## **CHAPTER 1**

## THE NUCLEAR NONPROLIFERATION TREATY'S UNTAPPED POTENTIAL TO PREVENT PROLIFERATION

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As currently interpreted, it is difficult to see why the Nuclear Nonproliferation Treaty (NPT) warrants much support as a nonproliferation convention. Most foreign ministries, including that of Iran and the United States, insist that Article IV of the NPT recognizes all states' "inalienable right" to develop "peaceful nuclear energy." This includes money-losing activities, such as nuclear fuel reprocessing, which can bring countries to the very brink of acquiring nuclear weapons. If the NPT is intended to ensure that states share peaceful "benefits" of nuclear energy and prevent the spread of nuclear bomb making technologies, it is difficult to see how it can accomplish either if the interpretation above is correct.

Some argue, however, that the NPT clearly proscribes proliferation by requiring international nuclear safeguards against military diversions of fissile material. Unfortunately, these procedures, which are required of all non-nuclear weapons state members of the NPT under Article III, are rickety at best. The International Atomic Energy Agency (IAEA) nuclear inspections, which are intended to detect illicit nuclear activities and materials, certainly have a mixed record. Not only has the IAEA failed to find existing covert reactors and fuel-making plants, which are critical to bomb making, the agency still cannot assure the continuity of inspections for spent and fresh reactor fuels

that could be processed into bomb usable materials at roughly two-thirds of the sites that it currently inspects. What is easily as worrisome is that even at declared nuclear fuel-making sites, the IAEA routinely loses count of many bombs' worth of production each year.

Finally, in the practical world, the NPT hardly admits of modification and is far too easy for violating states to withdraw from. Under Article X, treaty members are free to leave the NPT with no more than 3 months notice merely by filing a statement of the "extraordinary events [relating to the subject matter of the treaty] it regards as having jeopardized its supreme interests." As North Korea demonstrated with its withdrawal from the NPT, these slight requirements are all too easy to meet.

As for amending the treaty, it is nearly impossible. Not only must a majority of NPT members ratify any proposed amendments, but every member of the IAEA government board and every NPT nuclear weapons state member must ratify the proposal as well, and this is only to get amendments for consideration by those states that have not yet ratified the NPT. Ultimately, any state that chooses not to so ratify is free to ignore the amendment, and the treaty is functionally unamendable.

For all of these reasons, the NPT is not just seen as being weak against violators and difficult to improve, but it is seen effectively as a legal instrument that *enables* nations to acquire nuclear weapons technology. Former President George W. Bush highlighted this in a February 2004 nuclear nonproliferation speech in which he argued that the NPT had created a "loophole" in promoting all aspects of civilian nuclear technology including nuclear fuel making. This allowed

proliferating states to "cynically manipulate" the treaty to develop and acquire nearly all the technology and materials they needed to make nuclear weapons. President Bush attempted to shore up the NPT by calling on the world's nonweapons states that have not yet developed nuclear fuel making to foreswear such activities and to allow more intrusive civilian nuclear inspections in exchange for their assured access to nuclear fuel from those states now producing enriched uranium.

Bush's appeal, however, was hardly successful: Australia, Canada, South Africa, Jordan, Iran, and Argentina, among other states, were unwilling to give up their "right" to make nuclear fuel. Then, in September 2007, Israel bombed a covert Syrian nuclear reactor that was under construction. This act of violence, which followed months of intelligence consultations with the United States, was a clear vote of no confidence in the IAEA nuclear inspections system.

Compounding these setbacks, in 2005 the U.S. Government proceeded to negotiate a civilian nuclear cooperation agreement with India—a nonweapons state under the NPT that had already violated its pledges not to misuse previous U.S. and Canadian civilian nuclear energy aid and that had tested nuclear weapons in 1974 and 1998. Implementation of this agreement prompted Pakistan, Israel, and North Korea to call for similar treatment. Finally, as early 2010, Washington and its allies had still not seriously penalized, much less reversed, the nuclear misbehavior of Iran and North Korea, two states that the IAEA found to be in clear breach of their NPT safeguards obligations.

Each of these developments has undermined the NPT's nonproliferation credibility and led to a chorus of pleas from policy analysts for members of the NPT to take any number of steps to strengthen the treaty. Some of these measures would require nonweapons states to adopt more intrusive nuclear inspection procedures. Others would increase IAEA safeguards funding and establish automatic penalties for safeguard agreement violations.

The most prominent of these proposals, however, have to do with implementation of the NPT's famous disarmament Article VI. Under this article,

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.

As to what Article VI might entail, the NPT's preamble is quite explicit: the NPT member states should support a global ban on nuclear testing, cease producing nuclear weapons and their means of delivery, and pursue nuclear and general disarmament.

Nonweapons states point out that none of these objectives has yet been met. For all of the reductions that have been made in U.S., allied, and Russian nuclear weapons deployments (down from over 75,000 nuclear weapons to fewer than 10,000), both the United States and Russia, they note, still retain thousands of nuclear weapons in storage. Also, the five original NPT nuclear weapons states have yet to bring the Comprehensive Nuclear Test Ban Treaty (CTBT) into force and have yet to reach any agreement to cease nuclear weapons production.

When one digs deeper, though, this indictment of the NPT weapons states become a bit more complicated. After all, most of the declared nuclear weapons states have reduced their weapons deployments and have announced moratoriums on the further production of uranium or plutonium for weapons purposes and on the further testing of nuclear weapons. Also, the states most opposed to concluding formal international agreements on nuclear testing and production are not the NPT nuclear weapons states, but rather states outside of the NPT, such as India, North Korea, and Pakistan, or states such as Egypt, which refuses to ratify the CTBT until Israel signs the NPT and eliminates its nuclear weapons assets.

Combine these complications with the ones already reviewed and the NPT Review Conference scheduled for May 2010, which allows all NPT members to share their views on what needs fixing in the treaty's implementation, and you have the makings for everything but consensus. This is so although President Barack Obama succeeded in getting the United Nations Security Council (UNSC) to adopt an ambitious resolution last fall detailing a number of worthy NPT Review Conference goals.

How, then, will the NPT be viewed after the May conference is held? One strong possibility is that the NPT will become more and more of a diplomatic talking point—a nuclear version of the Biological Weapons Convention, a set of agreed international goals rather than an international understanding with concrete, operational consequences. What this risks is letting the NPT become a dead letter like the Kellogg-Briand Pact, which vainly tried in 1929 to ban war—i.e., a solemn, albeit ineffective legal attempt to prohibit the worst of what is certain to occur.

All of this is likely, but only so long as the NPT is viewed as it is now—as a set of nuclear bargains at war with one another. True, most nuclear nonprolifer-

ation experts insist that any reading of the treaty that might alter or curtail NPT members' nuclear rights as they are currently viewed is simply a nonstarter. Such a view, however, is unnecessarily fatalistic. In fact, the NPT is open to interpretation and has already been significantly altered as a result.

Here, the clearest demonstration is the way that the NPT's Article V promise to share the possible benefits of peaceful nuclear explosives has played itself out. When this article was first proposed in the 1960s, most nations, including the United States and Russia, believed that nuclear explosives could be employed as "ploughshares" to create canals and to complete other civil engineering tasks, including mining and excavation. To assure nonweapons states the possible benefits of such nuclear applications, the NPT allowed nuclear weapons states to share such benefits by supplying nuclear explosive services to nonweapons states on a turnkey basis.

To date, no state, though, has applied for such assistance nor has any state offered it—for two unanticipated reasons. First, the possible benefits of peaceful nuclear explosives turned out to be negative: Given the costs of cleaning up the radioactive debris that the use of peaceful nuclear explosives would produce, it became clear that it would be far cheaper to use conventional explosives for any proposed civil engineering applications. In short, it turned out that there were no benefits to share.

Second, and closely related, the few states that insisted on conducting their own "peaceful nuclear test explosions"—India and Russia—were strongly suspected of cynically using Article V as a cover for nuclear weapons testing. Certainly, the United States and most nuclear supplying states sanctioned India

for its 1974 test of a "peaceful" nuclear device by depriving it of access to most controlled civilian nuclear supplies. In time, any nuclear explosion, peaceful or not, was seen as a violation of an implied norm against any form of nuclear testing.

This example of Article V's reinterpretation, although not well known or understood, speaks directly to several of the NPT's current difficulties. As already noted, the common, current view of an inalienable right to peaceful nuclear energy recognized by the NPT is that this right automatically allows states to participate in any nuclear activity, no matter how uneconomical or dangerous, so long as it has some conceivable civilian application and the materials or activities in question are occasionally inspected by IAEA inspectors or their equivalent. This is Japan's view, and that of the Netherlands, Germany, South Africa, Brazil, Iran, and also the United States.

Yet, the recasting of Article V suggests that there is another more sensible way to read Article IV. This view recognizes the explicit qualifications made in the NPT with regard to exercising the inalienable right to peaceful nuclear energy. This right, the NPT notes in Article IV, must be implemented "in conformity" with the treaty's clear strictures in Articles I and II. These two articles, in turn, deny nuclear weapons states the right "in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices," and the articles ban nonweapons states from seeking or receiving "any assistance in the manufacture of nuclear weapons."

Properly understood, being in conformity with Articles I and II implies also being in conformity with Article III, setting forth the NPT requirement that all

nonweapons states accept the imposition of international nuclear safeguards on all of their civilian nuclear activities and materials to prevent their military diversion to making bombs. Certainly, a nonweapons state refusing such safeguards would be in implicit violation of Article II. Thus, the final statement of the 2000 NPT Review Conference refers to the need for nonweapons state members to exercise their Article IV activities in conformity with Articles I, II and III.

Technically, this safeguard condition is not easily met. Not all nuclear activities and materials can in fact be safeguarded to prevent their diversion to make bombs. Some activities, e.g., nuclear fuel making and operating large nuclear programs in hostile, noncooperative states (e.g., North Korea or Iran), cannot be inspected in a fashion that can reliably assure detection of a possible military diversion early enough to provide sufficient time to intervene to prevent the production of a bomb. Similarly, some nuclear materials are so weapons adaptable (e.g., highly enriched uranium, separated plutonium, or plutonium based fuels) that reliable and timely detection of their diversion to make bombs is simply not possible.

This, then, raises a question: If a nuclear activity or material is so close to bomb making that it cannot be safeguarded against military diversion, is it protected as being "peaceful" under the NPT? In the 1970s, it was hoped that nuclear fuel making in Japan, Brazil, South Africa, the Netherlands, and Germany could be safeguarded. Yet, recent discoveries of nuclear weapons usable materials unaccounted for (MUF) in Japan and the United Kingdom (UK) raise serious questions as to whether or not these assumptions were ever sound. We also know from experience in Iraq, Libya, Iran, Syria, and North Korea that the IAEA inspections

system cannot be relied upon to find covert nuclear weapon-related activities in states that refuse to cooperate fully with IAEA inspectors.

How, then, should one proceed? Should we continue to allow new states to make nuclear fuel even though we now know that these activities cannot be effectively safeguarded against military diversion? What of states that we have reason to believe may cheat, e.g., Egypt, Algeria, Syria, or Saudi Arabia—states that have all hidden their acquisition of nuclear technologies or nuclear capable delivery systems? Should we nonetheless allow them to develop large nuclear energy programs in the vain hope that IAEA safeguards somehow will work?

Many less developed states would answer that the NPT's preamble explicitly stipulates that all of peaceful nuclear energy's benefits, including "any technological by products which may be derived from the development of nuclear explosives," should be available for civilian purposes to all states. This would suggest that the NPT recognizes and protects an intrinsic right of all states to get to the very brink of making bombs.

Yet, if the NPT is dedicated to sharing the benefits of peaceful nuclear energy, these benefits presumably must be measurably beneficial *and* be distant enough from bomb making or the risk of being easily diverted to that purpose such that inspections could reliably detect their military conversion in a timely fashion (i.e., well before any bombs might be made). At the very least, what is protected ought not to be dangerous and clearly unprofitable. That, after all, is why the NPT bans the transfer of civilian nuclear explosives, why it allowed the sharing of civilian nuclear explosive services only on a turnkey basis, and why ultimately this offer was never acted upon.

By this set of standards, what currently is defended as being "peaceful nuclear energy" and protected by the NPT, ought to be questioned. Are nuclear fuel making and large nuclear programs economically competitive, i.e., "beneficial" in places like the Middle East when compared to making power with readily available natural gas or buying nuclear fuel from other producers? How economically competitive are such programs against safer alternatives in any region? Can nuclear fuel making be surveilled anywhere with rigor sufficient to reliably detect military diversions in a timely fashion? Are not such activities a threat in any nonweapons state? Should these activities be allowed to be expanded in nonweapons states and to new locales?

This set of questions, then, brings us back to the current prevailing reinterpretation of Article V. If the benefits of a nuclear activity are negative as compared to nonnuclear alternatives, and if the nuclear activity or material is dangerously close to producing a nuclear weapon, is there any reason to believe that it is a peaceful benefit protected by the NPT? These questions deserve answers. More important, the answers must be allowed to affect how the NPT is read and what states view as NPT protected activities.

The same is true regarding the NPT's withdrawal clause under Article X. The problem with Article X is that it has been read to give states like North Korea the freedom to violate the treaty and then withdraw with little or no adverse consequence. Yet, the Vienna Convention on Treaties points out that states that violate an agreement should and can be held accountable for their transgressions whether they choose to withdraw from the agreement or not. France and the United States now insist that this is the appropriate way to

read the NPT.

Reading Article X this way would mean that violating states inclined to leave the NPT, such as North Korea and Iran, would have far greater difficulty doing so with impunity. It is unclear whether this view, which the UNSC supported last September with the adoption of UNSC Resolution 1887, will prevail. Yet, creating as many useful interpretative challenges of this sort as possible will be critical if the NPT is to remain effective against further proliferation.

Certainly, such a goal informs the present volume's design. Each chapter, dedicated to clarifying the NPT's key ambiguities, is roughly structured to trace the NPT's text article by article. The analysis set forth here was mostly written or commissioned by the Nonproliferation Policy Education Center.

Much more, of course, could have been included in this book. But rather than seeking to be comprehensive, the aim throughout is to provide a guide for both policymakers and security analysts. This guide should assist in navigating the most important debates over how best to read and implement the NPT and, in the process, spotlighting alternative views of the NPT that are sound and supportable.

## **ENDNOTES - CHAPTER 1**

1. NPT, Chapter 2 of this volume, p. 21.