
PAPERS

The Future of the Nuclear Non-Proliferation Treaty

ROBERT L. PFALTZGRAFF, JR.

The Non-Proliferation Treaty (NPT) contains essentially three pillars: (1) preventing nuclear weapons proliferation; (2) promoting peaceful uses of nuclear energy; and (3) achieving nuclear weapons disarmament.¹ Emerging in the midst of the Cold War as one of the most unequal treaties in history, the Non-Proliferation Treaty divided the world into two categories of signatories; those few that were acknowledged to be nuclear states and the many that were not permitted to have nuclear weapons. Such a distinction is inherently discriminatory. Only the five acknowledged nuclear states are granted the right to include nuclear weapons as part of their national security capabilities, while the rest of the world is denied such an option.

The non-nuclear weapons states, in exchange for gaining access to nuclear technology for peaceful purposes, were required to submit their nuclear facilities to International Atomic Energy Agency (IAEA) safeguards. It was assumed that states seeking peaceful access to nuclear technologies would produce nuclear power only in declared facilities which would be open to international inspectors. At the time of the signing of the NPT those nuclear states who first joined—the United States, the United Kingdom, and the Soviet Union—were the principal possessors of nuclear technology. Nuclear weapons states were defined in the NPT as countries that had detonated a nuclear device before January 1, 1967. In

Robert L. Pfaltzgraff is Shelby Cullom Davis Professor of International Security Studies at The Fletcher School of Law and Diplomacy, and founder and president of the Institute for Foreign Policy Analysis in Cambridge, Massachusetts. Dr. Pfaltzgraff has also held a visiting appointment as George C. Marshall Professor at the College of Europe, Bruges, Belgium, and as Professor at the National Defense College, Tokyo, Japan.

addition to the first three nuclear signatories, China and France, who joined in 1972, were included because by the time of the NPT they had also become nuclear weapons possessors. In reality, the NPT codified the nuclear status of the possessors of such weapons, together with the non-nuclear status of the nonpossessors. The NPT was based on the world of the late 1960s, which differed substantially from the world of today. Can and should the NPT be adapted to address proliferation in the new circumstances of the post–September 11 world? Does the NPT have a future? If so, what is it?

When the NPT was conceived, the vast majority of non-nuclear states seeking access to such technology for commercial uses had much to gain by foregoing the right to military nuclear programs that they had no intention of pursuing. This remains largely the case in 2006. The nuclear possessors had an incentive not only to maintain their virtual nuclear weapons monopoly, but also to broaden the international market for the sale of peaceful nuclear technologies spun off from their nuclear programs. Such thinking formed part of the Atoms for Peace initiative set forth in December 1953 in President Eisenhower's address to the United Nations General Assembly.² Although the actual number of nuclear possessors has increased only modestly since the late 1960s—from five to perhaps eight states—the likely new entrants in the near future include North Korea and Iran. The collapse of the Soviet Union led to the denuclearization of three former Soviet Republics: Belarus, Kazakhstan, and Ukraine, on whose territory Soviet nuclear weapons had been deployed. Several other states have abandoned nuclear weapons programs, notably Argentina, Brazil, and South Africa. Therefore, the number of countries with nuclear weapons programs is actually fewer today than a decade or generation ago. However, the bad news is that prospective states as well as terrorist groups gaining or seeking access to weapons of mass destruction (WMD), including nuclear weapons, are enemies of the United States.

The good news is that, in its first pillar, the NPT codified an international norm against the acquisition of nuclear weapons shared by nearly all of the signatories. Even in the twenty-first century arguably few states wish to build nuclear weapons. Those that wish to do so, such as North Korea, Iran, and Iraq under Saddam Hussein, have been able to operate nuclear weapons programs even as NPT signatories. This has been called latent proliferation, with a country pretending to adhere to the NPT while developing nuclear weapons.³ Such states are largely immune to the constraints imposed by international treaties such as the NPT. What temporarily halted Iraq's program was the Israeli air strike against its Osirak nuclear reactor in

1981, together with its defeat in 1991 after Baghdad's occupation of Kuwait. Another category of states, including India, Israel, and Pakistan, have chosen not to sign the NPT because they already have or are in the process of becoming nuclear weapons states.



Such states believe that their national security will be enhanced by possession of nuclear weapons.

In return for nuclear weapons abstinence, the non-nuclear states received an obligation on the part of the nuclear states, as set forth in Articles IV and V of the NPT, to make available peaceful nuclear technologies. Article IV refers to the “inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination.” Article V commits NPT members to make available “under appropriate international observation and through appropriate international procedures, potential benefits from any peaceful applications of nuclear explosions” to non-nuclear states on a “nondiscriminatory basis.” In addition to such benefits, the non-nuclear states gained, in Article VI of the NPT, its third pillar, a commitment to good faith efforts on the part of nuclear weapons states to reduce their arsenals and even eventually to reach agreement on a treaty on “general and complete disarmament under strict and effective international control.”

Given Cold War tensions and the importance attached to nuclear weapons in the superpower deterrent relationship, such a commitment was both unwise and impossible to achieve. Whether a nuclear-disarmed superpower relationship would have been less stable will never be known. What we do know, however, is that the nuclear-armed superpowers did not go to war with each other. Nuclear weapons in the hands of the United States were essential to the security of Western Europe and Japan. They provided indispensable coupling between allies and the United States.

Nevertheless, anti-nuclear advocates, together with non-nuclear states at the various NPT Review Conferences, both during and since the Cold War, have frequently criticized the United States for inadequate attention to the issue of nuclear disarmament.

Even before the NPT came into effect, the United States and the Soviet Union had initiated a series of negotiations in 1969 for limitations and subsequently for reductions in strategic nuclear weapons that codified the superpower strategic nuclear relationship that emerged at that time. Therefore, the NPT had no discernible role in their action. In the generation before the end of the Cold War, the superpowers made continuing efforts to achieve limitations as well as reductions in their respective nuclear arsenals. Such attempts were largely unsuccessful as long as the Cold War lasted. The Strategic Arms Reduction Treaties I and II (START) and the Moscow Treaty, concluded after the collapse of the Soviet Union, are illustrative of the maxim that agreements limiting armaments are most likely when they are least needed.⁴ By the beginning of the twenty-first century, Russia was in the process of reducing but modernizing its strategic weapons while the United States retained an aging nuclear arsenal and debated what to do to adapt it to the new security setting as part of its deterrent against WMD. The political issues that had led to the huge nuclear build-up of the Cold War era had evaporated. Both Russia and the United States had an interest in dismantling nuclear weapons capabilities that were no longer deemed necessary.

While the NPT codified a norm against proliferation shared by most signatories, a state determined to acquire nuclear weapons can do so either within or outside the NPT. Article IV asserts that all members have “the right to participate in the fullest possible exchange of equipment, materials, and scientific and technological information for the peaceful uses of nuclear energy.” In practice, this means that a non-nuclear weapons state can come very close to the nuclear weapons threshold even as a member of the NPT with little fear of detection by legally developing the necessary fuel cycle capacity and simultaneously conducting clandestine research designed to produce a nuclear weapon. This is an explicit challenge to the NPT premise that if a non-nuclear weapons state renounces nuclear weapons and complies fully with this commitment, it will gain help under Article IV of the Treaty to develop peaceful nuclear programs. Iran can claim, as it does, that it is reprocessing uranium only for such civilian purposes as electricity, which is permitted within the NPT. The United States, the European Union, and others contest this assertion. What they fear is that a hostile Iran will acquire a nuclear weapons capability, together with

delivery systems including missiles. There has been extensive discussion of the need to strengthen Article IV of the NPT and to get more states to sign on to the Additional Protocol—in other words, to make the Additional Protocol the new safeguards standard.

The Additional Protocol of 1991 is illustrative of another limitation of the NPT. The Protocol strengthens the IAEA's ability to conduct inspections and requires states to provide more detailed information about nuclear-related activities. The Protocol increases the number and types of facilities subject to international inspection, and provides authority for the IAEA to conduct short notice inspections at declared as well as undeclared facilities. The Additional Protocol operates only in the case of NPT members who have specifically agreed to be bound by it. The Additional Protocol cannot prevent a state determined to acquire a nuclear weapons capability from doing so, although it can make such action more difficult. Approximately half of the more than 180 signatories of the NPT have accepted the Additional Protocol. Because such states for the most part have no interest in acquiring nuclear weapons, the Additional Protocol strengthens this non-nuclear NPT codification. A state determined to gain a nuclear weapons capability would simply not sign the Additional Protocol or perhaps create a clandestine nuclear weapons capability beyond IAEA inspections. It is conceivable that a state that had signed the Additional Protocol would still proceed to enrich uranium to the lower levels needed for reactor fuel for peaceful purposes and then choose to break out of the NPT. At the point at which such a state had decided to move toward a nuclear weapons capability, it could withdraw from the NPT or possibly operate a clandestine nuclear weapons facility.

Member states have the right to withdraw from the Treaty if they decide that their "supreme interests" are at stake. In practice, such a decision is likely to mean that a state has concluded that acquisition of weaponized nuclear capability is deemed to be more important than remaining a Treaty member. In this case, only three months' notice is required, together with a statement of the "extraordinary events" that have led to this decision. North Korea exercised this right in 1993, only to reverse its decision before the end of the three-month period and then to withdraw in 2003.

Iran remains a member of the NPT while the international community debates what to do about Tehran's nuclear program, including referral to the UN Security Council for possible sanctions. As we have seen throughout its history, the Security Council is a forum in which the national interests of its members produce harmony or discord based on a variety of political, economic, and military considerations. Referral of a non-compliant NPT

member to the Security Council, as evidenced in the debate over North Korea and Iran, is a protracted and perhaps even futile exercise. If agreed sanctions were to curtail the supply of oil exports from Iran resulting in major price increases, the effects on states imposing the sanctions might be at least as great as they would be on Iran. At least one permanent member of the Security Council, Russia, is part of the problem as a major supplier of nuclear technologies to Iran. Moreover, China is a major trading partner of Iran, which is also a key supplier of energy to Beijing.

Over the next several years and decades, the United States and other countries will need to diversify energy supply and to lessen our overall dependence on fossil fuels. Nuclear energy is becoming more important as a result of growing demand for energy. The nuclear power industry and the needs of states for such peaceful uses of nuclear technologies provided much of the initial impetus for the Eisenhower administration's Atoms for Peace program, leading to the creation of the IAEA in 1957. Global electricity demand is likely to increase by more than 50 percent by 2025. Nuclear power represents the primary carbon-free source for meeting this energy need. While nuclear power cannot be made "proliferation-proof," we should be increasing the priority of proliferation resistance in design and development of future nuclear energy systems. The so-called Generation IV nuclear reactors and fuel cycles—10 to 30 years from now—will be designed to be significantly more proliferation-resistant than current models and designs. At the same time the nuclear power industry will probably grow dramatically in the decades ahead. This will mean an increase in the enrichment of uranium to fuel nuclear reactors, together with an increase in the reprocessing of spent reactor fuel. In time, this growth will make enriched or reprocessed uranium more widely available. There will be greater potential for weapons proliferation from the possible diversion of plutonium or enriched uranium to nuclear weapons programs.

The third pillar of the NPT, nuclear weapons disarmament, has been focused on the original possessors of nuclear weapons under the assumption that the non-nuclear states as signatories of the NPT would not seek access to such capabilities. Here at least two principal problems with the NPT should be highlighted. First, the idea that a world without nuclear weapons in the hands of the United States would be a more stable world is a dubious proposition. Through its overall military posture the United States prevented Soviet expansion and helped create the conditions for the ultimate collapse of the Soviet Union, while providing extended security guarantees to allies in Europe and the Asia Pacific area. In the nuclear-disarmed world set forth in the NPT, a state or terrorist group with only one

nuclear bomb would have a nuclear monopoly unless other countries had taken illicit steps to retain one or more nuclear devices precisely as a hedge against other countries that might keep one or more nuclear weapons. Second, the argument that by setting a good example and disarming, the United States would encourage others to follow suit lacks strategic sense and an empirical basis. Since the end of the Cold War, the United States has reduced its deployed nuclear weapons, foregone underground testing, and not developed new warhead designs.

Such actions have had no discernable effect on Iran or North Korea, or India and Pakistan, and are unlikely to deter possible future terrorist possessors such as al-Qaeda. In this period we have seen several North Korean nuclear crises, Iranian nuclear development, and nuclear tests by India and Pakistan. There is also extensive evidence that al-Qaeda and other terrorist groups may be attempting to acquire nuclear weapons and other WMD.⁵ A world in which the United States had given up nuclear weapons might give additional states as well as terrorists an added incentive to acquire such WMD with which to threaten disarmed states. A nuclear-disarmed United States might lead states no longer able to count on U.S. protection to develop their own nuclear arsenals. A world without a nuclear United States would be a more dangerous place, not a more stable one. Thus the “general and complete disarmament” advanced in Article VI of the NPT is of questionable strategic logic.

With all of its shortcomings, nevertheless, efforts will be made to maintain the NPT as part of a comprehensive non- and counter-proliferation strategy that also includes deterrence, defenses, diplomacy, dissuasion, and disrupting and defeating adversaries through military means that may include preemption against those prepared or planning to use WMD. The NPT, by establishing or codifying a norm that includes most states, together with procedures and processes for compliance, helps to give greater authority and legitimacy to those who are able and willing to enforce such a standard. If possible, we should strengthen the inspections capabilities of the NPT and focus them as fully as possible where they are most needed, recognizing that inspections without the cooperation of those being inspected are likely to be less than effective. Those who are developing nuclear weapons clandestinely are not likely to cooperate with those seeking to discover what they are hiding.

There have been suggestions that the right of NPT withdrawal should be restricted or made more difficult. However, states that have not yet joined would have less incentive to join if the ability to withdraw is eliminated or tightened, and certain of those who are members might be

prompted to withdraw while this remained possible or easier, or simply oppose any efforts to renegotiate this portion of the NPT. Those states having no intention to develop nuclear weapons would probably agree to adhere to such strengthened provisions.

Last but not least, the NPT as a legacy of the Cold War does not address the problem of asymmetrical warfare and possible terrorist use of nuclear weapons. In the category of asymmetrical warfare there is the possibility of an electromagnetic pulse attack based on nuclear warheads launched from ballistic missiles to detonate several hundred miles above the earth's surface to interact with the earth's magnetic field. The result would be the destruction of the electrical and electronic systems on which we are heavily dependent as a society and from which the United States would not easily recover.⁶

Terrorist organizations that have attempted to acquire the ingredients for crude nuclear devices such as dirty bombs as well as biological and chemical weapons are not parties to, nor do they believe themselves to be bound by, the norms codified or created by state-centric treaties such as the NPT. Nuclear weapons technology transfer within the private sector will continue to grow. Transnational networks and operations such as that of A.Q. Khan in Pakistan, which provided extensive illicit nuclear technology transfers, will make nuclear and other WMD technologies more widely available in the years ahead. Over the years he had assembled a clandestine network that included participants from Pakistan as well as from diverse countries such as Germany, Turkey, Malaysia, South Africa, and the United Kingdom. The network consisted of scientists and engineers as well as other facilitators such as financiers and money launderers. Centrifuge enrichment technology, with some components manufactured in Malaysia, was transshipped through Dubai. The greatest, but by no means the only, beneficiary of the A.Q. Khan network was Libya. Iran also gained important assistance in its nuclear program from A.Q. Khan. The Libyan decision to abandon its WMD programs was instrumental in exposing this network.⁷

Much of the discussion of nuclear proliferation focuses on how such a capability could be acquired based on transfer of technologies, materials, and of know-how, or as a result of uranium enrichment and reprocessing. There has been far less emphasis on proliferation resulting from the theft and possible detonation of an assembled nuclear weapon. This could come about as an act of nuclear terrorism. A terrorist group might seize a portable nuclear weapon, for example, from a site in Russia. Such a weapon might be stolen from an inadequately secured facility, whether in Russia or elsewhere where protection was insufficient.⁸ One of the most

important security threats facing the United States, nuclear terrorism, lies largely beyond the NPT unless member states are prepared to use unilateral means to assure the security of their stockpiles.

Although the NPT subjects non-nuclear states to IAEA safeguards, it does not place special requirements on nuclear weapons states for nuclear weapons security. The September 11 attacks led the IAEA to develop an “action plan” against nuclear terrorism.⁹ The plan calls for efforts that include greater protection of nuclear materials as well as production and storage facilities and otherwise enhancing security and detection of suspicious activities directly related to nuclear materials. The enforcement of such an action plan necessarily depends on national action backed by surveillance and protection. This might include international cooperation to develop biometric technologies and other tools to help secure nuclear and other WMD sites. Whether nuclear facilities and materials will be adequately secured lies largely beyond the capabilities of the IAEA and instead within the jurisdiction of the member states.

The latest NPT Review Conference, held in May 2005, produced no recommendations for reducing the threat of nuclear proliferation. IAEA agreement may not be forthcoming at least until the next review session in 2010. This failure led UN Secretary General Kofi Annan to declare that the Conference had “missed a vital opportunity to strengthen our collective security against the many nuclear threats to which all states and all peoples are vulnerable.”¹⁰ Perhaps it is just as well that the Review Conference failed, for this allowed the deficiencies of the NPT to be revealed rather than masked in the aura of lofty declarations. At least the Review Conference did not result in empty resolutions and exhortations that have little to do with the real world situation: how to cope with WMD proliferation in the hands of states and terrorist organizations seeking our destruction. For this, we must look to broader strategies that include our own offensive and defensive capabilities—preemption and defenses against missiles as well as efforts to prevent WMD from entering the United States—all within a strategy that recognizes the inherent limitations of the NPT but includes non- and counter-proliferation regimes as part of a non- and counter-proliferation strategy. ■

ENDNOTES

- 1 The Treaty on the Non-Proliferation of Nuclear Weapons was signed on July 1, 1968, and entered into force March 5, 1970. It was signed simultaneously in London, Moscow, and Washington, D.C. The text is reprinted in Joseph Cirincione, Jon B. Wolfsthal, and Miriam Rajkumar, *Deadly Arsenals: Nuclear, Biological, and Chemical Threats* (Washington, D.C.: Carnegie Endowment for International Peace, 2005), 421–426.

- 2 For a detailed discussion of Atoms for Peace, see *Atoms for Peace + 50: Nuclear Energy and Science for the 21st Century*, final report from a conference organized by the Institute for Foreign Policy Analysis and The Fletcher School, Tufts University, and sponsored by the U.S. Department of Energy and the Dwight D. Eisenhower Library and Museum, October 22, 2003.
- 3 For a detailed discussion of latent proliferation, see Chaim Braun and Christopher F. Chyba, "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime," *International Security* 29 (2) (Fall 2004): 5.
- 4 START I and START II were signed in 1991 and 1993, respectively. The treaties set limits on, inter alia, strategic nuclear delivery vehicles and ballistic missile warheads. The Moscow Treaty, also known as the Strategic Offensive Reductions Treaty, was signed in 2002. It obligates the United States and Russia to limit their aggregate number of strategic nuclear warheads to between 1,700 and 2,200 by the end of 2012.
- 5 Charles D. Ferguson and William C. Potter, *The Four Faces of Nuclear Terrorism* (New York and London: Routledge, 2005), see especially chapter 2.
- 6 See the *Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack*, Volume 1: Executive Report, 2004, especially pp. 4–7.
- 7 For a fascinating account of the proliferation activities of A.Q. Khan, see William Langwiesche, "The Wrath of Khan," *The Atlantic Monthly*, November 2005, and by the same author, "The Point of No Return," *The Atlantic Monthly*, January-February 2006.
- 8 For a discussion of how nuclear terrorism might take place, see Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Henry Holt and Company, 2004), especially chapter 2.
- 9 L. Wedekind, "IAEA Action Plan to combat nuclear terrorism," IAEA website, <www.iaea.org/NewsCenter/Features/Nuclear_Terrorism/index.shtml> (accessed February 13, 2006).
- 10 United Nations (May 27, 2005). "As Review Conference for Non-Proliferation Treaty closes without agreement, Secretary-General says vital opportunity missed to strengthen security." Press release. <www.un.org/News/Press/docs/2005/sgsm9895.doc.htm> (accessed February 13, 2006).