agreed upon norms has been a problem whenever conflicting interests come into play. A particularly egregious example is provided by the reaction to Germany's violations of the Versailles Treaty that ended World War I. After Germany in 1935 announced that its army would now be based on compulsory national service, a clear violation of the treaty, Britain, France, and Italy, under the aegis of the League of Nations, held a conference at Stresa, Italy to decide what to do. It resulted in a resolution opposing the unilateral repudiation of treaties, but as British Prime Minister Winston Churchill observed in his history of the Second World War: "…the British representative made it clear at the outset that they will not consider the possibility of sanctions in the event of treaty violations."[3] So Germany went its unmerry way and the world lost an estimated 50 million people in the succeeding world war.

A more direct forerunner of the enforcement problem described in Gilinsky's paper occurred soon after WWII when the institutional arrangements that were negotiated for the UN required the existence of a veto in the Security Council precisely to prevent the imprimatur of the UN for actions deemed inimical to the interests of the five permanent members of the Security Council and their allies. When an attempt was made by the United States in its proposed 1946 Baruch Plan to block use of the veto in the case of nuclear related enforcement matters, the Soviet Union objected and the attempt failed. Of course the Baruch Plan was a transparent maneuver by the United States to achieve a propaganda victory over the Soviets in the early days of the Cold War, and not a serious attempt to find a way to encourage nuclear development without spreading bomb technology. Its failure made it clear that enforcement of nuclear rules was going to have a hard road ahead. The prospects for nuclear development, which seemed particularly bright in the

aftermath of U.S. President Dwight Eisenhower's "Atoms for Peace" speech, blinded the policymakers on all sides to the difficulties of creating and enforcing effective rules that could prevent proliferation without impeding development. The early history of the IAEA and safeguards deliberations illustrates the problems at the heart of Gilinsky's thesis.

The idea of an IAEA was born as part of President Eisenhower's "Atoms for Peace" speech on December 8, 1953. The subsequent program that was given the name Atoms for Peace had a number of objectives. It was, among other things: A disarmament tool by virtue of the proposed establishment of a nuclear fuel bank that its proposer thought could have the effect of limiting or reducing the amount of fissionable material eligible for weapons; a marketing tool for creating and boosting a world demand for nuclear energy at a time when the United States was in the best position to profit from it both economically and politically; and a propaganda tool to divert attention away from the barbarity inflicted on Japan and the risk of a future nuclear holocaust in favor of presenting peaceful nuclear energy as a contribution to human society's technological and social betterment.

In reality, the disarmament aspect of Atoms for Peace was illusory as it became clear that the amount of fissionable material in the world, including the Union of Soviet Socialist Republics (USSR), was so substantial that proposed contributions to a uranium bank would have no significant impact on weapons manufacture. Nonetheless, the United States was intent on promoting nuclear energy internationally and the Russians realized that such promotion had national security implications for them; therefore they decided to participate in the development of any international institution created to deal with peaceful nuclear applications. The United States was unprepared for the Soviet decision and was surprised when the Soviets agreed to send a delegation to an international conference on nuclear energy planned for Geneva in August 1955. The United States was further surprised when the USSR agreed to participate in the creation of the IAEA and a technical conference, following the large Geneva meeting, devoted to exploring the subject of safeguards to prevent peaceful nuclear technology from leading to the proliferation of nuclear weapons.

The Russian decision to participate (just two weeks before the conference opened) prompted a flurry of activity by the U.S. State Department to bring an American position on safeguards to the technical meeting scheduled to follow the Geneva conference. The American delegation to the safeguards meeting was led by Isadore Rabi and attempted to develop a U.S. position over the five days that were available prior to the agreed-upon meeting. Little prior thinking about the subject had occurred beyond the notion of emphasizing physical security of fissionable materials and detecting violations of rules created by the projected IAEA. It became apparent in the discussions among the Americans (in hotel room meetings at night) that the safeguards issue was complicated, difficult, and likely expensive. The American team settled on a proposal to assist material accounting with tagging fissionable material with a radioactive element, U-232, that would allow detection of the material in the plant. Material accounting would be accompanied by a system of physical security and inspection. The Russians, led by Dmitri Skobeltsyn, were skeptical of the proposal and pointed out some technical problems with the use of U-232 as a taggant that the U.S. had not taken into account. In addition, the U.S. team expressed a lack of confidence in the long term viability of its own safeguards proposal.

Following the safeguards meeting, and in advance of a meeting to draft the IAEA statute, the U.S. Atomic Energy Commission (AEC) created a task force to produce ideas and studies for safeguards. It contracted with the Vitro Corporation to produce an engineering study of safeguards to allay the concerns expressed over the effectiveness of the American proposals. The Vitro study concluded that even with a 90% probability of detecting diversion of nuclear materials, it would be possible to divert enough plutonium for one bomb from a power reactor within a period of five years. This meant that safeguards would have to have a political and diplomatic component as well as a technological one.

The task force concluded that Atoms for Peace might contribute to proliferation, that is, atoms-for-peace could lead to atoms-for-war. However, the AEC was not prepared to slow down, let alone abandon, the Atoms of Peace program. Although the agency explicitly recognized that there was no diversion-proof safeguards system, the commission supported taking the proliferation risks of going ahead with the program. The result was inevitable. The United States provided research reactors and training to dozens of countries, and some of them used the assistance to advance their interest in making nuclear weapons. India, Pakistan, and Israel all received assistance under Atoms for Peace. Much attention has in recent years been paid to the Iranian nuclear program and the concern about whether Iran is moving toward a nuclear weapon capability. Most of the stories do not mention that Iran's nuclear interest began in the late 1950's with a research reactor provided by the United States under Atoms for Peace. The cavalier attitude on safeguards at the beginning of the nuclear age has been matched by the attitude toward nonproliferation failures in more recent years.

The failure to tie an effective safeguards system to earlier nuclear development was made manifest during negotiations on the extent of safeguards. For example, the question arose as to whether safeguards should be applied to source material. The United Kingdom (UK), Belgium, Canada, and Australia supported this, but France and India were opposed. The opposition prevailed, making inventory accounting of source materials a purely voluntary activity. Another issue was whether safeguards should apply to all nuclear states. India supported this, but the five permanent members of the Security Council (the P-5), wanted to exclude themselves from such a provision so they proposed that safeguards should attach only to those states that receive technical assistance from the IAEA, thereby leaving out the P-5.

Finally, the issue arose as to whether there could be multilateral or alternative bilateral safeguards in lieu of international safeguards under the IAEA. The U.S., realizing that it would take another few years to establish an international system, and not wanting to wait for such a system to be put into place before engaging in nuclear trade, supported the notion of bilateral or multilateral safeguards in nuclear transactions. Thus, when the European Atomic Energy Community (Euratom) was established, the United States supported Euratom's desire for its own safeguards system which undermined the authority of the IAEA system at the very beginning.

But this was not the only problem making it difficult for safeguards to perform their stated function (deterring diversion via the risk of timely detection). Safeguards are still primarily focused on declared facilities. The additional protocol of the IAEA which allows, inter alia, for environmental monitoring, is meant to take care of this gap in coverage, but only about 60% of NPT signatories have ratified it. Special inspections ostensibly can be used to investigate

suspicious activity at a site, but inspectors require the cooperation of the state and, the threat of sanctions notwithstanding, are unlikely to be given access if inspections would reveal a violation.

Another problem in practice concerns the unrealistic timeliness goal of the safeguards system. Material balances are done on a yearly basis, while diversions can occur at any time. This can be overcome by increasing the number of inventory takings, but that increases the cost and is resisted by plant operators.

Finally, the official definition of a Significant Quantity (SQ) of high enriched uranium (HEU) or plutonium (Pu) (that is, the amount of material needed to produce a nuclear explosion) is obsolete. For HEU, 1SQ is defined as 25 kilograms, and for Pu, 1SQ is 8 kilograms. Weapon states have produced working weapons with significantly smaller amounts of materials. Moreover, even considering the official numbers, in bulk handling plants processing large amounts of such materials, the minimum detectable diversion over a period in which a bomb can be constructed will exceed 1SQ by far.

In response to all these problems with safeguards, technical and institutional advances to prevent proliferation have been incorporated into the nonproliferation regime. Among these are near real time accounting, the physical security convention, better intelligence and surveillance, the additional protocol, export controls, and increased use of the Security Council to impose sanctions on violators. Ultimately, of course, the system depends on the willingness of countries to carry out enforcement actions to deal with safeguards violations or other violations of international norms, and this is central to the problem discussed in Gilinsky's paper.

Although Gilinsky mentions a number of cases where the United States failed to act appropriately upon knowledge of violations, his main focus is on the Nuclear Materials and Equipment Corporation (NUMEC) affair in which Israel apparently and illegally received hundreds of kilograms of HEU from a U.S. Navy contractor in Apollo, Pennsylvania. This was an egregious example of misfeasance by the U.S. government. But equally bad is the example of Pakistan having obtained the means for making nuclear weapons which Gilinsky ascribes to a U.S. policy of "benign neglect" because of Pakistan's role in the Cold War. Neglect it certainly was, but there was nothing benign about it. During the most critical period of Pakistan's drive to obtain nuclear weapons in the 1980s, the executive branch of the U.S. government got Congress to amend U.S. nonproliferation laws to allow economic and military assistance to Pakistan and then repeatedly ignored violations of the laws for the same purpose.

Here is a list of the actions or non-actions taken by the U.S. government that gave Pakistan the confidence that it had little to fear from U.S. nonproliferation laws as long as the Cold War was still the primary focus of U.S. foreign policy and the Soviet invasion of Afghanistan was still ongoing:

1. In 1981 a new law was enacted giving a six-year waiver to Pakistan of the provisions of the Symington Amendment to the Foreign Assistance Act. Pakistan had previously been denied economic and military assistance under the amendment by importing unsafeguarded nuclear enrichment technology and equipment. The waiver allowed Pakistan to obtain a $3.2 billion aid package despite the continuation of its nuclear

weapon acquisition activities. The waiver was extended a number of times until the Soviets began to leave Afghanistan in 1989.

2. Agents for Pakistan repeatedly attempted to illegally smuggle materials and components useful for the manufacture of nuclear weapons out of the United States, and were either not prosecuted or were allowed to leave the country without heavy penalty.

   (a) In 1981, while an aid package for Pakistan was being considered by Congress, a Pakistani agent attempted to smuggle 5,000 lbs of zirconium for nuclear fuel rods out of the United States. The attempt was foiled by U.S. customs agents but had no effect on congressional passage of the aid.

   (b) A Pakistani agent named Nazir Ahmed Vaid was arrested in 1984 for illegally attempting to export krytrons, which are used for nuclear triggers. Although the known intended recipient was the Pakistan Atomic Energy Commission, the indictment was rewritten to exclude any mention of the nuclear use of krytrons. Vaid was permitted to plea bargain to a reduced offense, thus avoiding a jury trial, and a gag order on the case was issued by the judge. Vaid was found guilty of one count of an export violation and was quietly deported three weeks later. Although the case had no effect on U.S. aid to Pakistan, it did cause Congress to pass the 1985 Solarz Amendment to the Foreign Assistance Act which prohibited economic and military assistance to any country that illegally exports or attempts to export U.S. items that would contribute significantly to that country's ability to make a nuclear explosive device.

   (c) In 1987, a Canadian citizen of Pakistani extraction named Arshed Pervez was arrested for illegally attempting to buy and export a quantity of beryllium (used as a reflector in the core of nuclear weapons) along with 25 tons of maraging steel (a special steel used for constructing high speed centrifuges) from an American manufacturer. He was convicted of the beryllium charge and of lying to investigators, but escaped conviction on the remaining charges on the grounds of entrapment even though American intelligence officials found evidence that he was working for a retired Pakistani brigadier general and that the final customer was the Pakistan nuclear program. This was a violation of the Solarz Amendment, but no sanction ensued.

3. In 1985 the Pressler Amendment was signed into law that made military assistance to Pakistan contingent on an annual certification by the president that Pakistan did not possess a nuclear explosive device. Pakistan had the bomb by 1987, but the administrations of U.S. Presidents Ronald Reagan and George H.W. Bush continued to make the determination that Pakistan did not possess a nuclear explosive device until 1990, when the last Soviet soldiers were leaving Afghanistan.

4. The sanctions visited on Pakistan following the reimposition of the Symington and Glenn Amendments as well as the application of the Pressler Amendment did not last long once the U.S. concern about the Soviets was replaced by the specter of Islamic terrorists after 9/11. When the U.S. decided to wage war in Afghanistan and needed the help of the Pakistan Inter-Services Intelligence agency (ISI) to do so, the nonproliferation laws were again altered or replaced so that Pakistan could receive its desired arms shipments. The nuclear tests carried out by Pakistan (and India) in 1998 made no difference as the United States continued to change its laws for Pakistan's (and India's) benefit. Even the rise of the infamous AQ Khan network that spread nuclear bomb material manufacturing technology to many countries, including Iran and North Korea, made no difference.

The characterization of the U.S. attitude toward the Pakistani nuclear program during these years is more accurately called "supine indulgence" rather than "benign neglect". It has provided the two current bêtes noire of the United States in nuclear matters, Iran and North Korea, with the ability to claim that U.S. oppositional rhetoric to their programs on the grounds of principle constitutes hypocrisy. That is not to say that they have no fear of U.S. military action. Quite the contrary; but all parties understand that if it comes to that, it will not be primarily in defense of nonproliferation norms, although that is how it may be advertised. Rather it will be in support of the maintenance of regional U.S. power and influence against the survival and regional power ambitions of Iran in the Middle East and North Korea in East Asia.

It is frequently said, usually by people with a particular fondness for realpolitik, or who have a foreign policy axe to grind on behalf of a client, country, or industry that is behaving badly on nuclear issues, that U.S. interests in nonproliferation cannot be allowed to supersede broader U.S. national interests (defined by them as helping said client, country, or industry). Such philosophy relegates nonproliferation policy to a contingency to be exercised when convenient to do so. It is another version of the old saw that says nations do not have permanent friends or enemies, only permanent interests, which in this case excludes nonproliferation except in special circumstances. And there is no question, when examining the U.S. record (not just the rhetoric of its leaders), that the United States has yet to see nonproliferation as a permanent interest transcending alliances and ideology. Regardless of whether this as a good thing or a bad thing, it cannot be expected that other nations will be persuaded to view the issue differently, and that leads to the problems with the nonproliferation regime, including the one encapsulated in the title of Gilinsky's paper.

ENDNOTES

[1] Gilinsky, Victor, "Sometimes Major Violations of Nuclear Security Get Ignored," in *Nuclear Weapons Materials Gone Missing: What Does History Teach?* ed., Henry Sokolski.

[2] Ibid.

[3] Churchill, Winston, The Second World War, Vol. I, The Gathering Storm (London: Penguin, 1985), 119.